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INTEGRATING INTERPERSONAL NEUROBIOLOGY IN HEALTHCARE LEADERSHIP
AND ORGANIZATIONS

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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March 2022

INTEGRATING INTERPERSONAL NEUROBIOLOGY IN HEALTHCARE LEADERSHIP AND ORGANIZATIONS

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

DOCTOR OF PHILOSOPHY

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ABSTRACT

INTEGRATING INTERPERSONAL NEUROBIOLOGY IN HEALTHCARE LEADERSHIP AND ORGANIZATIONS

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Interpersonal Neurobiology (IPNB) is an interdisciplinary, science-based field that seeks to understand human reality including the nature of mind, brain, and relationships. IPNB has been used extensively by mental health practitioners as well as child development and parenting experts. While practitioners and scholars have described ways that IPNB can be used in leadership and organizations, there has been no systematic inquiry into the practical and phenomenological experience of this application. IPNB offers an alternative to dominant models of care and leading in healthcare settings and fields, which are characterized by disconnection, objectification, and separation. It offers a relationally centered approach that honors people's subjective experience and seeks to advance whole-person and whole-system wellness through the promotion of integration. As a living and dynamic systems approach, IPNB has the potential to influence the quality of leaders' presence, perception, and practice while upholding the interconnectedness within and between the functional elements of organizational structures and processes. This narrative inquiry sought to explore how leader and leader consultants approach their work from an IPNB perspective. It centers around two research questions: How, if at all, have healthcare leaders integrated IPNB in their leadership practices, and what impact has this integration had on their development and identity? Secondly, what, if any, implications might their experiences hold for leadership in health and mental health organizations? Using the

Listening Guide (LG; Gilligan, Spencer, et al., 2006) methodology this inquiry explores the experiences of twelve leaders and leadership consultants in order to understand the implications IPNB has

had for their practices, development, and identity. It takes a broad and deeply phenomenological dive into each person's IPNB leadership experience across time, space, and place to understand the implications this framework has had for leading and organizations. This inquiry identifies what themes and IPNB principles have been significant to the participants, the counterpoints that have propelled their development forward, and the multiple and relationally positioned identities that signify leader's relational embeddedness in the organizations and systems they serve. This dissertation is available in open access at AURA (<https://aura.antioch.edu>) and OhioLINK ETD Center (<https://etd.ohiolink.edu>).

Keywords: leadership, organizations, interpersonal neurobiology, relationships

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My leadership vision and practice has been deeply impacted by my colleagues with the Global Association for Interpersonal Neurobiology Studies (GAINS). Their commitment to walking the talk and their dedication to bring IPNB to the global community has been a constant inspiration. I am deeply grateful for their support and belief in this project.

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My parents provided both financial and emotional support, openly communicating their belief in me and pride in what I was doing. The opportunity to have them present for my decision to pursue a doctorate, and their active engagement in the process, was a true gift, given that higher education was never a priority in their lives. My father passed away before he could see the completion of this journey; however, his presence lives within my heart and hope that somehow his consciousness is near and somehow is aware. Also, my husband was unfailing in his faith in me and ready to take on extra practical activities I simply could not do as I spent long hours, year after year in the pursuit of this dream. For those who know me, it comes without

surprise that I must acknowledge my furry family as well. They provided their steady presence along with many opportunities to laugh and to grieve.

In addition to my parents and husband, I have been supported by the kindness of friends and colleagues who understood my lack of capacity and time to engage with all those things that sustain friendship. They have been waiting for me to re-emerge and celebrated along with me with open harms and joy.

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CHAPTER I: INTRODUCTION

Interpersonal Neurobiology (IPNB) is a relatively new field that brings together research from multiple disciplines in understanding human experience in various domains. IPNB was founded upon the intellectual principle of consilience, which Wilson (1998) describes as a theory of knowledge unification that links “facts and fact-based theory across disciplines to create a common groundwork of explanation” (p. 8). IPNB is a science based framework drawing upon empirical studies from disciplines such as physics and quantum physics, neurobiology, philosophy, mathematics, psychology, sociology, biology, anthropology, and the relational sciences including complex systems and attachment research (Siegel, 2012a, 2017; 2020). IPNB does not intend to be another theory, rather it is a lens through which theory and practice can be understood more deeply. Thus, across different applications IPNB can look very different. For example, it can enhance our understanding about human experience and development across time and in space, while embedding these dimensions in relational place(s).

IPNB has been used as a standalone framework to illuminate human and natural worlds, as well as combined it with other theories. Given IPNB’s applicability to the human sciences, there has also been growing interest in applying IPNB concepts and principles to the field of leadership more extensively (Firestone et al., 2008; Hill, 2008; Olson, 2008; Pearce-McCall, 2008; Phipps, 2009; Siegel, 2015a; Siegel & Pearce-McCall, 2009; Ungerleider & Dickey Ungerleider, 2018). The continued expansion of IPNB in leadership is considered by many to be needed and timely. For example, at the last IPNB conference, *Timeless Wisdom, Timely Action: Interconnection, Awareness, and Identity in the Cultivation of Compassion and Well-Being* (Siegel & Goldstein, 2019), leaders from various fields discussed the urgent necessity that leaders find ways to foster a transformation in consciousness demanded by the social, political,

racial, and climate crises facing humanity and the natural environment across the globe. This chapter will explore why this is particularly relevant for healthcare, including mental health, given recent calls for system transformation. In addition, it will provide an overview of the current literature in IPNB that holds relevance for leadership and organizations. It will also outline the significance and purpose for this inquiry.

Paradigm Shift in Canadian Healthcare Leadership and Organizations

Healthcare continues to be dominated by the biomedical paradigm along with top-down, command and control approaches to leadership, which have been challenged by many working in, and receiving care within, the system (Grundy et al., 2016; Mental Health Commission of Canada [MHCC], 2012; Mulvale & Bartram, 2015; Nelson, Lord, et al., 2001). According to Suchman et al. (2011) healthcare leadership has been dominated by the machine metaphor, which views “an organization as a group of workers carrying out their assigned tasks exactly as instructed” (p. 14). He warns that this is a limited and limiting perspective, particularly in healthcare, which is made up of human beings along with all the complexities they bring and the implications this has to the organizational system. While yielding technological advances and efficiencies in the industrialization era, Suchman et al. (2011) asserts that the machine model is outdated and harmful. For example, this approach places positional leaders as sole agents and engineers of change in complex environments that require more diverse perspectives. He suggests that not only does this place undue pressure on leaders, it places them in positions of control and ignores the resources and creativity among the organization’s healthcare workers. Moreover, he claims this approach is not sophisticated enough to meet the complex needs of healthcare organizations and stakeholders.

Recently in Canada, there have been calls for reform in healthcare and the mental health system (MHCC, 2012; Grundy et al., 2016). In the mental health arena recovery-oriented care has been suggested and implemented as an alternative in several countries, including Canada, Australia, and the UK (Nelson, 2009; Nelson, Janzen, et al., 2008; Nelson, Ochocka, et al., 2006; Piat & Sabetti, 2012). This more relationally centered approach does not focus treatment solely on the eradication of the symptoms of disease, or restoration of functioning; rather, it is a more individualized and holistically (i.e., whole person, whole community) considered approach that considers the social embeddedness of well-being and recognizes that wellness is not homogenous.

Further, the Canadian Mental Health Association (CMHA) was one of the first Canadian organizations to propose that mental health care needs to move beyond the narrow biomedical view that measures success by the reduction of symptoms and hospitalizations (Trainor et al., 2004). In a departure from the traditional system centered approach to mental health, the CMHA places people with lived experience at the center of mental health policy, systems, and practices. This is also in keeping with the nation-wide initiative spearheaded by the Mental Health Commission of Canada (MHCC) that offers services to persons with mental illness and includes their participation as well as their family members. These services reorganize traditional medicalized approaches to treatment to also include consideration of the multiple-intersecting relationships within which mental wellness, and illness, are embedded (MHCC, 2012; Nelson, 2009). For example, recognizing and addressing the psychological and physical impacts of stigma and discrimination on mental well-being.

The Need for a New Approach to Leadership

In order to respond to these calls for change, new approaches to leadership in healthcare are necessary (Avolio, 2007; Suchman et al., 2011). These changes require a paradigmatic shift in how care is envisioned and provided, as well as how leaders are positioned in relationship with those they are leading. IPNB is ideally situated to fulfill this need, given it is based in the sciences of relationships and complex systems. IPNB is an interdisciplinary, science-based, field that has potential to be a framework and/or foundation that can guide leadership and organizations. Further, it provides leaders with actionable principles to guide their own development and practices across multiple levels of healthcare organizations.

An IPNB perspective invites transitioning from the traditional view that employees are cogs in the organizational wheel, to instead consider them to be vital and central in the creation of a work culture that is grounded in compassion, meaning, and play (Goleman & Siegel, 2016). Hougaard and Carter (2018) assert that leaders have considerable power in the development of organizational culture, which they consider to be at the heart of high performance and positive outcomes. Attending to the development of greater self-awareness, as well as social or relational awareness, are considered foundational to the leader's capacity to facilitate an organizational culture that promotes integration (Goleman & Siegel, 2016; Kryder, 2009; Pearce-McCall, 2008; Phipps, 2009; Siegel, 2015b, 2007). Also, leaders are encouraged to support their followers in learning how to mind their brains (Goleman & Siegel, 2016; Hougaard & Carter, 2018; Kryder, 2009; Pearce-McCall, 2008).

Relationally Centered Leadership

In contrast to traditional models, IPNB offers a relational framework that holds potential to illuminate and guide leaders in public, non-profit, and for-profit healthcare organizations. In

addition to the organizational implications, and because healthcare is about providing services to human beings, IPNB is well positioned as a comprehensive framework that can also serve micro and meso levels of experience and engagement. For example, it has the potential to illuminate and guide leaders in their organizational and inter-organizational relationships, as well their relationship within themselves (Goleman & Siegel, 2016).

IPNB recognizes the fundamental role that relationships have in shaping the human mind and embodied brain across the lifespan along with the varied social environments they find themselves in, including the workplace. In fact this extends beyond the workplace to those being served by the organization. IPNB draws upon scientific research that recognizes the brain as a social organ (Badenoch, 2008; Cozolino, 2014b; Siegel, 2012b). In fact, Dr. Louis Cozolino (2014b, 2014c), one of IPNB's original creators, calls the relational space between people the *social synapse*, which he likens to the synapse between neurons where energy and information is shared via synaptic transmissions facilitated by a complex dance of neurochemicals/ neurotransmitters. He states that the social synapse is largely invisible to us with much of our communication lying below conscious awareness. He considers how the brain is the interface between nature (i.e., genetic template) and nurture (i.e., experience), where "[t]hrough the biochemical alchemy of template and transcription genetics, experience becomes flesh, attachment takes material form, and culture is passed through a group and carried forward through time" (Cozolino, 2014b, p. xvi). Thus brain development is dependent on relationships and is "a social organ of adaptation built through interactions with others" (Cozolino, 2014b, p. xvi). He challenges the interpretation of Darwin's evolutionary theory, which suggests human advancement rests upon the survival of the fittest; rather, he offers the alternative "[t]hose who are nurtured best survive best" (Cozolino, 2014b, p. 7, emphasis in original).

While there are other relationally-centered approaches to leadership (Fletcher, 1999; Graen & Uhl-Bien, 1995, Gittell, 2016) IPNB brings a unique tripartite view (Pearce-McCall, 2008; Siegel & Pearce-McCall, 2009) where these three primes (mind, brain, and relationships) are considered to be activated simultaneously in every human encounter and experience. Other relational approaches to leadership might touch on one or two of these primes, rarely are all three held explicitly in conscious awareness at once. For example, Jody Hoffer Gittell's (2016) Relational Coordination approach to leadership focuses primarily on the relational dimension of leading and organizations. Similarly, Fletcher (1999) explores how relational actions are disappeared and devalued in organizations. Graen and Uhl-Bien (1995) have developed a comprehensive leadership framework from a complex adaptive systems approach. While mind and brain may be implied in these approaches, these primes are not consciously named or attended to.

Brain-Based Leadership: Leading with Neural Integration in Mind

There are numerous approaches to leadership that encourage leaders to consider their own brain functioning as well as that of those who they lead. Some of the best known applications of brain science to leadership look at the development of emotional and social intelligence through encouraging practices that focus the mind in ways that regulate neural firing patterns (Boyatzis & McKee, 2006; Goleman et al., 2013; Goleman & Siegel, 2016). In other approaches, coaches and consultants focus on key areas of the brain in developing leadership capacities and skills (Goleman & Boyatzis, 2013; Henson & Rossouw, 2013).

During the 1990's advancements in technology, specifically Functional Magnetic Resonance Imagery (fMRI), made it possible for researchers to see blood flow patterns in the brain, which provided opportunities to view mental and physical processes more dynamically

(Abi-Rached, 2008; Casey et al., 2002; Lee, 1990). These advancements in technology allowed for in vivo measuring of brain activity via the oxygen levels of the blood in the brain. Thus, fMRI technology made it possible to view changes in blood flow patterns considered to represent how different experiences (i.e., emotions, thoughts, behaviours) are associated with specific brain structures and functions. In other words, where the blood flows neural activation is assumed (Casey et al., 2002). This led to George Bush's declaring the 1990's as *The Decade of the Brain* (Abi-Rached, 2008; Casey et al., 2002; Lee, 1990). Interestingly, evidence from fMRI studies has revealed the interconnected nature of these structures and function; in other words, brain activity is not restricted to specific anatomical areas rather activity is widely distributed across structural and functional regions in the brain and extended nervous system (Siegel, 2012a, 2012b, 2017, 2020). Therefore, IPNB defines the brain as: "the neural mechanism that shapes the flow of energy and information" (Siegel, 2012b, p. AI-11). The brain is considered to include the whole body given that the nervous system is distributed throughout the body.

In contrast, many brain-based leadership approaches focus on one or two aspects of this tripartite view of human functioning; for example, the brain and relationships, or addressing how leader development benefits from knowledge of the brain (The NeuroLeadership Institute, 2022; Drake, 2009; Eichinger, 2018; Gus et al., 2015; Henson & Rossouw, 2013; Hougaard & Carter, 2018). Whereas, an IPNB lens invites and guides leaders in recognizing how the brain and extended nervous system are inextricably linked with mind and relationships. In other words, relationships and mind shape both the structure and functioning of the brain and nervous system (Goleman & Siegel, 2016). In fact, Siegel (2017) asserts that rather than the mind being a product of neural firing patterns, the brain is shaped by the mind through attention and intention.

Mindful Approaches to Leadership

There has been a growing acknowledgment that individual well-being is connected to organizational well-being. In secular culture, and in Western medicine, there has been an uptake of mindfulness as strong evidence has uncovered the power of mindfulness in multiple arenas. For example, mental health and physical health such as pain management, stress reduction, immune modulation, etc. (Davidson et al., 2003; Kabat-Zinn, 2005b; Kornfield, 2008). Increasingly, mindfulness has been applied in the field of leadership with calls for leaders to mind their brains (Hougaard & Carter, 2018) and use mindfulness in the service of leading others (Cacioppe, 1997, 2017; Reb & Choi, 2014).

However, IPNB extends mindfulness-based approaches to leadership. Siegel (2017) states that the mind is not limited by skull or skin, rather it is recursive, emergent, and embedded in relationships, which shape the brain's energy and information patterns throughout development and across the lifespan:

beyond the head, the body and our relational world may be more than contextual factors influencing the mind- they perhaps may be fundamental to what the mind is. In other words, whatever mind is may be originating in our whole body and relationships, and not limited to what goes on between our ears. (p. 11)

Therefore, not only is the mind embodied but it is relational with our social environment not only influencing our mental life but also shaping and giving rise to our minds (Siegel, 2017).

Furthermore, because the mind is considered to be a complex system that is both within an individual and between individuals and groups, it is open to influence from outside and is chaotic as well as nonlinear (i.e., small inputs can create large change or shifts) (Siegel, 2017).

Finally, the definition of the mind also encompasses awareness or consciousness and our subjective experience, which are influenced by numerous factors including non-conscious processes like memory, mood, emotions, etc. (Siegel, 2017). Siegel (2012a, 2012b) suggests that

the nature of mind can be seen and known as the essence that links the other two aspects of the triangle: brain and relationships.

An Integrative Framework: Interpersonal Neurobiology and Leadership

Although limited, accounts of different applications of IPNB principles to leadership have shed light on its influence at micro, meso and macro levels (Kryder, 2009; Pearce-McCall, 2007; Pearce-McCall, 2008; Pearce-McCall, 2009; Phipps, 2009; Siegel & Pearce-McCall, 2009). There is increasing awareness that local efforts and practices can no longer be seen in isolation from global impacts (and vice versa) (Siegel & Goldstein, 2019). Given this, there is an increasing imperative that leaders recognize the interconnectedness of attention, intention, and action at micro, meso, and macro levels connecting individual, organizational, community, and global levels. This imperative is fueled by growing awareness of just how linked our different experiences are, as evidenced by economic, socio-political, health, and climate change outcomes. In addition, joining other leadership models that challenge traditional top-down, command and control models of leadership, IPNB invites transitioning from the traditional view that employees are cogs in the organizational wheel, to considering them as vital and central in growing a work culture that is grounded in compassion, meaning, and play (Goleman & Siegel, 2016). In keeping with Schein and Schein (2018) who propose changes to leadership models based in dominance and top-down management strategy, IPNB suggests that leadership can be found in and through relationship(s) that are not restricted or necessarily defined by official organizational management positions; rather, leadership can emerge across all levels of organizational structures and functions.

IPNB scholars have suggested numerous integration-promoting principles derived from neuroscience that can inform leaders' actions as well as their qualities of being. Discussed more

fully in the next chapter, integration is considered to be the hallmark of well-being in all living systems (Siegel, 2012b). This concept is based in complexity theory and recognizes self-organization within living systems occurs when differences are linked in space, place, and across time (Siegel, 2012a, 2012b). Given this, it stands to reason that this may be one of the foundational principles that many leaders use to guide their practices and decisions. Holding integration central to leadership invites the consideration of other IPNB principles that facilitate the capacity and actualization of practices that are necessary for this to occur. These will be explored more fully in the next chapter along with a literature review that is pertinent to understanding IPNB-informed leadership.

Significance of the Study

As a standalone framework, IPNB-informed leadership can be understood broadly and deeply, and can be described as dynamic, alive, and variable. IPNB epistemology is contextual and relationally embedded, thus what aspect is featured, and how it is understood, depends as much upon the knower as what is known. Given its complexity, aspects of IPNB can be used to illuminate leadership practices and organizational processes in addition it can be malleable in big picture applications. For example, IPNB epistemology invites practices that include both presencing and reflective capacities across the leader's mind, embodied brain, and relationships with an emphasis on understanding wellness as integration (Goleman & Siegel, 2016; Siegel & Pearce-McCall, 2009). This suggests that leaders develop capacities for awareness and insight into the different components of their own lived experience (Pearce-McCall, 2008). At the organizational level, this is done through varied practices and ways of being that are grounded in relational processes such as empathy, compassion, and curiosity, motivated by meaning beyond survival along with connection beyond the self (Goleman & Siegel, 2016). At the same time,

IPNB's conceptualization of complex systems provides an understanding of dynamic processes that facilitate greater complexity and self-organization, which provides an overarching perspective that can be applied to micro through to macro level processes.

In addition, IPNB can also enhance other leadership theories. For example, Dr. Daniel Goleman has partnered with Dr. Daniel Siegel (Goleman & Siegel, 2016) to explore the integration of an emotional and social intelligence approach to leadership with IPNB. van Loon (2017) has paired IPNB with a dialogical systems approach to leadership; and Suchman et al. (2011) has integrated positive deviance with IPNB in challenging traditional leadership approaches in healthcare. Further, leadership coaches and consultants have used IPNB in their development of frameworks that assist leaders in their practices and development (Betz & Kimsey-House, 2015; Glaser, 2014; Page, 2006).

What isn't known is how these principles are actually being utilized in practice and the perceived impact these have on leaders' experience such as *how* they practice, *where* the principles are applied (i.e., internally; externally; structurally; operationally; relationally, etc.), *who* is impacted (i.e., leaders; teams; organizations), *how* (i.e., actions; development; identity), and *when* (i.e., reflecting and learning from the past, in the present, planning for the future). Although enthusiasts and scholars assert that IPNB can be utilized in leadership and organizations, a systemic inquiry is needed to explore and understand whether there is substance to this claim. Therefore, and perhaps more importantly, understanding *why* this particular approach is useful and relevant to leaders using it is necessary. Many questions are unanswered.

Purpose of the Study

In an attempt to answer these questions, I will seek to contribute to IPNB leadership scholarship through a systematic narrative inquiry into how leaders and leadership consultants

are integrating this approach into their leadership and organizations. Further, I will explore the implications this had for their practice, development, and identity. To date what is known is that leaders and leadership coaches/consultants are utilizing IPNB by direct application of the framework's principles (Hill, 2008; Page, 2006; Pearce-McCall, 2007, 2008, 2009; Siegel, 2015a; Ungerleider & Dickey Ungerleider, 2018), or to enhance their use of other approaches (Betz & Kimsey-House, 2015; Goleman & Siegel, 2016; Kimsey-House & Kimsey-House, 2015; Kryder, 2009b, 2011). The literature on IPNB in leadership is conceptual and instructive, for example, taking a principle like integration, mentioned above, and reflecting upon how it can be used in understanding organizational processes (Pearce-McCall, 2007, 2008; Siegel & Pearce-McCall, 2009).

In addition, it is necessary to understand *why* this particular approach is useful and relevant to the field of leadership. Although IPNB enthusiasts and scholars assert that it can be utilized in leadership and organizationally, a systemic inquiry is needed to explore and understand why this is so. It is not enough to suggest that IPNB is an asset to the leadership canon without first understanding the who, what, when, where, how and why of its application as well as identifying perceived outcomes.

Although this study does not seek to prove IPNB's effectiveness, it will systematically inquire into IPNB-informed leaders' perceptions of benefit. This, along with other anticipated emergent themes, will serve to provide a foundational understanding of IPNB and leadership, which is necessary for future research directions, which will become clearer. More specifically, this study will look at leaders' experience within healthcare, given this is the area of concentration for my doctorate. Scholars and practitioners in healthcare, including mental healthcare, have been particularly interested in IPNB, given its focus on human wellness. In fact,

although the field has expanded since its inception, IPNB's early applications were primarily focused in the areas of human development as well as physical and mental health (Cozolino, 2002; Schore, 1994; Siegel, 1999). It therefore makes sense to expand this framework into the realm of healthcare leadership and organizations. Since one of IPNB's ontological premises is that human development and wellbeing are embedded within multiple-intersecting relationships, it has potential to illuminate multiple levels including micro (internal), meso (teams, organizational), and macro (provincial, national, global).

Despite the growing interest, to date there has not been a systemic inquiry into how IPNB-informed leaders are utilizing this framework. What is known is that leaders and leadership coaches/consultants *are* utilizing IPNB by direct application of the framework's principles (Hill, 2008; Page, 2006; Pearce-McCall, 2007, 2008; Siegel, 2015a; Ungerleider & Dickey Ungerleider, 2018), or enhancing their use of other approaches (Betz & Kimsey-House, 2015; Goleman & Siegel, 2016; Kimsey-House & Kimsey-House, 2015; Kryder, 2009, 2011). The limited literature available on the topic points to specific IPNB principles along with descriptions of potential ways to apply these in leading and organizations (Pearce-McCall, 2007, 2008; Siegel & Pearce-McCall, 2009).

Research Questions and Rationale

As stated, it is not enough to suggest that IPNB is an asset to the leadership canon without first understanding the who, what, when, where, and how of its implementation. Further, it is important to consider the perceived outcomes of this implementation at micro, meso, and macro levels of the leadership experience. Although this study does not seek to prove IPNB's effectiveness, it will systematically inquire into IPNB-informed leaders' perceptions of benefit. I hope that this, along with other anticipated emergent themes, will serve to provide a foundational

understanding of IPNB and leadership, that can provide suggestions for future research directions. As a result, this inquiry will explore how IPNB has impacted and/or influenced healthcare leaders, if at all. Further it seeks to explore their perceptions of this framework's impact on their development, identity, and practice as well as the healthcare systems within which they work. Therefore, this study seeks to answer the following research questions: How, if at all, have healthcare leaders integrated IPNB in their leadership practices, and what impact has this integration had on their development and identity? Secondly, what, if any, implications might their experiences hold for leadership in health and mental health organizations?

Method

Recognizing the far and deep implications that IPNB can bring to leadership and leading, I was compelled to find a methodology that can not only captures leaders lived experience, but also hold and illuminate multiple levels and dimensions of these experiences. Clearly, this required a qualitative methodology. Whereas quantitative research exists within positivistic and post positivistic paradigms, qualitative research is situated in postmodern, constructivist, and social constructivist ontologies and epistemologies (Pinnegar & Daynes, 2007). As such, qualitative narrative research is most often associated with the post-modern view that “there is neither a single, absolute truth in human reality nor one correct reading or interpretation of a text” (Lieblich, et al., 1998, p.2). This is consistent with IPNB's view that the perceived realities of time and space are “patterns of energy we perceive with our minds [that] give meaning to the world and let us share those perceptions with one another” (Siegel, 2017, p. 304). Narrative inquiry is about listening to and legitimizing the personal and/or local, historical and/or socially situated experience(s), which describes the purpose of my research. Equally fitting, narrative

inquiry interprets these utterances not as truth, but as descriptions of an ever-changing, self-organizing, constructive/ constructing, representations of lived/living experience.

Dimensions of Experience: Time, Space, and Place

Temporality is considered by many to be a fundamental component of story and therefore significant to understanding narrative. However, some scholars approach narrative inquiry with some caution about viewing time linearly. Ricoeur (1980) suggests that narrative time need not necessarily follow chronological time. Seeing temporality and narrativity as closely linked, Ricoeur looks to Heidegger's philosophy of time, which posits three levels of temporality that hold significant to narrative inquiry: Time is that within which events occur (known as within-time-ness); historical time; and the "plural unity of future, past, and present" (Ricoeur, 1980, p. 171). In addition, Mishler (1995) suggests that meaning and coherence in narrative accounts aren't always found in temporality; for example, linkage can be found through "causality, implicativeness, or thematic coherence" (p. 91).

For educational narrative researchers Clandinin and Connelly (2000) temporality is not only central to the definition of story, but also a key consideration in narrative inquiry and analysis. In addition to attending to past, present, and future utterances that emerge in the story these eminent researchers also attend to space within their framework, which they deemed a *three-dimension inquiry space* that allows for "inquiries to travel- *inward, outward, backward, forward and situated within place*" (Clandinin & Connelly, 2000, p. 49, emphasis in original). This three-dimensional inquiry space was drawn from John Dewey's theory of the personal and social interactional nature of experience that are continually building upon each other and evolving. Therefore, the inquiry space consists of the personal and social interactional dimension

of experience, the past, present, and future continuity of experience, and place where experience is situated.

In keeping with this, IPNB has the potential to enhance leaders' experiences at multiple levels and across dimensions of time, space, and place. For example, IPNB can reflect the internal processes of the mind and embodied brain as well as relationships between individuals, teams, within the organization, and beyond. It is a framework that has implications for *what* leaders do as well as *how* leaders relate to themselves and others. Further, IPNB accounts for how these relationships recursively shape leaders' experience, development and identity. IPNB also provides neurobiological awareness of processes that implicate *when* leaders might choose a particular action over another. It can assist in reflecting on the neurobiological elements, such as the role of memory, in relational encounters, which have implications for *who* is present in any given moment (i.e., triggered child-state). Therefore, I will be attending to the three-dimensional inquiry space of time, space, and place, throughout the analysis and interpretation of leaders' and leader consultant's stories as I attune to the implications IPNB has had for their practices, development, and identity.

The Listening Guide

This will be conducted using four systematic listening steps outlined in the voice and relationally-centered Listening Guide (LG; Gilligan, Spencer, et al., 2006; L. M. Brown & Gilligan, 1991) methodology, which I will fully explore in Chapter III. This guide will allow me to trace each leader's experience by attending to the relational embeddedness of their practices, development, and identity across the dimensions of time, space, and place. Furthermore, I will be enhancing this guide with the Dialogical Self-Theory (DST) notion that human identity and

development are experienced through multiple voiced positions (Hermans, 2012; Hermans et al., 1993). Informed by Bakhtin's (1984) assertion that understanding human experience through

ordinary pragmatic links at the level of the plot (whether of an objective of psychological order) are insufficient ... such links presuppose, after all, that characters have become objects, fixed elements ... such links bind and combine finalized images of people in the unity of a monologically perceived and understood world. (p. 7)

Instead, the unfolding of human development and identity through a polyphony of internal voices in dialogue, dynamically engaged in dimensions of time and space (Hermans et al., 1993). This is consistent with IPNB's notion that "the sense of self arises from the mind ... through sensory bottom-up and ... top-down concepts and knowing" (Siegel, 2017, p. 323). This dynamic sensing and knowing experience of mind is embedded neurobiologically and relationally; thus, from this perspective, there is no singular or static self, rather self that is a plural verb (Siegel, 2017). In addition, Relational Dialectics Theory (RDT) (Baxter, 2004a, 2011) will enhance the third listening step, where there is the potential for dialectically held counterpoints that move leader's development and identity through time and space. Finally, I will enlist a Dynamic Systems Perspective (DSP) (Daiute, 2014; Lunkenheimer, 2018; Thelen, 2005) as an overarching or holding framework that expands the LG's point of reference of the immediate researcher-participant relational dyad. Rather, my listening will also attune to the wider and deeper (i.e., internal) relational field within which participants' leadership narratives are situated.

Positionality

Researcher reflexivity is integral to the LG methodology. At each step of the research process—the interview, analysis, and interpretation phases—the researcher's experience is considered to be part of the meaning and sense making process (Bright, 2016; Gilligan, Spencer, et al., 2006). This will require me to monitor and document my responses throughout the inquiry process as well as represent this in the analysis and interpretation phases. In the spirit of this, I

start this research journey with the following reflections regarding my relationship to IPNB and decision to pursue this particular focus for my research.

Knowledge

I have not arrived with this research topic from an objective, neutral stance. I discovered IPNB approximately twelve years ago. I was immediately drawn to the field having studied and practiced from a relational framework in my work as a mental health practitioner and therapist. From early on in my career I came to integrate the understanding that relationships are essential to healthy development and well-being across emotional, mental and physical dimensions; this ran counter to many psychological theories I was schooled in, which were based upon Western notions of autonomy and independence as hallmarks of healthy functioning (Baker Miller & Pearce Stiver, 1998; Robb, 2006). When I encountered IPNB I was immediately intrigued. Not only was it a relationally based framework, it also appealed to my latent fascination with biology and neurobiology. IPNB has been dubbed *relational neuroscience*, referring to it being a “scientifically grounded paradigm concerned with how we shape one another’s brains throughout our lifespan” (Badenoch & Pearce-McCall, 2012, p. 3). It extended my knowledge about healthy development and well-being and validated my belief that humans are embedded in, and shaped by, relationships. In addition, I was drawn to IPNB’s understanding and harnessing of the power of the mind through targeted practices in order to foster change in clinical and nonclinical populations. In fact, when I discovered IPNB I had just embarked upon a personal exploration of mindfulness and the potential it held for my own well-being. I was intrigued by IPNB’s scientific rigor and interdisciplinary view that I found both challenging and highly effective clinically.

Since, I have been fortunate to not only study this field with some of IPNB’s preeminent scholars and practitioners, but I have also been blessed with an opportunity to be on the Board of

Directors, currently as the President, of the Global Association for Interpersonal Neurobiology Studies (GAINS). Through my involvement with this organization I have had the good fortune of making acquaintance with the founders of IPNB, including Dr. Daniel Siegel, Dr. Louis Cozolino, and Dr. Allan Schore along with studying with and appreciating the written work of other practitioners and authors including Dr. Bonnie Badenoch, Dr. Steven Porges, and Dr. Debra Pearce-McCall.

Practice, Development, and Identity

Given I will be exploring participant's development across participants' practice, development and identity, I will situate myself accordingly. I will trace this across my experience within place, time, and space, given these are three realms of each participant's narrative that I will use. The significance is to understand more fully the dimensions of IPNB-informed leadership development, which has potential to inform teaching and learning this complex, multi-dimensional frame. In keeping with the LG requirement for researcher transparency and participation I offer the following reflections.

Place

While I have been utilizing IPNB in my practice as a psychotherapist, my current explorations have turned to understanding how this field is/is not useful in leadership development and organizations. The intrigue that drives this inquiry has deepened throughout my doctoral journey. At the time of deciding this focus for my dissertation, I was working in a traditional, top-down, medical-model dominated organization. I grappled with doing research focused on change within this rigid system of care or, focusing on an area that breathed life into my being. The former was energized by my deep desire to foster change in a system of healthcare provision that was devoid of caring for relationships and the subjective experience of

those who utilized its services. My decades-long employment in this system had brought me to a time of significant internal distress and exhaustion. While I had been able to join with others in regional and provincial efforts to lead change, it was without the necessary resources and receptivity from those any who had the capacity to make structural (i.e., programs and services) changes that were so desperately needed. In fact, after years of effort, those in authority began to peel back and dismantle what little services we had long fought for. I simply had no more fight in me and decided it best to choose a research topic that ignited my passion.

Since then, I have transitioned into a demanding and challenging leadership position, which has tapped into my curiosity about the application of IPNB to my leadership practices, as well as organizational processes. Therefore, my IPNB-informed leadership development has taken place in the clinical work that I do as a psychotherapist in my private practice, as well as my leadership this role as a manager in a Canadian non-profit mental health organization.

Space

When allowed reflective space, IPNB touches down deeply. It challenges and transforms. As an IPNB-informed practitioner and leader I have been changed profoundly by the experience of intentional focus and practice, which has changed my mind, embodied brain, and relationships with others and within myself. I have come to understand my experience moment by moment, through the development of awareness and the harnessing of consciousness with a specificity that has transformed the neurobiological structures and functions in my body and brain. Through this I have developed the capacity to enter my internality with insight, compassion, and kindness, essential for integrative capacities such as curiosity, openness, acceptance, and love (Siegel, 2012b).

This dissertation process also impacted my awareness and understanding of the relational spaces between within the organization as well as the relationships between individuals, teams, and programs. It has been essential that I understand these relationally dynamic spaces and how they give rise the culture of the organization, which was fraught with conflict and low trust, when I entered the management position. Additionally, I am the only person on the leadership team who knows this framework and is striving to integrate it how I practice as a leader. I notice the impact in multiple ways. For example, seeing my focus blur as I am pulled this way and that by systemic and historical practices that serve to disintegrate and exacerbate dynamics leading to chaos or rigidity. I also do not have a shared language with my management colleagues and, although our value for person centered care is congruent, there are times where attention to the relational in between is lacking resulting in disconnection. However, as I develop as a leader dedicated to the promotion of relational wellness at micro, meso, and macro levels, as well as the integrative practices that make this possible, I am creating internal and organizational spaces where I connect with, and foster processes, informed by IPNB principles.

Time

My commitment to relationally centered practice has been with me since I discovered it early in my career nearly four decades ago. Time has given me the gift of discovery and the means to meet with IPNB teachers, mentors, and colleagues. Over time, I have become more knowledgeable about IPNB and have allowed the principles to seep into my being and inform my doing. I have found new relationships and workplaces that have provided the landscape of my learning. These landscapes have stretched me as I embrace the responsibilities that come with leadership. Time has also given me opportunities to build internal capacities to meet new challenges with an embodied mind that continually expands, contracts, and expands again.

Outline of Subsequent Chapters

The following offers a brief outline of the chapters as they appear in this dissertation.

Chapter II: Literature Review

In this chapter, I will define and explain key features and principles of IPNB, which have significance to the field of leadership and organizations. The field has grown exponentially in the past twenty years; therefore, any account of the expansive literature now considered to be a part of the IPNB canon will be incomplete. For example, when I first encountered IPNB there were ten texts in The Norton Series on Interpersonal Neurobiology, which is the main publisher of IPNB texts; now, the series is nearing seventy books featuring applications in mental health, trauma, parenting and teaching, couples work, therapeutic applications, to name a few.

Clearly, IPNB is a vast and growing field with concepts and applications beyond the scope of this dissertation. In order to focus this literature review I have chosen to focus on key principles discussed by leadership scholars and practitioners. This will include definitions of these key principles as well as explore how these reflect and expand understanding of human experience. I will then explore the ways these have been applied to leadership and organizations in the existing literature.

Chapter III: Methodology

This chapter will explore the relevance that narrative inquiry brings to this research project. In doing so, I will provide a brief overview of narrative philosophy and history along with my rationale for choosing it as the general approach to this research. I will then outline the specific methodology I will be using: The Listening Guide (LG) methodology, which is well suited to this inquiry because it allows for a multi-dimensional and relationally embedded exploration of IPNB-informed leaders experience. I will explore the methodology's applicability

in answering the research questions, exploring how it provides for a rich and nuanced discovery process that will be necessary in capturing the depth and breadth of IPNB's potential in leadership and the steps involved.

Then, I will outline and explain each of the guide's analytic listening steps and how these will be applied to this particular research. In doing so, I will expand upon the original LG listening steps by integrating three additional perspectives, which I will assert are necessary in order to capture the complexity of IPNB and the implications this framework has for leaders. Specifically I will explain and incorporate specific components of Dialogical Self Theory (Hermans & Gieser, 2012); Relational Dialectics (Baxter, 2004a); and Dynamic Systems Perspective (Daiute, 2014). I will present how the certain aspects of these theories will enhance the LG's steps and why it was necessary to enhance the original methodology in order to capture the complexity that IPNB brings to leadership and organizations.

Chapter IV: Findings

The primary purpose of this chapter is to introduce the twelve participants. It mirrors IPNB's notion of integration, whereby differentiation must occur before linkage. In other words, this chapter will focus on differentiating each person's experience of IPNB in leadership and organizations before linking the findings in the chapter that follows. This will provide readers with the opportunity appreciate the different ways in which leaders and leader consultants view and use IPNB in their practices before linking the findings back to the research questions, which bring coherence to the inquiry process as a whole (to be discussed in Chapter Five).

In keeping with the LG tradition, the introduction will include locating the interview relationally, highlighting the context of how I know the individual as well as reflections on the interview's relational tone, as I perceive it to be. This is an essential part of the LG process,

which acknowledges not only the influence of the researcher on all stages of the inquiry process, but also the significance of the relationship between researcher, participant, and the context within which the conversation is embedded (Paliadelis & Cruickshank, 2008). Drawing from Heidegger's (Heidegger, 1927/1962) examination of hermeneutics, LG researchers account for their own experience and the potential impact this has for their interpretation of participants' experiences throughout the analysis and interpretations phases (L. M. Brown et al., 1989). I will explore the dominant themes and plot lines, revealed through the first listening, in each person's narrative, which were primarily revealed through the first listening step. Then I will highlight examples of each individual's voice-poems, from the second listening step, attending to the relational embeddedness of their positionality and identity. Finally, the third listening's main contrapuntal theme(s) that have implications for each leader's development will be shared.

Each of the participants have been given these summaries and received an opportunity to comment—whether additive or clarifying. This was a necessary step to assure my listening and representation of their story is accurate. In addition, it provides an opportunity for each person to ensure they are comfortable with the details revealed, particularly for those who are in the public arena and may be identified by the information therein.

Chapter V: Analysis and Interpretation

This chapter will organize the inquiry according to the implications IPNB has had for participants' practices, development, and identity. In addition, it will explore how organizational leaders have utilized IPNB at meso and macro levels. For example, within the organization, between the organization and community as well as larger systems. This chapter will explain how the dominant themes that emerged through the first listening step impacted these leaders and

consultants' practices. It will feature themes that are shared across the narratives as well as those that diverge. Both have been informative.

The first listening will be utilized in the interpretation of how participants' development has been impacted by IPNB. However, the third listening step, which identifies contrapuntal themes that the participants' have grappled with, will serve to understand thematic tensions that have propelled their development forward. This will provide a deeper lens into these leaders' and consultants' developmental journey than simply understanding knowledge acquisition. This is in keeping the developmental view offered by a Dynamic Systems lens, which considers how change over time through the ever dynamic, interdependent interactions between and among components of systems (including within the body and between individuals and groups) (Lunkenheimer, 2018). In addition, when called for, participants' voice poems from the second listening will be used if necessary and additive.

The voice poems that emerge from the second listening will form the backbone of understanding participants' leadership identities. This is a multi-voiced perspective that will uncover the shifting relational positioning of these individual's identities. It will feature each person's unique voice(s) and draw implications for understanding how these leaders and consultants position themselves within the relationships they identify as significant.

Finally, in order to better understand how IPNB has been utilized in organizations, all three listenings will be used to uncover key implications. Given not all participants are organizational leaders, this section will feature those are in addition to any other reflections about IPNB's significance for systems and/or fields. For example, the medical field.

Chapter VI: Reflections on the Research Implications and Methodology

Finally, the sixth chapter will provide my reflections on the research as a whole. Drawing on the fourth listening step, this chapter will include commentary about how the findings and interpretation serve the purpose of this inquiry and the research questions. I will offer ways that this research contributes to the field of IPNB leadership and implications for organizational and systems functioning as well as change. This will also explore implications for leadership practice, development, and identity. I will comment on the potential for future research, which will feature an exploration of the applicability of the enhanced LG methodology to IPNB research. Finally, I will offer comments on the limitations of this research.

Conclusion

This is the first systematic inquiry that seeks to understand what, who, when, where and how IPNB has influenced leaders and leadership consultants practices, development, and identity. In addition, it explores the implications IPNB has for organizations, and larger systems. While IPNB leaders and scholars have written about IPNB's applicability to these arenas at conceptual levels and anecdotal accounts of the frameworks usefulness to the field of leadership, little is known about how leadership practitioners are actually experiencing this integration. The LG also provides a unique, multi-layered lens that offers an opportunity to dive below the words that are spoken in ways that reveal the embodied and relational realms of participants' experience. This provides an opportunity to not only explore these leaders' and consultants' consciously held responses, but also reveals nonconscious positions and themes that will reveal the complex implications and potential that IPNB holds for leadership and organizations. As a result, offering comment on how this enhanced LG methodology is particularly suited to IPNB research will be an additional benefit of this inquiry process.

CHAPTER II: LITERATURE REVIEW

Interpersonal Neurobiology (IPNB) is a relatively new field that brings together multiple disciplines in order to understand what it means to be human across various domains of experience across. Recently, the principles of IPNB have also been used to understand the natural world and the current climate crisis (Siegel & Goldstein, 2019). Dr. Daniel Siegel (1999, 2012a, 2020b) is the most recognized IPNB founder and scholar, who, between 1990 and 1995, began to explore the nature being human in conversation with forty academics and clinicians from many disciplines including physics, neurobiology, philosophy, computer science, psychology, sociology, biology, and anthropology (Siegel, 2017). Later, Siegel, along with Dr. Allan Shore (Schoore, 1994) and Dr. Louis Cozolino (Cozolino, 2002), began to explore human reality more deeply, asserting the fundamental interconnectedness of mind, brain, and relationships. Since those early explorations, many other researchers, scholars, and clinicians have joined efforts to expand IPNB through research and applications of principles, primarily in the field of mental health (Badenoch, 2008; Cozolino, 2010; Dana, 2018; Fosha et al., 2009; Gantt & Badenoch, 2013; Montgomery, 2013; Stern, 2004). In addition, IPNB has been applied to teaching and school settings (Cozolino, 2014a; Olson, 2014) as well as parenting (Siegel & Hartzell, 2003; Siegel & Bryson, 2011, 2018).

There has also been growing interest in applying IPNB to the field of leadership, with a handful of concept papers published in journals for members of the Global Association for Interpersonal Neurobiology Studies (mindGAINS, n.d.) and The NeuroLeadership Institute (2022). Further, IPNB has been integrated with other approaches to leadership in healthcare (Suchman et al., 2011; Ungerleider & Dickey Ungerleider, 2018) as well as consulting and coaching (Betz & Kimsey-House, 2015; Gus et al., 2015; Kimsey-House & Kimsey-House,

2015). In the past few years, Siegel has given oral presentations about IPNB and leadership with Dan Goleman (Goleman & Siegel, 2016) as well as other conferences or seminars (Goleman & Siegel, 2016; Siegel, 2015a, 2015b; Siegel & Goleman, 2016). In this chapter, I will identify, define, and explore key foundational IPNB principles that scholars, leaders, and leadership consultants have identified as having relevance to leadership and organizations. This literature review provides the foundation for this research project.

Introducing IPNB Foundational Concepts in Leadership and Organizations

As mentioned, IPNB is an interdisciplinary field that many of suggested holds potential as a framework to understand leadership and organizations. This chapter will explore the existing literature outlining some of the ways leaders, as well as leadership coaches and consultants, have applied and approached leadership and their organizations. I will touch on key concepts and principles that appears in this literature; this will be necessary in understanding the narratives of participants. In the course of my literature review, I did not find one published empirical study that explored or described the use of IPNB in leadership and organizations. Therefore, this chapter is drawn from books, articles, and webinars that explore the potential use, or describe anecdotal accounts, of IPNB in leadership development with applications to understanding and facilitating integrative processes in organizations.

Integration

As indicated, one of the foundational and overarching principles of IPNB is *integration*. This is defined as, “the linkage of differentiated parts” (Siegel, 2017, p. 253). IPNB considers integration across all dimensions of human experience including the internal domains of the individual person through to complex human and natural systems. Therefore, scholars have proposed its usefulness in leaders’ personal and professional development as well as applications

in organizations (Goleman & Siegel, 2016; Pearce-McCall, 2007, 2008; Siegel, 2015a).

Integration is grounded in complexity science, which recognizes that organic living systems are open to external influence and are thus chaos capable (Siegel, 2017, 2020b). Living systems are nonlinear and self-organizing, which means that interactions between the differentiated elements of the system are interconnected and dynamic, influencing and shaping the ever-changing structure and flow of energy and information across time (Siegel, 2012b).

There have been extensive applications of this concept in the field of mental health (Badenoch, 2008; Cozolino, 2010; Porges, 2011; Schore, 2003; Siegel, 2010b). From this perspective, health *is* integration where the differentiated parts of a system are linked creating a felt-sense of harmony (Siegel, 2010a, 2020). In contrast, Siegel (Siegel, 2010b, 2020) has demonstrated that physical and mental distress/illnesses can be understood as impairments in integration. For example, Siegel (2017) describes how he examined the diagnostic categories of mental illness in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013) utilizing this framework discovering that “every symptom of every syndrome could be re-envisioned as an example of chaos or rigidity” (p. 77). Unless regulated, mental and/or emotional distress can be expressed as chaotic symptoms such as the intrusive hallucinations found in schizophrenia or frenetic thoughts and emotions of mania, or the rigid experiences of slowed thought and lack of motivation in depression. In addition, integration is used to understand distress and wellness in nonclinical populations.

Given integration as a foundational principle of IPNB, I wished to understand whether and how integration was a principle of leaders approach to their practices, development and identity. It has been proposed that integration supports leaders in understanding their own functioning as well as that of their followers and the systems in which they lead (Siegel &

Pearce-McCall, 2009). Each individual in an organization, as well as the organization as a whole, are considered to be complex living systems. Therefore, understanding the implications that integration has for leaders and their organizations is foundational and critical. I expanded upon this through listening to the voices of leaders as they described how, when, where, and why they used this principle in their work.

Integration as a Verb: The FACES Flow

According to IPNB, an integrated system is an alive and dynamic complex system. Complexity is fostered in living systems through the process of self-organization. This occurs where and when the *differentiated* elements of the system are *linked*, creating energy and information flow across time in ways that are *flexible, adaptive, coherent, energized, and stable* (FACES) (Siegel, 2012b). Healthy and optimally functioning complex systems have the capacity to be responsive to inputs, whether growth-promoting or challenging. The term coherence is derived from computational mathematics and describes the self-organizing flow or movement of the river across time whereby the elements of the system are connected (C), open (O), harmonious (H), engaged (E), receptive (R), emergent (E), noetic (N), compassionate (C), and empathic (E) (Siegel, 2012b). Further, emergence refers to “something arising in new and ever changing ways” (Siegel, 2012b, p. 16-5); noesis is linked to “a sense of deep authentic knowing” (Siegel, 2007, p. 165). A coherent system is one that is resilient across change and time (Goleman & Siegel, 2016). This also involves the dynamic interplay between the system’s elements, which generate energy, while remaining stable. It has been suggested that leaders are considered essential for the optimization of not only their own internal systems, but also that of the organization’s emergent, self-organizing FACES flow across time (Siegel & Pearce-McCall, 2009). Therefore, as I listened to leaders’ voices, I attuned to whether leaders utilized this

principle in their own leadership experience as well as their organizations and the implications it had for their practice, development, and identity.

Integration as a Noun: The River of Integration

To depict integration, Siegel (2010b, 2012b, 2020) uses a metaphor of a *River of Integration*, which represents the harmonizing experience of integration as a river with each shoreline flagging the sides depicting deviations from integration with *chaos* on one side and *rigidity* on the other (Siegel, 2012b). The metaphoric river can be used to illuminate the emergent and dynamic internal aspects of human experience (mind and embodied brain) as well as external relationships. For example, an individual can assess their own experience through a FACES lens whether his/her state is integrated (i.e., flexible, adaptive, coherent, energized, and stable) at any given moment or disintegrated (i.e., chaotic or rigid). Furthermore, integration can be used to illuminate the dynamics within and between people or larger systems, such as the organization (Hill, 2008; Pearce-McCall, 2008).

The River of Integration serves as a useful metaphor to understand how non-regulated states of mind move across the shorelines of chaos or rigidity, or sometimes a combination of both. It has been proposed that the river metaphor can assist leaders in directing their actions to integrating and integrative practices (Siegel & Pearce-McCall, 2009). Thus, the leader's job is to recognize when this occurs and provide support for the movement (self, others, organization) into the river through honouring and honoring differences, while also supporting linkages (Pearce-McCall, 2007). Siegel and Pearce-McCall (2009) suggest it is the leader's responsibility to steer the organizational boat, navigating the unseen waters through relational attunement, collaboration, communication, and the facilitation of regulation within themselves and among the crew (the organization's members and teams). Playing on this same metaphor, author

Richard Hill (2008) refers to leadership as *the unseen rudder*. He states that the leader's role is to promote processes that regulate energy and information of the group mind of the organization, which is evident in the vision, dreams, wants, and passions of its members.

Integration as a Framework for Leaders and Organizations

IPNB scholars have suggested numerous integration-promoting principles derived from neuroscience, which are essential to integration. Highly effective leaders not only need to bring focus to *what* they do, but also *how they are* attending to the qualities they bring to their relationships with others as well as within themselves (Pearce-McCall, 2007; Siegel & Pearce-McCall, 2009). Integration can illuminate a leader's own functioning and development along with their relationships with others (Pearce-McCall, 2007, 2008; Siegel, 1999, 2007). Attending to the development of greater self-awareness as well as social or relational awareness is considered foundational to the leader's capacity to facilitate an organizational culture that promotes integration (Goleman & Siegel, 2016; Kryder, 2009; Pearce-McCall, 2008; Phipps, 2009). Goleman and Siegel (2016) state that integration is like a fruit salad with each element retaining its uniqueness rather than a fruit smoothie where there is linkage without maintaining the distinct elements that make up the whole. This suggests that at the individual level, leaders need to develop the capacity for awareness of the different aspects of their internal experience. At the organizational level, leaders need to be and act in ways that are grounded in relational processes such as empathy, compassion, and curiosity, motivated by meaning beyond survival along with connection beyond the self (Goleman & Siegel, 2016).

Applied to leading organizational change and processes Siegel and Pearce-McCall (2009) state that in order to optimize self-organization leaders need to guide and facilitate an organization's movement towards greater complexity, which is metaphorically found *in the*

river. These authors suggest it is the leader's responsibility to steer the organizational boat, navigating the unseen waters through relational attunement, collaboration, communication, while facilitating regulation within themselves and among the crew (the organization's members and teams).

In this way, leadership is focused on supporting the organization's structures, functions, and processes towards greater FACES capabilities. This is achieved by first assessing the presence and degrees of disintegration; the ways that the organization is either stuck in rigidity such as old patterns, avoidance, or being governed by rules; or caught up in chaos, which can manifest in ways like disorganization, constant crisis, or lack of clear vision. For example, an integrated organizational system is both changing and stable. Siegel and Pearce-McCall (2009) state that creativity and innovation occur when leaders and their team members have a sense of identity while enacting the capacity to respond to internally and externally imposed demands that may take them "near the chaos bank, but with enough order, familiarity and sense of mission to return to a FACES flow" (p. 4). The authors go on to describe that organizations can become rigid and fail to navigate these shifts and changes, which are necessary and essential to integrative functioning. Further, an organization mired in chaos is lacking linkages. For example, imagine an organization high in conflict and low in trust. The chaos created by interactions governed by dysregulated thoughts, feelings, and behaviours, without empathy, listening, and responsive communication (contingent communication), hinders an organization from moving forward.

As stated, complex systems are open systems and are subject to influence. Healthy and optimally functioning complex systems have the capacity to be responsive or flexible as well as adaptive in response to inputs, whether growth-promoting or not. Integration also involves the

dynamic interplay between the system's elements, which generate energy (the "E" in FACES), while remaining stable (S). This has implications for leaders who are called to optimize not only their own internal system(s), but also that of the organization's emergent, self-organizing FACES flow across time and in space (Siegel & Pearce-McCall, 2009). Guided by the principle of integration, leaders' can promote optimal functioning by honouring differences and promoting linkages or connections across these differences among employees, teams, and the organization. Examples, of this are developing employee and team capacity for respect, empathy, and open communication. This optimizes health and harmony in the organizational system and promotes movement towards maximum complexity (Goleman & Siegel, 2016; Pearce-McCall, 2009).

Simultaneously, leadership is focused on supporting the organization's structures, functions, and processes as well as its culture towards greater FACES capabilities. An integrated organizational system is both changing and stable. Utilizing the FACES acronym to describe organizational integration, Siegel and Pearce-McCall (2009) state:

Imagine how an organization in this mode can respond to internal and external shifts and demands in ways that maintain its core identity, while reinforcing the self-organizing development of the entity towards complexity and integration. Creativity and innovation often require some trolling near the chaos bank, but with enough order, familiarity and sense of mission to return to a FACES flow. (p. 4)

The authors go on to describe how organizations inclined to rigidity (linkage or sameness without differentiation) fail to navigate these shifts and changes, which are necessary and essential to integrative functioning. Further, an organization mired in chaos lacks linkage across different elements. For example, imagine an organization high in conflict and low in trust. The chaos created by interactions governed by dysregulated thoughts, feelings, and behaviours without the mitigation of empathy, listening, and responsive communication (contingent

communication), which would provide connection and linkage, hinders an organization from moving forward.

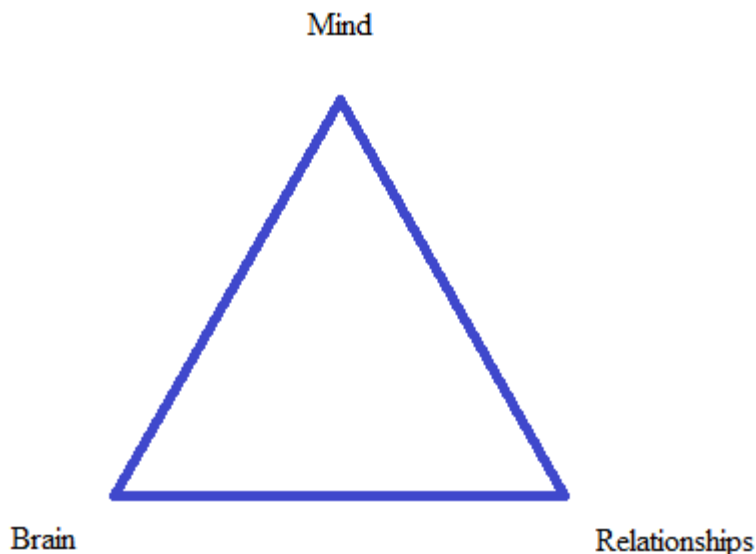
Mind, Embodied Brain, and Relationships: The Triangle of Well-Being

According to Siegel (2010b, 2012b, 2020), human reality can be understood across three irreducible and interconnected primes of experience: mind, brain, and relationships. This is a foundational concept in IPNB; this suggests that any discussion of IPNB-informed leadership is likely to consider the implications of understanding human reality from this perspective.

Therefore, my listening during the analysis phase was attuned to understanding how IPNB-informed leaders use this principle in their practice and development.

Integration emerges through the ever-dynamic process of differentiation and linkage within and between each prime, represented on each point of the triangle (see Figure 1). It has been proposed that leaders can use the triangle metaphor to guide inquiries into each of these primes (differentiation) at individual, team, and organizational levels (Siegel & Pearce-McCall, 2009). As well this metaphor can assist leaders in the promotion of linkages between each prime, which serves the facilitation of integration. This suggests that the Triangle of Well-Being offers a visual metaphor that illuminates internal and interpersonal dynamics within organizations pointing to leaders learning *how* to lead more than *what* to do. This teaches leaders how to fish rather than giving them the fish, which has been a key distinction in IPNB-informed leadership practice literature (Goleman & Siegel, 2016).

In order to understand integration across these primes more fully, each prime is defined next, along with a deeper look at how these elements are linked in shaping the dynamic and complex world of leadership and organizations.

Figure 1*Triangle of Wellbeing*

Note. Depicts three irreducible and interconnected primes of human experience. Used from *Pocket Guide to Interpersonal Neurobiology: An Integrative Handbook of the Mind*, by Daniel J. Siegel, 2012, p. F-7. Copyright W.W. Norton & Company, Inc. Used with permission.

Mind

IPNB considers mind to be an emergent process that regulates energy and information within the leader’s brain as well as the brains of others within the organization (Pearce-McCall, 2008). IPNB challenges the commonly held notion that the mind is the outcome of brain activity (Siegel, 2013b). In IPNB mind is defined as “an embodied and relational process that regulates the flow of energy and information” (Siegel, 2012a, p. 2). Derived from physics, the term energy refers to “the potential to do something” (Siegel, 2017, p. 31); for example, to take action, to create and innovate, and to move (Siegel, 2012b). However, it also refers to internal processes such as the electrochemical energy of the nervous system, the kinetic energy of the voice box,

and mechanical energy of the eardrum (Siegel, 2012a). Energy waves come in many forms that flow and emerge moment-by-moment, in varied frequencies and distributions, forming patterns that contain information (Siegel, 2017). Information is defined as “swirls of energy that have symbolic meaning” (Siegel, 2012a, p. 6). For example, the words on this page symbolize different shared meanings. Siegel (2013a) states,

when patterns of energy contain information, it indicates that the patterns mean something beyond just the sensation of the energy itself. Words are carried on energy patterns, yes, but they are patterns that contain information. Information is when energy flow represents something – it *re*-presents it to us. (p. 46, emphasis in original)

Flow refers to how the patterns of energy and information change and emerge over time (Siegel, 2017).

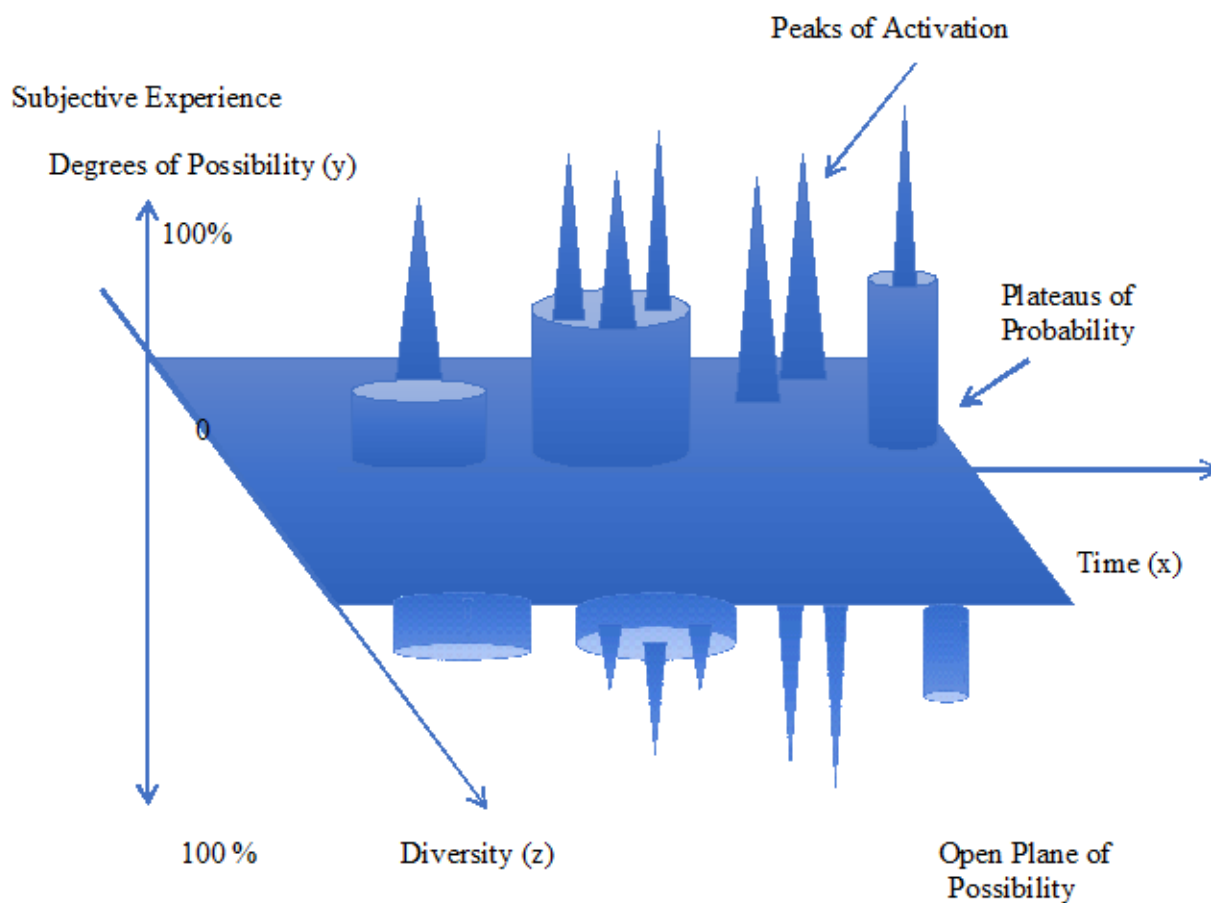
An integrative and integrating mind moves to maximize complexity and coherence through recursive, self-organizing processes (Siegel, 2017). Goleman and Siegel (2016) state that leaders need to be aware of their own mindscape, the mindscape of others, as well as *mindsphere*, which he describes as the big picture organizational and larger global systems view. The notion of mindscape includes both the conscious and non-conscious elements of mind; for example, not only what is readily seen but aspects of human experience like motivation; attachment; activation, etc. (Goleman & Siegel, 2016). It is the leaders responsibility to cultivate and facilitate open and receptive states of mind, which are key to this practice (Goleman & Siegel, 2016).

Taking a deeper dive into these states, Siegel (2010b, 2012b, 2017) has created a dimensional graph called the *Plane of Possibility*, which depicts conscious experience (see Figure 2). The graph represents how subjectivity and neuronal firing intersect across diverse experiences; as well it shows how awareness shapes these two aspects into conscious experience. The graph features an open plane at zero where the x-axis and y-axis meet; this is where

consciousness is focused in the present moment and held in a receptive state allowing all possibilities to occur. Moving up the y-axis, plateaus are depicted on the graph to represent that the human system is primed by memory, learning, and expectations to anticipate, and thus shape, events to occur. The graph also shows peaks of probability as the mind activates and neurons fire in specific patterns of thought, emotion, motivation, and action, etc. The plateaus and peaks of conscious and non-conscious subjective experience sit above the plane and the accompanying neural correlates are depicted below. Consciousness and neural firing vacillate from the open plane to plateaus and peaks in a continuous fashion across time.

The Open Plane of Possibility depicts human experience across multiple dimensions including subjectivity (above the plane) and neural firing (below the plane). The plateaus represent the priming of the mind and embodied brain by past experience, memory, learning, emotional, and neural patterns, which facilitate and shape energy and information flow across mind, brain, and relationships. The peaks of activation represent specific neural activation and consciousness awareness in the present moment.

According to Goleman and Siegel (2016) this framework is helpful in guiding leaders to facilitate their own and others' capacities to move onto the Open Plane of Possibility where emergence transpires. This metaphor depicts how leaders can attend to the ways their minds and neural mechanisms may be primed to interpret experiences and act in ways that may or may not benefit their intended purposes (Siegel & Pearce-McCall, 2009). For example, memories can activate both consciously (explicit) and non-consciously (implicit) creating a plateau of expectations, neurophysiological response, and emotional valence, which impacts perception of current events or situations (Siegel, 2012b).

Figure 2*Plane of Possibility*

Note. Reprinted from *Pocket Guide to Interpersonal Neurobiology: An Integrative Handbook of the Mind*, 2012 by Daniel J. Siegel, p. F-11. Copyright W.W. Norton & Company. Used with permission.

Mindsight equips leaders to develop the capacity to monitor their own internality so that they can become conscious of their neurophysiological and mental (thoughts, emotions, beliefs, expectations, motivations, etc.) peaks and plateaus at any given moment (Pearce-McCall, 2008; Siegel & Pearce-McCall, 2009). Mindsight is a term coined by Siegel (2012b) to represent “[t]he ability to perceive the internal world of the self and others ... Mindsight is the ability to *monitor*

[emphasis added] energy and information flow in the body and in relationships then to *modify* [emphasis added] that flow toward integration” (p. A1–52). The insight gleaned assists leaders to be able to modify observed dysregulated states through practices that not only consciously modify the mind, but the neural firing patterns in the embodied brain. For example, Siegel (Siegel, 2010b, 2012a, 2012b, 2017) has created a *Wheel of Awareness* (WOA) practice where the hub of a metaphoric wheel represents the practice and state of being aware. Spokes, representing the focus of attention, extend from this hub towards the rim, which signifies that which we are aware of, and can originate in the hub or be externally activated by any of the infinite elements on the rim. The WOA practice is a systematic awareness process where attention is purposefully focused towards plateaus and peaks across four dimensions: the five senses; interoceptive experience (noticing the internality of the body including muscles, bones, viscera); mental life (thoughts, feelings, beliefs, moods, motivations, expectations, etc.); and relationships. Offered as a mind and brain training practice, the WOA process is highly integrating across mind, embodied brain, and relationships (Siegel, 2012b). Goleman and Siegel (2016) suggest that leader development is served through their integrative capacities, as described by the FACES flow, which can be cultivated through this mindsight practice. This not only serves them intrapersonally, but also interpersonally; for example, interoceptive awareness serves the development of neurobiological networks involved in empathy, (Badenoch, 2008; Cozolino, 2014b; Iacoboni, 2008; Montgomery, 2013; Siegel, 2012b) considered a foundation for emotional intelligence, a widely applied concept of leadership qualities.

As stated, it is the leader’s job is to take the organization from the reactivity of chaos and rigidity to responsivity, which rests upon his/her internal and relational capacity for differentiation and linkage (Goleman & Siegel, 2016). This is facilitated by the leader’s

self-awareness as well as their understanding of neurobiological and relational factors that come into play moment by moment (Pearce-McCall, 2008, 2009c; Siegel, 2015a; Siegel & Pearce-McCall, 2009). Mindsight is considered to be one of the fundamental capacities and skills that leaders can develop in order to facilitate this ability (Goleman & Siegel, 2016; Siegel & Goleman, 2016; Siegel & Pearce-McCall, 2009). Like a tripod that steadies a camera lens, the three-legged qualities of *openness* and *objectivity*, along with the skill of *observation* are considered fundamental to steadying the mindsight lens (Siegel, 2010a, 2010b). Openness suggests that leaders cultivate the ability to be receptive, which requires the capacity to monitor for reactive states; objectivity refers to the capacity to disidentify from that which is being observed, whether it be an internal experience or external; and observation is the practice of attention and bearing witness to experience. Mindsight brings awareness and perception below “the surface level of object-filled physical spaces that surround us” (Siegel, 2013b, p. 49).

Further, developing a mindsight lens allows for the recognition of internal states that cross the shorelines into chaos or rigidity as well as provides the facility to differentiate the elements of our internal life then link them, which is fundamental to personal integration. In fact, research has found that the very act of monitoring or recognizing disintegrated internal states, along with describing them to oneself or another person, can modify and regulate them (Siegel, 2020). For example, neuroscientists and researchers Creswell, Way, Eisenberger, and Lieberman (2007) found increased cortical control of dysregulated affective states through a practice called *name it to tame it*, which promotes approach states rather than avoidance. This practice involves monitoring or noticing the emotional state and describing or naming it. This also promotes a resilient state in the brain allowing individuals the capacity to move towards rather than away from challenge (Siegel, 2010b). This, among other mindsight practices, are considered to be a

core quality for leaders who are called upon time and again to face complex problems (Kryder, 2009; Siegel & Pearce-McCall, 2009).

Practicing mindsight facilitates the development of a *mindsight map*, which is “kind of a picture inside ourselves of our inner mental life—the feelings, thoughts, and perspectives of others or ourselves” (Siegel, 2013a, p. 42). Mindsight maps enable a reflective or observational stance, which allows for a dis-identification from the phenomenon being experienced; this creates an opening for new understanding and insights to emerge. Organizational integration is well served when leaders develop mindsight maps not only of their own internal experience, but also of their followers as well as the relationships they co-create. Siegel (Goleman & Siegel, 2016) describes this as developing *mindsight maps of me*, *mindsight maps of you*, and *mindsight maps of we*.

In sum, according to the literature, a leader’s mindsight can facilitate integration internally, in relationships with others, and organizationally through the cultivation of greater understanding of the primes of human experience (Pearce-McCall, 2007, 2008; Pearce-McCall, 2010; Siegel & Pearce-McCall, 2009). In order to truly understand how this is implemented, however, it is imperative that leader’s voices be considered. For example, this research provided an opportunity to hear about leaders use of IPNB principles and practices. Are they consciously engaging in practicing mindsight? If so, how are they doing so and do they believe it to be of benefit? Is this a personal practice only? Or, are leaders actively teaching others in their organizations to do so as well? These questions, among others, informed how I attuned to participants use of mindsight practices in order to understand how the leaders and consultants I spoke to are using IPNB.

Embodied Brain

There are key neurobiological mechanisms that have been considered in leadership. Given the ever-expanding research into the brain and nervous system, a full understanding of relevant neuroscience and the neurobiological underpinnings for leadership is beyond the scope of this paper. Therefore the goal of exploring this prime, is to provide enough depth and breadth to be relevant to this particular research endeavor. This discussion will be anchored in a brief exploration of recent technological advances that have made this knowledge possible. Then I will expand on key neurobiological considerations that have been suggested in IPNB leadership literature given these may have relevance for participants in this research. This will include a literature review of how IPNB scholars and leader practitioners have applied brain science. I devote a section to neuroplasticity given it has found particular relevance in leadership literature. Finally, IPNB brings a relational lens to neuroscience research. Given this, I will bridge this discussion to exploring relationships with a brief discussion of the neurobiology of safety, which has been included and considered critical to leadership in IPNB literature.

The Brain Defined. As discussed earlier, IPNB defines the brain as: “the neural mechanism that shapes the flow of energy and information” (Siegel, 2012b, p. AI–11). This energy and information flows bi-directionally within the brain as well as between the brain and body. The latter occurs via neural pathways that travel vertically from body to brain and brain to body. This occurs via Lamina 1 in the spinal cord and the vagus nerve (Siegel, 2012b). The latter occurs through afferent (sensory neurons that carry energy and information towards the central nervous system and brain) and efferent (motor neurons that carry energy and information from the central nervous system and brain to muscles) in the spinal column (Montgomery, 2013; Porges, 2011; Siegel, 2012b, 2017). As well other regulatory molecules like hormones and

peptides have been found to interface with the embodied brain via cerebrospinal fluid and blood (Pert, 1997; Siegel, 2010a). Further, research into the gut-brain connection has established the link between brain and body. For example, links between the gut microbiome and health, including brain health, have been found with implications for mood, perception, and cognitive clarity (Perlmutter, 2015). In addition, research has found disruption in heart rate variability (HRV), caused by chronic activation of the threat response, is not only linked with functional bowel disorders and chronic diffuse pain disorders, but also with psychological and mood difficulties such as anxiety and panic (Kolacz & Porges, 2018).

The Decade of the Brain and Beyond. Research into the brain has been limited by the technological capacities available. Since the 1990's discovery of the fMRI technological advancements continue to be made and with this a growing understanding about the neurobiological underpinnings of mind and relationships. More recently, the National Institute of Health has funded the Human Connectome Project (HCP) (Glasser et al., 2016), which has advanced the capacity for neuroscientists to understand the complex, interconnected networks that are involved in cognition and behaviour. In addition, there are other projects across the globe utilizing connectomics and contributing to the database, with some addressing specific psychiatric and neurological disorders in addition to contributing in general to the understanding of the human connectome (Xia & He, 2017). Connectomics, a branch of systems biology, utilizes big data gathered from numerous brain imaging technologies such as fMRI, Diffusion Magnetic Resonance Imaging (dMRI), electroencephalography (EEG), and magnetoencephalography (MEG) (Favela, 2016; Xia & He, 2017). The HCP began in 2010 with the goal of mapping connections between widespread brain areas (Glasser et al., 2016). As a result, scientists have been able to begin to map both integrated and segregated dynamic organization of the brain that

continually reorganizes across the lifespan (Nomi et al., 2017; Parkin et al., 2015; Román et al., 2017; Shi & Toga, 2017; Smith, 2016; Tremblay & Dick, 2016; Xia & He, 2017). Furthermore, in keeping with the recognition that the brain must be understood as part of an embodied nervous system, research into the whole-body connectome are being considered (Lo & Chiang, 2016). For example, the neural network of the enteric (gut) nervous system has been found to extend beyond local neurons, with a call to examine the gut connectome, rich in sensory enteroendocrine cells that connect with underlying nerves that communicate via efferent nerves to the brain (Bohorquez & Liddle, 2015).

Through these technologies scientists have come to recognize that the embodied brain is a system, with differentiated circuits linking with local and distal structures (Siegel, 2017). Furthermore, these technologies, along with cross-disciplinary research, is producing a vast amount of research that links affective, cognitive, neurophysiological, psychological, and social aspects of human experience (Critchley, 2009; Critchley et al., 2004; Davidson & McEwen, 2013). More than ever, the HCP has challenged previous assumptions that posited specific areas of the brain are solely responsible for specific functions. In other words, neural integration within the brain as well as between brain and body are essential for the fostering of well-being.

For example, neuroscientist Antonio Damasio (2005) has proposed the *somatic marker hypothesis* based in his research that has uncovered the link between brain systems involved in decision-making and emotion with social cognition and behaviour. Challenging well-established Western notions that privilege thinking and rationalism over emotion, neuroscientists have discovered that cortical functions are inextricably networked with subcortical structures and circuits involved in emotion (Siegel, 2020). For example, the somatic marker hypothesis (Bechara et al., 2000) suggests that cortical processes are not solely responsible for reasoning

and decision-making with the orbitofrontal cortex (OFC) playing a key role along with somatosensory neural networks that involve emotions and feelings. Cognitive processes involve not only cortical circuits but also subcortical networks including the limbic system, considered to be central in emotional processes, as well as the body proper. The linking of differentiated cognitive, emotional, and embodied mechanisms has implications for leader development and practice. For example, since decision-making is not the sole domain of cognition leaders might need to develop the capacity to access and utilize their emotions and sensations. In addition, discoveries such as these have enhanced understanding about how neural integration is fostered internally, for example, through focused attention and mindsight practices aimed to enhance differentiation and linkage, as well as through attuned and resonant relationships, which will be explored later (Boyatzis & McKee, 2005; Cozolino, 2014b; Rock, 2006; Siegel, 2010b, 2017). Given IPNB-scholars have signaled the importance of leaders consciously using brain science in the service of fostering integration, I am interested in understanding the extent to which IPNB-informed leaders are utilizing this knowledge in their actions and practices and how they are employing neuroscience and neurobiology in their work with others and their own leadership development.

Leading with Neural Integration in Mind. Brain-based approaches to leadership have been developed as interest in the brain has grown (Goleman et al., 2006, 2013; Henson & Rossouw, 2013). For example, one coaching methodology focuses on exploring the neuroanatomy of resilience and using cognitive behavioural strategies to downregulate fear and stress while promoting a growth mind-set (Tabibnia & Radecki, 2018). Others have researched how neuropeptides, such as oxytocin, impact neural firing patterns and subsequent behaviour providing insight into positive organizational processes involving the neuroscience of trust (Zak,

2018). The neurobiology of motivation has also been studied with the discovery of strategies to deal with the brain's natural resistance to change and engaging neural mechanisms that support learning (Eichinger, 2018; Nowack & Radecki, 2018).

An IPNB perspective emphasizes the neural integrative potential and processes in the brain and extended nervous system. Therefore, attention is paid to three highly integrative areas of the enskulled brain: prefrontal Cortex (PFC) and most particularly the middle prefrontal cortex (mPFC); hippocampus; corpus callosum (Goleman & Siegel, 2016; Siegel, 2012b, 2020b). The hippocampus is involved with memory integration and the corpus callosum links the right and left hemispheres (see sections on Memory Bilateral/Horizontal Integration and Memory Integration later in this chapter) (McGilchrist, 2009; Montgomery, 2013; Siegel, 2012b). The mPFC plays a significant role in widespread neural integration involving processes that are particularly key in leadership. The mPFC consists of several cortical regions including the anterior cingulate cortex (ACC), the orbitofrontal cortex (OFC), the medial and ventral prefrontal cortex, as well as the ventrolateral areas (Siegel, 2012b). Considered to be responsible for many higher order functions such as decision and meaning making as well as emotion regulation, the mPFC is anatomically in contact with the lower regions of the brain that take in energy and information from the body, brainstem, and subcortical limbic circuits (Damasio, 2005; Fogel, 2009; Siegel, 2020). It is the mPFC that makes mindsight maps possible including that of the social world; for example, the me-maps, you-maps and we-maps discussed earlier (Siegel, 2017). These maps shape leaders and followers expectations and perspectives of themselves and the world around them. Therefore, if activated without conscious awareness and reflection these maps can impact integrative capacities within individuals, teams, and across the organization without mitigation. However, bringing conscious awareness to neurobiological activation in the

brain and body can assist leaders in both understanding and intentionally fostering integrative capacities within themselves (me-maps), others (you-maps), the relationships between organizational members (we-maps), as well as integrated MWE-maps where both differentiation and linkage are present.

Given its highly integrative function, the mPFC is often referred to as the “CEO of the brain” (Goleman & Siegel, 2016). Therefore, it is implicated in these leadership functions and activities. Further, the notion of neural integration being across mind, embodied brain, and relationships challenges dominant approaches to leadership that tend towards rationality and/or weighted in cognitive processes without attending to the relationally embedded body. At the onset of this research, it was not clear or known whether self-identified IPNB-informed leaders and leader consultants are consciously engaging with practices and processes that promote neural integration. Therefore, my listenings were attuned to how participants utilized the scientific principles of neural integration in their leadership practices and development.

IPNB proposes that there are nine mPFC functions that are the outcome of neural integration. These are considered to be key in fostering capacities that are essential for leaders well-being, integrative capacity, and the relationships they develop with others: body regulation, attuned communication, emotional balance, fear modulation, response flexibility, insight, empathy, morality, and intuition (Siegel, 2012b; Siegel & Pearce-McCall, 2009). Interestingly, the first eight of these have also been found to be outcomes of secure attachment and can also develop through the practice of mindfulness (Siegel, 2010b, 2017). All of these outcomes have been associated with mental and physical well-being and have been linked with leadership practices that promote optimal organizational functioning (Pearce-McCall, 2007). For example, Pearce-McCall (2008) states that the leader is the mPFC of the organization. In other words, it is

through the leader's attention to processes and practices that are integrative, such as practicing awareness and presence in communications, that the organization's FACES flow is fostered. Similarly, leadership consultants Hougaard and Carter (2018), discuss the importance that leaders learn how to activate the PFC through mindfulness practices that access cortical and subcortical circuits involved in emotion, empathy, and compassion, which they assert are essential in developing healthy and effective organizational cultures.

In addition to the implications for leader development, it has been suggested that an IPNB perspective leaders support innovation and creativity by intentionally engaging neurophysiological processes that allow for and encourage the emergence of integrative qualities, capacities, and motivations (Siegel & Pearce-McCall, 2009). Siegel (2012b, 2017) has coined the acronym SNAG to signify practices that *stimulate neuronal activation and growth*. This is done through various practices that include awareness of impairments to integration and intentionally focusing attention in ways that activate neurons or neural circuits. This requires that leaders foster their own mPFC integrative capacity to differentiate and link bottom-up processes (i.e., neural processes from the body, brainstem, and subcortical circuits such as instantaneous processes like sensations) with top-down processes (i.e., neural processes that are shaped and influenced by previous experiences such as memory, perceptions, patterns of suppression) (Siegel, 2012b). In order for creativity to emerge, leaders must do this with what Siegel (2010a, 2012b) refers to as a COAL state. This means accompanying these intentional practices with curiosity (C), openness (O), acceptance (A), and loving kindness (L) towards whatever top-down or bottom-up experiences shows up in awareness, which facilitates consciousness of peaks and plateaus arising from the Open Plane of Possibility. These are qualities that are not often discussed in leadership circles or considered in leadership development; therefore, this research

sought to explore the implications for the IPNB-informed leaders and consultants including the extent to which they actively promote the neurobiologically-grounded practices involved in the promotion of COAL.

Neuroplasticity. Prior to the new technologies, the brain was considered to be hard-wired and unchangeable after early development. However, it has been discovered that the brain, while particularly malleable early in life, continues to grow and change across the lifespan through a process called neuroplasticity (Davidson & McEwen, 2013; Lin et al., 2015).

“Neuroplasticity is the ability of the brain to change its structure in response to experience” (Siegel, 2012b, p. 8-1). This is how learning occurs. In fact, one of the early pioneers, Canadian neuropsychologist Donald Hebb (Palm et al., 2014) promoted a theory he called *cell assemblies* whereby excitatory synaptic connections between neurons occur as they fire together, linking them through repeated firing, which can occur through intentional focus and/or coincidental activation. These linked synaptic connections are held in memory, facilitating the capacity to apply these prior associations to new situations, influencing behaviour, perception, and response (Lansner, 2009). The neurobiological mechanisms of learning and memory include:

synaptogenesis, which is the growth of synaptic connections between nerves; *neurogenesis*, which refers to the growth of new neurons; *myelinogenesis*, which is the thickening of the myelin sheath around neurons, responsible for effective conduction of energy and information; and *epigenetics*, which involves the turning on and off of gene expression (Siegel, 2012b, 2020).

Several factors facilitate and inhibit neuroplasticity; these have also been studied. For example, Davidson and McEwen (2013) studied the effects of stress on neuroplasticity finding that moderate to severe stress increases neuronal growth in the amygdala while decreasing growth in the hippocampus and PFC. The authors conclude that intentional efforts to regulate the stress

response and to enhance prosocial behaviour enhances PFC activation and decreases amygdala activation. They also state their findings show that both structural and functional connectivity between the PFC and limbic circuitry is essential for the development of emotion regulation.

Even for those scholars who caution against using simplistic applications of brain science to leadership practice, neuroplasticity holds up to scientific scrutiny (Nowack & Radecki, 2018). Others encourage leaders to recognize that neuroscience is in its infancy when applying brain-based approaches to leadership practices (Eichinger, 2018). Nowack and Radecki (2018) offer leaders and consultants seven principles of neuroplasticity they deem relevant to leadership and organizational development: use it and it will improve; use it or lose it; specificity matters; repetition matters; difficulty and challenge matters; salience matters; and drivers matter. The authors also suggest leaders consider several interventions and/or practices that facilitate neuroplastic changes including: mindfulness, practicing new behaviours, and mental rehearsal. Given the significance neuroplasticity has for leader and organizational development I listened for the ways leaders and consultants engaged with intentionally capitalizing on neuroplastic change processes. One of IPNB's core assertions is that integration occurs by bringing conscious *attention* to the primes of mind, brain, and relationships, moment by moment; then *intentionally* implementing practices that promote integrative processes at micro, meso, and macro levels of the organization.

Expanding on this, Goleman and Siegel (2016) state that there are five strategies that leaders can utilize to support positive neuroplastic change: focusing attention in specific intentional ways to activate specific circuitry; developing a sense of trust within the organization and with individuals in order to enhance receptivity; recognizing that memory retrieval is memory modifier; capitalizing on the rhythms of unlearning and learning; and doing deep

practice and skills training in mind development practices such as Siegel's development of mindfulness and integration through the Wheel of Awareness practice, and/or the numerous other mindful awareness practices that can increase awareness and presence, intention, and compassion. As stated earlier, neuroplastic change occurs when leaders can SNAG their own brains as well as encourage this with others. One simple way to do this is to practice and encourage others to practice the basic building blocks for neuroplasticity: relationships; sleep; nutrition; aerobic exercise; humour; and novelty (Goleman & Siegel, 2016; Siegel, 2020).

In addition, the development and use of mindfulness is a core skill/practice for leaders who wish to be agents for neuroplastic change intended to promote integration: "Where attention goes, neural firing flows, and neural connections grow" (Goleman & Siegel, 2016). Expanding this from neural circuits to human systems, the principle holds (Pearce-McCall, personal communication, May 12, 2018). Whether for individual or organizational growth, presence is the portal to integration and attention is what directs energy and information. Intention arises when attention is grounded in presence. With *focal attention* we focus on something; with *non-focal attention* we put our attention below the surface (i.e., organizational culture) (Goleman & Siegel, 2016). Attention is different than intention with the latter being the vector or directionality that a person or group actualizes, which then influences where their attention is directed. Awareness is the direction of knowing and in that knowing there is awareness of being knower, knowing, and known (noun and verb). Within an organizational context, leaders have a vital role in intentionally facilitating projects and programs that hold potential to promote integration within and between the mind and embodied brain (Goleman & Siegel, 2016). For example, holding the intention for integration, leaders are responsible for finding ways to direct people's attention to

resources that can assist them in developing the capacity and skills that will take them from reactivity (chaos and/or rigidity) to responsiveness (characterized by FACES flow) (Pearce-McCall, 2008; Siegel & Pearce-McCall, 2009). Through the steadying of their Tripod Lens of observation, openness, and objectivity, leaders practice mindsight starting with themselves (insight) before turning the mindsight lens to their followers and the organization. In other words, it has been suggested that leaders need to develop awareness of their inner mindspace before focusing on the mindscapes of others (empathy), and before focusing on the larger organizational culture dubbed the mindsphere (Goleman & Siegel, 2016).

In addition, neuroplastic change can be fostered through relationships. Cozolino (2014c) has introduced the concept *experience-dependent neuroplasticity*, which he describes as “our brains are structured and restructured by interactions with our social natural environments” (pp. 77–78). For example, leaders can promote neuroplasticity through the development of trust. Further, attachment schemas can be rewired through corrective attachment experiences, such as that between leaders and their followers (Davidovitz et al., 2007; Davidson & McEwen, 2013; Harms et al., 2016; Hudson, 2013; Popper & Mayseless, 2003). By layering attachment research with an understanding neurobiological responses in the workplace, leaders have been invited to attend to their own attachment plasticity through intentional self-awareness practices and reflective safe relational experiences such as therapy, coaching, and consulting (Cozolino, 2014b). (See next section on attachment and relationships). Therefore, the analysis of participant narratives required I attuned to the lenses through which leaders and consultants viewed their relationships within themselves and others in their organization. I listened for the ways the leaders I spoke with engaged IPNB’s principles supporting integrative neuroplastic change. It has been suggested that leaders are in a position to inspire other to rewire their minds and

embodied brains towards more integration, more well-being (Goleman & Siegel, 2016; Pearce-McCall, 2007, 2008). When relationships are integrated over time (defined further in the section below), neural integration (basis of self-regulation) occurs which translates into functional integration and then structural integration (Goleman & Siegel, 2016).

Relationships

The third prime in the Triangle of Well-Being is *relationships*. This prime is defined as the sharing of energy and information (Siegel, 2020). From an IPNB perspective, relationships are considered to be foundational in the shaping the structure of our embodied brains and minds across the lifespan: “Relationships are the crucible in which our lives unfold as they shape our life story, molding our identity and giving birth to the experiences of who we are, and liberating or constraining who we can become” (Siegel, 2017, p. 28). IPNB considers healthy relationships to be characterized by integration where differences are honored and linkages sought through ways of being and acting that connect individuals and groups (Siegel, 2020). When relationships move onto the chaos shore of the river, there is too much differentiation and not enough linkage; on the other hand, when relationships are dominated by rigidity there is an excess of linkage or sameness, with a low tolerance for differences. For example, chronically conflictual relationships among co-workers might be characterized by the chaos of disagreement that is fueled by rigid adherence to personal views without the linkage of empathy, openness, curiosity, and trust. In contrast, integrative relationships are dynamic and emergent, like the flow of the river, and are characterized by flexibility, adaptability, coherence, while being energized and stable.

Viewed more broadly, from an organizational perspective, relationships are self-organizing systems, where the optimization of diversity can occur as the different elements or nodes of the system interact or link in an emergent process. Applying this to leadership,

Goleman and Siegel (2016) suggest that leaders need to assess the relationships in their organizations for rigidity (i.e., being stuck in old patterns or ways of being) and/or chaos (i.e., randomness, disorganization, chronic crisis).

Relationships are often a central focus in IPNB in leadership and organizational development literature. If leaders can discern when and how integration is insufficient or absent, they can focus their efforts to increase differentiation and promoting linkages. The resulting enhanced integration in the workplace would be associated with increased productivity and worker satisfaction along with other measures of organizational and personal well-being (Siegel & Pearce-McCall, 2009). In support of this, Hill (2008) states that leadership is, “purely interpersonal concept and practice” (p. 15). Similarly, Pearce-McCall (2007) argues that more than income supportive relationships, meaningful work, and learning opportunities for growth, facilitate healthy organizations. Considering the fundamental relational nature of well-being, one study looked at consumer orientation (also known as person centered care) in healthcare organizations, comparing leadership practices that were oriented to the provision of the social support of workers with leadership practices oriented to tasks (Bruno et al., 2017). This study found that organizations with leaders who focused on the quality of relationships and/or relationship behaviours facilitated greater consumer orientation than those leaders who focused on tasks. Furthermore, consumer orientation was associated with higher protective factors and lower social stressors in the workplace for both workers and healthcare consumers. In another article featuring a case example describing a pilot project focused on large-scale culture change using IPNB principles, employee motivation and productivity were directly linked to the quality of employee connections (Phipps, 2009). This study identified three triangulated, interconnected relational leadership processes that promoted openness, trust, and support, which she considered

to be central for compassionate communication: understanding and caring for others; social awareness and engagement; and self-awareness with self-care.

Given that relational wellness is at the foundation of IPNB, a logical extension to leadership and organizations is that leaders attend to relational capacity, quality, and processes that facilitate integration at micro, meso, and macro levels. Therefore, through the listening steps of this research I attended to and captured the relational aspects of the leaders experiences. For example, in the first listening I attuned to relational themes; in the second listening participants relationally situated voices were traced; and in the third each person's contrapuntal voices were considered in relationship with each other rather than viewed as being disconnected or in isolation from each other. Moreover, since IPNB views organizations with a relational lens, most particularly a complex systems lens, I considered this in the fourth listening where I returned to the research questions and explored participants' reflections on IPNB's implications for their organizations.

In addition, since relational wellness is linked to the other two primes (embodied brain and mind), when leaders focus their attention and intentional efforts on any one aspect of the Triangle of Well-Being, the other primes are impacted. This implies that leaders need to keep all three aspects in consciousness. Approaching leadership with the Triangle of Well-Bing in mind, suggests that leaders have some knowledge of the embodied brain. The whole brain is involved in social behaviour with interacting networks of cortical (orbital medial prefrontal cortex, somatosensory cortex, anterior cingulate cortex and the anterior insula cortex) and subcortical structures (the extended amygdala, hippocampus, and hypothalamus) (Cozolino, 2014b). Further, there are sensory, motor, and affective systems that activate for face recognition, reading facial expressions, interpreting biological motions like gestures, and mirror/resonance systems

(Cozolino, 2014b; Hill, 2009; Iacoboni, 2008). The social brain has regulatory networks for stress (HPA system of hormonal regulation), fear modulation (orbital medial PFC, amygdala, bed nucleus of the stria terminalis), social engagement (vagal system of autonomic regulation), and social motivation (reward representation and reinforcement for social behaviour) (Cozolino, 2014b; Porges, 2011, 2017; Siegel, 2012a). Leading with the whole-brain (i.e., holding the embodied brain in mind), can assist leaders to be both self-aware (me) and aware of the other person (you) as well as their relationships (MWE). In other words, leaders need to not only identify a differentiated *me* but also as MWE, a plural verb, embedded within the organizational system as an emergent process (Goleman & Siegel, 2016). Given this, it was important that I listened for and traced each participant's multi-voiced relational experience as they shared their leadership story. This provided for an understanding of their ever dynamic, contextualized, and shifting relationally positioned leader identities.

Attachment and Leadership. In addition to attending to present-moment mind, brain, and relational processes, capacity for integrative and integrating relational processes are impacted by memory. This is linked to the neural processes involved in memory and memory retrieval (Badenoch, 2008; Siegel, 2020). Attachment research has been one area of research that has had implications for understanding how historical relationships, particularly those with caregivers in early development, impact an individual's mind, brain, and relational capacity for integration. For example, an individual's capacity to participate in relationships is impacted by their attachment and trauma histories through neurobiological mechanisms involved in memory retrieval (Badenoch, 2008; Cozolino, 2014b; Ecker, 2015). Genetics are also considered to play a role in attachment behaviours; however, genetic expression is mitigated by the neuroendocrine system as well as neuropeptides such as oxytocin and vasopressin, as well as hormones

associated with stress including adrenaline and cortisol (Mikulincer & Shaver, 2007). In other words, relational experience impacts gene expression. Given the significance of early relationships in shaping the mind and embodied brain, it has been suggested that leaders need to consider the impact of memory in their own and others functioning (Game et al., 2016; Harms, 2011; Popper & Amit, 2009; Popper et al., 2000).

Among the developmental sciences, attachment theory is considered to be “the most visible and empirically grounded conceptual frameworks” (Cassidy & Shaver, 1999, p. x) that provides a framework to understand how early relationships shape present interactions. From birth to death, as profoundly social creatures human beings seek proximity and closeness especially during times of stress and threat (Badenoch, 2008; Cozolino, 2014b). Originally the brainchild of Dr. John Bowlby (Bretherton, 1992), attachment theory has contributed greatly to the neurobiological understanding of how early relationships directly shape development. In addition to fulfilling needs for physical and psychological protection during infancy and childhood, parental/caregiver responsiveness is linked to the formation of early attachment schema or internal working models (IWMs) (Hudson, 2013). Thus, the availability or non-availability of a safe haven and source of protection has implications for the construction of relationship expectations and future proximity seeking behaviours (Bretherton & Munholland, 1999; Hudson, 2013). Further, Schore (1994), has revealed the significance of early caregiving relationships in the development of the capacity to regulate emotions throughout the lifespan. For example, secure attachment provides the attunement and resonance experiences that initially regulate the infant’s emotions and physiological states; these regulatory capacities are then transferred, through neurobiological development and relational modeling, to the infant as s/he

develops. In this way, early relational experiences of emotional and physiological attunement and resonance shape the individual's later capacities for self-regulation and co-regulation.

Attachment schema are active not just in childhood, but in adulthood as well. Cozolino (2014b) discusses the importance of how attachment schemas are formed:

These schemas reflect the learning histories that shape experience-dependent networks connecting the orbital frontal, insula, and cingulate cortices with the amygdala, and other regions that regulate arousal, affect, and emotion. It is within these neural networks that interactions with caretakers are paired with feelings of safety, warmth or of anxiety and fear. (pp. 143–144)

These early non-conscious attachment schema impact responses to stress, as well as shape relational expectations and patterns of regulation along with immunological functioning.

Cozolino (2014b) points out how adverse experiences, such as childhood neglect, abuse, and prolonged shame, inhibit the growth of these circuits and the resulting regulatory capacities through biochemical processes triggered by stress. He describes the key role of the PFC, (most particularly the orbitomedial prefrontal cortex), in regulating the parasympathetic ventral vagal response, which is activated and engaged in safe interactions and situations dominated by positive emotion and activity, along with the parasympathetic dorsal vagal response, which is activated with shame states. These states are stored in memory networks including sensory, motor, and emotional memory. Thus, these schema become more visible during times of stress where individual capacities for affect regulation are strongly influenced by automatic implicit memories, which are activated milliseconds before we are even aware of our perception of events and relationships. In contrast, IWMs formed within securely attached relationships anticipate responses of willingness, support, and availability (Hudson, 2013). Cozolino (2014b) states that secure attachment promotes neurobiological integration, which facilitates regulation. People who have secure attachment are better able to modulate their stress response through

connection with others (co-regulation), in comparison to others with insecure attachment. For example, people who have avoidant attachment tend to greater dorsal vagal arousal with avoidance behaviours and low levels of emotional expression. These individuals tend to withdraw from proximity and tend to not explore the environment. In contrast, struggling to recover from stress, anxiously attached individuals are dominated by amygdala and sympathetic nervous system activation with increases in irritability, dependency, and acting out (Cozolino, 2014b). These often non-conscious patterns implicate an individual's response to situations at work including their relationship with leaders. Thus, leaders are encouraged to consider this when approaching workers for example, during times of stress and organizational change (Davidovitz et al., 2007; Game et al., 2016; Harms, 2011; Harms et al., 2016; Hougaard & Carter, 2018). In other words, an IPNB view suggests that leaders recognize the ever-present relational past (their own and others) in present-day encounters.

Early attachment relationships teach people whether relationships are safe and secure, or dangerous and untrustworthy. These early experiences also teach us how to behave and what to expect from relationships. It has been suggested that not only do individuals bring their attachment schema into the workplace but the relationships in the workplace are influential in activating these schema (Goleman & Siegel, 2016; Phipps, 2009).

Organizational Considerations. Attachment and bonding between leaders and their followers has been identified as a significant factor in developing effective, productive, high-trust organizations (Boyatzis & McKee, 2005; Kohlrieser et al., 2012; Zak, 2018). For example Kryder (2009, 2011) discusses the Mind to Lead coaching program, which she developed based on IPNB principles. She mentions how leaders find challenge not only because of increasing pressures on the organization, but also because workers bring their attachment

experiences into the workplace. Others concur, stating that leaders who focus on providing a secure base with bonding as a foundational focus, facilitate higher performances for individuals and teams (Kohlrieser et al., 2012). Phipps (2009) describes a pilot project that brought IPNB to a healthcare organization as a guide for large-scale culture change that aimed to enhance workers' and leaders' capacities for compassionate relationships. She asserts that the relationships within an organization impacts employee "motivation and productivity, the flow of information between the parts of the organization, and, ultimately, organizational ability to adapt and thrive amid constantly changing circumstances" (Phipps, 2009, p. 28). In other words, workers in her case example benefited from the quality of connections, including receiving information, feeling heard and being taken seriously by those with decision-making power, having trusting work relationships, and getting feedback. These factors all support organizational wellbeing, including resilience. However, she also found that early attachment relationships mediated leader and worker adaptive capacities, teaching people whether relationships were safe and secure, or dangerous and untrustworthy. This project revealed that relationships in the workplace were significant, interconnected, and influential in activating these pre-existing patterns as well as transforming them.

Leader attachment IWMs have also been studied and found to have significance with regards to organizational effectiveness and the capacity to develop positive relationships with followers. Hudson (2013) states that leader security (i.e., having sufficient support from senior leaders) impacts his/her ability to provide support and create a safe haven for their followers. Further, Hudson's dissertation research (as cited in Hudson, 2013) found that leaders with insecure attachment patterns are often inconsistent or unresponsive, resulting in follower responses of low motivation, feelings of demoralization, and lower job satisfaction and

involvement. He also found that this was associated with followers having increased vulnerability to organizational stress and disengagement. Furthermore, leaders with insecure/preoccupied (ambivalent/anxious) attachment tended to seek security from their followers through dysregulated behaviours such as aggression or feigning vulnerability in order to gain support. In contrast, insecure/dismissing (avoidant) leaders tended to be hyper-independent and struggled with inclusive organizational cultures. Finally, insecure/fearful (disorganized) leaders were likely to be targets for exploitation and struggled to meet with follower demands.

Given leader security is linked to individual follower well-being (higher self-esteem, greater trust, higher motivation) as well as group cohesion and positive attitudes towards organizational change, efforts such as increasing leader awareness about their own and others' attachment patterns as well as skill development to modify IWMs has been recommended (Davidovitz et al., 2007; Game et al., 2016; Goleman & Siegel, 2016; Hill, 2009; Hudson, 2013; Popper & Amit, 2009). In keeping with this, many approaches to attachment research and its application, including leader-follower relationships, rest upon the notion that attachment categories are stable and predictive of behaviour (Bretherton & Munholland, 1999; Popper & Mayseless, 2003; Popper et al., 2000). IPNB contends that although these early attachment patterns influence salient patterns and traits, they can be altered with new relational experiences and targeted mindsight practices such as recognizing the pattern, and naming it in order to tame it (Siegel, 2020; 2012b). Attachment patterns implicate plateaus on the Plane of Possibility that can be intentionally worked with, to open to more secure connections. This view is consistent with findings from researchers who consider attachment from a behavioural organizational perspective rather than tying attachment styles to less malleable traits that govern an individual's

capacities and functioning. For example, looking at the broader organization, leaders who consider the function, outcomes, and contexts of attachment, open themselves up to consider the impact that individual developmental differences might have on organizational dynamics (Sroufe & Waters, 1977). In keeping with this, Cozolino (2014b) asserts that insecure attachment patterns can change in the presence of supportive and positive relationships and increased self-awareness. In other words, reparative secure relationships, both intentional and spontaneous, as well as targeted mindsight and mindfulness practices, can shift IWMs that were once considered to be stable across the lifespan (Siegel, 2012b, 2020).

Furthermore, leaders are considered to be in a prime position to provide a secure base for those who look to them for guidance. For example, in a grounded theory case study designed to identify the components of secure-base leadership (SBL), several key points were identified: SBL can be developed and learned; SBL's need to provide a balance between care and risk; followers can form a secure base with leaders/people and organizational goals/projects; secure bases come and go through the realities of organizational change, therefore followers will grieve and SBL's are there to support movement through this loss process; SBL's facilitate follower development of new mental models and support their navigation through the dialectics of comfort and risk, support and stretch, protection and challenge (Kohlrieser et al., 2012). According to Goleman and Siegel (2016) it is the leader who brings elements of secure attachment to the organization, which rests upon the leader's capacity to attune to, and attend to inner experiences, not just productivity. This requires leaders to develop and practice what Siegel (Goleman & Siegel, 2016) calls the 3-S's involved in the capacity for attunement, resonance, and presence: The need to be *seen* (with all of one's hopes, fears, thoughts, feelings); the need to be *soothed* (involving contingent communication; making sense of what is seen); the need to be

safe. Contingent communication requires the capacity for affective attunement that is particularly sensitive to nonverbal signals and responding with this in mind (Siegel, 2012b). When the 3-S's are present human beings feel secure. In order to develop this capacity, leaders need to liberate themselves from the adaptations they developed in response to a lack in receiving the 3-S's (Goleman & Siegel, 2016; Siegel & Hartzell, 2003; Siegel & Bryson, 2014). Thus, when the leader acts as a secure-base and people in an organization matter, they feel heard and their experiences are honoured (Bretherton & Munholland, 1999; Harms et al., 2016; Popper et al., 2000).

This also means focusing on the deep processes of the mind beneath awareness, which they state helps to create a sense of belonging, a sense of safety and a sense of being seen among others in the organization (Goleman & Siegel, 2016). Occurring within the self or with another, “attunement is the way we focus on the flow of energy and information in an open and receptive manner” (Siegel, 2012b, p. 23-1). As attunement occurs, resonance begins to emerge, leading to a sense of feeling felt that facilitates the development of trust, which is not only highly integrative but found to be essential to the wellbeing of the organization and the people within it (Popper & Mayseless, 2003; Zak, 2018). According to Siegel (Goleman & Siegel, 2016), when viewed from the polyvagal perspective, which he dubs “the science of trust,” it is apparent that reactivity in organizations occurs when there is lack of trust; and when trust emerges it ripples through an organization and integrates the brains of all involved. In fact, according to studies into the power of social networks by political and social scientists Christakis and Fowler (2009), every action or interaction between a leader and their followers affects others by three-degrees of connection.

The literature on leadership suggests that IPNB-informed leaders hold the Triangle of Well-Being central when considering their own development and actions as well as those of others. In addition to assessing the presence of integration and disintegration at micro, meso, and macro levels of the organization this approach holds promise of transformation across these levels through thoughtful application of research into the neurobiological and relational process that facilitate integration. This means that leaders not only attend to top-down processes that tend to be more technical, but also transformational bottom-up processes that promote integration across mind, embodied brain and relationships.

Harnessing The Leadership Triangle

The embodied brain must be in a state of receptivity in order to access the Open Plane. In order to be receptive and open there needs to be a felt experience of safety (Porges, 2011; Siegel, 2017). One of the greatest contributors to understanding the neurophysiology of safety is behavioural neuroscientist Dr. Stephen Porges (2011, 2017). Porges has devoted his life to researching the neural response of vertebrates when they experience safety, threat, and life danger. Taking an evolutionary perspective, Porges (2011) discovered the central neurophysiological role that the *vagus nerve* plays in mammalian responses to environmental stimuli, in concert with the sympathetic nervous system (SNS). Dubbed the *Polyvagal Theory*, Porges (2007, 2011) presents a hierarchically organized neurophysiological response where the parasympathetically dominant vagus nerve as well as the SNS activates in adaptation to the environment including social realms. He discovered that several structures in the brain (i.e., amygdalae) and the nervous system constantly scan the environment for the presence of threat or danger through a nonconscious process he calls *neuroception*. When safety is detected, the myelinated ventral vagus is activated, facilitating social engagement. This arm of the vagus

innervates the somatomotor striated muscles of the face responsible for micro-expressions, and the tuning in of the inner ear, which facilitates engaged listening, as well as the visceromotor pathways that regulate the heart and bronchi. However, if our nervous systems detect threat, the SNS arm of the autonomic nervous system is activated to facilitate fight or flight response. Further, if life danger is detected the *dorsal vagal complex*, located below the diaphragm, innervating the viscera and gut, is activated and a collapse state occurs; this is characterized by cognitive slowing, shutting down, and dissociative states. Porges (2017) states that this dynamic system challenges previous notions about the achievement of homeostasis thought to be achieved through autonomic balance between the antagonistic SNS and parasympathetic systems responding to present-moment threats. Instead, the response of this hierarchically organized system can be shaped by previous life experiences such as trauma, therefore, impacting psychoneurobiological plateaus, which prime activation patterns and subsequent behaviours considered to be adaptive (Porges, 2011, 2017). Needless to say, these plateaus and resulting peaks narrow possibilities as the energy and information flows of mind and body are non-consciously shaped into peaks of activation. Later in time, these pre-existing patterns may not serve the development or intentional shaping of an organizational culture towards integration. In other words, organizational growth requires activities like exploration, innovation, and creativity, which arise from a non-defended state of mind, body, and relational safety.

Paul Gilbert (2009, 2018) has looked at the implications of social safety in organizations. Research shows that social safety is distinct from positive affect (PA) and negative affect (NA) and that the promotion of PA and reduction of NA does not provide the same effects as the promotion of social support, which resulted in higher levels of social safety (Kelly et al., 2012). This “suggests that interventions that increase energized, enthusiastic feelings associated with the

incentive system, or that reduce guilt and fear associated with the threat system, may not in fact increase the feelings of warmth, reassurance, and connectedness that arise from the soothing system” (Kelly et al., 2012, p. 823). Gilbert (2009, 2018) states that social safety is necessary for leaders who must support affiliative and compassionate workplace environments through the display of friendliness and the promotion of seeking, sharing and cooperation along with mutual support. They state that this lies in contrast with traditional authoritarian models of leadership where leaders are prone to feeling threatened and reacting with hostility or defensiveness; this leadership style tends to rest in self-promotion, insecurity, and tends to be punitive towards errors. On the other hand, compassionate leadership, which rests in security and fosters non-defensiveness, promotes team and group engagement as well as empowering others. In other words, leaders need to not only mind their own embodied brains but they need to develop the capacity to recognize and care about what might be going on with others in order to influence the web of relationships that creates an organizational culture that encourages and promotes safety (Goleman & Siegel, 2016; Hill, 2009).

In order to foster neurobiologically receptive and integrated states, it has been suggested that leaders must develop resources so that they can respond to the ever-emerging moment that brings with it uncertainty and vulnerability, while having internal and external resources to find safety (Hougaard & Carter, 2018; Kryder, 2011; Siegel & Pearce-McCall, 2009; Zak, 2018). Creative solutions cannot be generated when the nervous system is responding to actual or perceived threat or danger. The chaos of overwhelm or the rigidity of collapse states impair leaders and their followers. Therefore, this implies that both leaders and their followers need to have the capacity to move away from threat as well as learn how to transform unexamined beliefs, implicit memories, and perspectives that trigger these neurophysiological responses. This

suggests that leaders have knowledge of how the embodied brain responds to threat and/or perceived threat. For example, when individuals encounter uncertainty and vulnerability their systems respond as if under threat. This can result from plateaus primed from past experiences since the brain is an adaptive organ responding to current stimuli based on past learning (Cozolino, 2014b). In addition, the amygdalae are two almond-shaped structures (one in the right and left hemispheres of the brain) that rest on top of the brainstem in the subcortical area of the brain associated with the limbic system (Siegel, 2012b, 2020). These structures constantly scan the environment, including the relational environment, like radar for threat asking “am I safe?” (Goleman & Siegel, 2016). If the determination, real or imagined, is that the individual is under threat, an “amygdala hijack” can occur. This can take over an individual’s perceptions and, along with activating the SNS fight or flight response, the individual’s focus becomes fixated on the actual or anticipated threat, with reactions coming fast; this results in actions that often don’t work to facilitate integration (Goleman & Siegel, 2016; Siegel, 2012a). According to neuroscientist Joseph LeDoux (2002) these lightning fast reactions to emotional stimuli bypass the cortex, running through the thalamus, a sensory relay station, and its direct connections to the amygdala, and translating immediately into behaviour. This is contrasted with a slower response, which he calls the high road, where processing is slowed down and energy and information goes from thalamus to the cortex, enabling a more regulated and reflective response (Cozolino, 2014b; LeDoux, 2002). Therefore, Goleman and Siegel (2016) assert that leaders need to understand their own and others’ responses that can be indicators of an amygdala hijack. For example, common organizational practices, such as performance reviews, can trigger a threat reaction, which blocks the neural availability and openness required for taking in information and learning (Hougaard & Carter, 2018).

Leaders Minding Brain and Relationships: The Domains of Integration

Siegel (2010b, 2012b, 2017, 2020) has articulated nine domains of human functioning and experience that can assist in determining an individual or group's integrative capacities across mind, brain, and relationships; as well these domains can assist in identifying the direction for integrating practices. These *Nine Domains of Integration* are not intended to be definitive or complete, but aim to be comprehensive-enough without being overwhelming (Siegel, 2020). Siegel and Pearce-McCall (2009) suggest that these domains can assist leaders in assessing whether integration is present or not sufficient in the organization or workplace. For example, differentiation may be blocked when individuals in an organization are not permitted to be specialized or contribute uniquely to the vision; whereas impairments in linkages may be found in poor communication, or siloed teams. Each area or domain provides guidance for inquiry and action, which will be described below. In addition, integration in each of these domains as well as across these domains—dubbed *transpiration* by Siegel (2010b)—can assist in understanding outcomes of integrating processes. More recently, Siegel (2020) has changed this domain to *integration of identity*. While leaders may not directly or consciously employ efforts to foster integration in a specific domain, integration may occur as an outcome. Given integration is considered to be foundational to and IPNB perspective of systems at micro, meso, and macro levels, I have utilized these nine domains to interpret participants' experience and capacities.

Domain of Consciousness

The fundamental domain is that of the *domain of consciousness*, which “involves the experience of knowing and the awareness of the known” (Siegel, 2012b, p. 41-4). The capacity to be aware of awareness itself is reflected by the open plane of possibility, the seat of pure consciousness. As mentioned earlier, Siegel (2010b, 2012b, 2017) has developed this reflective,

mindsight practice called the *Wheel of Awareness* (WOA) that, when practiced, can integrate across mind, brain, and relationships. It involves a metaphor of a wheel where the hub represents awareness, the spoke depicts the directional focus of attention, and the rim of the wheel illustrates that which we are aware of. The integration of consciousness occurs through a process of guiding attention systematically from the position of the hub, through four rim quadrants. This involves differentiating the elements of experience and linking through conscious awareness (Siegel, 2012b). The first quadrant represents the five senses, the second involves sensing the body from the inside (interoceptive awareness), the third quadrant focuses on mental life (feelings, thoughts, beliefs, motivations, memories, etc.), and the fourth brings attention to relationships and the relational-in-between. Strengthening one's capacity to be "in the hub" allows for the increased intentionality of attention. Pearce-McCall (personal communication, May 12, 2018) adapts the WOA to help leaders view various levels of self-organizing and emergent systems from the "hub" of consciousness, including self, other, relationship, and group/organization/culture. The quadrants described by Siegel can be considered to exist in different forms at each of these levels.

Goleman and Siegel (2016) contend that leader development is served through the WOA practice. The integration of consciousness facilitates relational, neural, and mind-body regulation whereby getting caught on the rim (i.e., becoming identified and caught up with elements of experiences) is mitigated through the awareness of what is happening in the present moment (i.e., being caught on the rim could look like a style called micro-management). Furthermore, cultivating the capacity for a receptive hub is considered to be foundational for leaders who wish to promote integration across the domains of organizational life (Siegel & Pearce-McCall, 2009). Integration of consciousness is also facilitated through other mindfulness and mindsight

practices. For example, leaders can bring their attention to their intentions via internal attunement that is facilitated by a metaphoric *Tripod Lens* of *observation*, *openness*, and *objectivity* (Siegel & Pearce-McCall, 2009; Siegel, 2007, 2010b, 2012b).

Mindfulness

As mentioned earlier, mindfulness is a practice that facilitates mPFC integration and this is now supported by research, some of which is described below. Mindfulness is “a state of awareness that enables us to be flexible and receptive and to have presence” (Siegel, 2010a, p. 1). Mindfulness has other definitions as well including elements of non-judgemental awareness, presence, openness, and receptivity to whatever is within the field of awareness (Kabat-Zinn, 2005a, 2005b). Mindfulness can be practiced formally through meditation practices or informally by bringing awareness to the present moment (Badenoch, 2008; Cozolino, 2016; Hölzel et al., 2011; Hougaard & Carter, 2018). Mindfulness is different than mindsight in that the present moment is met with open acceptance, rather than awareness with the intention of implementing or modifying the experience in the promotion of integration.

Mindfulness has been studied extensively for its impact on varied aspects of human functioning and well-being. It has been shown to have many benefits including enhanced immune response (Davidson et al., 2003), increased insight, enhanced mind-body functioning, attention and emotional regulation, enhanced body awareness, greater empathy, return to emotional baseline following reactivity (Berkovich-Ohana et al., 2012; Hölzel et al., 2011), reduced emotional interference during cognitive tasks (Ortner et al., 2007), emotional equanimity and increased capacity to recognize and label experiences within the embodied mind (Creswell et al., 2007; Siegel, 2012b). As stated earlier, the first eight of the mPFC functions (body regulation, attuned communication, emotional balance, response flexibility, fear modulation,

empathy, insight, and moral awareness) have been associated with mindfulness (Siegel, 2007, 2010b). These functions facilitate leader capacities for integration across mind, brain, and relationships (individuals and teams) enabling organizational integration (Goleman & Siegel, 2016; Kryder, 2009, 2011; Phipps, 2009; Siegel & Pearce-McCall, 2009). It has been suggested that leaders learn how to practice mindfulness as well as supporting those in their organizations to do the same, such as starting meetings with a mindful practice (Hougaard & Carter, 2018; Kryder, 2009; Kryder, 2011; Pearce-McCall, 2008). This includes relational mindfulness, which involves attending to the present unfolding of relational dynamics and processes on individual and organizational levels (Kryder, 2009).

The literature suggests that leaders focus on integrating consciousness within their own mind, body, and in their relationships with others. Through practices such as mindfulness, mindsight and the WOA leaders can purposefully focus their minds to develop integration in this domain to further their own development and capacities. In addition, they might teach and/or foster these skills in their organizations, which are essential in developing capacities for integrative structures and processes. Finally, integration of consciousness may occur as an unintentional outcome of integrative practices focused in other domains of individual and organizational processes.

Bilateral/Horizontal Integration

This domain refers to the neural integration of right and left hemispheres within the brain and the resulting impacts on mind and relationships. The hemispheres are linked by the corpus callosum, which is a band of dense neural connecting fibres (approximately 300–800 million in number) that permit the flow of energy and information that both activates and inhibits areas in the right hemisphere (RH) and/or left (LH) (Cozolino, 2014b; McGilchrist, 2009; Schore, 1994;).

Each hemisphere is specialized in how it processes energy and information. Iain McGilchrist (2009) is a neuropsychiatrist who has devoted his life to understanding the hemispheres of the brain. He states that,

things change according to the stance we adopt towards them, the type of attention we pay to them, the disposition we hold in relation to them. This is important because the most fundamental difference between the hemispheres lies in the type of attention they give to the world. (p. 4)

In other words, each hemisphere has different ways of processing energy and information. The RH is earlier developing and holistic, associated with non-verbal communications, image, metaphors, sensing of the whole body, processing raw emotion, and autobiographical memory; whereas the LH is later developing, linear, linguistic, logical, literal, creating labels and lists (Siegel, 2010b). When disintegrated the RH tends towards the chaos shore and can contribute to high levels of arousal, avoidance, and negative affect (Schoore, 2003; Siegel, 2010a). The LH can bias perception in ways that separates and sees people and the natural world as an “other” (i.e., creating an us-and-them perspective). LH disintegration is characterized by rigidity where elements are held apart without adequate linkage. This results in a diminished awareness of the relational realm or the interconnectedness of all things, privileging and equating human existence with thinking and rationality, negating the importance of emotion, black-white thinking or an incapacity to recognize context, paradox, meaning, and lack of insight (Badenoch, 2008, 2011, 2017; Cozolino, 2014b). McGilchrist (2009) demonstrates how the centuries long preference for LH processing has resulted in the dominance of civilizations (and their organizations) that favor individuality, power-over, and fragmented definitions of success.

Bilateral integration entails recognizing these hemispheric differences and linking through attention and honouring the contributions of both to every experience. Integration within this domain is characterized by fluidity between left and right modes reflected by a FACES flow

(Siegel & Pearce-McCall, 2009). Given that Western culture is biased toward LH-dominance this often means that attention needs to be biased towards developing RH processes such as presence, connection to sensation and body, relational mindfulness/mindsight, etc. (Badenoch, 2011; McGilchrist, 2009). Siegel and Pearce-McCall (2009) suggest that at the organizational level, bilateral integration involves attention to coordinating activities between different departments, teams, divisions that may have their own separate processes and practices. Within leadership teams, bilateral integration suggests understanding and embracing the strengths and styles of each person, linking through leadership practices that utilize these differences in the service of the organizational vision and goals (Pearce-McCall, 2008). It also suggests that leaders take ongoing care to recognize and attend to RH processes and ways of knowing, so often marginalized in organizational life (Badenoch, 2008; Goleman & Siegel, 2016; McGilchrist, 2009).

Badenoch (2018) asserts that even a rudimentary understanding of the brain can assist in calming performance anxieties, specifically, including the significance of the right-mode/right hemisphere non-conscious communications, along with more left-mode approaches. For example, a leader's capacity to be empathic and responsive rather than reactive to an individual who is highly emotional can be served by understanding the neurobiology of implicit memory (see upcoming section on *memory integration*) and hemispheric activation, which may be influencing the person's reactivity. Furthermore, leaders' capacity to tune into their own internal responses and levels of activation invites a whole-brain/whole-body, in the moment, flexibility that holds both left-mode knowledge and right-mode wisdom to the leadership moment. From this conscious state, the leader can hold their internal position and acknowledge the other's emotion, and move the interaction forward toward co-creative resolution. Therefore, leadership

moments that are informed by both LH and RH processes integrate both the wisdom of the whole body and subcortical energy and information along with the clarity of the left-mode. In combination with other domains including *vertical integration* (next section), bilateral or horizontal integration is considered necessary for whole-brain leadership and is seen to be foundational to ethical leadership practices (Firestone et al., 2008).

Vertical Integration

The brain and nervous system are vertically distributed with energy and information flowing from body to brain and brain to body and within the brain from brainstem to limbic system in the midbrain, to the cerebral cortex, and then from top to bottom again in a continuous flow (Siegel, 2010b). In other words, bottom-up and top-down processing occurs both within the brain and between the brain and body proper. Vertical integration entails the capacity to recognize what the body is signalling through sensations as well as tuning in to feelings, and the more subtle primary process emotions (Panksepp & Biven, 2012; Siegel, 2010b). Therefore, vertical integration involves differentiation and linkages across cortical, subcortical, and bodily circuits. The energy and information of interoceptive awareness, which is our capacity to sense our bodies from the inside (i.e., sensing bone, muscle, viscera, etc.), is mediated through the RH and then to the limbic circuits in the midbrain, the insula, and into the right mPFC (Siegel, 2020). This is emergent process where the embodied brain is considered to be a system or process of regulation rather than a structure: “Cells are always alive and changing, fluids and electrical impulses are always moving within and between cells, and body as a whole is never completely at rest with its breathing, heartbeat, and other organic movements: We are complexity and flow” (Fogel, 2009, pp. 41–42).

Developing the capacity for awareness to attune to these subcortical circuits facilitates access to energy and information (i.e., feelings, sensations, emotions, intuition) that are essential to informing cortically-involved activities such as discerning needs, making decisions and choices, etc. (Siegel, 2010b). This is considered essential for leaders who not only need to be able to attune to their own needs for basic self-care (nutrition, sleep, movement) in order to function well, but also the more complex regulatory processes that maintain homeostasis and regulation (Fogel, 2009; Rock, 2006). Furthermore, the evolutionarily older limbic circuits, considered to be the seat of emotions, are inextricably linked with the newer developed cortex; the latter provides top-down shaping and options for emotional expression (Panksepp & Bevin, 2012). This is key for leaders who must process and navigate many complex realities. For example, ethical decision-making requires the whole brain and body as well as the capacity for emotional regulation during times of stress (Firestone et al., 2008; Goleman & Siegel, 2016).

In addition, vertical integration is considered essential in a leader's capacity to attend to relationships individually and collectively. For example, Pearce-McCall (2008) presents a case where the concept of vertical integration was applied to better understand an organization's structure and then guided practices between managers and executive leadership to facilitate the necessary changes. Attending to vertical integration is also necessary for leaders who must cultivate embodied awareness in order to have the capacity for response flexibility, which entails being non-reactive and non-judgmental (Kryder, 2009; Pearce-McCall, 2007). IPNB founding scholar Allan Schore (2012) agrees: "implicit relational knowledge is not purely psychological, but essentially psychobiological, mind *and* body" (p. 124, emphasis in original). In other words, the capacity to monitor internal experience and modify with practices that promote integration facilitates the development of relational capacities. This behooves leaders to develop and

perform practices that vertically integrate within their own brains and between brain and body as well as that of others in their organizations.

Interpersonal Integration

Given relationships are considered a prime of human experience, it is understandable that IPNB considers integrated relationships to be the foundation of well-being (Cozolino, 2010, 2014b; Schore, 1994; Siegel, 2020; Siegel & Bryson, 2011). As indicated earlier, relationships that honour differences and promote linkages are integrative. Given we are hardwired to pick up the signals of others much has been written in IPNB texts about the relational practices that foster integrative relationships such as presence, contingent communication, attunement, and resonance (Schore, 1994; Siegel, 2020; Siegel & Bryson, 2011). These skills support relational safety considered to be essential for interpersonal integration. Further, both self-awareness, including interoceptive awareness, and social awareness are considered to be seamlessly linked through mindsight that is characterized by openness and receptivity:

And as ‘we’ is woven into the neurons of our mirroring brains, the light of our connection illuminates even our sense of self. With internal awareness and empathy, self-empowerment and joining, differentiation and linkage, we create harmony, within the resonating circuits of our social brains. (Siegel, 2010b, p. 231)

Cozolino (2014b) states that resonance circuitry along with imitation and the mirror neuron system make empathy and attunement possible. Resonance circuits communicate information, advance social cohesion, and enhance group safety (Cozolino 2014b). Furthermore, an internal model of the internal experience of the other person is created through resonance circuitry. Empathy and resonance involve “the insula and the anterior cingulate cortex (ACC) [which] play a significant role, with the insula bridging, coordinating, and regulating cortical and subcortical, including the body, circuits. In many ways the insula and ACC are involved in ‘linking hearts and minds’” (Cozolino, 2014b, p. 237). In addition, these two brain regions are involved in the

integration of somatic and cognitive processes, the conscious experience of feelings, as well as the selection of behaviour in response to external stimuli and events, along with the simulation of the internal states of others. Empathy is key to fostering integrated relationships in organizations; leaders neurobiological capacity for empathy is an essential part of their development.

According to empathy researchers Decety and Michalska (2010), there are five types of empathy: Cognitive; emotional; empathic concern; perspective taking; and empathic joy; of these cognitive empathy, empathic concern, and perspective taking are considered to be key to leadership practice (Goleman & Siegel, 2016). As stated, mirror neurons are considered to play a key role in empathy. However, some forms of empathy can interfere with a leader's capacity to manage some conflictual situations if she/he becomes overtaken by emotional empathy with others' states such as anxiety and fear. Mirror neurons were found by accident in the parietal and frontal cortices of a macaque monkey when she/he observed actions performed by the researcher; specifically, these premotor neurons in the F5 area of the monkey's brain fired during the observation of intentional behaviour as if the monkey was performing the action (Cozolino, 2014b; Iacoboni, 2008). Since these early discoveries, mirror neurons have been found to be widely distributed across the brain including the premotor cortex, the supplementary motor area, the primary somatosensory cortex and the inferior parietal cortex (Siegel, 2020). Research has indicated that mirror neurons are considered to involve multiple brain and body neural networks that bridge outer and inner experience so that we can perceive the experiences of others (Iacoboni, 2008; Siegel, 2020). Key in the formation of perceiving the intentions of others, mirror neurons are considered to be involved in mental maps of people and spaces (Siegel, 2017, 2020b). Interestingly, the macaque's mirror neurons correlate with the Broca's area in humans, linked to language. Thus, mirror neurons are also considered to be key in communication. From

an IPNB perspective, leadership requires the capacity for empathic communication. In order to have empathy, leaders must be able to notice their own capacity to experience the experience of others; this involves developing a mindsight-map-of-me plus a mindsight-map-of-you, which can lead to empathic concern and compassion followed by action (Goleman & Siegel, 2016).

However, there has been some controversy surrounding empathy and leadership. Caution has been suggested when leaders utilize empathy without attending to integration, suggesting that differentiation must not be lost in the service of linkage (empathy) (Goleman & Siegel, 2016). Empathy without differentiation can facilitate over-identification and so, what has been thought of as compassion fatigue, is now being considered empathy fatigue (Singer & Bolz, 2013). Therefore, enhancing empathy with compassion allows for integration to occur. While empathy assists in understanding (cognitive empathy) and feeling with and for (emotional & empathic concern) the other person, compassion allows for responsiveness and action. Compassion invites the question: How can I be of assistance? (Hougaard & Carter, 2018). This is most effective because compassion moves people into action. For example, a secure-based leader offers a sense of compassion and safety, encouraging people to dare to take risks and be creative (Kohlrieser et al., 2012).

In keeping with this, *social baseline theory* (SBT) (Coan & Maresh, 2014) reinforces the recognition of the importance of relationships to leadership and organizational integration. SBT draws upon Bowlby's attachment theory, behavioural ecology, cognitive neurosciences and perception science in understanding how relationships both mitigate and hamper mental and physical well-being (Coan & Sbarra, 2015). SBT establishes the social nature of the brain, which has been shown to require fewer metabolic resources in the presence of collaborative relationships, and, inversely, expends more energy (cognitive and physiological) in the absence

of social resources. Noting that perception of effort in the face of challenge is mitigated by the presence of supportive relationships, Coan and colleagues (Beckes et al., 2011; Coan & Maresh, 2014) state that *risk distribution* and *load sharing* accounts for this; for example, the prefrontal cortex, which is responsible for physiological, emotional, and cognitive regulation, returns to a calm state when people are in the presence of higher quality relationships characterized by mutuality and intimacy. In contrast, relationship loss and rejection diminishes the self as people move away from their social baseline into a state of isolation, adding to a heightened perception of threat and the experience of greater burden when facing environmental challenge. Therefore, social pain deeply impacts human functioning; in fact, the *social pain overlap theory* was developed upon the discovery that the same brain circuits are activated with social as well as physical pain (Lieberman, 2013).

These research findings have significant implications for leaders. Leaders need to develop key qualities and/or practices that consider the principles of integration in their work relationships; for example, attuned relationships, empathy, response flexibility (Pearce-McCall, 2007). In addition, motivation and innovation are embedded in safe relationships where awareness of self, empathic concern, and integration are held central to organizational processes grounded in cultivating a secure-base (Kohlrieser et al., 2012). Therefore, resting upon a strong value for the human resources in organizations, IPNB challenges traditional command and control ways of managing as ones that simply don't work anymore, especially at this time in history with the emergence of a knowledge-based work culture (Goleman & Siegel, 2016; Hougaard & Carter, 2018). For example: discussing the negative psychological and spiritual impact of Western socioeconomic values for material gain that dominate many organizations, Hill (2009) argues for a workplace that honours the importance of relationships. From and IPNB

perspective, organizational integration requires that individually and collectively people are acknowledged, recognized, empowered, and engaged in their work. Given this, attention will be paid to how leaders and consultants are attending to interpersonal integration during the analysis phase of this inquiry process.

State Integration

State integration refers to the organized patterns within the embodied brain, which are experienced as states of mind:

The patterns themselves are made of neural firings that contain an electrochemical flow of energy and information. In other words, a “state of mind” arises from a neural net profile of brain activity and is alternatively experienced as an aspect of subjective mental life...*It coordinates activity in the moment and it creates a pattern of brain activation that can become more likely in the future* [emphasis in original]. Repeated activation of particular states for example, a shame state or a state of despair makes them more likely to be activated in the future. In this manner, states can become traits...that influence both internal and interpersonal processes. (Siegel, 2012a, p. 189, emphasis in original)

Returning to the Plane of Possibility, states are the plateaus, and traits well-established peaks.

Therefore, states and traits result from more established neural firing patterns, which form an individual's personality. Organized as *neural nets*, which are groups of interconnected neurons, state integration offers neurobiological efficiency where moment by moment activation of complex information processing links different elements of mind, brain, and relationships (Siegel, 2020). Emotion is considered key in this process, signalling when there has been a shift in states as well as playing a key role in coordinating energy and information flow through these states (Siegel, 2020). A cohesive state refers to the quality of differentiated elements coordinating together to maximize neural efficiency; a cohesive state can be also coherent, or it can be rigid. When states are integrated, the organism or organization is responsive and adaptable to the external environment, in that ongoing FACES flow (Siegel, 2020).

Responsible for perceptual biases, emotional tone and regulation, memory processes, mental models and behavioural response patterns, states hold considerable significance for leaders (Goleman & Siegel, 2016; Siegel, 2020). When disintegrated, states incline towards chaos and/or rigidity, impacting people's capacity for flexibility and adaptability which become compromised, along with impairments to their energy, stability and coherent functioning (Siegel, 2010b). Therefore, Siegel and Pearce-McCall (2009) suggest that mindsight is crucial for leaders to recognize both their own and others ever-shifting states. Further, they argue that leaders are positioned to not only modify their own dysregulated states but also to influence that of others in the organization. They also suggest that organizational integration is facilitated when leaders attend to the ever-changing states of the workplace and larger contexts (i.e., the community, marketplace, and global states within which the organization is embedded).

Memory Integration

Memory plays a significant role influencing the activation of states of being. Both non-conscious (implicit) and conscious (explicit) memory primes the plateaus, readying mind and brain for anticipated experiences both pleasant and unpleasant (Badenoch, 2008, 2018; Siegel, 2020). Implicit memory is early developing (in utero and dominates during early childhood), biased to the RH and subcortical activation, involves the amygdala and orbitomedial prefrontal cortex, is context free, and without attribution to the source of the memory (Cozolino, 2014b). On the other hand, explicit memory is later developing and linked to maturity of the hippocampus, which begins to mature at approximately eighteen months through to age five (Siegel, 2012a). When an explicit memory occurs, we recognize it as a memory; it has context, is recognized as occurring in the past (time stamp) and is recollected with a known source. Unlike

implicit memory, explicit memory is LH biased involving activation in the hippocampus and dorsal lateral prefrontal cortex with a bias to cortical activation (Cozolino, 2014b).

Events that are charged with emotion and/or are repeated are the most impactful on the brain and more likely to be recollected in the future (Siegel 2012a). However, memory integration is negatively impacted if the events are accompanied by stress because of the release of hormones from the hypothalamus, adrenal, and pituitary glands (HPA axis). As mentioned earlier, the hippocampus is one of the highly integrative areas of the brain that has particular relevance to memory integration. The hippocampus is particularly vulnerable to the hormones, such as cortisol, released by the HPA axis, which results in inhibition of neuronal growth and, ultimately, with chronic stress, neuronal death (Siegel, 2012a). In addition, the amygdala works in tandem with the hippocampus adding meaning and value to the perceived event. However, while cortisol inhibits hippocampal *explicit* memory integration, noradrenaline enhances amygdala *implicit* encoding, leaving these charged events as wordless, non-conscious memories (Siegel, 2012a). This is the reason why many traumatic or stressful memories exist in implicit form. However, as suggested, these memories may be triggered in present-day situations including those in the workplace and/or between leaders and followers; however, these memories show up without the memory stamp—as emotions, moods, sensations, perceptual biases, etc. As an example, individuals who experience higher stress at work during times of transition and change in the workplace may have both explicit and implicit memories related to past stressful events that are influencing their responses. Therefore, leaders need to consider how they can support people through these changes, which are not only be stressful in and of themselves but can also carry the echoes of difficult memories, particularly implicit ones (Hougaard & Carter,

2018). However, implicit memories are not easily recognized as memory, but may appear in ways that could be easily mistaken as overreaction or resistance.

The implications for leaders include the importance of awareness of how both implicit and explicit memory might be impacting activation across their own mind, body, and relationships as well as that of others. This holds particular relevance with implicit-only memory, given its activation is often missed, leading to misinterpretations and miscommunication (Siegel & Pearce-McCall, 2009). Also, attachment schemas are often held in implicit-only form, activating when triggered by internal or external events. For example, attachment security/insecurity has been found to impact individual perceptions and behavioural responses to potentially stressful workplace events, capacity to balance life and work, as well as attitudes towards work (Harms, 2011). Imagine an employee with an anxious attachment system, worrying over any perceived negative nonverbal expression on his manager's face. Fostering mindsight in recognizing the signs of implicit memory activation can assist leaders in regulating their own responses as well as supporting others in the organization to be less reactive (Siegel & Pearce-McCall, 2009). This entails developing the attentional skills to recognize implicit memory when it occurs, thus rendering it explicit which opens the memory to the neuroplasticity of integration (Badenoch, 2008, 2018; Cozolino, 2014b; Siegel, 2020). This occurs because attention engages the hippocampus, which allows for implicitly held representations of events to become integrated further into the neural memory systems (Siegel, 2020). Likening this process to a jigsaw puzzle, with the hippocampus as the assembler, memory integration involves putting together the implicit memory pieces into a mostly explicit, coherent, whole picture. Leaders can utilize this knowledge to aid their own development as well as recognizing the influence memory may have for others in the workplace; for example, during times of change and stress an

employee's response may be influenced by implicit memory and appear out of step with what is anticipated.

Narrative Integration

Finding narrative or a story to describe this whole picture is both intrapersonally and interpersonally integrative, as it is one ancient way we link—by finding shared meaning in our different experiences or stories (Cozolino, 2014b; Siegel, 2010b). The narrator is the observer, “one that narrates its own unfolding” (Siegel, 2012b, p. 41–10). The capacity to find words to describe experience rests upon RH and LH integration with the right mode and left mode ways of processing energy and information combining to making sense and meaning. Further, a coherent narrative signifies that the integration of implicit memories has transpired (Siegel, 2010b). When we can weave a sense-making story about our implicitly driven thoughts, feelings, sensations, and behaviours, integration occurs. With a beginning, middle, and an end, narratives provide *mental time travel*, which is the capacity to traverse past, present, and future as plans are made in the present moment using information gleaned in the past (Siegel, 2020). Linking memory and narrative integration, Badenoch (2011), scholar and practitioner in the IPNB field, utilizes a process where sustained and mindful attention along with the labeling or naming of the implicit memory is repeatedly practiced while being mindfully anchored in the present-moment. This and other forms of memory reconsolidation are now one focus of many treatments for trauma. Memory reconsolidation occurs when a disconfirming present-moment experience can be accessed and integrated at the time the implicit sensations, perceptions, beliefs, and emotions are occurring (Ecker, 2015). Therefore, an attuned leader can change long-standing beliefs about the workplace or leadership by offering a response that counteracts previous experiences (Davidovitz et al., 2007; Kohlrieser et al., 2012).

From a system's perspective, having a coherent narrative that links an organization's past, present, and future vision is essential to facilitating integration (Siegel & Pearce-McCall, 2009). Further, the shared narratives, or what Cozolino (2014b) calls co-constructed narratives, link the different elements of an organization, shaping its culture toward integration. At an individual level, leaders are encouraged to attend to making sense of their own histories so that they are able to be present and coherent in their state of being, able to respond in-the-moment, unencumbered from unresolved memories and inflexible states (Firestone et al., 2008).

Temporal Integration

The human brain is able to map experience across time, which enables us to learn from the past during the present moment and plan for the future, though only living in the now. However, this also means that humans can ruminate on the past becoming disintegrated in the present and preoccupied about plans for the future (Siegel, 2020). Thus, temporal integration refers to the integration of the universal realities of impermanence, uncertainty, and mortality that accompany our human experience of time (Siegel, 2010b). Typically, humans:

busy ourselves in an effort to deal with [these] three fundamental outcomes of temporal processes: (1) We long for certainty, but because we can map out time, we know that nothing is really certain; (2) we long for permanence, but we know that nothing will last forever as time moves ever forward; and (3) we long for immortality, but we come to know that we all must die one day. (Siegel, 2012b, p. 41-14)

Oftentimes, we don't navigate these dilemmas with ease; we either react with chaotic distress or clamp down with rigidity through avoidance, efforts to control, or emotional despair. Siegel (2020) suggests that in order for temporal integration to occur, we must face these realities head on, holding the differentiated and paradoxical elements in consciousness while linking with compassionate attention.

The implications for leaders surround the acknowledgement and honouring of an organization's past, present, and future (Pearce-McCall, 2007). This domain invites leaders to hold in awareness and guide the organization's developmental phases through being clear "about where their organization was, is, and can go integrating current certainties with risks and changes for the future" (Siegel & Pearce-McCall, 2009, p. 11). It requires that leaders have the capacity to support others to let go of holding on to the past (rigidity) while responding to fears and potential dysregulation, while stepping into the uncertain future (chaos).

Transpiration/Integration of Identity

The final domain refers to an emergent experience that occurs while "breathing across all the domains of integration" (Siegel, 2017, p. 206). Siegel (2017) originally dubbed this domain *transpiration* however the term has evolved to the current reference of *identity integration*, which reflects more accurately the outcome when individuals integrate the eight preceding domains. However, identity does not refer to a static state, rather it is ever-emergent, flexible, adaptive, coherent, energized and stable. Further, identity refers to the personal level as well as the collective, which includes organizational identity and a sense of being a part of a much larger whole (Siegel & Pearce-McCall, 2009). It situates self, other, and the collective within a larger global whole, inviting meaning and a sense of interconnectedness beyond organizational walls.

It has been suggested that leaders utilize these domains to guide their practices (Siegel & Pearce-McCall, 2009). The domains can assist leaders in assessing the degrees of integration within themselves and the organizations in which they lead. These categories assist by differentiating the domains of integration, providing a framework to dive deeper into integrative and disintegrated experiences. Understanding how or if leaders are using the domains is one application I have used in this research. However, these domains assisted me in interpreting each

participant's experience. For example, understanding their conscious and non-conscious attention to these domains and comprehensiveness, or lack thereof, of integrative capacity as leaders. This was essential given the varied experiences of these self-identified IPNB-leaders, which can be understood across a continuum of integrative consciousness, capacities, and practices.

Conclusion

IPNB invites a whole new way of seeing, being, and behaving. Although it has been widely applied in the mental health, teaching, and parenting spheres of lived experience, this chapter featured some of the ways it can be applied in leadership; for example, enhancing and guiding leader's development, illuminating and acting in relationships across the organization, and the organizational system itself. These applications have both internal and relational breadth and depth.

The literature suggests that the IPNB-informed leader need to attend to ever-emergent energy and information flows across the primes of mind, brain, and relationships with the intention to foster integration within and across the organization. Acquiring knowledge about the brain and extended nervous system can equip leaders in recognizing mental, physiological, and behavioural dysregulation in themselves and others. Developing skills such as mindsight and mindfulness can assist leaders in monitoring and then modifying this dysregulation, lending intentional efforts to facilitate the complex system (individual or collective) moving to integrations that is characterized by a FACES flow.

The available literature suggests that leaders, coaches, and consultants, who have been interested in applying IPNB to leadership, see great value in doing so. Given, I was unable to uncover any research looking into how leaders are utilizing IPNB this research sought to explore

how leaders who self-identify as being informed by IPNB are doing so. This leaves many questions regarding how IPNB is being utilized in leadership and organizations, and in what way. For example, what, if any, principles described in the literature, are leaders using? How are they using these principles? Are there additional ways, not suggested in the literature, that leaders and leader consultants are integrating into their work? Overall, I came to this research with a curiosity about the knowledge IPNB-informed leaders are integrating into their practices, development and identities. The literature outlined has provided a backdrop for my reflection on these leaders' stories offering a framework to explore the integrative capacities and effects of these leaders' efforts. This was necessary given the varied ways in which these leaders and consultants used IPNB as well as their different positions, locations, and leadership contexts.

CHAPTER III: METHODOLOGY

Scholars and practitioners featured in the literature review propose that IPNB has the potential for far and deep implications in leadership and leading as well as having implications for organizations. This research inquiry sought to systematically explore how self-identified IPNB leaders and leader consultants are using this framework in an effort to expand upon the literature by inquiring into what leaders are actually doing and how IPNB has impacted their development and identities. This takes IPNB-leadership canon beyond concept into the realm of experience. In order to do this, adopting a narrative method made sense. Although narrative methods can be used in quantitative research, they are usually applied in qualitative inquiries that seek to explore and understand personal and social experience rather than predict or prove. Narrative inquiries (NI) are about listening to and legitimizing the personal and/or local, historical and/or socially situated experience(s), which is best suited to this particular inquiry.

However, searching for a suitable narrative methodology proved to be daunting given narrative's variability: "Narrative research is a multilevel, interdisciplinary field and any attempt to simplify its complexity would not do justice to the richness of approaches, theoretical understandings and unexpected findings that it has offered" (Squire et al., 2013, p. 13). Daiute (2014) agrees in her discussion of the utility of NI to researchers when she suggests that the many forms of NI and analytic practices are rooted in the different disciplines within which the inquiry occurs. She states that different disciplines lend to different emphasis.

Contemporary narrative inquiry can be considered from different epistemologies including: a way of knowing (Bruner, 2002); a way of understanding the meaning of human experience and sense-making (Clandinin & Connelly, 2000; McAdams, 2012); a way to understand events and human action (Polkinghorne, 1988; Richards, 1989); a way of

constructing and/or expressing identity (M. L. Crossley, 2003; Freeman, 2006; Josselson, 2006; Maynes et al., 2008; McAdams, 2012; Mishler, 1995; Witherington, 2007); a way of making socially and politically marginalized experiences visible (L. M. Brown & Gilligan, 1992; Hammack, 2011; Maynes et al., 2008; Pederson, 2013); a way to understand and transform organizations (Boje, 2008; J. S. Brown et al., 2005; Gabriel, 2000); and an integral part of relationships both internal and external (Baxter & Braithwaite, 2009; Bell, 2014; Gergen, 2009; van Loon, 2017). These varied perspectives are not only informed by different philosophical approaches, but also have implications for data collection, analysis, and processes for interpretation (Riessman, 2008). Narratives are often chosen for research because stories reveal peoples' subjective truths of their lived experience and bring order to chaos. Psychologist and narrative scholar Jerome Bruner (2002) believes that narratives structure perceptual experience, organize memory, and integrate life events.

I will begin with a brief introduction to narrative inquiry and highlight some of the approaches to narrative inquiry that have relevance to my research topic. I will then explore of the Listening Guide (LG) (Gilligan & Eddy, 2017), which I have chosen as the methodology for this inquiry. This will include an explanation of the LG process and a discussion of its suitability for uncovering the breadth and depth of IPNB's influence on leaders as well as how they are using this framework in their practice and organizations. Then I will outline features of three relational approaches, which I will use to enhance the LG process. These include Dialogical Self-Theory (DST) (Bakhtin, 1984; Bell, 2014; Bohm, 1996; Hermans, 2001; van Loon, 2017), Relational Dialectics Theory (RDT) (Baxter, 2004a, 2004b), and Dynamic Systems Perspective (DSP) (Daiute, 2014; Lichtenstein et al., 2006; Lunkenheimer, 2018; Thelen, 2005). I will also

explain why I have enhanced the LG with these theories and how these approaches will be used during the LG's systematic relational and voice-centered analytic process.

A Brief Overview of Narrative Inquiry

There is tremendous diversity in how NI is viewed at all levels (ontological and epistemological underpinnings, data collection, analysis, and interpretation), lending considerable promise, yet at other times, confusion. Researchers who use narrative typically study stories of experience and/or events; however, there are varied views about what constitutes a story as well as the methods used to gather and analyze (Pinnegar & Daynes, 2007). For example, definitions of narrative vary, sometimes offering conflicting views among those who are considered the field's prominent scholars and researchers. As stated, this variability is generally attributed to the discipline and/or traditions within which the inquiry occurs, for example psychology, sociology, anthropology, linguistics (Riessman, 2008).

Furthermore, different views about the relationship between story and narrative exist among researchers and scholars. For many, story and its structural elements (i.e., beginning, middle, and end) are central to the definition of narrative (Clandinin & Connelly, 2000; Eakin, 1999; Elliot & Bonsall, 2018; Maynes et al., 2008). Through story, humans are said to construct and reveal their individual and collective identities; bring coherence to the past, present, and future; engage and entertain others (audience); do political work; and mislead or motivate (Eakin, 1999; Maynes et al., 2008; McAdams, 1993; Riessman, 2008). Bruner (2002) suggests that narrative brings order to uncertainty and the inevitable mishaps and disruptions humans experience, which has been discovered to be a neuro-psychological necessity "of consciousness and action" (p. 28). Therefore, narrative researchers look to stories to understand the functions and meaning of experiences; how individuals and groups make sense of events; as well as

express and connect with others and within themselves (Hermans & Gieser, 2012; Riessman, 2008; van Loon, 2017). These elements of narrative have relevance to this particular inquiry where I wish to explore and understand IPNB-informed leaders from their perspective.

Historical Overview

Examining the history of narrative revealed ontological and epistemological foundations, most particularly following the *narrative turn*, that are consilient with IPNB and the goals/hopes for this research. The narrative turn refers to a change in thinking about research. Riessman (2008) states that the seeds of this turn occurred the 1960's which saw the budding of narrative as a method of inquiry—and that 1980's saw it flowering. According to Squire (cited in Reissman, 2008) the 1960's saw a questioning of Western thought and a growing interest in intersubjectivity, consciousness, reflexivity, and interdisciplinary approaches to scholarship and research that prompted this initial turn. Some view the early epistemological shifts through the 1960's and 1970's occurring via two streams of influence: First, the rise of psychologically and sociologically influences in humanism including the works of Bruner, Polkinghorne, Sarbin and Bertaux (cited in Andrews et al., 2008); and second, the rise of Russian structuralism and French post-structuralism and postmodernism (Andrews et al., 2008; Gubrium & Holstien, 2009; Riessman, 2008). At this time, there was a shift to studying narrative in and of itself, with an expansion in application from literature to other genres and disciplines (Hyvärinen, 2010).

However, it wasn't until the 1980's that narrative inquiry saw significant growth and popularity in the social sciences as a method of inquiry into human experience, identity, and development (Andrews et al., 2008; Clandinin & Rosiek, 2012; Hyvärinen, 2010; Riessman, 2008). Riessman (2008) considers this narrative turn to be linked to larger socio-political.

Pinnegar and Daynes (2007) assert there were four turns or movements, not just one, at this time in history:

(1) a change in the relationship between the person conducting the research and the person participating as the subject (the relationship between the researcher and the researched), (2) a move from the use of numbers toward the use of words as data, (3) a change from a focus on the general and the universal toward the local and specific, and finally (4) a widening in acceptance of alternative epistemologies or ways of knowing. (p. 9)

These turns challenged positivistic epistemology and paved the way for new ways of conducting research. Pinnegar and Daynes (2007) state this shift was influenced by post-modernism, post-structuralism, neoliberalism, and cultural studies bringing attention to the previously unexamined role and person of the researcher. For example, the assumption that the researcher can achieve objectivity and are positioned to act upon the research participant was called into question. Instead, researchers recognized their relational embeddedness, and therefore impact, at all stages of the research process. Secondly, if the research interest lies in understanding human experience, utilizing numbers to represent complexities and nuances was considered to reduce the richness of human experience and interaction. Thus, positivism's ontological premise that truth is knowable and reducible to factors that can generalize and predict is considered inadequate in the social sciences. Bruner (as cited in Pinnegar & Daynes, 2007) suggests this flattens insight and meaning-making, reducing the focus to researcher-defined, labeled, and depicted phenomena rather than understanding the stories and the meaning(s) therein. Therefore, rather than confining individual experiences with predetermined grand theories, narrative inquiry seeks to uncover the local and particular.

Narrative does not look to generalizability as a determinant of validity. Rather, value and validity are found in deeper, contextualized, understandings of lived experience that have the capacity for transferability (Riessman, 2008). Philosopher Allisdair MacIntyre (cited in Pinnegar

and Daynes, 2007) challenged Enlightenment's ontological premise of rationality as the most valid way of knowing; instead, putting forward the claim that knowledge and knowing are both embodied and relational, and cannot be decontextualized. It is with these historical developments and considerations that this particular inquiry settles and finds promise.

This fit with the methodological parameters and requirements for this inquiry. It was essential that I find a method that could hold the complexity of IPNB's dynamic, emergent, and relational movement and meaning. The underlying principles of narrative are consistent with IPNB, which is not considered to be a theory about human experience; rather it is seen to illuminate natural processes that evolve the human experience in space, place, and across time. Each application of, or approach with, IPNB is different from the other with each being relationally embedded and responsive to the dynamic interplay of mind, brain, and relationship, moment by moment. It is fluid, responsive, ever-changing thus defying any fixation of meaning and prediction.

Story

Narrative inquiry scholars turn to methodology that captures more complex and nuanced ways of expressing the ways that individuals, and groups of individuals, (i.e., organizations) make sense of their lived (Pinnegar & Daynes, 2007). Narrative inquiry is a way to study and explore the experiences, actions, and meanings in human lives from the individual's (or group's) perspective (Clandinin, 2007; Hyvärinen, 2010; Mishler, 1995; Pinnegar & Daynes, 2007). Many social science narrative researchers subscribe to the premise that narrative and story are inextricably linked, if not synonymous (Boje, 2008; J. S. Brown et al., 2005; Bruner, 2002; McAdams, 1993). Different ways of knowing a phenomenon become knowable; for example, how and why a particular event is storied, or what the narrator accomplishes by narrating a story

in a particular way and the effects on readers and listeners. Accounting for the latter is key in the LG process, where the researcher makes note of their responses throughout the interview, listening steps (analysis) and interpretive phases (Gilligan & Eddy, 2017). Mishler (1995) suggests that the successional ordering of events, often considered to define narrative, is not necessarily representative of the ways that humans bring coherence to their lives. In his view, meaning can also be found in and through “causality, implicativeness, or thematic coherence” (Mishler, 1995, p. 91). Further, dialogical approaches to narrative suggest that narrated experience be discovered and understood through the relatedness or spaces between elements of dynamic systems (within individuals, between individuals, and larger sociocultural contexts) as well as temporality (Baxter & Braithwaite, 2009; Bohm, 1996; Cunha & Salgado, 2017; Sampson, 2008; van Loon, 2017). Some historical accounts suggest that post-war shifts in approaches to narrative were influenced by French structuralism and deconstructionism along with and Russian formalism, cultural analysis structuralism, and postmodernism and humanist approaches in sociology and psychology (Andrews et al., 2008; Riessman, 2008). Russian philosopher and literary scholar Michail Bakhtin (Bakhtin, 1981, 1984) introduced the importance of analyzing interactions in the reading of texts as a source of meaning (Hermans & Gieser, 2012; Riessman, 2008). This dialogical approach to narrative inquiry is present in the LG process, which creates space for uncovering and understanding internal and external relational realms of experience necessary for a fulsome exploration of IPNB-informed leaders’ stories.

Narrative and IPNB

As discussed in the previous chapter, IPNB founder, Dr. Daniel Siegel (2012b) asserts that narrative is of one of nine domains of integration across mind, brain, and relationships. Integration is one of IPNB’s foundational principles occurring across multiple domains of human

experience and functioning. Narrative is considered to be a highly functionally integrative across the other eight domains:

Narrative integration is how we make sense of our lives by weaving the distinct elements of memory of lived life together and then extracting meaning from those reflections ... narrative may be an innately integrative process, and it draws upon other domains of integration—such as those of memory, consciousness, vertical and even bilateral integration, linking the left's [hemisphere] drive to tell a logical linear sequence that looks for cause-effect relationships of things in the world with the right hemisphere's dominance for autobiographical memory: Narrative harnesses many aspects of our selves to integrate a meaning making process. (Siegel, 2017, p. 93, emphasis in original)

Accordingly, narrative integrates across the other domains of lived experience as well as being integrative by emerging coherent meaning(s) of this lived experience. IPNB views narrative process as integrative between, among, and across mind, embodied brain and relationships (Siegel, 2007, 2012a, 2017). For example, at the neurobiological level, narrative both reflects and shapes the brain and extended nervous system, a view shared by narrative psychologists (Beaudoin & Zimmerman, 2011; Zimmerman, 2017).

Therefore, IPNB views narrative as descriptive (i.e., of the multiplicity of identity and meanings of human experience) as well as active (i.e., continually constructing, creating and shaping that experience). In other words, narrative is both reflective and constitutive as well as reflecting and constituting. This is consistent with narrative approaches to social science research where the meaning of human experience is held central to the inquiry and as well the process of narrating, which shapes and creates meaning; in other words, narrative can be method, the phenomenon being studied, or both (Pinnegar & Daynes, 2007). This is consistent with constructionism, which postulates that “the self does not have an existence apart from its surroundings, it is co-created in relation with society. The external *dialogue* between person and other is *interiorized* in a *society of selves*” (van Loon, 2017, p. 16, emphasis in original).

The Interview

The process began with the recruitment of participants for interviews. This included leaders and leader coaches/consultants who self-identified as using IPNB in their practice. Since there is no standardized training in IPNB, individuals and groups gain knowledge through varied means. For example, reading, webinars, conferences, study groups, specific IPNB programs and university courses that integrate IPNB in curriculum. I included leadership and organizational consultants because some leaders practicing from an IPNB perspective have shifted from direct practice to supporting other leaders in their work.

Some of these individuals were known to me through affiliations in the IPNB community or, suggested to me by others. In addition, an invitation for participation was sent through the Global Association for Interpersonal Neurobiology Studies (mindGAINS, n.d.) newsletter (see Appendix A). Each potential participant was provided with an email explaining the focus of the research and an invitation to participate (see Appendix B). Once confirmed, each participant was provided with a consent to participate (see Appendix C) and a one-hour remote interview was conducted and recorded. There was only one standardized question at the beginning of the interview, which was provided to participants prior to meeting: Can you tell me a story/stories of a time when you approached your leadership from an IPNB perspective? The audio recordings were transcribed into text and the video recordings saved for the purposes of further review during the listening steps.

The Listening Guide: Setting the Stage

I have chosen this section's title carefully as the notion of *setting the stage* implies that narrative occurs in space, unfolding across time, located in place (relational, situational, contextual) for both narrator (speaker) and audience (listener). However, an improvisational

stage suggests that the lines between speaker and listener are dynamic, shifting, and shared. Interactions arise recursively and attention is drawn not only to the individual narrator(s), but the interactions and relationships between narrators. Significant as well, is the context, which is not a mere backdrop to the story being told, but integral and embedded in and with the story, both shaper and shaped. The story is not predetermined, but emerges as the conversation unfolds. Given relationships, both internal (i.e., between mind and embodied brain; between different states; between memory and the present moment) and external (i.e., other people, culture, natural environment, communities, and organizations) are considered to be fundamental and seamless in IPNB. Therefore, I needed to find a methodology that could illuminate and hold these multi-layered, intersecting elements, which the LG fulfilled. However, I also needed to enhance this methodology in order to capture the depth and complexity of IPNB-informed leaders' experience. I will begin with a description of the LG and then introduce the ways I have enhanced the process along with the rationale.

LG Overview

I was thrilled to rediscover Carol Gilligan's (Gilligan, Spencer, et al., 2003; Gilligan, Spencer, et al., 2006; Gilligan & Eddy, 2017) LG, which provides a systematic process of inquiry that attunes to multiple perspectives or voices of a persons' experience, while, at the same time, accounts for the relational embeddedness of voice and experience. The LG is informed by literary and musical theory that attunes to the multiplicity of voices, tones, rhythms, counterpoints, and fugues through which people share their experiences (Gilligan, Spencer, et al., 2006). It requires the researcher tune in and embody a deep listening practice as the way into another person's story. The LG provides a nuanced and complex method for inquiry and discovery where voice is the portal into a person's experience (Gilligan, Spencer, et al., 2006).

Voice is considered to be “the footprint of the psyche, bearing the marks of the body, of that person’s history, of culture in the form of language, and the myriad ways in which human society and history shape the voice and thus leave their imprints on the human soul” (Gilligan, Spencer, et al., 2006, pp. 253–254). The LG is also informed by psychoanalysis, with its emphasis on the multiple-layered organization of the *psyche* (used synonymously with *self*) and the polyphonic representation of the internality of experience. The LG is also a relational approach, viewing human development as embedded and embodied within personal, social, and cultural relationships (Spencer, 2000). Accordingly, *self* is relationally positioned and constructed, repositioned and reconstructed, through dynamic movement in space and place, situated in ever-evolving time. This approach offers a systematic process of inquiry with the capacity that made visible IPNB-informed leaders’ subjective experience, through which their development, identity, and ways of acting were made visible.

The LG embeds the inquiry, analysis, and interpretive processes in body, context, and relationship. As an essential part of this epistemological undertaking, the LG requires researchers to attend to their own responses during the interview as well as the listenings and interpretive phases (L. M. Brown et al., 1989). The LG is a framework for analysis and interpretation that recognizes voice “depends on resonance or relationship in that speaking relies on, and is affected by, being heard” (Gilligan, Spencer, et al., 2006, p. 254). Thus, the relationship between researcher and participant, as well as the researcher’s internal response, must be made transparent in the research process, and considered as part of this process. The process involves the researcher making notes after every step, attending to and documenting their reactions including thoughts, feelings, memories, questions, theories, and anything that may be relevant to the interviewing, analysis and interpretive stages (L. M. Brown & Gilligan, 1992; Gilligan,

Spencer, et al., 2003; Gilligan, Spencer, et al., 2006; Raider-Roth, 2014). This activity is not a mere sideline practice; these reflections are made visible when the interpretations are written, bringing the researcher's voice and position(s) into the narrative.

The LG Analysis Process

The LG involves multiple listenings of transcribed interviews, each time with a different interpretive focus, amplifying different voices or ways of speaking (Doucet & Mauthner, 2008; Gilligan et al., 1990). The term *listenings* evolved from earlier reference *readings* to signify the active participation of the researcher, who must tune into the narrative of person while simultaneously attending to their own internal response rather than passively reading, analyzing and interpreting the transcript (Gilligan, Spencer, et al., 2006). Thus, the researcher tunes in to both the metaphoric and actual voice(s) through which a person expresses their lived experience (Yancey, 1994). The LG orienting questions—who is speaking and to whom, in what body or physical space, telling what stories about which relationships, in what societal and cultural frameworks? (Gilligan & Eddy, 2017)—are held in consciousness through the four successive listenings of the interview transcripts. Operationalizing Bakhtin's (1984) notion of the polyphonic nature of development and self-positioning, each listening focuses on a different voice(s). These different voices, or "speech genres" (Raggat, 2006, p. 18) communicate the person's relationally situated mindscape, where inner and outer experience are continually in dialogue and flow. There are four listenings with each step being designed to capture different aspects or angles of the person's unique polyphonic expression(s) of practice, development, and identity.

Listening Steps One and Two

The first two listenings of the LG were prescribed with the first time through the transcript focusing on the overall plot including the story that is being told, who is present and/or absent, as well as any themes or patterns (Gilligan & Eddy, 2017; Gilligan, Brown, & Rogers, 1990; Gilligan, Spencer, et al., 2003; Gilligan, Spencer, et al., 2006). Recurrent phrases were noted, as are images, emotions, metaphors, and rhythms of speech (Gilligan, Spencer, et al., 2003). This listening also included noticing places of silence or indirect speech where the individual did not quite say what h/she is intending (Gilligan, 1982). This step provided information about *what* IPNB-informed leaders experienced. It revealed their practices and actions as well as the plot and dominant themes in their IPNB-leadership story. I then summarized this, as I did with each subsequent step including my embodied response, for example, places of resonance and disconnection. This not only documented my participation in the listening process in conscious awareness, but also tracked my responses which were reconsidered and shared, where relevant, during the analysis and interpretation phases.

The second listening identified and traced the multiple voices of each person's narrative. This was done by underlining the first person voice and the words surrounding the *I/me* (i.e., words, including the object, immediately before or after, which provided meaning and context) (Gilligan & Eddy, 2017). This step not only attuned to the ways each person spoke about themselves but also tuned in to the voices where their knowledge was pushed away, distanced or dissociated from awareness (L. M. Brown & Gilligan, 1992; L. M. Brown et al., 1989; Gilligan & Eddy, 2017; Gilligan, Brown, & Rogers, 1990). For example, statements like "I don't know" were attended to, as well as the disappearance or absence of the *I* when participants spoke about their own experience. For example when they such switched to the words *you, they*, or other

language that distanced their subjective experience from the topic at hand (Jack, 1991; Raider-Roth, 2005, 2014).

Following this, these *I-voices* are reconstituted, keeping the order that they appeared in text, into *I-poems*, which are intended to tune the researcher's ear to the person's subjectivity, how she/he speaks about themselves. This allowed for close observation of the narrator's shifting voice including the cadences, rhythms, and nuanced ways they represented their subjective experience (Gilligan, Spencer, et al., 2006). However, although accounts of the LG typically reference tracing the I-voice other researchers (Balen, 2005; Beauboeuf-Lafontant, 2008; Paliadelis & Cruickshank, 2008; Raider-Roth, 2005) also included other, more relationally embedded positions. Paliadelis and Cruickshank (2008) changed the name of this step to *voice-poems* to reflect this more inclusive tracing of the relational self or relational/multi-vocal-positions. I have adopted this term, given it reflects the analytic process I followed as it closely reflects IPNB's notion of a dynamic, ever-emergent, relationally-embedded self.

Therefore, I traced and made note of phrases that indicated the participants' subjective and relational positioning within their narrative, for this second listening. These voice-positions were informed by IPNB, past LG research, and, most importantly, the voices that emerged in the participants' narratives. In particular, I discovered the appearance of *I/me*, *self-in-relation*, *we*, *connecting-you*, *distancing-you*, and *MWE* voices. The tracing of the *I/me*-position, or *I/me*-voice, involved identifying and underlining each time the person spoke with a first person pronoun along with the contextualizing words immediately before and/or after. This provided associated meanings of the person's *I/me*-voice. For example, "I said", "I did", "I thought". I also listened for a *self-in-relation*-voice, where the *I/me* was clearly differentiated from another person, entity, thought, theory, etc. Whereas the *I/me*-voice did not have a clear relationship to

another person or entity, the self-in-relation-voice did. This self-in-relation-voice tracking expanded upon Gilligan, Brown, and Roger's (1982) original use of the term, which identified each time a person referenced their relationships with another person. For example, "I spoke to him;" "They made me dinner." However, expanding the scope of my listening to non-human elements of experience was necessary in order to capture the fullness of leaders' experience, particularly given the focus of this research involved their relationship to IPNB. This enhanced my understanding of the self-in-relation voice emphasis in original, -voice emerged from the participants' narratives where they often communicated relationships with non-human elements in their experiences in ways that had influence and meaning for their practice, development, and identity. For example, "I thought about integration;" "I recognized the rigidity;" "The meeting's chaos confused me." In addition, the integration of Dialogical Self Theory (DST) with this listening step where multiple-voices or positions are considered to be dynamically in relationship both internally, and with the external environment, supported this expanded view.

I also noted when the person used the word *we*. Unlike the differentiation that characterized the self-in-relation-voice, the *we*-voice carried a tone or sense of connection or being linked with another person. I noted the *we*-voice when it was not possible to identify who the individual was in relationship with, or when their subjectivity merged with another. For example, "we decided to change;" "we all thought." I also noted the *MWE-voice* which communicated a sense of a differentiated I/me that was linked with another. As explained earlier, MWE is a word that Siegel (2017) created to describe an integrated identity where,

we embrace not only the differentiated *me* with its personal in-group, and the differentiated broader *we* as a wider relational self, but also have both, together ... *MWE* can be viewed as our integrated identity, the lineage of a differentiated *me* with a differentiated *we*, all in one integrated and integrating self. (p. 322, emphasis in original)

I included the MWE-voice when it emerged in words such as *we*, *our*, and *everybody*. Further, a MWE-voice carried a distinctive tonal quality suggestive of relational integration, where the distinctness of the *I* was linked relationally without losing differentiation. In other words, the person's position in space and across time was embedded relationally (place) without loss of their identity or differentiation (held in space) within the relationship.

In order to differentiate the we-voice from a MWE-voice I paid attention to how the word *we* was used. When I found myself asking "who is the we?" I coded it as a we-voice given this signified the speaker's undifferentiated sense of we. With the MWE-voice I could clearly identify the differentiated person (external) or position (internal) that were linked or connected. For example, "we all took on a part;" "we talked and decided." Also, I found that the we-voice and MWE-voice invoked different responses within me, which assisted with differentiation. For example, I noted that the we-voice often brought forward confusion (who is the we? Is this person speaking for others?) whereas the MWE-voice brought clarity. For example, I knew who the narrator was referring to with the latter. In other words, when the MWE-voice appeared, both differentiation and linkage were clear.

In this inquiry, I also tracked the *you-voice*, where the individual spoke about their own or others' experience from either a distanced or disconnected position. For example, one participant stated "you could just see it" when referencing his own seeing. Also, another you-voice was also noted: a reflective you-voice where participants stepped back from their own experience in order to understand, or gain insight or knowledge. In this case, the you-voice did not carry a disconnected quality, rather it communicated a meta-positioning that aided the integration and understanding of the topic or situation at hand. For example, one participant frequently used a *you-voice* when she took a step back to reflect on her leadership with

organizational processes such as “if you go back to,” “how you share the flow of energy and information.” In addition, there was a relational you-voice which seemed to carry the intent to connect with or reach out to me as the interviewer. This was noted when participants stated “you know,” which was offered in a manner that invited my participation or understanding of what was being said.

Initially, I identified each of the voices in the transcripts by using different colours. However, when documenting the findings in the later analysis and interpretive phases I used other means such as bolding, italicizing, underlining, and capitalizing the different voices. The voice-poems assisted me in identifying the narrator’s subjective awareness and relational positioning unencumbered by content, themes, and plot lines. This provided an angle or lens that more clearly traced their leadership identity as it unfolded in over time, in space, and place.

Dialogical Self Theory (DST). As indicated, I drew upon DST to enhance the second listening step. Drawing on the philosophical roots of William James, Giambattista Vico, Hans Vaihinger, Michail Bakhtin, and psychologist George Kelly, dialogical approaches to narrative inquiry view story as emerging from an ever-emerging self or multiplicity of selves, that offer space for the *I*, which “observes the *Me* and relates the movements of the *Me* in a storylike fashion” (Hermans et al., 1992, p. 26, emphasis in original). Based in constructionism, dialogism challenges the notion of a static, knowable, unitary self (Hermans et al., 1992). For example, life story research is often focused on the individual as she/he/they moves through time with an emphasis on the coherence and order of events presumed to be presented sequentially. In contrast, dialogism suggests that humans can change their constructs through processes such as organization and reorganization, stabilizing and destabilizing, centering and decentering, and transpositioning (transformation of I-positions) (Hermans et al., 1992, 1993; van Loon, 2017).

Rather than analyzing narrative form and structure, this approach attends to the dialogical nature of storytelling and the ever-evolving experience of self, including the internalized other (Hermans et al., 1992; Isaacs, 1999; Linell, 2009). In this view, individuals and groups (i.e., organizations) are “(a) spatially organized and *embodied* and (b) *social*, with the other not outside but in the self-structure, resulting in a multiplicity of dialogically interacting selves (Hermans et al., 1992, p. 23, emphasis in original). Thus, humans not only come to understand events, their meaning, and their experiences through dialogue, but also are shaped and reshaped, disintegrated and reintegrated, positioned and repositioned, which become a focus for inquiry.

The Unitary Self/the Multi-Voiced Self. From an IPNB perspective, the notion of *self* is fluid, dynamic, and relationally situated, which challenges the notion of the “private, solo-self, a personal inside only mind” (Siegel, 2017, p. 160) and includes a relational in-between, a *we-ness*. In keeping with this, is literary critic and philosopher Michail Bakhtin’s focus:

Bakhtin saw dialogic relations as both a feature of fundamental awareness of self and others in society and as a mark of exceptionally creative thinking. It is only through the encounter with the others that one comes to recognize oneself in full depth—ones position in the world, the unwritten script that culture has provided to conduct oneself in the world, and the unseen history one has inherited, and this heightened awareness is not possible unless one is face-to-face with the other (Bakhtin, 1986). (Bandlamudi, 2016, p. 6)

Bakhtin’s work informed DST founder Hubert Hermans’ (Hermans & Gieser, 2012) challenge to the Western notion of the unified individual self that is distinct and separate from an external *other*. Instead, DST views human development dialogically where growth and movement in space and across time occur as internal positions are in relation, continually evolving through dialogue both internal and with the social environment. These positions compose a multi-voiced or polyphonic voiced and relational self that is “experienced not only between the self and the actual other, but also between different *I*-positions within the self” (Hermans & Gieser, 2012, p.

8). Related is social constructionist, Kenneth Gergen's (2009) notion of *multibeing*, which is socially embedded, "engaged in the flow of relationship" (p. 137) and continually developing in space and across time. DST scholar Rens van Loon (2017) also views self as both embodied and relational where "*the embodied, dialogical, and relational self is positioned on the junction of time (past, present, future) and space (internal, external) with the potential of generating new meaning and new selves, formulated as I-positions*" (p. 120, emphasis in original).

These views mirror and complement IPNB's science-based view on development, where mind and embodied brain are continually emerging across time and developing simultaneously in relationship place and relational space. As indicated, Siegel (2017) challenges the notion of a unified self, suggesting that this is an illusory notion of separateness in a quantum world of relationality, where "energy and matter have a betweenness to them, a fundamental interconnectedness called entanglement" (p. 165). Badenoch (2008) articulates the phenomenon of *inner communities* to represent different neurobiologically activated relational states of being that are "inherently multiplistic, with rich, active internal relational lives developed and shaped in childhood and modified by later life experience" (p. 77). Like DST's notion of I-positions, IPNB recognizes that the brain and extended nervous system organize so that complex functions and processes integrate in neural nets for efficiency and speed (Siegel, 2020). These states become activated through attention and function, for example, a *car-driving-state*, *leader-state*, *parent-state*. In addition, these states often activate concurrently in dialogue or communication with each other; hence Badenoch's (2011, 2018) description of inner communities where different states commune and interact. Furthermore, these neural nets are shaped by internal and external relationships between different aspects of relational experience across time and in space (Siegel, 2017).

Therefore, in the LG analysis and interpretive stages, I wove dialogical and IPNB views on identity in order to capture the richness of leader's experience. This multi-voiced approach facilitated analytic depth in the second listening. Specifically, as I identified each leader's me/I-voice, we-voice, you-voice, self-in-relation-voice, and MWE-voice, DST assisted in recognizing the dynamic and relational nature of these voices as they unfolded through each person's narrative. This added to other applications of the LG process where the voices were typically represented as distinct from each other (L. M. Brown & Gilligan, 1992; Gilligan & Eddy, 2017; Gilligan, 1982; Jack, 1991). This shifted the meaning-making process during the interpretation phase. For example, it fostered an openness to each leader's internal relationality between voices or I-positions, which revealed the complexity of their growth and development over time, in space and place. It also assisted me to recognize and represent the iterative, dynamic nature of each leader's development and identity.

Third Listening Step

In the third listening I attuned to the counterpoints in participants' narratives as expressed through the *contrapuntal voices* or themes that emerged. This listening step is inspired by the musical notion of counterpoint where two or more melodic lines, each with its own rhythm, shape, and/or range, occur simultaneously, moving through time and space together; each providing a different approach or highlights a different aspect of the musical moment:

the words 'counterpoint' and 'contrapuntal' have older meanings. Counterpoint ... comes from the French word *contrepointe*, 'against', or 'meeting of points'. This is not the imagery of opposition and war, however, but of the process of quilting. The term meant 'to quilt, or quilt stabbed or stitched through.' A counterpoint-maker is a quilt-maker. And contrapuntal meant 'a back-stitch' in sewing, elaborating a quilt or tapestry,' and only later 'the harmonic treatment of melodies as a counterpoint in a musical composition.' So the terms 'counterpoint' and 'contrapuntal' meant to elaborate a design, in a quilt, a tapestry, and, later a musical composition. (Gilligan, Spencer, et al., 2003, p. 115, emphasis in original)

Therefore, this step required the identification of at least two contrapuntal voices or themes that emerged in participant narratives. Each of these contrapuntal voices or themes brought a richer understanding of each person's IPNB-leadership experience, particularly bringing to light their development and identity moving across time, through space, and in place. These different voices were not always in opposition to each other; rather, they were like the aforementioned quilt metaphor with different patterns and colours that complimented, harmonized, contrasted, and highlighted different aspects of the topic or experience under scrutiny (Gilligan, Spencer, et al., 2003; Raider-Roth, 2005, 2014). Therefore, I first listened and noted all counterpoints in each leaders' narrative, then identified those that were most dominant to bring forward to further analysis and interpretation (frequency, saliency, relevance to the research topic). In addition, I noted the leader's relationship to the contrapuntal themes, which ranged from simplistic to complex, in motion centripetally and centrifugally (see Dynamic Systems Perspective section below).

The identification of these different contrapuntal voices occurred by reading the text multiple times, identifying one voice at a time. In addition to carefully listening to each person's experience and identifying their emergent counterpoints, I was also guided by the principles of IPNB, given that these informed and were relevant to the research. Each contrapuntal voice was identified by using different colours to mark the text. These were then managed by mapping the differently coloured voices (text) into a table (see Table 1) that identified the dominant contrapuntal themes.

This depiction ended up looking like a tapestry of coloured text, with different voices weaving side by side or counterpoints appearing as if in a quilted conversation.

Table 1*Contrapuntal Thematic Table*

Dimension	Actions	Development	Identity	Notes
Time	Actions and practices positioned in time	Developmental themes or voices positioned in time	Utterances of identity positioned in time	Notations for clarity purposes including: Other dimensions represented in the utterance; narrator's relationship to the counterpoint (dialectical / non-dialectical) centripetal and centrifugal forces; reflections; questions; reflexive notes
Space	Actions and practices positioned in space	Developmental themes or voices positioned in space	Utterances of identity positioned in space	See above
Place	Actions and practices positioned in place	Developmental themes or voices positioned in place	Utterances of identity positioned in place	See above

Temporality, Space, and Place. At times the contrapuntal themes ran across more than one dimension (time, space, place) and represented more than one aspect of the leader's experiences (actions/practices, development, and identity). In order to track this, I added notes in the final column. Dialogical approaches add the dimension of space to time, as necessary in analyzing experience, which is considered to be embedded relationally as well as embodied (Gergen, 2009; Hermans & Gieser, 2012; Linell, 2007; Wertsch, 1990). This view allows an expansion of Clandinin and Connelly's (2000) notion of place as "specific concrete physical and topological boundaries of inquiry landscapes" (p. 51). Adding these dimensions of analysis, I differentiated participant contrapuntal themes and voices in the third listening step across space, place, and time. This allowed me to more deeply analyze the layered nature of participants

development, expanding upon the notion that story is told in linear time (past, present, future). For example, participant counterpoints occur in internal spaces where dialogue occurs between different voices or positions. These counterpoints can be dynamically held in space (thought/feeling; contrapuntal states of being), whereas other counterpoints occur in place (workplaces, teams, cultures), and others over time (past, present, future, or in retrospect where present insight and knowledge reflexively shift past experience). In addition, when I analyzed participants' contrapuntal voices and themes I included the less tangible places such as social fields, which can be defined as "the quality of relationships that give rise to patterns of thinking, conversing, and organizing, which in turn produce practical results" (Sharmer, 2018, p. 15). This is necessary because IPNB considers the mind not only as an internal phenomenon (mindscape) but also located in the mindsphere, which is "embedded within the world around it, [which] extends into information systems outside of the body, and is situated in social contexts" (Siegel, 2017, p. 154). Therefore, the mind can be situated place as it spatially unfolds and refolds, emerges and re-emerges, over time. Consistent with this, DST posits the self to be a process in space (Hermans, 2012). As discussed earlier, DST utilizes the term *I*-positions to denote the multiple interacting internal present states that are able to reflect on the past and project into the future (Hermans & Gieser, 2012). This added relational possibilities that provided analytic depth as well as breadth in the analysis and interpretation phases.

Dynamic Systems Perspective (DSP). In the last column of the table I also noted other reflections for consideration including the movement between these voices and themes using Gilligan, Spencer, et al.'s (2003) reflections for consideration:

A range of questions could be asked at this point. Does one contrapuntal voice move with one another? Does one or more of the voices move completely separate from the other? What are the relationships among the contrapuntal voices? Do some of them seem in relationship with one another? (p. 167–168)

Riessman (2008) suggests that narrative analysis is distinct in its attention to sequence of action, its focus on particular actors, in particular social places, at particular times, grounded in the study of the particular and upholding a concern with how the speaker assembles and sequences events, uses language or visual images to communicate meaning. However, a DSP seeks analytic methods that capture the relationship between elements of complex systems, rather than singularly focusing on the individual's experience (Bell, 2014; Daiute, 2014; Gubrium & Holstien, 2009; Witherington, 2007).

For example, narrative researchers interested in relational, dynamic, and dialogical approaches, challenge the notion that narrative inquiry should solely focus on local or small stories separate from big stories. Small and big stories can be considered as complimentary to each other, with small stories focusing on everyday occurrences and big stories emerging as individuals reflect and connect these stories with that of the social community within which they are positioned. This signifies a new turn that views narrative as being continually in process, fluid, and changeable, rather than focusing backwards from the present to the starting point of the story (Thelen, 2005). While much of the literature and research on development from a DSP focuses on childhood and adolescent development, (for example, challenging traditional notions of universal, predictable, and supposed normative, stages in cognitive, motor, and emotional capacities), a DSP can be applied across other domains and throughout adulthood such as social, emotional, and psychological development (Witherington, 2007).

I brought this perspective to this research because the leadership stories I heard did not follow the linear view of development. Thelen (2005), a developmental theorist, suggests that a dynamic systems perspective focuses on nonlinear, relating of elements across time. Further, the patterns of these interactive and interacting elements include history, immediate conditions, open

and free space as well as constraints, in a mutually interdependent and embedded adaptive and self-organizing whole system. For example, one of IPNB's domains of integration is memory, considered broadly as having two forms: *implicit* (early developing, activation biased to the right-hemisphere, amygdala and orbitomedial cortex and context free with no source attribution) and *explicit* (later developing, cortical and left hemisphere biased, activation in the hippocampus, and contextual/known memory source (Cozolino, 2014b). Memories, both implicit and explicit, can be triggered in the present moment. However, implicit memories are activated non-consciously colouring emotions, perception, visceral experience and behaviours (Badenoch, 2008). As Siegel (Goleman & Siegel, 2016) suggests, these memories impact leaders' development, identity, perceptions, and behaviours in a continual and dynamic, manner where past, present, and future are mutually influencing. Therefore, memory does not unfold in distinct, linear categories with implications for the narrative study of IPNB-leader development. Therefore, as I listened to participants' counterpoints, I attuned to the myriad of contrapuntal pathways that influenced their leadership development.

Relational Dialectics Theory (RDT). In addition to DST and DSP I also used RDT in this third listening. Also informed by Bakhtin's dialogism, RDT emphasizes discourse between individuals and groups as the focus of analysis and application. Defining discourse as "a system of meaning—a set of propositions that cohere around a given object of meaning" (Baxter, 2011, p. 2), this theory concerns itself with how new meanings emerge as competing or different discourses that are negotiated in relational space. Unlike, DST's focus on dialogue between internal I positions and /or internal and external I-positions, RDT emphasizes an analysis of utterances that are held dialectically, where systems of meaning are believed to emerge from the interplay of multiple voices or discourses. In keeping with IPNB's discussion of integration

where differentiation and linkage occur across mind, brain, and relationships, RDT asserts that “social life [is] not closed, univocal ‘monologue’, in which only a single voice (perspective, theme, ideology, or person) could be heard: social life [is] an open ‘dialogue’ characterized by the simultaneous fusion and differentiation of voices” (Baxter, 2004b, p. 181). In both RDT and IPNB, the individual’s unique voice is not lost or merged with the other, but rather linked in creative emergence of new meaning systems. Revisiting Siegel’s (2012b) well-known metaphor: Integration is like a fruit salad, not a fruit smoothie.

In addition, RDT’s goal is to be “a heuristic device to render the communicative social world intelligible” (Baxter, 2011, p. 7). It serves to sensitize and provide a descriptive theory or framework through which to view phenomena. Further, it does so in a way that challenges modern approaches to communication articulated as: the binary of public and private realms; bias against uncertainty; illusion of monadic individual actor; inattention to power; and the view that relationships are containers (Baxter, 2011). Similar to IPNB, RDT does not make a distinction between individual’s public and private development and identity. Rather, individuals are considered in their wholeness and relational embeddedness, which are mutually informative and indistinct. In addition, IPNB views uncertainty as a fundamental and essential reality, which humans must navigate in a continuous manner across space and time. RDT views uncertainty similarly; it also adds the perspective that valuing and being with uncertainty in processes of expansiveness and dialogue, rather than trying to control or change it, bring forward new, unanticipated possibilities that are “pregnant with potential for emergent meanings that have not been uttered before” (Baxter, 2011, p. 10). RDT’s attention to power in dialogue also adds a dimension to relational narrative inquiry where the inequality of competing or different discourses is acknowledged. This is particularly relevant and important to exploration of

leadership from a relational perspective. The RDT heuristic suggests that power is not within individuals, but with the discourses and relational in-between, which are considered through analyzing centripetal (centered) and centrifugal (marginalized) forces in dynamic dialogic interplay (Bakhtin, 1984; Baxter, 2004a; Baxter & Braithwaite, 2009). I enhanced the LG with RDT by attuning my listening to contrapuntal voices that are dialectically engaged, exploring where leaders' development and identity emerge as seemingly competing or contradictory positions interact and move over time and in space.

Fourth Listening Step

The fourth listening has had varied applications; I followed Gilligan, Spencer, and colleagues (2003) use of this step: returning to the research questions, I brought together all that had been learned in previous listenings. In order to do so I revisited each previous listening with the research questions in mind: How, if at all, have healthcare leaders integrated IPNB in their leadership practices, and what impact has this integration had on their development and identity? Secondly, what, if any, were the implications of IPNB in their organizations? Each of the listenings provided a different layer of each participant's experience in reference to these questions. For example, listening one provided the broader strokes of each person's story, the plot, themes, and practices that were impacted by IPNB. It provided answers to *what* questions such as: What IPNB principles are leaders using? In what way? What themes dominate their narrative?

The second listening provided opportunities to dive deeper into each person's subjective experience as an IPNB-informed leader. Answering *who*, this listening attended to the multi-voiced ever-dynamic positionalities of IPNB informed leaders as they move through time and space. *Who* is speaking and in *what* voice? This particular listening attended to these leaders'

relational embeddedness. As such, this listening pointed to *where* leaders' identities were situated or expressed. *Where* were they positioned relationally? Within themselves? In relationship with others and their larger social fields?

Finally, the third listening traced the contrapuntal themes that propelled each leader's development across the dimensions of time, space, and place. As stated, the research questions assisted me to link these different levels of inquiry and to identify the relevant themes as I traced each person's centripetal and contrapuntal movements. In addition, I noted each person's relationship with these counterpoints, such as if/how they held them dialectically. For example, identifying if the counterpoint was held as it traversed the harmonious, integrated flow of experience across time, in space or place. Or, listening for *where* this integration was absent or compromised and chaos or rigidity (or a combination of both) prevailed. Also, noting if the particular contrapuntal relationship was consciously engaged with, or an outcome of other IPNB-informed processes.

Interpretative Reflections

The LG provided me with guidance for the interpretation with enough flexibility to explore IPNB-leader's practices, development, and identity with breadth and depth. Throughout the interpretive process I not only tapped into the fourth listening, which queued me to how each listening step addressed the research questions for each person, but I revisited the transcripts as a whole, as well as the more detailed information in steps one through three. Through this constant zooming in and out movement each person's experience shaped and reshaped the whole; and the whole, in turn informed how I interpreted the different listening steps. This is informed by Dilthey (Rickman, 1976) who introduced the notion of the hermeneutic circle whereby

interpretation of narrative text follows a recursive and circular pattern, where consideration of the parts must be held through understanding the whole (and vice versa).

This dynamic and iterative process supported my research aim. I was not interested in identifying a neatly defined, universally applicable IPNB approach to leadership because this flies in the very face of what IPNB is—an ever-evolving, dynamic, emergent, and living framework that requires this research to stay true in process and form, inquiry, interpretation, and outcome reporting. In addition, the creators of the LG make a clear distinction between traditional notions of coding data and the hermeneutic circle of inquiry and interpretation with which the methodology is aligned. In fact, this method insists that complex human experience can only be fully understood through this recursive process (Gilligan, Spencer, et al., 2006). This process continued until it reached saturation, i.e., there were not additional iterations emerging from the listenings.

Through the interpretive process I provided reflections from the analysis where I held both specificity and locality (differentiation) along with themes and patterns that connected the narratives (linkage). Given the phenomenological nature of the second and third listening, it was essential that I not reduce individual leader's experience into neat categories for the sake of offering a falsely cohesive summary of IPNB-leaders experience. While there were some identifiable common themes, there were also different leadership pathways and manifestations, which were honoured. This reflected and confirmed IPNB's assertion that it is not a theory to be applied, but a reorientation of the many fields that it has enlightened. As Siegel (2020) indicates, IPNB is different every time it is used because it is contingent on, embedded in, and responsive to/with each unique context in which it arrives and plays out.

Specific to this inquiry, this was necessary because the leaders and leader consultants/coaches were at different levels in their knowledge and application of IPNB. There is no one way or place to learn IPNB. In addition, the leaders I spoke with had varying experience in leadership with some having time-limited experiences and others having devoted their careers to leadership. For example, I spoke to individuals who were leadership authors and whose practice included large scale organizational consulting. In addition, the participants differed in their leadership roles, geographic locations, organizations and roles. Given this variability it was essential that I had organizing frames through which to understand and reflect on their experience.

The interpretation phase offered space to reflect on the findings, which were summarized in the fourth listening. These reflections were grounded in the research questions in order to illuminate how IPNB has impacted and/or influenced healthcare leaders, if at all, and how this framework has impacted their development, identity, and practices as well as the healthcare systems within which they work. In order to do this, I listened deeply to each person's emergent themes, voices, and counterpoints using the LG steps. In addition, I listened for threads that ran through the different responses, that I brought back to the whole and linked through the patterns and themes that emerged. In other words, the organization of the interpretation came through the listenings rather than categorical imposition.

I managed the information differently for each step. For example, in listening one, themes and plotlines were identified using different coloured text. For the fourth listening, these were then pulled from each person's narrative and categorized by recurrent, dominant, or unique themes that emerged in answer to the research questions. Then, during the interpretive phase, I reflected on these individually as well as linking back to the participant group as a whole

through similar and divergent themes and plotlines. For example, several leaders were drawn to IPNB because of their dissatisfaction with dominant ontological premises and practices in their chosen field. While each participant articulated this slightly differently, (i.e., distress, unease, or disturbance, within academia, medicine, and systems) the underlying theme of dissatisfaction was similar. Seeing this pattern across a number of participants' stories assisted with my interpretation of divergent themes among the participants as well. In other words, the movement from individual to the whole, and then circling back again, helped to illuminate the implications IPNB had for leadership practices, and for participants' development and identity.

I reviewed and interpreted the second listening voice poems on an individual basis, given these were a unique reflection of each participant's identity the information was treated as such. Granted each narrative produced a number of voice poems, however, upon review there were dominant voices that emerged that wove through each person's relationally situated leadership identity. Therefore, I carefully chose the poem(s) that best represented each persons' positioning with respect to the research questions. For example, some leaders' I-voice was dominant when they spoke about their leadership whereas others had a clear MWE-voice. I interpreted these voices attending to the relational embeddedness within which the poems emerged. This meant that I accounted for the nuances and subtleties captured in each voice. For example, for some an I-voice communicated their separateness from others and a leadership position that reflected a traditional top-down perspective. Whereas others' I-voice emerged because of their experience of isolation within non-relational systems. These leaders were relationally embedded in these systems and seeking to foster change, however their leading efforts were solo and driven by their values and commitment to relational practice. Therefore, I interpreted each person's voice poem with consideration for their unique situations and relationships, while seeking to bring a coherent

understanding of the implications that IPNB has had for their leadership identity. After interpreting each individual's poems, I zoomed my interpretive lens out to the whole, and discovered a continuum of relational integration with some leaders' identities being highly integrated and integrative, and others falling at the other end of the integrative continuum.

Finally, the contrapuntal themes were individually categorized according to themes across practice, development, and identity during the analysis phase. However, as I reflected on their responses, it became clear that each person's contrapuntal themes were particularly significant to their development. Therefore, I primarily utilized this listening step to explore participants' development as IPNB-informed leader and consultant. For example, as each participant grappled with the tension created by these counterpoints their learning and development were propelled forward in an iterative and self-organizing fashion. I then reviewed the each person's contrapuntal themes with the whole in mind. This revealed similar and divergent themes that brought coherence to the process and final interpretation.

Conclusion

IPNB encompasses all of what it means to be human. Offering a science-based framework of understanding natural processes of living systems, IPNB holds promise of providing a comprehensively broad and deep way of seeing and acting to numerous fields, including leadership. IPNB views relationships as a prime of human development and experience and, as such, are integral and inseparable from the development of mind and brain (Cozolino, 2014b; Siegel, 2020). For example, an individual leader's experience of the present moment is not only coloured by their immediate and extended relational environment, but also their internal dynamic relationships such as between memory and neurophysiological activation, emotions and thought, processes within the enskulled brain (i.e., between brainstem, limbic circuitry, cortex),

etc. (Montgomery, 2013; Porges, 2011; Siegel, 2012a). These internal processes can become neurobiological and relational patterns that gel into states or positions. These dynamic processes influence neural firing patterns within the mind and embodied brain, which have implications for shaping perception and behaviour (Christakis & Fowler, 2009; Cozolino, 2014a; Dana, 2018; Ecker, 2015; Lieberman, 2013; Porges, 2007). Becoming conscious of these interconnected flows of energy and information has implications for leadership practice, development, and identity.

The possibilities for integrating IPNB in leadership as well as organizational processes, have not been studied. In order to begin the inquiry, we must first understand how leaders are approaching leadership and their organizations from an IPNB perspective. Clearly the LG provides a process of systematic inquiry. It brings multiple ways of listening to leaders' and leadership consultant's experience, which is essential to this inquiry. The LG can help to uncover the *what, who, when, where, why, and how* questions that invite a broad understanding of application (doing) and deeper inquiry into the realm of being. In addition, DST and RDT will enhance the second and third listening steps in order to facilitate a more complex analysis of leaders' development and identity. Further, the whole inquiry process will be contained or held by a complex systems perspective, which acknowledges the interconnected, recursive, and self-organizing principles of natural systems of which humans and groups of humans (organizations) exemplify. The manner in which this relational inquiry is structured not only honours IPNB's foundational premises, but holds promise for the expansion of understanding the implications for the leadership field.

CHAPTER IV: FINDINGS

In this chapter I introduce the twelve participants I interviewed. These leaders and/or leader consultants reside primarily in the United States although two are from abroad. I had invited a leader from Canada, however the interview did not occur because of extenuating circumstances. Most of the participants are in, or have been in, direct leadership positions. Five of the participants are currently leader coaches and consultants who use IPNB in their practice. One of the individuals I interviewed views himself as an academic in the field of leadership although he has had past leadership and organizational consulting experience. All integrate IPNB into their work although in different ways, which lent to considerable variability in how they saw and practiced IPNB. In addition, the contexts within which these leaders and consultants worked were different with one participant creating and leading a clinic completely dedicated to functioning from an IPNB perspective including the organizational functions, structures, and clinical approach with clients. Three of those I interviewed are top scholars and leaders in the IPNB field and another two in the leadership field. I also spoke with two participants who defined themselves as clinicians with time-limited IPNB-leadership experience and who were less identified with these leadership roles. Some of the leaders were working for change in individuals, teams, organizations, or systems; others were focused on developing new programs or organizations based on, or resonant with, IPNB.

In this chapter, I will introduce each of these individuals. All, with the exception of one, who requested her name be used, have had their identities changed to preserve confidentiality. I will then share a summary of each person's findings from the first three LG listenings. Specifically, I will highlight the overall plot, themes, and specific applications of IPNB, including the identified or described principles, the participants revealed in the first listening.

Secondly, I will discuss the dominant way each person spoke about themselves through their polyphonic-voice poems, noting their relational positionality within themselves as well as with others and their social field. Finally, keeping in mind the focus of this inquiry, I will reflect on the contrapuntal themes that shed light on their development. This initial report out of the findings will set the stage for a deeper dive in the next chapter, where I will offer my interpretations revealing my reflexive participation in the process.

Exploring Leader Practices/Actions, Development, and Identity

In order to answer the research questions, I sought to understand leaders' experience of integrating IPNB. As stated, the LG methodology provided a multi-voiced, multi-layered, and relational guide for this narrative inquiry process. The breadth and depth of information offered through the listening processes were significant and extensive. Therefore, as I present each participant and the layered experiences they shared with me I will be selective in highlighting representative and unique features of their story. In order to do so, I will be guided by themes and utterances that speak to leaders' actions/practices, development, and identities. In addition, the dimensions of time, space, and place will bring a layered fullness to the findings through understanding how/if leaders' engagement with IPNB has impacted the aforementioned realms of their experience. For example, for some, development as an IPNB leader did not occur along the linear temporal trajectory of past, present, and future. Rather, their present learning of IPNB impacted their reflection on their past leadership, which changed their vision for future leadership applications of IPNB principles or stances.

Exploring Organizational Impact

Although organizational processes are often studied separate from leading, IPNB's relational lens suggests that the leader's experience is interwoven and deeply connected to the

organization and larger systems within which they work. Therefore, it is necessary that I include this in the inquiry. Nonetheless, not every leader or consultant focused on IPNB applications at the organizational level. At times this was due to their different leadership positions; for example, not all were organizational leaders. However, many of the leaders did not contextualize about their leadership experience with their role or position; rather, their narrative unfolded centered around their leadership experience. This in itself, was informative. As such, I will discuss the organizational impacts of IPNB for those leaders who did attend to organizational implications of integrating IPNB.

Presenting the Participants: Vignettes

Two of the participants wished to be identified, although I have protected the identity of one given the interpretation of their narrative may cause them distress or harm. Each participant received their vignette and been given the opportunity to provide comment and seek adjustments. In keeping with the LG process that emphasizes researcher reflexivity and transparency I have included comments that reveal my experience of the relationship we co-created during the interview with these individuals. These comments reveal my embodied and relational experience of the unfolding conversation and may not reflect that of the individuals I spoke with.

As I discuss the listening steps, each person's experience will be understood across the dimensions of time, space, and place, although not explicitly named. The place dimension or container provided reflections from within the interview and beyond, for example, relationships, organizations, or situations where each person's leadership is situated. The space dimension directed my attention to realms both within and between, and traced movement in these different realms. For example, centripetal or contrapuntal; harmonious flow, chaos or rigidity; openness or restriction; top-down and/or bottom up processing, etc. Finally, attention to the time dimension

drew me to attend to participants' expressions of past, present, and future, in whatever order these are presented. Each participant received their vignette and been given the opportunity to provide comment and approval.

Kent: Leading from the Ground-Up

Speaking with Kent was like a being bathed in warm evening breeze that flowed with ease, bringing relief after a hot summer's day. The ease I felt was, at least in part, due the fact that Kent and I knew each other previously. I have always noticed the impact of Kent's quiet and easy demeanor in my body, which senses there is safety in the relational space created between us. Our interview was the first time we have talked at length about his experience of IPNB and leadership. I was struck by Kent's gentle presence and unassuming wisdom that had me later understanding the strength of his leadership. Kent is also an author in the IPNB field and is often called upon to consult with, and/or present to, schools and groups of teachers. At the time of the interview, he was a school psychologist where he was sought out daily by colleagues and local administration to guide and assist with challenging situations that arose in the private school for youth who have behavioral and psychological challenges. Kent identified his values with servant leadership and preferred to see himself as "leading from behind" differentiating his positioning from the more traditional top-down paradigm that permeate the school system within which he practices.

Kent's shared how IPNB had been invaluable in informing *how* he responded to students and faculty as well as *what* he did during the challenging moments he was called to address. Many of his interventions were informed by his knowledge about the relationally embedded brain and nervous system. For example, he shared incidents where he educated his colleagues and the administration about the brain and nervous system so that they could better understand

what was happening for the youth, who, from a behavioral perspective, were evaluated negatively and with control. He indicated that this view facilitated relationally-centered actions and had consistent positive outcomes for those involved. This not only included the youth and teachers, but supported his own practice and development. Here, Kent reflected on how IPNB assisted him to lean into challenging situations while being aware of his own vulnerability then using this to connect with others:

this is going to sound strange—but you know, it’s easier to be more vulnerable and for that to be okay ... that’s being more confident? I don’t know, but when I am able to be vulnerable and in some sort of situation where I can say, ‘well all our brains work the same.’ So I have the same thing too because my brain works the same as your brain ... it’s a whole system, I can say, just because I’m older than you guys doesn’t mean much other than my brain works the same. So [when] something’s painful for somebody or angry or whatever might be, I can preface it with that and then you know use an experience of my own or help me to kind of communicate with someone else.

Using his own experience to connect with others, Kent simultaneously taught students about their own nervous systems and the impact it has on their behaviour. Similarly, Kent shared how he is often in a role of teaching teachers, principals, and superintendents about how to approach students with the embodied brain, and relationships in mind. In fact, he shared that he always has the Triangle of Well-Being in his mind to help guide him, with relationships being at center of many of his leadership decisions.

Kent’s leadership has emerged relationally rather than from position. He shared how he had earned the trust of his colleagues through his willingness to act in challenging situations. He attributes his effectiveness to IPNB:

a lot of that comes from constant IPNB perspective, because they figure out how I can help sort it out. Mostly it works, I don’t know, 90% or something like that. It’s pretty high ... so it becomes in the school, in the culture of any school, that you have to, as the expert in anything, you have to earn your credibility and there is no way to earn your credibility other than like doing it and you have to be jumping into the middle of something that everybody is terrified about and have it come out okay.

Clearly, Kent has earned the trust of his colleagues, which is integral to his leadership identity in the school. He did not seek to be a leader; rather this emerged through his courage, actions and knowledge. What this has meant for Kent is that he is sought out for assistance by colleagues at all levels of the organization. In addition to acting in crises situations, Kent has used his IPNB knowledge in the creation of regular wellness promoting activities for the students, such as a morning meditation practice. Kent shared that IPNB is a part of him and has permeated his whole being and actions as a professional and in his personal life.

However, adding complexity to Kent's narrative, his voice-poems communicated that, in as much as his personal life, leadership and clinical work are relationally embedded, he is often alone when considering what and how he fulfills these roles. For example, in the following multiple-voiced poem Kent reflected on one of the meditation sessions he was about to facilitate; the students were busy talking and not paying attention and the teachers look to him to take action:

I think about

you know

before I kind of got into IPNB,

if I was...

well I was

you know

you know

I would tend to more to go towards control

When you have 50 kids

you know

you are there

everybody is looking to you to lead

because I work with them for years

you know

you know

when you have the IPNB perspective

you don't think about basically shut up kid

you know

you don't think about that sort of control

you are like, what's going on here?

Kent shifts from an **I-voice** (bolded) that is reflective about his development as an IPNB-informed clinician, to an observing and distanced you-voice (underlined) that observes and comments on his experience. Kent's distanced you-voice invited a sense of discomfort, a moving away from the vulnerability of being looked at to lead in a challenging situation. Whereas Gilligan (1982) identified a *self-in-relation-voice* in her research, I also noticed Kent shift to a you-in-relation-voice (underlined and italicized), where a more observant, distanced position emerged. This voice was reflective of his experience, pulling him centripetally towards his vulnerability and action. In addition, it was from this reflective you-voice that Kent observed his own development and growth from approaching the situation from a stance of control, to IPNB's framework, which invited curiosity and engagement. I was drawn into Kent's narrative as he invited me in via a connecting you-voice ("you know?"). As I listened to Kent's voice poem I took note that he led from a self that was differentiated from his colleagues because of the IPNB knowledge and his re-positioning to a more relationally considered stance. He connected with his

colleagues through his leadership, modeling, and educating them, rather than being able to collaborate with them. In this poem he is positioned as *the observed* by those who are looking at him to act, his IPNB-informed perspective setting him apart from them, and yet resourcing him in a way to be and to act for their benefit and that of the students.

There were several contrapuntal themes in Kent's narrative. However, the one that was woven throughout his narrative was paradigmatic; specifically, a non-relational/relational contrapuntal thematic perspective.

So it shifted the way we think about each of the students and so has ... so I have a different lens because IPNB, and I'm trying to help other people to have a similar lens because I've found it so helpful, when you know why, it-it takes away the need to really ... I guess use power and control or reward and punishment to uh ... you know, get kids to do what you want to do. You have more of this sense of why and then what you can do about it. And then you talk to the kids about it.

The counterpoint between the dominant nonrelational ideology that rewards or punishes in order to control behaviour and a relational view predates Kent's work in the school system. For example, he shared a story about an earlier time when he and his colleagues challenged the non-relational intake procedures at a mental health facility where he worked as a clinician. This relational value was what drew Kent to IPNB and his resolution is to continue to work for change. Rather than constricting him or shutting him down, Kent used the energy generated from holding the counterpoint dialectically to motivate his work to continue to lead others to more relational ways of seeing and being.

In addition, Kent's development as a leader has been shaped by the counterpoints of vulnerability and strength. For example, he shared this when, in the above example, where he took actions to challenge the non-relational ways things intake calls had been performed in the clinic; he stated that his actions could have gotten him into trouble. In another situation, he noted his vulnerability as a leader when he received the projections of others' ideas of leadership (i.e.,

of expertise). In these situations he had a sense of risking judgement or worse. He held the contrapuntal dialectic of vulnerability and strength with the internal space of acceptance: “it’s just part of the way it goes”. As well, he shared how IPNB had resourced him to take decisive action while being aware of his vulnerability. For example, he shared how he had been assisted by understanding the neurobiological underpinnings of his own and others’ responses, which didn’t resolve the counterpoint or distress however, it allowed him to continue to move forward and to lead.

Jemma: Transforming the Culture of Medicine

I had met Jemma briefly through colleagues and heard of her work as a director of a student service organization that was dedicated to supporting the wellness of medical students. I heard that she has integrated IPNB into this center, which she founded and was grateful that she agreed to speak to me. Although we have had a few short conversations in a group setting, this was the first time we spent time as individuals in conversation. Like Kent, Jemma was warm and our conversation unfolded easily; her kindness exuded through her words and presence throughout the interview. Jemma’s narrative was fluid and coherent, flowing in time with reflections from the past when she was first exposed to IPNB through to her present consulting work, that she does in partnership with her husband, a well-regarded cardiac surgeon and leader in IPNB and medicine. She also spoke about the future, which was filled with hope and commitment to expanding their work in transforming non-relational practices that permeate the culture of medicine.

Jemma has three graduate degrees, a Masters in Social Work, Masters in Consulting and a PhD in Educational Psychology. From the beginning of these academic pursuits, Jemma remembered feeling a deep dissatisfaction with what she was being taught. She stated that she

learned theories, but all seemed lacking in a foundation that satisfactorily explained the “roots” of psychological theories. Then, she found out about IPNB when she attended a conference where Dr. Daniel Siegel was a key presenter. At the time, she had graduated and had just been hired as a director in a program set to develop a mandated state-wide curriculum aimed at developing interpersonal skills and capacities for physicians. She described this first encounter with IPNB as transformative:

here was this, you know, physician that was really giving me the basic science or the foundational pieces to support or not support some of the other models that I had learned about as a psychotherapist and educator. So it was just, for me, sort of almost an epiphany about like, oh wow, so I can talk this language.

IPNB brought science to Jemma’s practice, and the means through which she could communicate to the physicians she was charged to educate and support. It bridged the world of psychology, which she knew well, with biology, giving her knowledge and the language to speak to physicians about their own experiences. IPNB’s relational neuroscience provided her with science-based language that was non-shaming. More than just a theory to be applied, Jemma asserted IPNB’s transformative impact for physicians in that it “embodied them to be a learner, as opposed to a knower.” Further, since IPNB is based in science, it was taken up readily by those she taught. For example, she applied the principles of integration to understanding and transforming the way that surgical teams functioned:

in-pervious times the surgeon would sort of be the dictator of the team, just barking out orders ... so to use IPNB model to talk to ... So if you look at differentiation and linkage how do you differentiate the different roles of each member of the team. And then link them together to create um greater safety for the patient, and so that even if the surgeon is directing, has access to all these different streams of information that determine patient safety. And there’s also a value, of each member of the teams input and not putting one person’s input above, as being more important.

She taught many IPNB principles and practices directly to physicians; for example, Siegel’s Wheel of Awareness practice. Jemma’s own development was supported through a regular

mindfulness practice. In addition, her leadership work is strongly informed by honoring and drawing upon bottom-up (body to brain) processes as well as top down (brain to body). Jemma's work later extended to other areas such as leadership and nursing.

However, it was when she later became a director of a student wellness center at a university in another state that Jemma was able to integrate IPNB organizationally as well as clinically. She shared that the center focused on wellness rather than traditional models of care that center around diagnosing mental illness. In addition, as a faculty member, she, and her leadership partner, included IPNB in their regular presentations to departments of medicine, including psychiatry and pediatrics. During this time, Jemma noticed IPNB's significant impact with faculty members and the culture of medicine; specifically, practices and mindsets transformed from being retaliatory to curiosity. She stated that she focused on bringing Siegel's integrative stance known as COAL (compassion, openness, acceptance, and love) to her teaching and leadership work, which challenged punitive and rigid practices that were considered part of medical socialization and professionalism:

That hall of rigidity, you know, doesn't it invite people to be integrated, so how do we do it in a way that creates that sort of FACES adaptive coherent energized and stable. So you know there were all kinds of teaching moments like that, that through the years and a very dramatic one, and extreme, most of them thank goodness were not like that, but I think that model though of-of COAL and FACES, you know, invites people to develop what I would say a learning mindset, not in knowing.

The mindset shift (from knower to learner) was significant in medical culture where physicians are socialized to be expert knowers. As I listened to Jemma's story I was inspired and awed by her commitment and courage in challenging deep seeded values and ideas that permeate medicine. She was motivated from within, and appeared unphased by the potential risks that I imagined she must have experienced when bringing this new paradigm to fruition.

I was intrigued when Jemma stated that she struggled to identify as a leader. Attributing this to values instilled from her family of origin, her mid-Western cultural background, and the era in which she grew up, Jemma identified with “Virginia Satir[’s] ... statement that she thought it was important to lead following two steps behind and shining a light on the path”. Jemma rejected notions of being in charge, unless “people really cross the line and I feel strongly about it.” She also stated, “I don’t know, what my leadership is ... I never really thought of myself in that role if that makes any sense. I just wanted to be someone with integrity and authenticity and to share the things I was learning in a ways that others could benefit.” Although Jemma expressed this tentativeness about her leader identity, through the voice-poems I noted that her **I/me-voice** (bolded) was strong and clear as she articulated how she felt and acted. Her leader identity is flexible and dynamic; for example, when she encountered passion for the topic at hand her leadership was propelled into the foreground:

I’ve always preferred

[being more of a background leader]

sometimes I am

sometimes I’m not

sometimes I can get pretty passionate

I don’t have a need to be the star

where I found myself

you know

I’m trying

I

I guess

I like more support

I guess than leading

so I think

I would like to think

my identity is not about

my identity is from in here

I don't know

my leadership

I never really thought

myself in that role

I just wanted

I was learning

I guess those

are my goals

here I am

Jemma's **I-voice** (bolded) was reflective ("**I would like to think;**" "**I just wanted;**" "**I was learning**") and positional ("**my identity is;**" "**my goals;**" "**here I am**"). There was also a softening of her **I-voice**, although this did not conjure up a sense of tentativeness in me as I listened. Rather, Jemma's **I-voice** invited a sense of thoughtfulness and careful consideration ("**I would like to think;**" "**I never would have thought**"). In as much as Jemma's **I-voice** carried a clarity of knowing who she is, so too her *self-in-relation-voice* (italics) and her MWE-VOICE (capitals). Here, described her co-development as a leader along with her partner and husband:

I guess

I think

WE PUT OUT

WHAT WE HAVE FOUND HELPFUL

IN OUR OWN LIVES

[the people that resonate with that]

INVITE US INTO THEIR LIVES

I would say

HOW WE LEAD

WE SAY HAS RESONANCE WITH THEM

THEY'RE OFTEN INVITING US

Jemma's MWE-VOICE (capitalized) is multi-layered and deeply embedded relationally. Initially she expressed her leadership actions from a MWE-position ("WE PUT OUT;" "WHAT WE HAVE FOUND"). However, this shifts to a *MWE-IN-RELATION* voice (capitalized and italicized), where she and her leadership partner are in relationship with those they are working with ("*INVITE US INTO THEIR LIVES;*" "*WE SAY HAS RESONANCE WITH THEM*"). In this next voice poem Jemma shared with a *self-in-relation-voice* (italics) with IPNB ("*intense gratitude for IPNB in my life;*" "*part of my life;*" "*helping me understand*") as well as another person ("*I have been influenced by Dan*");

I just feel

intense gratitude for IPNB

in my own life

part of my life

in helping me understand

myself and my relationships

I feel like

you know

I like IPNB

I have been influenced by Dan

Jemma's leadership development has been embedded relationally with IPNB and its founder. This signified that IPNB was more than information to be learned and applied. Jemma's voice poems communicate a complexity and multiple-layered relationship with IPNB. It lives within her, has changed her, and enhanced her life.

In addition, Jemma's development was propelled forward through a dialectic of honoring the counterpoints of *traditional approaches in medicine and IPNB's relational perspective*. Rather than taking the dominant paradigm head on and directly trying to change it, Jemma held both counterpoints in dialogue with each other. In doing so, she consciously cultivated qualities of curiosity and understanding, which facilitated change and movement within individual physicians, in physician teams, and organizational cultures. For example, she shared how she considered and worked to understand traditional models and then examine them with IPNB's science-based perspective.

In addition, another contrapuntal theme emerged in her narrative: *inward and outward experience*. Jemma held these two realms of her leadership experience dialectically: "it's that dance, the inward dance. And then inviting outward dance because I think the systems that we create are often manifestation of the internalized system that we live in." She also spoke about holding the counterpoints of *doing and being* in her dynamically flowing identity and development as a leader. She stated that she believed this to be true for others as well in that

being informs doing and doing informs being, rather than privileging one over the other. Jemma suggested that it had been essential that her doing was consistent and integral with her being. For Jemma, doing and being are not mutually exclusive categories of her leadership experience; rather, each informed the other informing and shaping her development and practices as a leader.

Charles: I've Always Been a Leader

Charles and I had also known each other previously. He was one of the first people to volunteer to be part of this research project. Charles wears many hats in his private consulting and counselling practice, one of which is being a consultant to leaders and organizations. His tone was confident and he spoke with authority and clarity about human experience in general, and more specifically about those with whom he worked. His intelligence was undeniable. Since publishing his first book, Charles has an international following that takes him to countries all over the globe. He shared that his acting background has supported his work by bringing a capacity to inhabit different states and enables him to adjust his language and tone to engage with others. In addition to being an author and presenter, Charles has been a leader in organizations dedicated to providing education about IPNB and related approaches to mental health.

One of Charles's first and repeated assertions throughout our conversation was that he doesn't apply IPNB, rather it is a "way of living and it's a way of thinking and it's a way of being." He stated that through science and neurobiology, IPNB is about a return to a naturalistic way of being, which is characterized by wholeness. In his leadership and consulting endeavors, Charles stated that IPNB, "doesn't teach me or lead me to be something I am not. It encourages me and engages me to be something I am ... More thoroughly and with a greater depth of understanding." Rather, than it informing the creation of structures or definitive principles to

apply in Charles's practice, IPNB offered a framework for the creation of space for engagement with "something broader and wider," that is not predictable but aligned with the naturalistic principles of complex systems. Charles shared that teaching this to leaders is "both rewarding and difficult."

Although Charles was clear that he does not consider IPNB to be a framework that he applied to leadership he did mention several principles that have illuminated or informed his work. One of the governing principles is that of integration, which has guided him when he engaged in a "reverse engineering" process to assess where people's blocks or barriers are to embracing their natural wholeness. When he consults with organizations, Charles uses exercises designed to uncover integrative and disintegrative processes. He also utilized IPNB to understand individuals he encountered in his work life, particularly when they were being reactive or acting in a manner that suggested disintegration. Here he shared about a colleague:

if he gets a bit cranky or something, there's that thing of okay, that's interesting what he is doing, and there's something behind that. What can we do with that energy, where-where-where can we go, what's being disintegrated here. What functions, I see you, you are really high there and we might stop a meeting, and just start talking about, what might be the issue. Which might be personal, might be financial, might be something I'm doing.

Although helpful, Charles shared that he does not see IPNB as necessary in and of itself because it describes natural processes. His consulting work capitalizes on recognizing the natural processes of complex systems, where emergence of new possibilities occur through principles of self-organization rather than harnessing linear processes to get a specified end result. As a result, he suggested that while the language of IPNB brought principles and useful descriptions to life experience, Charles identified that it can sometimes be counterproductive: "there's no need for, to speak in IPNB because IPNB is natural ... all you have to do is engage with them."

Charles's sense of leadership identity mirrored this sense of naturalness, which is reflected in the following voice poem:

IPNB gave me a clarity of sense

what my mother was telling me

You be one

with yourself

if you find that other people like

that you are talking

they follow it

you can say to yourself

I guess

I'm leading there

For Charles, IPNB clarified what has always been present and authentic to him. His voice-poem introduces Bakhtin's (1984) notion of double-voicedness (double underline) where the narrator takes on the voice of another. In this case, Charles spoke with his mother's voice, which became internalized and influenced his leadership identity. This internalized voice is relational (double underline and italics) ("if you find that other people like;" "if you are talking and they follow it") and also relationally distanced from others (double underline) ("you be one with yourself;" "you can say to yourself"). Also, this distanced double-voice is positioned one-directionally, rather than held dialogically, where his leadership emerges from others liking what he says and following him. In the following voice poem he shares further about his leadership identity:

I

I'm blessed

I didn't have to work to be okay

I was able to

I actually had to stop screwing up

what you go through in life

you get past this

you integrate

then you are-are-are leading

meaning other people are finding it valuable

or you are simply walking

your own path

Charles had never sought to be a leader, although it appealed to him. His **I-voice** (bolded) was clear and anchored in his sense of strength and Ok-ness. As he commented on being a leader he shifted to a distanced-you-voice (underlined) that positioned him reflectively as he commented on his leadership self. At other points in his narrative, Charles was clear that he has never considered himself to be a follower. In one example of this, he described himself as an apprentice not a follower of a teacher and mentor with whom he has worked with and co-authored a book. His leader identity a natural outcome of him being more fully who he is.

Camille: Community-Based Co-Leadership

I received Camille's name and contact information through a colleague and, although she didn't know me, Camille generously consented to being part of this research. As with all the interviews, we meet remotely for the interview after having brief email contact about the focus of this research and consent process. At the time of our conversation, Camille was writing a book that integrates IPNB and parenting, a clinical area she has focused on as a psychologist. She is no

longer acting as a leader, therefore Camille's reflections were about her past involvement with an organization in the Southern United States that continues to be committed to bringing IPNB training to clinicians in the community. Camille was one of the founding leaders, who joined efforts in developing the organization's purpose and membership. Not only was this organization focused on bringing IPNB scholars to their local area but they sought to integrate its principles into their operations and structure. For example, Camille stated she was watchful that their structures didn't become too rigid. In addition, the leadership team on the Board of Directors, attended to the neurobiology of relationships as they built the collaborative structure of the organization. Her leadership narrative was reflective and relational as she shared about her development as a leader and the connections she had with others as they led together to form the vision for the new organization and began to build its structures and functions.

Camille came to her position on the organization's board, not because she sought out to be a leader but because she was committed to the vision to bring IPNB to her community. She spoke about her growth as a leader, which encompassed what she and her colleagues did in the creation and running of the organization as well as her leadership capacities. She shared that she needed to develop patience when the organization moved into chaos, which she grew to recognize as necessary in the group's development. In order to do this, Camille developed a mindfulness practice, which helped her with regulating her own emotions. Not only did her active cultivation and practicing of awareness include her internal experience, but also she developed a neurobiologically-informed perspective about others and relationships. In addition, Camille learned to be mindful of her tendency to become overextended by her own creativity and generation of proliferation of expansive ideas. Through this she learned to slow down before she made commitments. The contrapuntal themes in Camille's narrative pointed to a dialectical

relationship between these elements of her development, which continued to evolve and flow over time. For example, she held her passion and energetic limitations in awareness as she navigated the leadership terrain, rather than rigidly imposing one way of being over the other.

This contrapuntal holding was embodied as much as it was relational:

Because I was also a mom, and I'm also growing a practice, and uh, I didn't want to get overextended and uh so some of it, sometimes was just stopping and doing-not moving too fast. ... But to me it was slowing down and just making sure that it made sense and it felt ... maybe it's an intuitive and I think of intuition as integrating your body and your mind, and so letting my-and my community and people I'm talking to, and so letting it be more of it long term intuitive direction.

The dialectic between *passion and limitation* continued to inform Camille's leadership and her ultimate decision to leave the organization when she needed to devote her energy and time in a new direction. Camille continues to listen deeply to the unfolding of her intuition. As her personal development happened over time her capacity to attune to her own unfolding guided her away from the organization to new ventures.

Thus, Camille's identity as a leader was bounded in time and deeply embedded in relational space (the relational in-between) and place. When she spoke about her leadership experience her MWE-VOICE (capitalized) consistently emerged indicating a relationally integrated identity with her colleagues:

WE WOULD MEET

TALK ABOUT WHAT

HOW WE KIND OF RUN THE PROGRAM

so I think what

I think

you know

WE JUST STARTED TALKING

HOW CAN WE ALL DO

THESE THINGS TOGETHER?

I think it was close

WE DID ANOTHER

I really am still excited

when I think about it

WE JUST HAD LOCAL PEOPLE

WE DID THAT

WE HAD DIFFERENT PEOPLE

WE DID

WE JUST HAD

WE WANTED IT TO BE

ON THE BOARD WE HAD

WE HAD

WE HAD

WE WANTED TO REACH OUT

I think

WE HAVE NOW SOME PEOPLE

you know

WE DIDN'T WANT TO

WE ALSO WERE

WE ARE ADDING

WE HAVE OTHER ORGANIZATIONS

SO WE ALSO

REACHING OUT TO THESE OTHER GROUPS

Camille's **I-voice** (bolded) is reflective, positioned as the narrator of the MWE (capitalized) leadership experience. Throughout this voice-poem Camille described the decisions and the actions taken in the organization as being relationally embedded and integrated. Adding another relational layer in the last line of the poem, Camille's MWE-VOICE is in relation to other groups (capitalized and italicized) in the community ("*WE HAVE OTHER ORGANIZATIONS*").

As Camille spoke it was clear that each of the co-leaders brought different skills and capacities and that these were linked through their shared communication and commitment to engaging with and enacting the principles of IPNB within the organization and with the extended community.

Elliot: Clarity in Position and Perspective

Elliot focused on his experience as a leadership consultant. Although I had met him several times previous to the interview, this was our first time having a face to face conversation. Elliot expressed some doubt about being able to add value to my research at the beginning of the interview. It struck me that this was not so much an expression of self-doubt but, a realization of the limitations about what he could say as he indicated he was uncomfortable offering examples because of confidentiality. With this in mind, we proceeded.

Elliot shared that he has always lived and lead from an IPNB perspective. He described himself as an unconventional consultant, which was sometimes welcomed by his consultees and sometimes not. For example, his approach included understanding the neurobiological underpinnings of leaders' experience, which meant that he regularly invited conversations that extended beyond the workplace in order to identify leaders' barriers to integration:

I guess like what you're trying to do is you just sort of intuitively can see when people are overly anxious, what they need, what they're losing is cortical functioning. They're smart enough but in a sense they lose a dozen or two dozen IQ points whenever they're in ... they're under stress, which makes them make mistakes. Right?

Rather than providing solutions, Elliot focused on teaching leaders about their neurobiology and the impact this has for their functioning and relationships with others. For example, he teaches leaders about the neurobiology of dysregulation, neuroplasticity, and memory. Often, Elliot's explorations extend to leader's personal life given their behavioral patterns at work are often reflected in their personal life as well. Elliot shared that not all leaders are prepared to do this. He observed how patterns of behavior, gender and age, (i.e., white middle aged males) and cultural beliefs prevent some leaders from embracing this approach.

At one point in the interview, Elliot challenged me to define IPNB; asserting this is something I should be able to do at this point in my doctoral process. Interestingly he also shared that he was not sure what the current definition of IPNB is, stating it has changed and evolved to include more and more aspects of lived experience. There were other elements of the evolution of IPNB that did not sit well with him. For example, he stated that some IPNB scholars' work was biased towards white, middleclass values and perspectives. He also suggested that the field had been broadening in ways that deterred from the original intent and focus of the field. In addition, Elliot challenged the focus on attachment research in IPNB, suggesting that evolutionary and neurobiological development of cognitive and emotional patterns are broader than attachment research suggests. Recognizing that people bring these early patterns into the workplace, Elliot's preference rested in a perceptual science called *affordance*:

affordance is what we do as children from a real bottom up way from our, you know, from our somatic and vestibular systems up to our sense, our motor movements and our-our perceptions of all of that. How do we work and how do we make this world work for us. How do we, how do we use our bottle and our binky and how do we get our diapers off so we can play with our poo. All of that stuff is figuring out how to work in the world. And so maybe you think about a boarder, again I say this is a boarder category of affordance, um ... and that's the stuff we learn early in life. And it's learned both interpersonally and in an interaction with the environments, right? And that's what every business person brings into the workplace.

Elliot stated that this framework suggests that a toxic or pathological workplace culture can impact and shape an individual. In addition, affordance calls into question the impact that an individual leader can have in changing negative work cultures.

The power to influence was a repeated theme in Elliot's narrative. He openly disagreed with the notion from complexity theory that small inputs can result in large outputs in organizations and systems. Rather, he sees the capacity for organizational change dependent on the power individuals have within the organization: "the question is, do those people have enough power and leverage in the organization to get other people to pay attention? And if they don't, then I don't succeed." In addition, Elliot approaches his individual consulting relationships from a standpoint of leveraging for points of engagement and uptake:

It's that shifting back and forth because what we're looking for I think is coaches, is looking for leverage. Like how do we take this from being an intellectual, academic exercise, um, about which the person has defenses and barriers, to activating something in them that makes them, you know, sort of really get engaged and feel like they're invested and their hearts are in it?

In addition to focusing his efforts to engage people in positions of power, Elliot was unafraid to challenge organizational structures and practices that were based upon rigid and controlling ideologies.

In keeping with this, Elliot identified with being as an unconventional leadership consultant as well. He shared how, at times, he offered an approach that leaders are not always

expecting. For example, his goals aren't always about resolving problematic areas in order for the continuance of the status quo:

every person I worked with

you know

you know

I'm dealing with the things that don't work

because of my

my position

But I think

you know

I

I think

in my work

you know

to me they have so much less value

you know

I think it's really

made me a very untraditional corporate coach

In this poem, Elliot's **I-voice** (bolded) is active and reflective. It is clearly situated in and defined by his role as a consultant. His *self-in-relation-voice* (italicized) is in relationship with the people he works with ("*every person I worked with*") and the expectations he is called upon to enact ("*I'm dealing with the things that don't work;*" "*to me they have so much less value*").

These expectations run counter to what Elliot believes is more valuable. However, his

positioning is not at risk; rather he recognizes and identifies with being untraditional and continues to work from a whole-person framework, which yields often unexpected outcomes. For example, he shared how leaders have made life-altering changes when they begin to understand that their personal relational patterns are reflective of how they show up in the workplace.

In keeping with this, Elliot stated that he often coaches people out of jobs that are causing them to be unhappy because their talents are being underutilized. As evident in this predominantly you-voice (underlined) poem Elliot asserted that integration is only possible when individuals experience the capacity to be authentic in their workplace:

if you have to
distort yourself
twist yourself to be at work.
making you really unhappy
damaging other parts of your life
you are experiencing in your life
either you have to change
your attitude towards the job.
or you have to change your job.
so you can allow
yourself to be integrated,
you know?

Elliot's you-voice (underlined) is both reflective and distant. He takes a step back from the person represented by the you and comments upon their experience. The you-voice suggests a

generalized destructive pattern that Elliot frequently witnesses in workplaces. In order to access and leverage peoples' motivation for change, Elliot stated that he connects with his clients' emotions and their need to feel valued and encouraged. He found this to be far more powerful than imparting information, which is a more traditional tact in coaching. For example, at one point he spoke at length about the importance of accessing and using leaders' anger, which he asserted needs to be recognized and harnessed for pro-social action. Elliot redefined leadership consulting in ways that are more whole, and considerate of the neurobiological underpinnings of each person's mind and relationships. However, he takes action from a distanced position where he assesses his clients experiences based on predetermined patterns he has observed and prescribes IPNB-informed solutions.

Theodore: Transforming Medicine Through Relationship Centered Care

Theodore is a physician and leader who has committed his career to bringing relationship-centered care to medicine. I had reached out to him at the beginning of my doctorate after reading his book and being intrigued by his work and message. He replied with warmth and openness; in fact at that time, he invited me to have a phone conversation about my interests in relational leadership in healthcare and my doctoral journey ahead. So, when it came time to recruit participants for this research he was at the top of my list, given he had written about integrating IPNB into his leadership work. True to his relational commitment, not only did he remember me, but he easily accepted my request to participate. His warm, down to earth presence immediately set the tone for our conversation.

Like many of the other IPNB-informed leaders I spoke with, Theodore shared that he has always practiced from an IPNB-perspective, even before learning about IPNB. Having a

career-long commitment to relational practice his discovery of IPNB resonated, enhanced, and scientifically validated what he had been committed to throughout his career: holding the physician-patient relationship central to his practice. He shared that he began by working on his own relational skills as a physician before branching out in teaching and coaching others. Following this he began to notice and shift his focus on organizations from a relational perspective: “the idea of relationship-centered administration backstage to support relationships at the front stage because the thing is kind of the perfect idea for me. And that became the focus of all my work, almost all my work since then.” Although not the only framework or theory that Theodore uses, he described IPNB as a “point of view” that has reflected and enhanced his practice. For example, he shared how he applied IPNB’s integration of brain science in a way that brings credence to his relationally centered work:

To me the importance of interpersonal neurobiology is that it shows how we’re quite literally activating each other’s brain by the way we relate to each other in every moment. And so knowing about that, we can be intentional about the quality of relationships and try to show up as a friend and not as a foe to meant to be, trying to be careful about it and what happens in the amygdala and all kinds of other neurons and all these other mechanisms.

In addition to his work with physicians and organizations, Theodore shared a story about a challenging situation with a colleague where his knowledge of relational neuroscience guided his approach. Theodore recognized that his colleague’s reaction was rooted in a threat response and that in order to resolve their disconnection, they needed to repair the resulting lack of trust. Rather than arguing for his correctness or defending his view, Theodore and his colleague entered a dialogue that focused on building a partnership from a bottom-up—respecting and tending to the relational embeddedness of body and emotion—perspective:

And so, I think by doing that you know I may or may not be thinking of neuro-transmitters but it's that kind of approach that is the consequences of taking IPNB perspective that you are working, and since you are noticing this state of relativeness, and noticing the behaviors that will be affecting those neurobiological mechanisms.

In addition, Theodore asserted that reflective practice was essential to going deeper with understanding the neurobiological underpinnings of interactions. He shared, for example, about the importance of sensing as a source or pathway for deep knowing that guides him in his relationships with others. Therefore, his leadership practice and presence is intimately woven with this multi-layered awareness, which he teaches to other leaders and coaches in addition to his own practice.

In as much as this has been a personal commitment, Theodore also stressed that he could not do this reflection solely on his own. He shared how his development as a relationally-centered practitioner and leader was bolstered through his involvement in a “three person cluster” of leader colleagues where he found support and a place to explore his work. He stated that the attachment and support they co-created, “we were kind of unstoppable.” Theodore believes that it is essential for leaders to have their attachment needs met, in groups such as this, order to face risks that are so often part of leading and change. In addition to finding the relational support, Theodore shared that developing in-the-moment awareness, as well as reflective practice, is an essential skill and capacity for leaders. He eloquently spoke about the multi-layered implications of practicing from this perspective:

So it's process awareness. It's aware of are we sitting like this? Or are we sitting more honest into each other? Are we sending each other humiliating formal letters, or are we ... are we working in a collaborative way to help each other be our best? So it's that kind of awareness of the process awareness and values that were enacting in each moment, in each other. And then we can be more intentional about that instead of doing things with this trance that we have inherited that never even thought about, that that's just how things are if I questionably continue again.

For Theodore, leadership development and practice from this perspective, implicates *what* leaders do, as well as *how* they position themselves in relationship within themselves and in their relationships with others. This is not a values-neutral stance; it is governed by value for processes and practices that connect, link, and foster relational wellness.

In addition, Theodore's voice poems revealed an **I-voice** (bolded) that was consistently reflective. In some circumstances this **I-voice** was woven reflectively across his internal, behavioural and relational realms of experience indicated by his MWE-VOICE (capitalized) and *self-in-relation-voice* (italicized), as well as when he spoke about other people through his you-voice (underlined):

I can't be accurate

I can't control that

I can make

my best guess

I can watch and see

how are you responding?

I can even make

I noticed just now

WE HIT A LITTLE BUMP

IN OUR RELATIONSHIP

be engaged in the other person

I have to be reflecting all the time

part of my work

This multi-voiced poem, among others, revealed that Theodore reflected deeply about his leadership and was clear about his leader identity. This **I-voice** (bolded) was reflexive (“**I can watch and see;**” “**I have to be reflecting all the time**”) and clear. Theodore’s **I-voice** emerged from his understanding about his relational positioning, which was not present to control or declare righteousness, but to bring awareness, curiosity, and engagement to the relationship. In his organizational development work, this value for relationships informed how he views organizations as well as what he promotes. For example, Theodore views organizations as conversations rather than machines. In fact, he has consciously and actively worked to transform the externally imposed counterpoint of the machine model with relationally-centered care through transformative processes as well as advocacy and intentional change. For example, he shared a story about how he directly challenged the practice of sending “ding letters” in medical school, which punished students for behaviour deemed unprofessional, rather than supporting and teaching them what professionalism meant.

Theodore’s commitment to bringing relationally-centered care to medicine has not been without fear and has a need to enact courage:

I was as intimidated

my job was to be a disturbance

my job as a consultant

gave me enough courage

I don’t live here

I get to go home

doing my work

I had...

WE'RE BUCKING EACH OTHER UP
SUPPORTING EACH OTHER'S ATTACHMENT
WE HAD THE LEADERS IN THE SCHOOL
WHO WANTED US THERE
WE DID HAVE
OUR OWN PLURAL COMMUNITIES
THAT GAVE US THE COURAGE

The courage that Theodore found, was embedded relationally; it was the MWE-VOICE (capitalized) who supported in a mutually circular manner that acknowledged deeper relational needs (attachment). Furthermore, revealing an even more dimensional and layered relationally positioned voice, Theodore's MWE-VOICE is relationally embedded. The *MWE-VOICE IS IN-RELATION-WITH-MWE* (capitalized and italicized) ("*BUCKING EACH OTHER UP*;" "*SUPPORTING EACH OTHER'S ATTACHMENT*;" "*OUR OWN PLURAL COMMUNITIES*"). In other words, Theodore's differentiated and linked, relationally embedded leader identity is also in relationship with other differentiated and linked individuals and group(s). He is not a lone actor, rather his leadership is deeply embedded in relationality. Theodore indicated that taking risks and leaning into his responsibility to be a disturbance in order to promote change, is not easy; however, his commitment to fostering change that is rooted in value for relationships and rooted in science was a strong and clear motivation for his life's work.

Daylen: Heeding the Embodied Call for Relational Leadership

I have been privileged to meet Daylen on a number of occasions within group settings large and small, as well as individually. He has upheld a number leadership positions, however his reflections during our conversation were centered around his leadership and scholarship in

the IPNB field. What resulted was a conversation about his leadership experience that centered around his integrated leadership identity and development that ran parallel to the development of IPNB as a field. Daylen is an internationally recognized leader, practitioner, and scholar. Despite his busy schedule and notoriety, he was the first, of all the leaders I reached out to, who accepted my invitation to participate in this research. Throughout the interview I was struck repeatedly by his presence which can only be described as possessing humility, grace, and openness. I felt treated with value as a researcher and traveller on the path, rather than a receptacle of his knowledge and expertise.

Daylen's story began with his encounters with the medical socialization process during his residency to become a pediatrician. During his residency, Daylen's natural inclination to inquire about patients feelings and stories was shamed and prohibited by attending physicians. The fundamental and required non-relationality and institutionalized objectification of the people under doctors' care was morally reprehensible to Daylen and increasingly intolerable:

I tried to ignore the feeling of it, but the feeling didn't go away, until finally it just got so extreme when I just became despairing, and couldn't feel the water on my skin when I took a shower, didn't want to go dancing at dance spree, and just started having fantasy of jumping on a train and disappearing into the wilderness, you know? And um, and-and-and the feeling of despair and depression, you know, not—I don't get depressed, but I mean feeling hopeless in the medical socialization experience and just having a constant feeling I have to get out of here. The minute I got out of there, I no longer was in despair. I was, you know, like I had kind of a fresh—and I had, you know, situational despair.

The message he received was clear: doctors are not to be concerned with patient's subjective experience nor their feelings. No longer willing or able to withstand the disconnect between what was being demanded of him and his deep values for relationship, Daylen left his medical training and travelled to Vancouver Island, British Columbia where he explored his fascination with salmon osmoregulation and worked on a crisis line. Driven by a clear value for the power of

relationships and commitment to science in understanding humans and natural systems, Daylen returned to medicine, this time training to become a psychiatrist and later, taking the lead in creating a new field that came to be IPNB.

Daylen's leadership identity was shaped through an ever-present dialectic between his commitment to relational neuroscience and external skepticism, resistance, and sometimes hostility. Throughout his career, Daylen has been committed to health and wellness rather than medicine's focus on illness and pathology. He has remained steadfast in developing a scientifically based understanding of the interconnection between mind, brain, and relationships among humans and the natural world. His development as a clinician and leader, has been inextricably interwoven with the evolution of the IPNB field.

Daylen shared that leadership was a call to truth, which emerges in the tension of the responsibility to speak up, often against powerful people and points of view. For Daylen this was an imperative, an undeniable call for responsive and responsible action:

I guess the leadership call, is a call to truth. And of course truth is relative so how can you stand up to [names of well-regarded theorists] or all of these professors at medical school. And-and the issue is you know, I think dropping into knowing the science and also knowing from a human point of view what we need to do.

Daylen spoke about the risks he has taken in his leadership journey and the courage he has had to embody in doing so. For Daylen, leadership action has been embodied and relational; for example, he shared about one situation where he was compelled to speak publicly in a conference in opposition to an eminent scholar and presenter's misrepresentation of science. As Daylen recollected the story he seemed to be reflexively in awe to have found "my body, not even with my direction, but my body itself walking ... down the central isle towards the stage." This was one of many times he has stepped into a leadership role in transforming the field of mental health. However, he emphasized the importance of knowing the science when taking

risks of standing up and speaking up. Through his steadfast development of the IPNB field, Daylen's leadership in forging new ways of seeing, doing, and being have afforded him international acclaim in fields such as mental health, trauma, parenting and child development, education and school systems, and, more recently, climate and social justice.

Daylen's embodied leadership voice had multiple layers and implications. For example, he asserted that one of the essential, yet neglected, considerations for leaders, and other IPNB scholars, is energy. In one example about this, he spoke about systems sensing, which involves both "systems awareness and systems thinking." He stated that this requires "letting go into awareness...an energy field". Partnering with other scholars in the leadership field, Daylen has explored leadership from a whole systems perspective and how leaders can sense relational fields through their bodies which are "some kind of antenna that is immersed in a system's field." In application, this has assisted Daylen in sensing the presence of disintegration (rigidity or chaos) with groups he has been called to facilitate and teach.

Daylen's voice-poems reflected a leader identity that was embedded relationally. His strong *self-in-relation* (italicized) and MWE-VOICE (capitalized) consistently emerged, particularly in his descriptions of the development of IPNB and his leadership within the field:

I started this whole thing

I know my science about attachment

I know about the brain

I know about genetics

I mean

THAT'S OUR WHOLE FIELD

I was forming the kind of new curriculum

I brought together a bunch of my teachers

I just brought 40 of them.

I brought them all into a room

you know

I

you know

WE WERE USING

I always felt

I brought all those people together

WE HAVE

WE HAVE NOT BECOME

WE DON'T DO THIS

WE ARE

you know

HOW DO WE KNOW

WHAT WE KNOW

OUR WHOLE FIELD

WE HAVE BEEN

WE WILL PROBABLY DO

WE'VE BEEN DOING

WE ARE VERY PROUD

OF WHAT WE DID

NOW EARTH NEEDS US

FOCUSING OUR HEALING

For us

for me anyway

In the first voice poem, Daylen's **I-voice** (bolded) is positioned alone—it was Daylen who was thinking, knowing, and starting this new field. However, as he evolved and as the field grew, Daylen's voice shifted to being in relationship with others (*self-in-relation voice*) to an integrated identity (MWE-VOICE). As the poem comes to an end a we-voice (plain text) emerged—differentiated from the MWE-VOICE (capitalized), which clearly referenced the different scholars who have been leaders in the field. Daylen's, we-voice (plain text) (“for us”) suggested an undifferentiated voice of humanity.

Daylen described his leadership as pervasive and saw himself as heeding the call to lead rather than being *the* leader. Here, he described one situation where he had been singled out by a conference moderator to take the lead on an issue that had arisen. However, Daylen was not sure that he was best positioned to take the lead:

So there was the moment, right? I mean was I a member? Not really because it wasn't my day. And I wasn't up on the stage. I was just in the audience. I could've been in the hotel for-for a workout, you know? But um, there I was. So I didn't know what to do. You know? So this is why it's a little complicated question, right, when you question was, when do you know to step up, you know, so I didn't want to step up, and he really got the microphone, he put it in my hands.

The counterpoint of *speaking/not speaking* was woven throughout Daylen's narrative, with complex turns and twists. Most frequently, he was called to leadership from his embodied mind that commanded action; however, at other times and places, when the call was imposed and did not resonant within him, Daylen stepped forward with reluctance and distress. Rather than leading for the sake of being a leader, Daylen's leadership emerged as he followed what needed to be done as demanded by an internal imperative. He has been called to action, time and again,

from a deeply embodied space and a relationally embedded place rather than fulfilling externally imposed definitions of who and what constitutes a leader.

Judy: Situational Applications of IPNB

Judy works as a coach and consultant to leaders. She has a global reputation for her effective training program, which she created and delivers, as well. Her exposure to IPNB has included participation in an IPNB certificate as well as self-directed learning such as attendance of conferences. While I had met Judy previously, we had not seen each other for a considerable time, yet we settled easily into conversation. After I answered her questions about the interview process, Judy spoke with considered confidence about her work and the beliefs that informed how she approaches her roles as a consultant and coach. Judy indicated early in the conversation that while IPNB had assisted her in some circumstances, her use of it was periodic. Judy stated that she has the intention to use IPNB but shared “I don’t always follow through with it.” She described her knowledge of IPNB as “basic.” However when she has used IPNB, it has assisted her to bring language to the dynamics occurring in the relational space between people she works with, where “there is something energetically happening. There is something scientifically happening.” She shared situations where IPNB supported her processing and actions, particularly in situations where there was interpersonal challenge. In these circumstances IPNB guided her reflections about her responses. However, she also indicated that IPNB’s focus on empathy has a downside for leadership and other applications (discussed below).

For example, Judy shared two stories, one a consulting situation with a two individuals, and another that occurred in a group situation. In both situations individuals had become dysregulated and the potential for conflict or further disruption was high. In the first situation, she shared that she initially tried “to get through” to the two individuals who were engaged in

conflict. It wasn't until Judy recognized the underlying neurobiological mechanisms at play that she was able to intervene in a way that proved to be effective. Specifically, Judy asked for a "time out" in order to facilitate emotional regulation, which included herself. Reflecting on her decision to pull back and reflect openly about the relational dynamic that had unfolded Judy shared:

at that point I just kept thinking what have I learned about IPNB? What-what space did I just create here that isn't working and what can I do to kind of heal that space? And so at that moment, you know, I just had a conversation with an entirely different talent. I literally said, you know, a-as crucial as it seems, this is not working for us and it's not working for me ... So I really think—and of course I was thinking this is kind of rupture and repair and there's gonna—we need some time for the rupture to kind of just settle and then I can come back and try to repair it, so maybe kind of like a mini repair.

Instead of trying to find a solution and imposing this on the situation, Judy's response became reflective and focused on the relational in-between as well as the neurobiology of the individual's threat response. In addition, she utilized her knowledge about relational ruptures and the necessity for repair, in guiding her response. Similarly, in the other situation she tapped into her IPNB knowledge-base to deal with a dysregulated participant in a workplace group consultation she was facilitating. In this situation, Judy recognized his activation from a neurobiological perspective of safety and sought to cultivate this in her relationship with him as a means to calm and sooth. For her, this served to mitigate her own response through stepping back into a reflective stance rather than being judgemental.

Judy indicated that IPNB can underpin varied approaches to leadership, such as authentic leadership and transformational leadership. She views IPNB's influence in *how* these theories are utilized and *how* a leader focuses their own mind. That being said, Judy also had some caution about using IPNB. This was rooted in her conflation of IPNB's focus on relationships with a specific manifestation of empathy that risks over-identification and enabling behaviors. At one

point she recognized the influence of her own family of origin positioning in defining and experiencing empathy without boundaries. While she attributed her capacity to develop trust quickly with her clients, she also stated that she struggles with her capacity to have an “extreme sense of empathy,” particularly when consulting (versus coaching). In one example she shared:

So I had to choose what is the best of-of ... of two challenging decisions. You know, one is to just be completely in this caring state and try to ... try to help this gentleman regulate so that maybe he could make some better decisions, maybe he could, you know, engage ... you know, bring the prefrontal cortex back on line. But that might never happen. And I might not get that done in the time that I’ve got as crisis is happening. And um, so that I think is where you’ve got the challenge.

Seeing caring and productivity as mutually exclusive, Judy shared that her capacity to “take on the energy” of others can be a gift, it also has made leadership more challenging for her. Through her reflections and practice, Judy has come to learn how to put a “container” around her empathy.

Judy’s voice-poems were dominated by an **I-voice** (bolded), which situated her leading and reflections on her leadership, within her own mind:

I think...

I mean

to me the overall richness

IPNB in my life

I feel like it’s been a bit of a challenge

I believe

I’m just going to be

I take in attachment theory

I understand a portion of it

I believe it has a lot of impact

I don't believe

you know

I said

I think

In the above two voice-poems Judy reflected on her use of IPNB on her own. Her understanding and decisions about her use of IPNB is on her own, rather than in dialogue with others (“**sometimes I think;**” “**I think;**” “**I believe**”). Her **I-voice** (bolded) communicates an ambivalence with IPNB, both in terms of understanding and its usefulness as a framework (“**to me the overall richness; of IPNB in my life; I feel like it’s been a bit of a challenge**”).

One of the contrapuntal themes Judy shared reflected the tension she experienced when applying IPNB in her consulting work. Within this role, Judy felt pressure and responsibility to come up with answers to problems and solutions to situations. This is contrasted with her coaching work, where there is more space and expectation for relationally considered interventions. This was reflected in one of Judy’s voice poems which featured a more relationally positioned and integrated MWE-VOICE (capitalized):

WHEN WE HAD TO

WE WERE GOING TO HELP

WE

WE DID

WE ALL JUST

you know

WE EXPERIENCED

WE WENT INTO WORK

ON OUR STRENGTHS

WE CAN IMPROVE

TELL EACH OTHER

WE CREATED

EVERYBODY COULD BE

In this poem, the consulting space is relational with the experiences (“WE EXPERIENCED;” “WE ALL JUST;” “WE WERE GOING TO HELP”) (capitalized) and actions (“WE DID;” “WE WENT INTO WORK;” “WE CREATED”) were shared and unfolded in ways that are mutually beneficial to all (“WE CAN IMPROVE;” “EVERYBODY COULD BE”). However, more typically, Judy’s **I-voice** (bolded) indicated that in her work, she was more on her own. This was also reflected in her comments about the challenge of bringing IPNB to organizations. She stated that her capacity to bring IPNB to workplaces was constrained by the organizational cultures and that when she teaches other coaches she offers a hybrid approach. Judy’s relationship to IPNB was ambivalent. She clearly drew on a number of approaches in her work, but found IPNB’s neurobiological focus to be of great assistance, particularly at times when her clients became dysregulated. She then employed IPNB to understand what was occurring for herself, her clients, and in their relationship.

Penny: An Autocratic Leader’s Transformation

Penny graciously consented to participate in this research. I contacted her through another person who identified her as a suitable candidate given her leadership experience on a board of a community-based IPNB clinicians. Meeting Penny for the first time for the interview I was struck by her warmth and openness, which were apparent the moment we began to talk. She started our conversation by informing me that she was no longer a leader and expressed a hope

that her contribution to my research would be helpful. Contrary to her expressed concern, Penny's recollection of her leadership experience was communicated with clarity and depth.

Penny did not seek a leadership role in the newly formed organization; rather, she was sought out and drawn into a group of women who wanted to bring IPNB to their local community. Once she learned about IPNB her life began to change. The transformation not only sent Penny on a completely new career path, (she left the corporate world to become a therapist), but it also facilitated her development as a more relational practitioner. When she joined the board of directors of this organization, she had many experiences through which she learned how to enact the principles of IPNB. However, her experiences as a corporate leader and the pragmatic skills that she utilized in that setting were helpful to this group, particularly around ensuring tasks were managed in a way that moved the organization forward.

At the same time, Penny's role in this organization brought IPNB's relational foundations into her leadership practice. The learning wasn't always easy. Prior to her exposure to the collaborative leadership culture within this organization, Penny had identified herself as an autocratic leader. She was not accustomed to leading from a relationally attuned and considered stance. For example, Penny shared a pivotal story where she had to confront her direct leadership style. She described how this had been a required style of leading in her previous leadership role, however it was not congruent with the relational foundations of this new organization. Below, Penny expressed her reflections on her own and others reactions to the dynamic that unfolded through an IPNB lens:

Well, I think in the moment when I was freezing, I wasn't capable of a whole lot of reflection but what I will tell you is that one of the other board members who was sitting near me, without saying a word, just touched my back and put her hand on my back. And kept it on my back for the duration and nobody else even noticed. It was very subtle, and it was just she touched my back and kept her hand there for the whole time. And it was grounding, and kept me in the room and uh, felt very loving. Um, so yes, afterwards

[laughs] I was not frozen. I could take in the physical support and really not just go to some shame place of you know oh I fucked up; I did a really bad job. You know I could understand that it wasn't done well, but that the group was okay. I was okay, you know? It wasn't something I want to do again, but I learned a lot from it.

Penny went further and reflected the fact that she did not freeze as she had done many times before in her corporate leadership positions. I was struck by the power and significance of her colleague's wordless support in transforming the isolation Penny had endured in her previous leadership experiences. Penny was deeply supported by this simple, attuned touch. Her learning and development touching down in her body as she navigated the challenging and painful situation that unfolded in a way that integrated her new learning.

Her reflection on the collaborative practices that characterized the organization included an analysis of gender. Specifically, Penny viewed the relational approach to be more feminine and the non-relationality of the corporate world from whence she came, which she found were reflective of masculine values and norms. For example, the simple act of her colleague placing her hand on Penny's back, was a novel relationally situated leadership experience that was deeply impactful for Penny. The value of leading from a position where "you don't give up on anybody" was a sharp contrast to the corporate prioritization of justifying the means in order to "obtain an end," was new to Penny:

you know

to me

to the way I relate to people

How I founded

my career

how I relate to my clients

I started doing

part of my life

everything about my life

For Penny, the impact of IPNB has been broad and deep. Her **I-voice** (bolded) and *self-in-relation-voice* (italics) communicate how this new way of seeing, being, and doing permeated her life both professionally and personally (“**part of my life;**” “**everything about my life;**” “*how I relate to my clients*”). She began to study IPNB texts and trained with the field’s scholars integrating this new way of seeing and being across her mind, embodied brain, and in her relationships with others.

In addition, through her reflections on gender and IPNB, Penny recognized a shift in how she expressed her power as a leader. Rather than being an autocratic leader, she learned to be more collaborative:

AS A CO-FOUNDER

I had come from the corporate world

I must admit

I have a bent towards...

You know

I’m in charge

I have the power

I tell you what to do

You do it

I was very comfortable

to come into a group

I mean

culture shift for me

move into a group of therapists

my management or leadership

I

I mean

I am a woman

I was more collaborative

I

changed my leadership style

understanding people's perspective

being collaborative

The poem starts with Penny's MWE-VOICE which orients her transformation relationally. She and the leadership team are integrated relationally—differentiated and linked through their work and their commitment to IPNB-informed leadership. Penny is comfortable with being autocratic, yet this transformative experience shifts her relational position from top-down “*you do it*” leadership to relational “*understanding people's perspective*” and to being collaborative. Interestingly, Penny associated this new way of seeing and being with values that are foundational to the field of therapy.

Penny did not lose her appreciation of autocracy, however. In as much as her way of being was transformed she also learned to draw upon the efficiency and clarity of an autocratic style. However, seeing positive benefits of being directive as a leader in specific situations, Penny learned how to be more relationally skillful in delivering the message. In this mixed-voice poem, Penny shares her self-reflections as well as her relationally integrative re-positioning:

I had not quite gotten

that I needed to bring people in

I needed to do it more collaboratively

you know

I was getting it done

right?

I was very unskillful

I know

I would not do these things today

I would

I would talk to more people

I would get buy in

I would

I would talk to her

I think

I don't know

if I would have

all the way to she stays

she can be unproductive

I would have worked to encourage her

MORE PRODUCTIVE WITH US

Penny is able to find a way to resolve the recurring contrapuntal theme of *autocratic*

leadership/relational leadership by holding the dialectic tension of both and allowing the

situational and relational dynamics to inform her leadership choices. At other times, she consciously chose one counterpoint over the other. For example, she saw the value she brought to the board because of her capacity to get things done, keeping to schedule, and skills in running their board meetings. In addition, Penny stated that in her former leadership positions she learned to be comfortable with aggression, which she saw as an asset. At the same time, Penny learned to adapt to the flattened leadership structure of the organization where everyone found their leadership place, for example taking the lead on projects based on each individual's creative interest and energy: "I do think there are things to be learned from you know, pragmatic do things on time, don't waste people's time, and you know, the more collaborative. The more connected kind of ways of making decisions and-and leading." Penny developed the capacity to bring both directness and relationality together in her leadership practice.

Geoffrey: Sustaining Relationality in a Non-Relational System

Geoffrey wears many leadership hats. He is the executive director of a non-profit counselling agency, a clinical supervisor, and a community-based change agent. Geoffrey is committed to bringing IPNB to systems of care, particularly those involved in the care of children and families. It is the latter role that dominated Geoffrey's narrative about his leadership and IPNB. He stated that it was his interest in relationships, and more broadly the relational field of early caregiving, that drew him to IPNB. His quiet commitment to bringing IPNB and relational perspectives to his community, including mental health and family justice system, carried a resilience and clarity that came from his values and belief in the power of relationships to shape development. It was here that our conversation began with a depth that was, perhaps, made possible by prior connection; however, there was a resonance that emerged almost

immediately that took our dialogue in directions that left us both energized, open, curious, and wanting more time and space to contemplate the emergent themes, together.

One of the dominant themes in Geoffrey's narrative was his deep commitment to finding a way to influence the court and child welfare systems in his community towards acknowledging the central importance of relationships in children's development. He was committed to making changes to the current system, which he described as lacking in openness to the point of rigidity that was so extreme he described it as "calcified."

there was no buy-in from the child welfare system, in fact quite the opposite. You know, they're very ... how can I say? They're not interested in anything that would upset the current way of doing things. In spite of the fact that you know, there's research evidence and so on and in spite of the fact that these are the types of things that, you know, could be really transformational in terms of kid's lives. They just said, no, we're not going to do that. And so ... there we had it.

Geoffrey used IPNB to understand this resistance, which he located not only within the system but in the individuals with whom he has attempted to engage. He suggested that the idea that humans have social brains and the capacity for neuroplasticity challenges some deeply held individualistic beliefs and values such as "people gotta pull themselves up by the boot straps and we're all alone." Geoffrey acknowledged the fear and suspicion that fueled the resistance he encountered when he tried to lead change.

At the time of our conversation he had been reflecting on how to influence the rigidity he encountered in the family justice system, time and again. Holding the tension generated by the counterpoints of *finding influence and remaining invitational*, Geoffrey vacillated between another counterpoint of his commitment to *leading change and the disillusionment* of repeated failed attempts at getting through:

And so, um, but that, what you're naming there is saying okay, that's, that's maybe one element of it is saying yeah, I see all that rigidity and calcification and man, I can beat my head against the brick wall over and over and over and not-not make a damn bit of a difference, right? [chuckles] Except my head really hurts. And so I think ... gaining courage and feeling grounded in ... um ... you know, I'm going to continue to invite and influence and figure out the paradox—you don't figure out paradox, you just kind of live into them. But um, to be with that paradox in such a way that all of that rigidity and calcification doesn't, you know.

Although answers of how to influence remained elusive, as the interview unfolded, Geoffrey recognized opportunities for his leadership and influence in other capacities and arenas. Rather than actively seeking to take the lead for change, Geoffrey has led through many emergent possibilities. For example, he recollected his lead role in a community resilience network that seeks to bring trauma informed resiliency building initiatives to his community. As Geoffrey contemplated his identity as a leader in our conversation, the word “catalyst” emerged as he remembered times when he focused his and others’ imagination and creativity towards the beginning of new ways to provide care to families and children. Using an IPNB lens Geoffrey shared how “here’s possibility and here’s ... some imagination and creativity kind of together and ... catalyzing energy and-and uh, information ... around possibility and around ... not just possibility but then actuality, you know.” He shared that IPNB provides a “deeper, more vibrant, more alive vision ... for who we are to one another as human beings.”

Geoffrey’s leadership I-voice was reflective and relationally embedded:

so I think

BEING CONNECTED TO OTHERS

you know

WE'RE IN IT TOGETHER

I

I think really

I'm not sure

I

I have a really good response

I think

I don't know

I guess

I would go back

you're invited

You know

you're invited to this...

I

my own challenge

I

I

I tend to see all

I tend to want

you know

what I learned

you know

I mean

I think

you know

I'm going to continue

Geoffrey's **I-voice** (bolded) dances and weaves with reflections on his leadership, his desire to lead from a relationally integrated MWE-VOICE (capitalized) position ("WE'RE IN IT TOGETHER"). At times his leadership **I-voice** (bolded) sounds tentative ("**I tend to see all;**" "**I tend to want;**" "**I think**") however, I had the sense that his pauses and qualified statements were more of about his carefully considered practice and his desire to lead from emergence and flow rather than imposition of pre-made and rigid ideals. From this stance, Geoffrey led with humility, openness and curiosity in the service of bringing relational neuroscience to the systems that serve children and their families.

Luuk: Leading as an Embodied and Transformative Practice

Luuk had doubts about his participation in the research given that he does not identify as an IPNB leader. However, I had approached him because of his integration of IPNB in his writing about leadership. We met remotely for the first time to do the interview although we had previously corresponded regarding his work. At the time of the interview Luuk was clear that he was no longer in leadership; rather he was currently teaching at a university. The intersection between Luuk's practice as a DST leadership practitioner and his reflections on IPNB in his writing intrigued me, and so, we forged ahead with our conversation with the intention to see what emerged.

Luuk spoke with considerable depth about his development as a leader and as a person. He shared that his development and commitment had not been to a specific theory or framework, but to his own embodiment and emergent integration of sensing and intuitive knowing with his rationality. In other words, he did not identify as a DST or IPNB practitioner. Rather, these fields were reflective of and illuminated key elements of his experience. His forty-five-year martial arts

practice was foundational to his adult, and later, leadership development. His introduction to martial arts, when he was a young man, was driven by an internal dis-ease that had emerged:

I was an excellent student, I had very high grades. But in my view something was lacking in my understanding. And what I felt was lacking was through-through understand, to really deeply understanding what do we mean, for instance with the concept of transcendency or with the concept of imminence.

Over the decades of committed practice, Luuk's capacity to sense ascendent energy through and with his body has deepened and become more refined. In addition, his recent practice has been to work with energy that has descended into his being and awareness. Though deep listening and attunement, Luuk has developed his capacity to integrate his rationality with his embodied sensations, through which his intuition emerged:

It was very difficult for me to move into a practice that started from the body. And sensing, and this is what let's say to place overtime what's happening in between people without using rationality, without using word, without using let's say other techniques. Just sensing, feeling, or it's more like what we call—what I'm calling in my book the body intuition axis. I really went very deep. Um, this make me aware of another layer in human interaction. That really was kind of a gift to me.

Luuk described himself as “kind of a vehicle in integrating conflicting I-positions ... in leaders.” As such he identified himself as a non-traditional consultant to leaders and organizations. Referring to himself and an “organizational therapist,” Luuk's unconventional approach to leadership and organizational consulting has come about through a developmental “process of preparation ... and then it happens, it emerges or it descends ... and it's a process of it's happening to you.”

Prior to this, however, Luuk attempted to be a conventional consultant, which required him to tap into his rationality to the neglect of his embodied intuitive knowing. His voice poem below revealing an **I-voice** (bolded) that was ill at ease with the objectification of others, revealed here through his *self-in-relation-voice* (italicized):

*I separated myself from
the object I was assessing
it influenced me over time*

I was a good assessor

I wrote

did not make me happy

I felt

I was more or less objectifying

I did not want to do that

brought me into kind of a crisis

I did a perfect analysis

I made an analysis

I became aware

I had to integrate all these different elements

Luuk continues to develop and work with the concept of *transpositioning* through which can be understood as the integration of different internal I-positions: “the mechanism of transpositioning does not guarantee the integration of an outcome, but it might be possible that is the outcome. So that’s where say it’s not a process that you can steer and direct completely by yourself.” As Luuk described these processes I could sense what he shared more than intellectually understanding what he was stating. His narrative invited an open awareness beyond concepts and defying the notion of application of principles. For example, when he shared about his work with symbolism I found myself feeling and sinking into his words rather than cognitively sorting through what he was saying: “When we try to explore symbolism, we work from let’s say the physical, the

embodied part and then bring it to intuition and rationality, and opening up fragments of a language that are not coming from your brain, but are coming from your body.” Reflecting this, our conversation was like entering spaciousness and allowing the energy and information he was offering to sink into the relational space between us as well as my being.

Luuk stated that his attraction to IPNB, and Dan Siegel’s work in particular, occurred because it resonated with this experience and offered a reformulation of ideas he had been grappling with. For example, holding the dialectic of *rationality and intuition* together Luuk reflected on his theory of leadership and asked:

what does it mean for your body? What does it mean for your rationality? What does it mean for your ... intuition, and that’s where it comes together and Siegel, Daniel Siegel says it works more or less in the same way.

Luuk utilized the term integration to describe a process that was not of his creation rather, he stated “[i]t was not me who integrated but it was I who was integrated. It was not me integrating but it was me being integrated in a process, which came from another level of being.” Luuk reflected on the sense of wholeness that has emerged from this integration, which cannot be taught or made to happen. Rather, he asserted it is the leader’s job to tend the soil and attend to the emotional, intuitive, and rational realms of experience, then to allow and attune to the energy and information that flow into awareness.

Tina: Intentional IPNB Leadership and Organizational Development

Tina Payne Bryson is an IPNB scholar, author, Executive Director and founder of the Center for Connection in Pasadena, California. She chose to reveal her identity for this research, which I asked her to participate in given her work in developing a successful interdisciplinary practice that is entirely based on IPNB perspectives, practices, and principles. Her educational background is in psychology and social work, with a special focus in parenting and child

development. She has co-authored several books with Dr. Daniel Siegel and is a well-regarded presenter and educator in her own right. I was grateful that she consented to the interview, which occurred just following her new book launch and just after the COVID shut down in California. Therefore, the conversation was contextualized with implications this had had for how the Center offered its services. With her golden retriever by her side, and family members entering our interview space as they moved about their daily activities, our conversation felt like it was nestled in the comfort of familiarity and warmth of a good conversation between friends, although this was the first time we had spent any time together. Tina's enthusiasm in sharing her work was palpable.

Tina's introduction to IPNB occurred during graduate school, where she was consistently dissatisfied with the curriculum finding it lacking in depth. At the time of this discovery she was studying psychopathology and found herself repeatedly searching for the roots of the disorders and why specific evidence-based treatments were effective. When she was exposed to IPNB at a conference her search was realized and she began to study with Siegel:

My training is separate from IPNB had taught me that ... I could—this kid had anxiety because they had an anxiety disorder. Like they must've diagnosed her. And that just seemed ridiculous circular reasoning to me. Well I said, okay, what is anxiety? So here's my IPNB lens. It's anxiety is a nervous system that has a neuroception of threat even in a safe environment. Or you know, if it's appropriate anxiety, it's neuroception of something is not working, this isn't working right, I need to be alert.

Tina shared that IPNB brought the whole into focus—whole person, whole organization. These early encounters with IPNB shifted Tina's intended career path. Initially, she looked to IPNB in understanding her own parenting however, she then brought the framework to parenting and understanding the developmental needs of children. This then translated into her work as a scholar and notable expertise in the area.

She created the Center for Connection approximately six years ago with the intention of bringing clinicians, who were committed to working from an IPNB perspective, together under one roof. Interestingly, Tina mentioned that when she interviews potential employees, knowledge of IPNB is not required given this can be acquired; however, what she looks for in the clinicians she hires is a relational orientation and a commitment to relational practice.

She indicated that IPNB has guided everything in the center from the micro to the macro. It informs *how* the center's clinicians approach their work with clients as well as their relationships with each other, and it influences *what* they do. For example, the science of neuroplasticity informs the teams assessment and treatment planning processes, infusing their work with hope as they collaborate "to create experiences that harness how the brain changes." Rather than focusing on behavioral change, the center's clinicians who are from different disciplines, focus on changing the structure and functioning of clients' embodied brains, minds, and relationships. IPNB also shapes the physical environment of the center. For example, Tina and her colleagues have maximized the integrative influence of the center's appearance and structure of the physical space. In addition, they attended to how rooms are structured and decorated as well as sound levels, which can activate the nervous system. In addition, because relationships are foundational to an IPNB approach, the decision to work in a co-located space was consciously chosen in order to foster opportunities for connection.

As a leader, Tina turned to the principle of integration to guide her understanding of the organization's functional processes. She has paid careful attention to functional processes and practices with attention to the promotion of integration at every level using,

the framework of IPNB, the idea of chaos and complexity theory, dynamics systems theory, how the differentiated parts, that are also functionally linked, lead to flexible adaptive coherent, energized, and stable state. When systems are not integrated, you see chaos, rigidity or both.

This has been actualized in many ways; for example, Tina has implemented regular team and inter-team meetings to foster differentiation and linkages. In addition, team members practice a conscious commitment to fostering respect for each other's differences, whether these be inherent talents or the unique perspectives and skills of their different disciplines. In addition, she shared stories of having to make the difficult decision to fire practitioners because they were so differentiated from the vision and foundational principles of the organization that their behaviours were incompatible, disruptive, and even destructive. Tina's use of integration brought clarity to her decision and guided the language she used to explain their dismissals in a manner that was non-blaming, yet truthful in holding them to account.

Tina shared that a culture of genuine care has emerged among the center's staff group, which, at the time of our interview, approximated forty members. These individuals have expressed this care personally with each other in times of fun and challenge, as well as professionally. Tina's care for her employees was communicated in multiple ways. For example, the provision of mental and emotional support through the creation of a clinic that has a designated position devoted to this purpose. In addition, although Tina recognized her differentiated role and responsibilities as leader, she strove to implement these with care:

I make the call

even if I disagree

but I feel like it's

it's better for my team

the way I am thinking

NOT ESSENTIAL TO WHO WE ARE

I just

I want to empower them

I'll be honest

really hard for me

I can be a control freak.

My family is walking through nodding

I have strong preferences

how I think things should be

I'm super conscientious

I have high expectations

I don't want to be

I want to be a conscientious leader

I'm making sure my people

I'm thinking about them

I'm making sure my people

I'm thinking about them

I'm thinking about the details

I

I really want them

personal journey for me

This voice poem reveals that Tina holds IPNB at center, allowing it to inform her personal development and growth as a leader. Her identity as a leader is dynamic and responsive. Her

I-voice (bolded) is reflexive and focused on her professional and personal experiences, which differentiate and link in a dynamic conversation (“**I am a control freak;**” “**I’m thinking about the details;**” “**personal journey for me**”). Her **I-voice** (bolded) is woven with a *self-in-relation- voice (italicized)* that embeds her reflections relationally (“*I want to empower them;*” “*I’m making sure my people;*” “*I’m thinking about them*”).

Tina also positioned herself as a continuous learner who welcomes others influence:

I’ll just give an example

if I have someone who knows something

I don’t know

I like

I need that

I don’t

I don’t ever want to be

I want to be the kind of leader

I want people who are on my team

who can challenge me

who can um help me

differently than I can already

do on my own

In her leadership, Tina consciously navigates her tendency for high expectations “I really want them to have the freedom to be differentiated and celebrated for their differentiation and not worried is Tina going to like this?” This has meant that Tina has grown personally—for example, learning to let go of control in order to allow for this to occur. Her commitment to relational

practice that honors the minds, brains, and relationships of others is strong. Tina consciously chooses to be guided by this over and above her natural inclination for control.

Tina also talked about the leadership culture at the center through this mixed-voice poem. Tina's **I-voice** (bolded) along with her *self-in-relation-voice* (italicized), are both differentiated and linked as well as relationally reflective. Her MWE-VOICE (capitalized) communicates the pervasiveness of leadership at the center, where shared responsibility is both consciously allowed and fostered:

WHERE ARE WE RIGHT NOW?

THE NEEDS IN OUR COMMUNITY

THE NEEDS OF OUR STAFF

WHERE ARE WE GOING WITH THIS?

DO WE WANT TO INNOVATE MORE?

DO WE WANT TO JUST GET REALLY GOOD?

WHAT WE ARE DOING?

WHERE WE ARE NOW?

I'm the founder

I'm the executive director

I feel like it's my job

where my staff all feel safe

if they have a need I'm going to show up for them

I got their back

WHAT WE HAVE DONE

WE'VE CREATED THESE DIFFERENTIATED PARTS

Tina's MWE-VOICE (capitalized) is layered. The differentiated and linked members of the center's teams reflect and co-create together ("WHERE WE ARE RIGHT NOW;" "DO WE WANT TO INNOVATE MORE?"). In addition there is a *MWE-IN-RELATION-VIOCE* (italics and capitalized) where the integrated identity of the center is in relation with the community ("*THE NEEDS OF OUR COMMUNITY*") and within the team itself ("*THE NEEDS OF OUR STAFF*"). It is clear that there has been a waxing and waning of the relationally integrated processes that continually shape and reshape the center as it has moved through time, in space, and place. At the same time, Tina's **I-voice** (bolded) locates her leadership identity as differentiated from her colleagues at the center ("**I'm the founder;**" "**I'm the executive director;**" "**I feel like it's my job**"). Her sense of responsiveness and accountability are both differentiated and linked relationally.

Tina utilized IPNB as a reflective lens through which she understood the center's development as well. She shared that the organization has gone through periods of developmentally anticipated chaos. IPNB's understanding of growth and change in complex systems has supported Tina's capacity to recognize the naturalness of this process. This understanding has informed her capacity to ride the waves of disorganization and reorganization that has characterized the center's relational unfolding:

WE REALLY ARE

WE ARE DIFFERENTIATED AND FUNCTIONALLY LINKED

THAT'S WHO WE ARE

WE

you know

I think I'm really proud about

WE
 WE SORT OF
 WE GOT REALLY REALLY BIG
 WE THOUGHT ABOUT MAYBE HAVING EACH DIVISION
 WE ULTIMATELY ENDED UP MOVING
EVERYBODY WANTED TO BE TOGETHER

Tina reflected on the center's development over time and noted stated that "we have been saying we have been building the plane as we fly it. Now we feel like the plane is built and now we are writing the manuals and the flight patterns." Tina and the clinicians at the center are continually learning and growing, creating and innovating, and she could not be more proud.

Conclusion

In this chapter, I introduced the twelve participants with a focus on the main themes of their narrative. As stated, I began with thirteen, however one individual was not in agreement with my account of their experience and did not wish to converse to resolve the disconnect. Although this was a loss, it was also informative. This outcome invited me to reflect on the power of the methodology to reveal multiple layers of participant experience; some of which may not have been apparent to the narrator. Specifically, the voice-poems powerfully revealed participants' multi-voiced positioning that were nonconscious as they narrated their leadership experiences. In addition, each leader shared a different experience of integrating IPNB into their practice, as well as its impact on/for their development, and identity. Their positions as leaders varied considerably as well as the depth and degree of their knowledge and integration of IPNB in their leadership work. Their contrapuntal themes informed their growth as people as well as leadership scholars and practitioners where the dominant counterpoints propelled their

development both forward and inward. In fact, although IPNB knowledge acquisition was important, it became apparent that much of these leaders' and consultants' development occurred relationally, both within and between their relationships with others and the organizational/systems environment within which they worked.

In the upcoming chapter, I will interpret the findings with greater depth. This will draw upon the fourth listening step which takes the inquiry back to the research questions. Given the circular and iterative nature of the LG methodology, the interpretation will also require me to not only focus on the fourth listening, but to also return again and again to each listening step as well as the narrative as a whole. In addition, themes or patterns emerged across all thirteen interviews, which informed the organization of each of the above sections. Each participant's voice will be honored and differentiated within this discussion; in other words integrated into a coherent whole.

CHAPTER V: INTERPRETATION

In this chapter, I will present my interpretation of the stories of twelve IPNB-informed leaders and leader consultants. The process of interpreting the narratives was chiefly informed by the LG process, which is iterative in nature and required my constant reflexivity as the researcher. This was done through note-taking throughout each stage of the listening process, where I noted my reflections and embodied responses to each person's sharing. The LG does not presume truth, rather this methodology facilitates a multiple-layered process of uncovering the experiences of each person. This narrative inquiry was bounded by the time, space, and place that was co-created between me as researcher and each participant. Given I was inextricably woven into this process my voice will be made visible, particularly where I have determined its significance to the topic at hand, for example, responses I had that shifted the directionality of the inquiry, analysis, or interpretation.

The LG's four listening steps offered a different way of attuning to each participant's experience. Each of the steps reveals and builds the interpretation. As a result, the understanding of each listening must be linked to an understanding of each person's whole narrative. This required me to zoom in and out, from the specific listening step to the whole narrative. In addition, given the focus of this inquiry and research questions, discussed below, I also listened across all of the narratives, in order to capture themes or patterns of significance.

In review: The first three listenings, the participants' voices guided what I attended to during the interview and analysis phases. The first listening step provided the thematic foundations where I identified key themes, repeated topics, and plotlines. In the second step, I listened for and coded each person's relationally-situated voice. I allowed these voices to emerge, rather than pre-planning the coding system. Each relationally situated voice was

identified using different fonts. What emerged were the following: **I-voice** (bolded); we-voice (plain text); *self-in-relation* (italicized); distancing-you-voice (underlined); *connecting-you-voice* (italics and underlined); MWE-VOICE (capitalized); and double-voicedness (double underlined) where participants spoke using another person's story or an imagined voice. These voices were then re-constituted as voice-poems, which portray each person's relational-positioning. Finally, the third listening features participants' contrapuntal themes. These are recurrent, emergent counterpoints that influenced the participants' development across time, in space, and place. The notion of contrapuntal themes comes from music, where two melodies are played simultaneously, adding tension, movement, and richness to the piece as a whole (Gilligan & Eddy, 2017; L. M. Brown & Gilligan, 1992). For example, some leaders experienced externally imposed expectations in their field, which ran counter to their internal values. The counterpoint between the two (external expectation/internal values), impacted their leadership in specific ways that had relevance to their development.

In the fourth listening I returned to the participants' responses in the first three listening steps with the research questions in mind. The first research question, was: How, if at all, have healthcare leaders integrated IPNB in their leadership practices, and what impact has this integration had on their development and identity? The second research question was: What, if any, implications might their experiences hold for leadership in health and mental health organizations? Not all leaders reflected on the implications of IPNB in organizations. At times this appeared to be related to their own leadership positions, i.e., some were organizational leaders whereas others were leaders in different fields, or consultants/coaches to leaders. However, some leaders were positioned in organizations and spoke about IPNB's influence at this level.

This chapter focuses on the interpretation of the listening steps and will draw on the collective voices of the participants in order to answer the research questions. It has been broken down into sections that adhere to these questions. First, I have explored whether and how IPNB has influenced individual participants' practice and practices. When I focused zoomed out and listened to all of the participants as a whole, several key *noticing's* or topical areas emerged; these formed the headings under which this section is organized. The next section explores these leaders' and consultants' development. This section primarily draws upon the first and third listenings. The third broad section will discuss the participants' leadership identity. This will be presented as a continuum of integration, which emerged through the analysis and interpretation phases. I will utilize Siegel's (2017) conception of identity, is based upon the IPNB principle of integration, which I chose because this it had emerged as a significant principle among the leaders I spoke to. Finally, in the last section, I will use all three listenings to explore the organizational implications.

While each leader's story contributed to the whole, each section will highlight those participants who illuminated the specific topic in order to understand the research questions. In addition, after each section I will discussing the implications the findings have for the research questions.

Interpretation of Findings

The division between analysis and interpretation using the LG was not well-defined. Describing the process as a paradoxical hermeneutic circle Brown and colleagues (L. M. Brown et al., 1989) state that the listenings build the interpretation, which is constituted of each step as well as an understanding of the whole narrative: "Thus the interpretive procedure is a fundamentally circular one, because while the whole can only be understood in terms of the

parts, by the same token the parts can only acquire their proper meaning within the context of the whole” (L. M. Brown et al., 1989, p. 144). The interpretation that follows shares this sentiment, offering continuous movement whereby I have adjusted my “listening lens,” over and over, zooming in and out, from the specific to the whole. As the researcher I have been inextricably woven into this process. I have made choices in the direction my questions and analysis took, even as these were informed by what the participants brought to the interview. This was a profoundly and deeply relational process that followed throughout the interpretive stage. In addition, the literature review attuned my listening to the themes and principles IPNB scholars have identified as significant to leadership as well.

The LG analysis lent itself to an interpretation process that was multiple layered. I have presented these as *noticing’s* because this represents my active positioning in relationship to the energy and information being shared. Throughout the analysis phase I took a receptive stance allowing each person’s experience to reveal itself to me through the differently attuned listening steps. As the receiver of these leaders and consultant’s stories, I also listened to my emergent responses—my thoughts, feelings, sensations, and relational movement towards, neutral, or away from that which was shared. I hadn’t intended this; however it became clear early in the analysis phase that the words that were spoken called forth different responses, at varying intensities, within me. These needed to be accounted for given these internal stirrings became part of the research process the instant they presented.

I became increasingly aware of how much my own mind was drawn to specific themes and ways of speaking that were informed by my own integration of IPNB, which has become a part of me in ways I had not recognized prior to this experience. This process revealed how much IPNB has become a tacit way seeing and understanding my relationships with others as well as

my own interiority. Moreover, bringing consciousness to my own internality served as a valuable source of information. As I dove deeper into the analysis and interpretation phases, I became increasingly aware of how my own mind and embodied brain influenced, and was influenced, by the relationships I was having with what and how participants shared. For example, my embodied response to these leaders' voices was visceral and informative in a way I had not anticipated. In surprising ways their words lived within me, challenged me, and changed me. When I noticed a particularly strong response I was compelled to pause and to inquire more deeply. In particular, I noticed the power of the second listening step, to draw me into close contact with each person's expression of their relationally situated consciousness and identity. Where the first listening revealed the themes and plotlines of participants' IPNB leadership experience, the second cast light on their embodied and relationally situated subjectivity as they shared this experience. This listening step evoked movement that emerged both within me and in the relational in-between, that at times drew me towards the person's utterances and at other times, repelled me away. I also had less pronounced responses that could best be described as neutral.

Influence on Practice

It has been suggested that IPNB offers leaders a way of viewing their practice, and practices, that are grounded in relational neuroscience (Pearce-McCall, 2007, 2009; Siegel & Pearce-McCall, 2009). Scholar practitioners in the field of IPNB and leadership have described ways that the principles of IPNB can inform how leaders practice their work at micro, meso, and macro levels of organizations (Goleman & Siegel, 2016; Phipps, 2009; Siegel & Pearce-McCall, 2009). The following seeks to explore and understand how leaders and leadership consultants have integrated IPNB into their practices. It primarily draws upon the first

LG step, which illuminates the dominant themes regarding participants' experience of integration at the practice level. In addition to noticing when participants spoke directly about this principle, I also tracked when this principle was implied or woven so intimately with their way of practicing that it appeared to be seamless, non-conscious, and embodied. This included the more nuanced expressions of integration and/or the qualities of integration. While this was apparent in the first listening step, the voice poems from the second listening shed considerable light on these more embedded ways of being and behaving. I also attended to any contrapuntal themes that had relevance to integrative practice(s).

First Noticing: Integrative Action

The IPNB principle of *integration* was featured in most of the leaders' and leader consultants' stories as playing a significant role in their leading and leadership. This is a foundational principle in IPNB that establishes that wellness in complex systems is characterized by differentiation and linkage (Siegel, 2012b, 2020). When systems are integrated they are flexible, adaptive, coherent, energized, and stable (Siegel, 2012b). This is applicable to any human and non-human organic living system including, but not limited to, individuals, relationships, teams, organizations, and communities. When systems are integrated they have qualities of coherence: connected, open, harmonious, engaged, receptive, emergent, noetic (deep authentic knowing), compassionate, and empathic.

While all of the leaders and leader consultants I spoke with talked about integration there was variability in how it influenced their practices and to what extent. For most of the leaders, integration was foundational to their leadership practice including how they viewed situations, made decisions, and led from position or emergent opportunity/need. In addition to the leaders who talked about integration, there were three leadership consultants who did so, but in different

ways. These differences invited questions regarding the impact that role and focus may have on the way that this principle is understood and utilized. For example, did the consulting role influence how these individuals' viewed and/or utilized the principle of integration? This was beyond the scope of this particular inquiry however, it may have implications for future research.

The majority of the leaders I spoke to were highly integrative in their actions and practices. These leaders held integration at center when doing the active work of understanding situations and guided their decisions. At times they spoke about thinking and acting in ways that consciously fostered integration. However, integration also appeared more implicitly, suggesting that this principle was deeply woven into their way of being and doing to the point it had become nonconscious.

One participant, Daylen talked explicitly about integration as both a property and a process inherent to the well-being of living systems. He has been involved globally with mental health, education, leadership, and, more recently, climate and social justice. For Daylen, integration is a way of perceiving and understanding the relational fields within which his leadership emerged. He sees the relevance of integration across all of these fields:

Whether you are talking about making sense of your individual life or neuro-networks or group behavior or whatever, even the ecological challenges of what's happening on the planet now. You could see the excessive differentiation of humanity is the leading to the destruction of life on earth.

He shared that the presence of integration in any and all systems, large and small, can be understood by looking at the systems' capacity and level of flexibility, adaptability, coherence, energy and stability. As an example, Daylen reflected on using the principle of integration to address an uncomfortable dynamic that unfolded when he was invited to lead a diverse group of community leaders. As he began to engage with the group, he was aware of an increasing internal discomfort, which he allowed to serve as information that led him to recognize absence

of integration in the group. Daylen then utilized what he was sensing to determine how he was going to intervene. In the following quote, he reflected how his own internal shift in integration signaled him to attend to what was happening among the group attendees:

I think ultimately emotions are a field of a shift in integration. That's what I think emotion is ... what I was feeling in that group, is I was feeling the level of integration. In this case it was low, which if we had some kind of measuring device it was measuring chaos and rigidity rather than harmony. You know, the full FACES acronym that I use—flexible, adaptive, coherent, and energize stable—I'll bet you it's a field state that you could simply call coherence.

Daylen utilized his knowledge of integration to inform his response. First, Daylen invited each member of the group to introduce themselves by sharing their ethnic, cultural, and racial ancestry along with their current community of residence. This created relational space for the differences of the individuals to be honored; and then, Daylen invited linkage through the practice of listening and respect. Reflecting on the importance of integration in this situation, Daylen was clear that the cause of the disconnection in the group had been the premature expectation that these diverse community members were ready to connect (link) in shared action, prior to differentiation. He then cautioned that leaders and facilitators must attend to this or risk states of rigidity or chaos, which leads to incoherent states and processes.

Daylen's experience suggests that integrative leadership is multi-leveled and faceted. Daylen's integrative lens provided the means through which he reflected on his internal processes as well as that of the mind, brain, and relationships of individuals and groups with whom he was engaged. This suggests that leaders benefit from attuning to their internal sensations and emotions, which can signal states of integration and disintegration. Given leaders are relationally embedded, this internal attunement may also provide information about the level of integration among others including individuals, groups, organizations, and larger systems. In other words, the leader's mind and embodied brain can be an integrative resource through which

relational knowledge is accessible. Further, Daylen utilized both his embodied and relational knowledge, as well as his conceptual IPNB-informed knowledge to guide his actions, which were intentionally integrative. Given integration is at the heart of wellness in living systems, this needs to be foundational to leading practices. If there is too much linkage before the elements in a system differentiate, rigidity occurs; on the other hand, too much differentiation and the system becomes chaotic (Siegel, 2012b, 2020).

The Triangle of Well-Being

The Triangle of Well-Being is a metaphor Siegel (2010a, 2012b, 2017) created to represent the primes of human experience. The premise is that all three dimensions are inextricably linked as primes of human experiences. Given this, it is not surprising that the three are implicated in all leadership activities. However, when integration is layered into this understanding, it suggests that leaders can use this metaphor consciously in order to promote wellness within the systems they inhabit and lead. Mind refers to emergent process that regulates energy and information in the embodied brain and relationships; brain refers to the neural mechanisms of energy and information flow; and relationships the sharing of energy and information (Siegel, 2012b). Integration involves attending to mind, brain and relationships across the domains of human experience. These domains are considered to be, but not limited to: consciousness; bilateral/horizontal integration (between the two brain hemispheres; vertical (within the brain and between brain and body); interpersonal (relationships); states of being; memory; temporal (time); narrative; and identity (formerly transpiration) (Siegel, 2012b, 2017).

The literature suggests that leaders have a responsibility to harness the capacity to monitor and modify energy and information flow within their own minds, embodied brain, and relationships as well as that of the organization (Pearce-McCall, 2008). Many of the participants

I spoke with consciously acknowledged the primes in their self-reflective practice; whereas for others the triangle was more implicit and embedded in their narrative. Kent did both. For example, he used knowledge of the mind, brain, and relationships to guide his interventions with students and also explicitly taught his colleagues, school principals, and superintendents about the neurobiological underpinnings of student's behaviour along with the importance of relationally-attuned interventions. In addition, his knowledge about the Triangle guided his assessment of his own internal state, his actions, and how he connected with others.

But then when we get to IPNB then that kind of learning or changing yourself, based on the information I have so that when you realize okay, this is you know I have an implicit memory about something or ... And you to kinda try to help recognize things with myself, and then that affect how I am. And so I think that when it really shows is in some kind of major crisis where you're really pushed.

Leadership and IPNB scholars have suggested that leaders need to harness their awareness, a property of mind, in order to promote integration within themselves and the organizations they lead (Goleman & Siegel, 2016; Kryder, 2009).

Daylen illustrated this when he accessed different streams of knowing that were embedded in his mind, body, and the relationships during the group process he described above. This story reflected Daylen's integrative capacity within the Domain of Consciousness. This domain requires, "access to information, and the phenomenal or subjective personal quality of an experience" (Siegel, 2012b, pp. AI-18). Taking a deeper look at this story, the following voice poem reveals Daylen's reflexive lens, which required his capacity to focus his relationally embedded mind both internally and externally. In doing so, Daylen was able to sense the presence of disintegration among the group and respond with presence and without judgement. These are considered to qualities of contingent communication, which can facilitate interpersonally integrative processes (Siegel, 2012b, 2020).

when I was using

way of shaping my

WE HAD A VERY DIVERSE CITY

WE HAD

I was there

you could feel it in the room

I was getting a sense

you can get a kind of feel

I didn't know why

I was feeling

I asked the facilitator

if I could

you know

I guess

I said

I want

my keynote

I said to the group

I am giving

I said

we call that integration

I was concerned

WE WERE IN RIGHT THERE

ASKING US ALL TO LINK

BEFORE WE DIFFERENTIATED

WE WERE STARTING TO EXPERIENCE

they were heard so I said

WHAT WE NEED TO DO

DIFFERENTIATE BEFORE WE LINK

WE HAVE BEEN ASKED

BY OUR FACILITATORS

I said

LET'S GO AROUND AND DIFFERENTIATE

I said

I'll start

giving you an example

how you might do it

I said here's

my individual story

where I am

you can see the color of my skin

I'm of Jewish background

you know

my ancestors came to this continent

My great grandfather was murdered

I come here with a message

from my grandmother

THEN WE WENT AROUND

ONCE WE WENT AROUND

you could do this

WE LIVE IN THE SAME SMALL TOWN

you can take a deep breath

AND SAY LET'S GET TO WORK

This voice-poem communicates Daylen's back and forth movement in consciousness. Initially, he communicate with a clearly differentiated I-position as indicated by his **I-voice** (bolded).

Initially, this is both a reflexive voice as well as descriptive (i.e., "**when I was using;**" "**way of shaping my;**" "**I was there;**" "**my individual story**"). He is aware of his own internal processes.

His *connecting-you-voice* (italics and underlined) is reflexive. Rather than distancing himself

from his experience, this voice connects his felt sense with the relational field ("*you could feel it in the room*"). Following this, Daylen's **I-voice** is peppered through the poem, with much of his

positioning shifting between different relational voices. When he began the active work of

relational integration among the group members, Daylen started with his own story and, by doing so, he modelled the differentiation he had determined was necessary to proceed. His **I-voice**

(bolded) is differentiated. His voice shifts to a MWE-VOICE (capitals) as the group process of

differentiation and linkage through respectful listening begins. Daylen's MWE-VOICE becomes

more dominant, signifying a shift within him and in the group to a more integrated state, where

each person's subjective experience was differentiated and honored (linked) through the act of

speaking and being heard.

Jemma also used the Triangle in ways that assisted her own reflexive process. She shared how she consciously practiced curiosity to uncover the neurobiological underpinnings of her varied streams of knowing (emotional, sensing, cognitive, relational). Other participants practiced reflexivity in purposeful reflection with trusted colleagues. Theodore shared how his development was fostered through the support of two of his physician colleagues. He shared that he could not have done the internal work on his own, but together “we were kind of unstoppable.” Theodore stated that attending to the neurobiology and relationality of the leader is essential to development. In order to do so, he stated that leaders need to bring awareness, an aspect of mind, into the relational realm:

So it’s process awareness. It’s aware of, are we sitting like this? Or are we sitting more honest into each other? Are we sending each other humiliating formal letters? Or are we ... are we working in a collaborative way to help each other be our best? So it’s that kind of awareness of the process awareness and values that were enacting in each moment, in each other. And then we can be more intentional about that instead of doing things with this trance that we have inherited that never even thought about.

Offering another example of shared integrative awareness, Camille talked about how she and her leader colleagues attended to their collective mind, brain, and relationships as they built their community-based IPNB organization. As a group, they consciously attended to their individual and shared neurobiological processes that had implications for their leadership practice. This also extended to their relationships with the community at large. For example, when the organization began to expand their community presence, they invited these organizations into dialogue because they recognized the potential for a threat response if their efforts were viewed competitively.

Mind. Several of the participants I spoke with practiced mindsight and mindfulness as an integral practice that resourced them in their leadership. Jemma had a personal meditation practice, which she found essential to her development. In addition, she taught physicians about

the importance of meditation for their own well-being. As well, Jemma taught physicians and medical students mindsight practices such as the Wheel of Awareness Practice, which harnesses conscious awareness represented by the metaphoric hub of the wheel in the service of integration. Specifically, this practice utilizes focused attention (spokes of the wheel) in an intentional pattern across four dimensions of experience, which lie on the rim of the wheel: the five senses, interoceptive awareness, mental and emotional processes, and the relational realm (Siegel, 2018).

Camille also found meditation assisted her with self-regulation and development as a leader. She had a regular formal practice that was key in her ability to lead particularly during situations that activated less integrative states. For example, she became aware of that she had a pattern of taking too many things on, particularly when the organization she co-led grappled with expected chaos during phases of growth. Through mindfulness, Camille was able to develop the capacity to recognize this pattern, which she then modified through behavioral change. Tina's capacity for mindsight was woven throughout her narrative in such a way that it had become an integral way of seeing and experiencing her leadership practice. For example, Tina continually attended to fostering differentiation among team members roles, skills, and expertise, and the functional linkages among these different individuals and teams. The resulting flexibility was fundamental to clinician's responsiveness to emergent client and community needs.

Luuk also exemplified this when he described his emergent awareness of the different streams of knowing he experienced, moment by moment:

if I think about how this works, so I had one um, one ... let's say stream in my life, which was about the physical energy. So sensing what's going on without interpreting ... sensing what's going on—sensing what's going on in a relation when you practice, and that's—so Tai chi, let's say it makes your mind, your mind-body or body-mind so sensitive that when there is somebody here next to me with a headache, I sense the headache. Or when there is anger, I sense the him or her being angry. Or sad. Or this is

what Tai chi does, because it's the sensitivity in your body but also the sensitivity for what's happening around you.

Through repeated practice of bringing his awareness to his sensing stream of knowing, Luuk experienced a natural outcome of having greater attunement in his relationships with others. The capacity for attuned communication is one of the nine middle pre-frontal cortical outcomes that can emerge through mindfulness and mindsight practices that are neurologically integrative (Siegel, 2012b).

Three of the leaders I spoke to, discussed how mindsight and mindfulness practices were also relationally and culturally transformative. Jemma partnered with her coaching partner to consciously change the culture of surgical teams to be more integrative. One of the active steps they took was to teach and support surgeons to be mindful of their practices and the impact these had on the wellbeing of their teams. I was inspired when I heard Jemma's story about the success she had in bringing about a positive shift in these surgeons' consciousness and the culture of surgical practices, which were often alienating and punitive.

Daylen also reflected on the absence of valuing mindsight in medicine: "the perceptual awareness of feelings and memories and meanings that seems to be absent in the world of medicine. You could be a factual knowledge expert but not sense the inner world with your mindsight capacity." His leadership emerged through his commitment to transform the alienating practices in medicine by honoring people's minds (i.e., subjectivity, awareness) that are embodied (i.e., brain, extended nervous system) and relational (i.e., including that between the doctor and patient).

Theodore also blazed new territory in the health care sector, through his commitment to bringing relational awareness to healthcare practice and leadership. He consulted with physician organizations and focused on teaching a reflective skill that he calls "thinking in action." This

involved mindful attention to showing up as a friend not foe, through minding the neurobiology of the potential for activating the threat response (i.e., amygdala and other neural mechanisms). He asserted that leaders need to consciously bring in-the-moment mindfulness as well as reflection to their relationships “with a little bit more care and depth”.

Brain. Several of the leaders and consultants I spoke to discussed how the neuroscience of IPNB was often the entry point for engagement with IPNB. It provides a scientific basis to considering relationships and a way to understand the regulatory benefits and creative possibilities of the mind. Since the early days of his career as a family physician, Theodore was interested in the patient-clinician relationship, especially the importance of trust. As his career evolved to broader audiences, his commitment to bringing relationally-centered perspectives to medicine remained and he found that neuroscience and the neurobiology of relationships was key in engaging with the medical community. Theodore shared how the neuroscience of attachment needs and behaviors helped to understand the doctor patient relationship. In the following brief voice poem he summarizes this beautifully:

WE'RE QUITE LITERALLY
 ACTIVATING EACH OTHER'S BRAINS
 THE WAY WE RELATE
 TO EACH OTHER
 WE CAN BE INTENTIONAL

Speaking with an integrated MWE-VOICE (capitalized), Theodore identified each of the primes in this poem: mind (“WE CAN BE INTENTIONAL”), brain (“ACTIVATING EACH OTHER’S BRAINS”), and relationships (“THE WAY WE RELATE,” “TO EACH OTHER”).

In addition, while practicing relationally-centered care with his patients, Theodore recognized that organizational environments also suffered when relationships were neglected. In order to address this, he attended to how individuals in organizations activate each other's brains, moment by moment. When he taught medical students, he discussed the relationally embedded brain and nervous system and taught them about the neurobiological circuitry that underlies relational processes. Theodore found IPNB's neuroscience brought "credibility in medical audiences", which facilitated physicians' acceptance of the framework. Theodore said, "people tend to respect science, they tend to respect medical knowledge."

His reflections inspired me to consider that no two leadership moments are the same and that leaders can benefit from attuning to the needs and language of their intended leadership efforts. For example, all the leaders who worked in medicine talked about how important IPNB's relational neuroscience was in engaging medically trained individuals, teams, and organizations. For example, Jemma also utilized IPNB's neuroscience in reaching physicians through the provision of a science-based understanding of the human mind and relationships. It helped her to bridge the "soft science" of psychology with the "hard science" of the medical field.

[It] was really giving me the basic science or the foundational pieces to support or not support some of the other models that I had learned about as a psychotherapist and educator. So it was just, for me, sort of almost an epiphany about like, oh wow, so I can talk this language.

Jemma taught medical students about the Triangle of Well-Being and discussed how the integration across mind, embodied brain, and relationships was essential to their professional development. She also taught the three primes at faculty meetings where her student services clinic was located. Jemma shared how the Triangle metaphor guided attention to find linkages across their differences, which facilitated consideration of alternative or different perspectives. In

addition, understanding their own relationally embedded neurobiological responses to the sometimes punitive culture of medicine, was helpful for students and physicians:

With physicians ... the other piece that was really important about it was that I think that the more we talked about our biological and neurological makeup, you know, the bottom up and the top down processes, the less it embodied shame ... It gave me a language.

This approach fostered connection and understanding, rather than the competitiveness and punishment that was prevalent in medicine.

Judy also shared a story about a consulting meeting she had with two organizational leaders of a non-profit organization. The meeting was tense and took a turn towards disconnection, which began to alienate Judy from the leaders. Judy shared the following:

And so we were on the phone and I just could not get through. Nothing I was saying was working. And then I could hear this pause and then the one young woman really, like, she must've been having an amygdala hijack, you know, immediately she just ... I don't really know what she said, it was so obvious she was angry. Just really angry ... I remember literally on the phone saying, you know what, let's just have ... let's just have kind of a timeout. And I've never said that in a consultant position.

Rather than continuing to push, Judy pulled back to reflect and recalled IPNB's Triangle and realized their conversation had prompted movement away from a receptive state into a threat response. She offered her observations to the others and they all were able to re-engage from a more integrative state. Judy reflected on the nuanced qualities of their communication, which occurred on the phone: "I still firmly believe you can still have a lot of your neurons acting and reacting even if you don't have eye to eye [contact] because you can sense a lot of things in the tone and ... and what's not said." She also shared that this knowledge assisted her when her leadership clients become dysregulated in group consulting situations. For example, Judy utilized her knowledge about brain and nervous system activation to intervene when an individual became so dysregulated he left a consultation group she was facilitating and paced around the building. Judy recognized that he needed to bring his nervous system back into regulation.

Following this she also provided space within the group to debrief and move forward to address the underlying dynamic that had triggered him. It was after this that the group was able to return to the task at hand.

Offering a different angle, Penny shared how understanding the neurobiology of relationships was foundational to her acceptance of a more relationally-considered practice of leadership:

I was not willing to trust that until I had enough science backing it up to say this isn't hooey. This isn't magic. This is that there's something happening between two human beings, that we don't have a total understanding of yet, but we are beginning to understand pieces of it. And that is, grounded-deeply grounded in science.

Penny's trust in science was the bridge that allowed her to open up to the significance of her own mind as well as supporting her capacity to connect deeply with others. Similarly, Elliot found that leaders of organizations were interested in understanding the mechanisms of a healthy functioning brain and what happens when things go amiss. He shared that teaching leaders about the neurobiology of memory and attachment facilitated their engagement in the process of change. For example, Elliot often focused on how adaptive neurobiological mechanisms impact the mind and workplace relationships. He taught leaders how a dysregulated nervous system impacts their capacity to access knowledge and interferes with the ability to think clearly.

Embodied Brain. IPNB's perspective is that neurobiological mechanisms extend beyond the enskulled brain to the body proper (Cozolino, 2014b; Montgomery, 2013; Schore, 1994; Siegel, 2012b). Energy and information travel vertically through the spinal column to the brain in a bi-directional manner (Siegel, 2010b, 2012b). This means that the neural mechanisms of mind and relationships are embodied. This was relevant to many of the leaders and consultants I spoke to who sensed and accessed their whole body in ways that informed their practices.

For example, Daylen's leadership emerged time and again as an embodied imperative to act. When he was unable to tolerate the medical socialization process that required him to objectify the people he was intended to care about, his body broke down in despair. He responded and risked his chosen career by leaving medicine, only to return again with a renewed vision and commitment to bring subjectivity and relationships central to his work. In another story he shared, he was compelled to speak up during a conference presentation where a preeminent scholar in children's development and personality theory was disparaging the field of attachment:

So I found my body, not even with my direction but my body itself, walking—I was in the back, the 700 person room. I found myself walking down the central isle towards the stage. Now, just so you know, I was the keynote presenter that morning. So [chuckles] maybe that gave me a little bit of a courage. So I come up to the stage and the facilitator goes, 'Who—what's going on? What's going on?' I said, 'I'm getting up on that stage.'

Daylen arrived on stage, and challenged the scholar's offensive comments with research findings that affirmed that children's relationships with their caregivers shape the neural firing patterns in their brains and nervous systems, which implicate their attachment patterns and future relationship expectations. In this situation, Daylen's body implored him to act; his mind catching up to the movement his body initiated. Reflecting on this during the interview, Daylen stated "it's like interpersonal neurobiology tries to be really broad in embracing what the word truth means ... but courageous in filling the responsibility."

Also exemplifying courage and responsibility, Kent was often called upon to intervene in challenging situations by his colleagues and school administration. Rather than attempting to control students' behavior, an approach that dominated the school system, Kent engaged in ways that acknowledged students' subjectivity and responded with their nervous systems in mind. He attributed his success to the science of IPNB for bringing neurobiology to understanding

subjective experience. He shared that “when you have the IPNB perspective, if a student’s laughing or being uncooperative then you don’t think about basically shut-up kid, you know, you don’t think about that sort of control, you are like, what’s going on here?” Kent was a curious knower, who had an openness to discover the subjective experience of the students before he acted:

my lead

if you can imagine

you don’t want to go

I was looking around

I started walking around

time to get yourself focused

they were just talking

I let it go

you know

trying to get their attention.

I said, this is fantastic

EVERYBODY HAS GOT THIS VAGUS NERVE RIGHT?

WE ARE WIRED TO CONNECT

good thing you guys are talking

aren’t watching me

you are talking with each other

staff has heard me enough

they weren’t shocked

I explained a bit about the vagus nerve

you know

OUR MINDFUL MOMENT

you really care for

you know

as much as you can

you really care

you can

do it to yourself

SO LET'S JUST DO THAT.

I had

you know

WE KIND OF ENDED

they headed off to class

In this poem, Kent is conscious of his own leadership responsibility as well as the student's experience. His **I-voice** (bolded) is descriptive, relational, and active; he leads, looks, and walks in his relationships with the students in mind. He responded to the student's energy and, rather than demanding and punishing them for talking, instead his *self-in-relation-voice* (italicized) engages the students where they are at with their minds, embodied brains, and relationships. Kent utilized his knowledge of the vagus nerve to first teach and then guide the students in a meditation that matched their social energy. In doing so, Kent's positioning shifted to a

MWE-VOICE (capitalized) as he joined with the students via his acknowledgment of their shared biology, and then through the activity of mindfulness. In addition to the students, he is consciously aware of the teachers who also look to him to lead and take action.

Relationships. As discussed, relationship is one of the three primes of human existence and reality (Siegel, 2020). According to IPNB leadership scholars, Interpersonal Integration, which is characterized by the flow of differentiation and linkage within and between individuals and groups, needs to be held central to leadership practice (Siegel & Pearce-McCall, 2009). Disintegrated relationships that are chaotic have too much differentiation and not enough linkages. On the other hand, relational rigidity occurs where linkages are dominant or expected and there isn't enough space or tolerance for differences. Interpersonal integration requires presence, attunement, support, and relational safety (Badenoch, 2008; Siegel, 2020).

Whereas the brain was an entry point into the Triangle for some leaders and consultants, for others, the relational prime was their entry point. Theodore was one. His commitment to bringing relational practice to healthcare leaders drew him to IPNB. Theodore not only taught doctors and administrators about relationally centered care but he also attended to his own relationships with colleagues. As an example, he shared a story about a situation that unfolded during an organizational consulting job. Theodore noticed a growing resistance among the group he was working with. He recognized the necessity for alignment and trust in order for him to have impact with this group. In order to do this, he consciously chose to teach the group of physicians about the neurobiology of attachment relationships. Specifically, he talked to them about how “the regulation of opioid levels in the brain [are implicated] whether we are feeling connected or feeling rejected and ostracized.” This provided a foundation for engagement, which

eventually turned the interaction around. Theodore recognized this group was perceiving him as a threat and worked to re-establish trust and relational engagement.

Theodore utilized his mind and knowledge about the brain to illuminate and guide his relationships with colleagues. His narrative was woven with stories of how he brought this relational consciousness to his own collegial relationships. He was attentive to the unfolding dynamics in the relational space in-between individuals and groups. Theodore's intention was to identify and practice the means to facilitate connection across differences, which is a hallmark of interpersonal integration. Theodore called this "process awareness" and shared that this in-the-moment relational awareness needs to be a constant practice for leaders: "So we aren't aware of just the content of our communication, but we are also paying attention to the process of how we are communicating. What guesses do I have about what is going on with you?"

In addition, he suggested that leaders must simultaneously be aware of their own internality including their own neurobiological responses. For example, he spoke about how his own "amygdala hijack" and emotions have negatively influenced his capacity for attuned responsiveness. He stated that "the work" of leadership is to recognize and attend to what is hindering relational integration. It has been suggested that leaders need to attend to the personal and relational impairments to integration, through awareness (i.e., the practice of reflection, mindfulness or mindsight); then, they need to engage neurophysiological processes that activate neurophysiological processes that foster the integrated processes involved in creativity, innovation, and motivation (Hougaard & Carter, 2018; Pearce-McCall, 2008; Siegel & Pearce-McCall, 2009). Theodore's neurobiologically attuned lens requires the vertically (top-down and bottom-up processes within the brain and between brain and body) integrative capacity

that is considered necessary for leaders so that they can access valuable information for more cortically involved processes like decision making, discerning needs, etc. (Siegel, 2010a).

As an example, Theodore shared a story about the importance of attending to the relational in-between during a challenging and potentially conflictual experience. He had become the founding director of a physician's organization that was doing a managed care contract. This new organization was not well received among his physician colleagues who saw it as a threat. Theodore's formerly friendly colleagues were "feeling like enemies." They had a belief that Theodore's organization was going to take their contracts away from them. In response, he was committed to find a way to address their perceptions and fears using the relationship and communication principles he believed in:

And I was, no we can be an ally, we'll help you with it. We are a grassroots level of organization, we are trying to organize the whole city. I'll just help get all the docs in this one hospital together. It will be in support of your part of the organizations. They were—very alarmed by that. We had never had a conversation directly with each other.

He approached his colleagues and asked them about the concerns they had, listened carefully, then responded. Theodore was able to foster and support a more collegial relationship where he and his organization were no longer seen as a threat. He shared that he needed to be continuously able to "...actively reflect and be engaged in the other person. But I have to be reflecting all the time as part of my work." Theodore also described a story where he used his knowledge of the relational brain to understand the dynamics that had unfolded in a consulting situation. This informed how he responded: "I knew that ... we had to be aligned, and ... we had to trust each other ... they weren't trusting me and I probably wasn't trusting them. And whatever hinders relationship that's the work ... Let's have a conversation about that." He recognized that he had to shift his efforts to access neurobiological circuits within the brain and body (vertical

integration) and within the brain (vertical and bilateral) involved in emotion regulation, trust, and safety before he and the organization's members could move forward.

Relationships were also of prime importance to a small group of therapists who joined together around their passion to bring IPNB to their home community. In order to fulfill their vision they created a community-based IPNB organization. Camille was one of the leaders in this group. She shared how, from the group's inception, the principle of relational integration was woven throughout its development. It guided the process of their meetings, their decision making processes, and way the work was dispersed. Camille shared what the energy of the group felt like when these women first came together: "There was just a discussion on how can we all collaborate, and so it was pretty exciting. It was just kind of had a life of its own." The essential commitment of this group was to honor each person's different strengths and skills, then link through their shared vision and activities: "Personally for people and also from their needs, the work that they did, and you see the excitement in people, the neurobiology part of it. You know, just people light up. Then ... it's a good energy." Given the board's commitment to integration across mind, brain, and relationships, they honored the different strengths and skills of each member. This meant that each member of the group was able to contribute to discussions and decisions.

Implications

Integration was foundational to the practices of IPNB-informed leaders and consultants I spoke to. This informed how they approached their relationships within themselves between different elements of their internality as well as how they viewed the groups and organizations they led. Many utilized their whole being, for example attuning to their sensations and emotions as well as their cognitive capacity, as a resource in detecting disintegration and integration.

Decisions and actions either emerged from the knowledge gleaned from these different streams of knowing, and intentionally directed towards fostering wellness.

IPNB leadership literature suggests that leaders can use the triangle as a guide to inquire into each of the primes of human experience (Goleman & Siegel, 2016). This can be utilized to explore the presence and absence of integration (differentiation and linkage) at individual, team, and organizations levels. The leaders I spoke to exemplified this as well as revealed the practices through which they did so. These leaders utilized the Triangle metaphor to inform their understanding and promotion of integration within themselves and their leadership practices. The primary way these leaders' did so was by bringing mind, brain, and relationships into focus in ways that informed their integrative actions. This is in keeping with the literature that suggests leaders need to hold the three primes in awareness at all times (Goleman & Siegel, 2016). There was variability in where they focused this awareness; for example, their awareness spanned internal practices by employing reflexivity, curiosity, sensing, and listening, through to external acts that were invitational and engaging.

This integrative consciousness brings the fullness of lived experience into focus. The Triangle of Integration is a visual metaphor that illuminates internal and external dynamics within organizations that guides leaders in learning how to lead rather than what to do (Goleman & Siegel, 2016). Thus, rather than aiming interventions at only one or two primes, as often seen with brain-based or mindfulness approaches to leadership, IPNB asserts that all three must be considered. As indicated in the above stories, these leaders entered the triangle from any one of the primes; however, the other two are ever present and actionable at individual, group, and organizational levels. Although mentioned less frequently the Triangle of Well-Being metaphor along with others such as the Wheel of Awareness, were also taught directly so that others could

practice these integrative practices. In addition, some of the highly integrated leaders held the three primes tacitly and did not have to consciously choose to engage with the Triangle in mind. Rather, their actions, at times, were chosen for them as they heeded an embodied and relational knowing. This points to a distinct feature that an IPNB approach offers to leadership practice. While there can be IPNB leadership practices, there is no definitive way of practicing IPNB. IPNB informs leaders' ways of being and introduces ways to consciously perceive human experience from a relational neuroscience understanding. It is from this understanding that relationally and neurobiologically informed integrative action occurs.

Second Noticing: IPNB-Informed Views on Change

Change is central to leadership practice. How leaders view change impacts their approach. The leaders and consultants I spoke with led change at the individual level (including within themselves), teams, organizations, communities, and larger systems. I spoke to leaders who were thought leaders at the global level through to leaders who acted from the front lines of providing care and support. Four categories emerged reflecting how these individuals viewed change: Neuroplastic change; relational engagement; complex systems change processes; and power.

Neuroplasticity

The brain and extended nervous system are capable of neuroplastic change that can occur in response to environmental and relational experience as well as intentional practices and activities (Cozolino, 2010). The leaders I spoke to were aware of and capitalized on opportunities to cultivate integrative neuroplastic change. Tina shared that she utilizes mindsight practices as well as intentional experiences and opportunities directly in the service of creating neuroplastic change:

Neuroplasticity in the sciences was really emerging too. We could create particularly ... we could create particular experiences that harness how the brain to attend to things and even the nervous system ... to create experiences that harness how the brain changes.

This is in keeping with the IPNB leadership literature that suggests leaders need to be aware of their own minds (mindscape) as well as that of others in order to optimize differentiation and linkages necessary for their health and integrative capacity (Goleman & Siegel, 2016). Tina was attentive to this within her organization as well. Not only did she provide opportunities for her staff in stretching beyond their current capacities and functioning, but this was also the principle for treating the center's clients. In order to do this, she needed to be aware of the mindsphere, which references the bigger organizational social field as well as the larger relational fields within which her organization is embedded (i.e., culture, geography, history) (Goleman & Siegel, 2016).

Neurobiology of Memory. Memory integration plays a significant role in the capacity to learn, develop, and to anticipate the future. Past experiences shape neural firing in the brain and extended nervous system (Siegel, 2012b). Implicit memory is significant because it impacts perception and emotion without awareness that the present moment is being impacted by a past experience (Cozolino, 2010, 2014b; Siegel, 2010a, 2020). Events that are stressful or charged with emotion are particularly implicated given the hormones that are excreted by the hypothalamus, adrenals, and the pituitary glands, result in hippocampal dampening, which impairs memory integration (Siegel, 2012b). The amygdalae also work in tandem with the hippocampi adding meaning and value to these events. This results in memories being stored in implicit form, which can then be activated during future stressful experiences (Badenoch, 2008). Therefore, stressful situations in the present can trigger both implicit and explicit memories; however, with implicit memory it isn't recognized as such. Rather, these memories color the

present experience through sensation, emotion, perception, and behavioral patterns (Siegel, 2012b, p. AI-38).

Many of the participants mentioned memory and its role in their leading practices and leadership development. Kent worked consciously with the neurobiology of memory. Kent recognized that students' misbehaviors were often indicative of past trauma or previous negative experiences. Looking at student's behavior from this perspective necessitated a different approach than behaviorally focused interventions that were typical in the school system. Instead, Kent practiced with memory in mind and took the lead in teaching his colleagues and superiors about the impact of implicit and explicit memory on behavior and encouraged his colleagues to shift their approach. For example, Kent shared a story about educating the school's principle and a mother of a student whose behavior had come under scrutiny:

So I thought I'd bring out to help her understand what likely is the problem. We talked about implicit and explicit memory and those are terms I don't think the principal has heard of before. And cause people talk about trauma and triggers and they kind of go through that. And ... um, she was saying the principal is going toward the direction of oh, he's overreacting. And so that for me because of the IPNB training ... I explained, explicit memory, how you remember what happened this morning, you know, if you saw into that explicit. Implicit you don't really realize you're remembering it, and kind of walked through that whole thing.

Kent stated that he used moments like this to teach the principal, teachers, and parents about the significance of implicit memory and the influence this has on neural activation and the resulting behaviors. He has found this approach to be very helpful and that it "took the blame out of the situation because we don't know ... isn't really anybody to blame or look for to point a finger."

Kent's approach is consistent with literature that suggests what may be judged as resistance or an overreaction may be related to memory (Cozolino, 2014a; Olson, 2014). This has implications for the focus of integration promoting interventions; for example, engaging with underlying neurobiological mechanisms along the accompanying psychological, emotional, and relational

meanings of internal working models, rather than simply focusing on behavior. The literature suggests that leaders have a responsibility to consider how they can support people through stressful situations given these can trigger implicit and explicit memories, which will valence people's minds and embodied brains in ways that impact their present experience (Goleman & Siegel, 2016).

It has also been suggested that leaders consider impact of memory for themselves as well as those they lead (Hougaard & Carter, 2018; Siegel & Pearce-McCall, 2009). Memory plays a significant role in determining the states of being that are activated, therefore leaders need to become aware of their own non-integrated implicit activation and learn skills to integrate these into explicit form (Goleman & Siegel, 2016; Siegel, 2012b). In the service of this, Elliot guided leaders to explore how their family of origin experiences impacted their relationships with employees. He described this as “shift[ing] my weight from foot to foot, as far as in and out, and also between present and past.” For Elliot, memory integration is core to leadership development and integrated functioning. Leaders need to be aware that high stress workplace situations, such as times of transition and change, can cause high stress and may trigger implicit memories that impact experiences in the present (Goleman & Siegel, 2016; Hougaard & Carter, 2018).

Relational Engagement

Most of the leaders I spoke to reflected on relationships as foundational in fostering change. This is consistent with IPNB leadership literature that suggest leaders can, through attuned interactions effect deep change the workplace (Goleman & Siegel, 2016). Returning to Theodore who used his knowledge of the brain to understand the relational dynamics that unfolded in a consulting situation. This informed how he responded. Jemma also consciously fostered relational safety when she created a safe relational space for medical students and

faculty to share their stories of challenge in the medical system. This initiative occurred as a response to an expressed need by a medical student:

We did a lot of things that, I think were consistent with IPNB but branched off into others, like um, I had a medical student come in and plop down and just say I'm sick of—I'm sick of—I'm sick of hearing about everybody does things so great and wonderful and what a wonderful position I am and how many things I have done right. I wish one of my faculty members would tell me how they failed and how they recovered so we created something called Bounce and invited faculty members to come in and tell their stories of failure.

Jemma's receptiveness and response was a radical shift and challenged a culture that demanded perfection and punished errors. The opportunity proved to be of great value and was so well received that the faculty at the medical school started to compete with each other so they would be chosen to tell their stories of mistakes and difficulties. She described how the room was so full that there was only room to stand.

Geoffrey was another leader who was committed to bringing relationally based care to children and families. At the time of our conversation, Geoffrey was struggling to understand how he could effect this change in a system that was not open or willing to consider new ways of responding. His preferred way of leading was through relational engagement, however he was frustrated and disillusioned by the rejection he received.

In spite of the fact that you know, there's research evidence and so on and in spite of the fact that these are the types of things that, you know, could be really transformational in terms of kid's lives. They just said, no, we're not going to do that. And so ... there we had it. It was a lack of vision for who people can be to one another and in fact, who people are to one another as social, emotionally connected beings who are authentic and grounded and kind. You know, that's the kind of community that for me is really important to try to influence and to foster.

Geoffrey suggested that one critical relational element was missing from his efforts: the invitation from the other parties. He suggested that that perhaps he had been trying to effect change in a system that had not asked him to do so. He shared the importance that he needed to,

stay rooted and ground in what's possible and continue to participate in and create spaces where this kind of relationality is uh, experienced. And ... you know, so some of me is kind of pulled back and said, that's what I'm gonna do and kind of focus on, where I may interface with these broader systems.

Although he had not found resolution to the question of how to impact a system that was not open to change, he noticed the many places he had facilitated valuable change through being a “catalyst” for others to develop their own relational leadership capacities and for relationally considered programs and services to be created outside of the mainstream system.

The counterpoint of relational and non-relational ontology and epistemology appeared in many of participants' narratives who worked within healthcare and other human service areas. With the exception of Judy, who struggled with this counterpoint internally, these leaders and consultants struggled with the non-relationality of individuals, organizations and systems and were committed to introducing more relationally sensitive practices. Daylen was one of these. As a leader, he encountered resistance from his efforts from individuals through to systems. Like Geoffrey, Daylen found interest and support outside of the medical system for a new way of conceptualizing the way healthcare is provided. Returning to his story of when he directly challenged a renowned theorist in personality theory who had made disparaging remarks about the field of attachment at a conference. Fueled by the scientific inaccuracy of what this individual was saying, as well as his dismissal and disparagement of some of his valued colleagues, Daylen was compelled to act. When he spoke out and challenged this individual, Daylen was able to present research findings, which was key in his view:

So you gotta know your science ... Right? Cause if you're going to stand up to these maniacs ... That say these maniacal things within the politics or ecological issues or—you gotta—you gotta know your science. Now that takes a lot of, you know—I felt terrible. I thought he was going to have a heart attack. The dude is like 80. I sat down 'cause I thought it was a little too much for him, and then he goes on and on again about stupid attachment research. So I got back to the front stage.

As we talked, Daylen reflected that given he was a keynote at the conference, he likely had some credibility with the audience; without this he was uncertain if his efforts would have been effective. Nonetheless, Daylen asserted the importance of knowing the science upon which IPNB is based, in order to spark change and challenge non-relational paradigms and practices that prevail.

Theodore was another leader and consultant who was committed to bringing relationally centered care to medicine. In fact, his career has been devoted entirely to this and he works to educate and coach others in practices that are interpersonally attuned and integrated. However, this comes with risk:

because of our need to be connected with others, we will fit into the patterns that we see other people doing. Even if they are patterns we don't like all that much, we go along with those and not be rejected from the group, than to put that attachment, that connection at risk. And so that's part of why the work of a change agent is so scared because we are intentionally disrupting the pattern to see if we can provoke a different kind of pattern. That's the only way change will happen.

He recognized the power of attachment needs to influence people and how much relational risk occurs when leaders' move away from the group's view. Theodore viewed leaders and consultants to be disrupters and recognized the courage this role takes. In order to facilitate change, leaders are called upon to grapple with their own neurobiological imperative to connect and belong in order to inspire change. He also pointed to another important implication for change work: the individuals and organizations being asked to change will also experience this relational dilemma. In other words, when leaders are engaged in change work that challenges ontological and epistemological premises of practice, they need to know they are asking people to not only let go of their way of seeing and doing, but also we are asking them to step into relational uncertainty.

Camille and Penny offered another consideration for relationally focused change. Their organization was not asking to transform others directly, however, they recognized that introducing new organization into their local community required relational attention. The leadership team was aware that bringing a new organization into a community of organizations with similar mandates could be perceived as threatening. They recognized their organization may be viewed as competition. In order to address this, they preemptively reached out to these community organizations and extended the invitation to partner on projects. This intentionally relational strategy facilitated connection and a sense of community-based partnership.

Complex Systems Approach

IPNB is informed by complexity theory, which is based in “mathematical views of how systems function across time with the properties of self-organization and emergence” (Siegel, 2012b, pp. AI–17). Given living systems are open, they are subject to influence from external sources and the resulting response causes the system to change (Siegel, 2012b). From this perspective, leaders are not positioned to control or impose change. Rather they are relationally embedded in the system(s) and positioned to influence, guide, disturb, support, etc. For example, Hill (2008) describes leaders as the “unseen rudder” who steer the organizational ship. This conjures up an image of leader attunement and responsiveness as the organization moves through the ever dynamic water that changes and moves through time and space.

Kent’s view of change was from a complex systems perspective. As a person who led “from the trenches,” Kent’s influence was through his actions and relationships with the people around him. He believed that his efforts were felt in ways that characterize the butterfly effect:

a butterfly flaps it’s wings out where you are and I get a hurricane here in the east coast ... [the] idea that a small thing can change a big system has been really helpful so that’s my latest part of that belief for me as far as my work with trying to change systems.

For Kent this meant that leaders do not “have to come into a system ... with sledgehammers,” instead they need to engage with different elements of the system. He stated that how “you intervene in a system, can have this huge effect on the rest of the system.” Kent shared that his faith in this has grown over time through his observations where he “seen how the physics work.” As an example, he shared a story about supporting a book club reading of his book on IPNB and school systems. He consciously decided to keep the group small to facilitate engagement and a deeper understanding of the book in order to encourage more transformative change. However, this decision was also informed by Kent’s belief that this small group could influence substantive change in the larger school culture.

Tina also shared her considerations of complex systems change and applied these in how she led her organization. When she began the IPNB center, she did not have all of the details in place. Rather, the organizational structures and processes have evolved over time, as the organization grew. The structures and processes were formed in response to emerging needs and dynamics. Tina described this using a metaphor of an airplane: “we have been building the plane as we fly it. Now we feel like the plane is built and now we are riding [it], writing the manuals and the flight patterns so we have done a couple of really innovated things that fit in with our model.” This is an apt metaphor to describe a complex living system that is self-organizing as feedback from within and outside of the system loops back into the system, prompting a response that then changes and organized that system. As the leader of this organization, Tina attuned and responded to these feedback loops that allowed the organization’s growth over time.

Charles spoke about change from a complex systems perspective as well. He acknowledged this view is counter to the dominant worldview that “operates enormously on

linear systems and predictable outcomes.” In contrast, he views systems as whole, and change within systems, unpredictable:

The real key of complex systems is that they will seek out organizing principals, so that they actually become if not predictable, they have some reliability. And teaching that, and living that way, teaching that to leaders, and living that way as a person expressing, is both rewarding and difficult.

Charles shared that the emergent outcomes of processes that are integrative, create health for systems, although these outcomes are not predictable. Charles recognized that processes of change can trigger a fight/flight response, which he believed is a more dominant state in organizations than social engagement. His desire as a leader and consultant was to change this inclination whenever possible. Charles viewed individual and collective threat responses as a symptom of disintegration and worked to support systems to move into a more integrative state.

Power

Only one person I spoke to viewed power as the only way to influence change. Elliot was absolute in his belief that change could only be leveraged through the individual(s) who had power within a given organization.

And then the question is where are you in the organization? What have you created? What did you find when you go there? And these are all variables that have to be taken into account, you know, but the person has to have the authority and the position to make the change. They can't be a butterfly.

In Elliot's experience, organizations are hierarchically organized, and are not open to, and changed by, the same inputs found in natural systems change. He stated that “it's hard to see a top down hierarchical patriarchal structure being affected by butterflies. It happens but it's a real ... you know, it's a rarity.” As a result, his efforts as a consultant were directed at leaders who had the power to change organizations and systems.

Others I spoke to also encountered power as they sought to foster change and learn to work with the realities of hierarchically organized systems in order to foster and influence change. Many employed the change efforts described above in search of ways to navigate and/or engage with power. Geoffrey struggled to find ways to engage systems that were so rigid and based upon ideals that held power central. Others chose to bypass these realities by forming their own organizations based upon the relational principles central to IPNB.

Implications

The first three views on change are not mutually exclusive. Complex systems and neuroplastic change are inextricably linked with relationships. However, the way these leaders and consultant viewed change impacted how they entered organizations and practiced the work of change. Those who viewed change from a relational perspective tended to focus on their relationships with others. They concentrated on fostering capacities and practices that were relationally integrative. These individuals were more pointed in their change efforts. This focus was at various levels (micro, meso, and macro). For example, they tended to have a more defined relational goal in mind. Those who had a complex systems lens had a trust in the dynamic unfolding process that resulted from their efforts. They also worked at different levels of organization, however their lens was more systemic and broad, i.e., not focused on a specific change. This invited me to consider whether different change efforts are better suited to different views of change. For example, are some areas of change, like Tina's organization's development, best served through astute responsiveness that allows for the natural unfolding of self-organization? Whereas others require more focused attention and relationally integrative action, as seen with Theodore's process awareness?

Finally, Elliot's introduction of power in leading change is a worthwhile topic to consider. Certainly, leaders like Geoffrey, struggled with finding ways to engage in systems that are built upon top-down structures and processes. The fact that many of the relationally-centered leaders I spoke to struggled with the relational/non-relational counterpoint suggests this is a significant issue in IPNB-inspired change work. Although Elliot's method diverged from the others, his choice to do so is understandable given the reality of the struggle to find relational ways of engaging a system that is, at heart, non-relational. However, IPNB's ontological premise rests upon the fundamental relationality of humans and, by extension, the systems they create. Thus, the hope remains that there are ways of transforming top-down systems without capitulating to non-relational practices.

Third Noticing: Alternative Approach to Integrative Practice

Most of the leaders I spoke with shared their experiences with reflexivity and relationality, which characterize integration in relationships and consciousness. These leaders shared with a depth of consciousness that inspired a sense of awe and engagement within me. However, there were three exceptions. Interestingly, during the analysis of these individual's narratives, I experienced a visceral sense of discomfort. The strength of this reaction implored me to dive deeper and to bring language to what I was noticing. What I discovered was a tone of othering in their narratives. It was the utterances that featured a way of talking *about* people in contrast to the engagement with people that was prevalent in other participant stories. Integration of consciousness requires awareness of oneself as knower that is differentiated and linked with the known (Siegel, 2017). They communicated from a position of unquestioned and unexamined *knower* without much awareness or acknowledgment of their positionality or the subjective experience of the *known*. These consultants tended to approach people with pre-determined

theories, rather than an openness to discovery of the known. During these interviews I attempted to clarify and create space for the possibility that they had additional reflections on integration, however their responses affirmed they held a different perspective, or a different lens, of integration than their peers in this inquiry.

While Charles opposed the idea that IPNB could be applied his approach to integration suggested that, rather than embodying integration, he applied purposeful actions aimed at creating differentiation and linkage in his consulting work. For example, he shared that he usually practiced a “reverse engineering” process where he looked for disintegration within the organizations and then worked backwards to diagnose where the problem lay. Based on the premise that individual and organizational difficulties are rooted in blocks to the natural state of integration, Charles looked for what blocked or created barriers to this naturally occurring process. He then prescribed ways to address these blockages. As well he sought to identify the positive potential in systems, for example, within individuals, and at the organizational level. He shared that approaching the work in this way has meant that outcomes cannot be predicted:

What we need to do is integrate these things, and whatever emerges out of that integration, it may not even be what you want, or what society wants, or what is suitable. But what emerges out of that integration is something that is going to have a wellness about it and is worth pursuing and following.

In addition to allowing integration to guide his assessment and actions Charles taught organizational leaders and members “integration skills.” For example, he is frequently hired to teach communication skills in organizations; however, he stated “they don’t need communication skills, they need integration skills, and then language will emerge naturally and comfortably.” However, Charles was clear that he dispensed using IPNB language when consulting with groups: “There’s no need, to speak in IPNB because IPNB is natural, like you were saying, do you turn on these things? These are what are there naturally. All you have to do is engage with

them.” Charles was able to utilize the principle of integration while he worked within the language systems of the organizations and groups he consulted to.

Another leader consultant, Elliot’s understanding of integration was more narrow than presented by the literature and the other participants. He explained that it was his primary job to support leaders to integrate their private and professional lives because he has noticed that many leaders fail to recognize the connection. Elliot’s guiding principle was wholeness, which he described as “doing what you love, loving what you do:”

if you have to distort yourself or twist yourself to be at work. If work is really making you really unhappy and damaging other parts of your life. Another words, if work is part of the dissociation you are experiencing in your life, right? I’ve sort of coached a lot of people out of jobs. Because the job was just you know, killing them one way or another.

Following this I attempted to tease out if Elliot had any other aspects of integration that he might speak about. At this point in our conversation his response was a clear no: “Maybe I can guide [you]. I thought I said it but maybe I’m not that clear.” He went on to state that when leaders do not bring all of their inner lives to their work they become “pathologically dissociated” and their “performance suffers.” Therefore, as a consultant he was committed to correcting this, even though this had not made him popular with some of the organizations that hired him. He shared that his views and consulting stance were not always in line with corporate expectations:

I think it’s really made me a very untraditional corporate coach that people either love because they hate the other stuff, or they don’t take me seriously because they think I have to ask them, you know, 500 true and false questions before I can get to know them.

He shared that this sometimes meant that he was fired. Elliot shared that the disconnect between what he offered to leaders and their expectations were at times influenced by gender (“old white guys don’t really know how to listen;” “token women” at the head of corporations), as well as culture and ethnicity (Persian leaders who “don’t believe in taking advice from anyone but themselves”).

Elliot's view on integration was not entirely disparate from the literature, which considers wholeness to be an outcome of integration (Siegel, 2017; Siegel & Bryson, 2011; Stern, 2004). However, this particular account was limited in its reach and depth. For example, Siegel (2018) states that "the notion of wholeness ... invites us to think in systems terms—the ways basic element interact to create emergent phenomena—rather than simply one part interacting with another part in isolation" (p. 84). However, at a later part in our conversation Elliot offered a more fulsome view of integration:

So, in thinking about the word of integration, then integration is having a greater awareness of what is going on in other people so that your mind and your heart can link up with what's there, as opposed to having like a bad set of directions that you are enforcing on a situation that doesn't work.

I noted that Elliot had an aliveness in his tone, when he shared the story from which the above quote came. It wasn't a consulting story, rather this was a story about a time when he took the lead in making a difference in his own work in ways that ran counter to the system within which he practiced. I began to wonder if Elliot's stated caution about protecting his consulting clients' confidentiality impacted the way he talked about IPNB. For example, he talked *about* people and situations utilizing broad categories rather than sharing directly the relational experiences he had with clients. I wondered if this played a part in the overall tone of our conversation as well as the limited depth when he discussed how he engaged with IPNB.

Judy differed from Elliot and Charles, in that she didn't have a conscious understanding of, nor intentionality for, the promotion of integration. However, she had both an intuitive sense of integration and its outcomes. In fact, Judy had offered her own metaphor of integration called "the caramel effect:"

I never really had as much caramel in my coaching or my consulting until I understood IPNB. So caramel needs to be ... you think of melted caramel, right, but not like, not liquid. Just you know, soft caramel ... It kind of flows. But it doesn't flow quickly. Like caramel cannot flow quickly. And I think that ... what really was different is that now I can take a step back and become more caramel versus, you know, pure water or pure metal.

When I suggested that what she was describing was analogous to The River of Integration (Siegel, 2012b) metaphor, she indicated, with laughter, that she had not made that connection. However, Judy was clearly describing the state of integration (caramel), and the disintegrated states of chaos (water) and rigidity (metal). It was intriguing to me that she discovered this metaphor, and in her own words, described this foundational principle of IPNB.

In addition, Judy had an ambivalent relationship with IPNB and, struggled to reconcile IPNB's relationality with solution-focused expectations of consultation. She struggled with this contrapuntal theme (relational/non-relational practice) throughout her interview:

There are sometimes you don't have the luxury for long engagements for coaching. Sometimes I feel ... and maybe I'm wrong, I'm kind of hope that I am wrong, I don't know that I would have the luxury to be completely in IPNB state. You know, if [snaps fingers] decisions have to be made in a way, I may not have the time to think about an empathetic approach. Um, I may not have the time to think about whether I'm triggering somebody or they're triggering me.

Judy conflated relationality with being empathic. She shared how, as a child, she had always been able to sense the experiences of others. In addition, her mother suffered with anxiety and depression, which heightened Judy's capacity for emotional empathy. Prior to learning about IPNB Jenny stated, "I couldn't see that middle ground and I think some of it also because I didn't really understand some of the scientific underpinnings of what-what I was experiencing." She went on to describe how,

I've always been a very sensitive person. So I guess sensitive—maybe I just—well, sensitive not in a way that a lot of people use the word sensitive. Not like oh God, she's sensitive. You know, my feelings hurt. Sensitive meaning more like emphatic. You know, really ... truly sensing the energy, taking on the energy.

It was clear from her description that Judy's understanding of empathy was limited to what Decety (Decety & Michalska, 2010) called *emotional empathy*. This type of empathy has not been found to be helpful to leaders; rather, cognitive empathy, empathic concern, and perspective taking are key to leadership practice (Decety & Michalska, 2010; Goleman & Siegel, 2016). Emotional empathy is not necessarily integrative because it facilitates linkage without the necessary preceding differentiation. Judy's description of "taking on the energy" of others is an accurate description of this. However, integrative empathy entails the ability to feel, sense, and understand the experiences of other people without losing one's differentiation (Goleman & Siegel, 2016). Furthermore, Siegel (2017; Goleman & Seigel, 2016) suggests that empathy is best activated along with compassion, because this offers leaders the capacity for responsiveness and action. However, Judy's solution was to become more boundaried: "I think that we also need to be very, very careful of that, how we talk about empathy ... I said, I had to put a container around it, and I didn't do that in my first years. I've done that more recently." Judy had to separate herself through containment and boundaries in order to achieve the differentiation she believed missing in IPNB's definition of empathy. Unlike the more integrative leaders, it was clear that Judy was struggling to reconcile her more directive ways, with being relational. As a result, she saw these two counterpoints as mutually exclusive rather the possibility that *both* directiveness *and* relationality can co-exist in leadership practice. For example, the aforementioned alternative forms of empathy where differentiation and linkage are held and enacted in concert.

There was an absence of empathy throughout Elliot's narrative, which communicated a distanced positioning from others. As indicated earlier, he spoke *about* the people he worked with, rather than about how he engaged *with* them. Elliot, positioned himself as the knower of

others' experience. He shared that he came to this knowledge through his observations over time, which he generalized and, combined with IPNB's perspective on relationships and neurobiology, applied to his consulting work:

Because every ... every person I worked with and the problems that they run into are basically, you know, revolve around early family dynamics that they, you know, that they brains and minds adapted to, and that they bring to the workplace for better and for worse. And usually, I'm dealing with the things that don't work because of my-my position. But I think that um, you know, it's all interpersonal, it's all biology, it's all evolution.

Elliot used IPNB language and science in a way that validated his knowing. This *self-as-knower* positioning facilitated his othering language, which signaled his position as *knower-of-other* without conscious acknowledgement of the subjectivity of the known (other person). Although his conclusions about people's experience emerged from a collection of his observations, his position as constructor of this interpretation was not acknowledged, rather presented as truth.

The following are some examples of this othering language (in italics):

I find it's an interesting thing *working with them*. At least to suggest my experience, there are a lot of um, *there are a lot of family businesses* in LA that are *run by Persian families*.

Like I was saying before, there will be *some people in younger generations* or there *will be women* in the firm. You know, *some women ... they'll see it* but *it's too threatening to the powers that be*.

What I found mostly is that *most old white guys* don't really know how to listen.

So I tried to shoot at the middle level, the *middle-aged white guys* and—and the *middle-aged gals* and ...

I mean from my experience ... *women that are higher up* in corporations have a real dilemma *because they're higher* and a lot of like—'so *they're the token women*.'

Elliot presented his perceptions as truth claims. This was different from the more integrative leaders who brought a moment by moment consciousness and relational engagement to their way of being and doing.

For example, in the following voice poem Elliot talked about the view that leaders' personal and professional lives need to be integrated:

so we all affect each other

our moods

our ability to work and learn

our neuroplasticity

the more you

the more you bring to work

right?

your performance suffers

right?

things that you shouldn't bring to work

if you like to wear

you know

if you wear see-through blouses

you shouldn't bring that to work

you know?

if you like to wear a codpiece around the house

being integrated at home

your work

reflects your interests

your passions

you know

you never

you never work a day

in your life

if you are doing

what you love to do

Right?

This voice poem begins with an *undifferentiated-we-in-relation-voice* (italicized). It is a general statement about all people, therefore I have distinguished it from a MWE-voice, where the differentiation and linkage is clear. In this poem, the we-ness carries a tone that suggested Elliot's view about the homogeneous relationality of all people. Although he used the word "our" I coded this as a we-voice (plain text) because this voice did not carry the differentiation and linkage of a MWE-voice (i.e., "our moods;" "our ability to work and learn;" "our neuroplasticity"). Instead, all people were linked and considered to have the same experience. In addition, Elliot frequently used a connecting *you-voice* (underlined and italicized) directed towards me, this voice sought confirmation and agreement rather than connection ("right?"). His voice poem is dominated by a *distancing-you-voice* (underlined) that disconnected and separated him from the leaders he worked with. This *you-voice* has a tone of declaration and telling others, rather than listening and responding, which are fundamental to fostering integration in relationships. In addition, Elliot utilized humour when he made a distinction between the things leaders should not bring to work from their personal lives ("see-through blouses," "codpieces," "moods") from "interest" and "passion," which he views as integrative. However, he did not share what the integrative actions were to support leaders in making the distinction between what they should leave at home and how to integrate their passions across these two dimensions.

Charles also spoke about his leader and organizational clients using othering language. Charles frequently took a self-position as *knower of the other* without acknowledgement of his

participation or influence in this knowing. In this example, he reflected on one dimension of his client's experience (behavior): "*I look at* what people are doing that I am working with ... like, what they are doing?" (italics added). Positioning himself as the knower of the other person's reality gave him power to theorize about the other. He was focused on their behavior and inquired in a manner that suggested distance rather than engagement. In another example, Charles reflected on a consulting job he was hired to do:

I was given the task to be aware there was one person who was particularly difficult and might be quite readily in that class of toxic engagement. So, *that was what I knew* [emphasis added]. I went there. *I figured out who it was* [emphasis added] without being told. Because you could just see it. There's an interesting thing that when one is actually manipulating environments rather than engaging in environments, which is the IPNB way of doing things, that, when someone is looking as though they are engaging, like they are being terribly nice and wonderful. It reeks of falseness, and you go 'uh.' So, *you are faking it* [emphasis added] alrighty and of course the tale, the poisonous tale comes out.

In the above, the known (person) is the focus and Charles's impact and power as knower is not acknowledged. The known's experience is defined and judged by the knower (Charles) who presents his perspective as truth, i.e., the known is assessed to be faking it and manipulating. Charles's determination is without conscious reflection. Charles utilized IPNB to explain his perspective without the recognition that his practice was not integrative relationally nor consciously; specifically, by positioning himself as knower of the other person's experience, he disengaged from the person who he defined as.

He also shared that most people don't have the capacity to understand IPNB terms and he had the capacity to speak to others using their language. Like Elliot, Charles used distancing and othering language to describe the people he worked with. In our conversation, he did not bring attention to the relationships he had formed with these individuals, rather he focused on determining what interfered with integrative processes and then established a plan to correct. The

following voice poem is constructed from the passage above. It provides another listening lens through which Charles's positioning is made visible:

I was

work I do

my work is

I do coaching and training

I was called

how do I apply

I do a lot of work

I was given

what I knew

I knew

I went there

I figured out

you could just see it

you go uh

you are faking it, alrighty

I see what

you are trying to do

you are trying to control

I would

my

my responses

you know

my response

I'm

I'm wondering

HOW WE CAN CREATE

I can see

bothering you over there

I always observe

I

we bring

we discuss IPNB

we are doing

we see

we can utilize

first thing that you do

what do I do?

first thing I do

Charles's **I-voice** (bolded) is positioned separate from those in the group and the woman he is speaking about. He observes, sees, knows, figures out. He utilized MWE-VOICE (capitalized) in a manner that had me wondering if I should code it as a we-voice. I experienced some confusion as I grappled with pinpointing "who is the we?" The differentiation was unclear. Was Charles seeing them as individuals and inviting them into a relationally integrative process? Or, telling them that this should be done? In response I felt distanced from Charles's narrative. I felt

considerable discomfort when I listened to his you-voice (underlined). It was a declarative voice, which was positioned not only at a distance but above or in a superior position to the people he was describing. When he stated, “you could just see it,” I felt the invitational pull to join his perspective, however I was also confused: was I the intended “you?” Was the “you” more broadly referenced and suggestive that anyone viewing the individual would concur with his conclusion? This confusion and lack of clarity signified to me that Charles’s use of integration was from a relationally distanced position. It indicated that his “integration skills” that he taught leaders and organizations were applied more in the realm of doing than embodied and relational in the realm of his being.

The third, leader consultant, Judy, spoke with a mixed pattern of conscious integration throughout her narrative. At times she spoke about the known as other, without apparent awareness of herself as knower or constructor of the perspective she declares. For example, she described a meeting where she was consulting with organizational leaders:

The other, the co-president, [emphasis added] tried to rescue the situation, and as soon as she did, she became really anxious. So one was anxious and angry [emphasis added], then one was anxious [emphasis added] and [mimics panicking] oh my gosh, oh my gosh, oh my gosh [gasps].

As the unacknowledged knower of these leaders’ experience, she identified them with othering language and mimicked their responses. Yet, in another example of this, Judy shared from a more reflexive position where she acknowledged that her position as a consultant impacted her orientation and IPNB assisted her to critically examine herself as assumed knower:

As a consultant, you know, you have to have the answers, you need to problem solve, and I could definitely see that they were in a pretty scary place. And so ... and yet I had to take a step back. And I don’t ... I—I’ve told the story in various capacities but I’ve always shared that without the ... the exposure that I had to IPNB. I don’t think that would’ve happened.

Judy's consciousness shifted through self-reflection and her recognition that the role of a consultant is to be a problem solver, helped me to understand her vacillation in consciousness. When she was able to step back from the expectation to problem solve, IPNB served her capacity for more conscious integration as indicated by her acknowledgment of the impacts positioning her consultant-self as knower might have on her relating and capacity to acknowledge the subjective experience of those she worked with ("I could definitely see that they were in a pretty scary place").

Implications

There was a significant difference between these three consultants and the other people I spoke with. The fact that all three were consultants may be significant in that the expectations of their role may shape how they perceive and use IPNB. That being said, there were two leader consultants among the more integrative participants who were able to bring a consciousness and reflexivity to their work, which was anchored in relational practice. Luuk had talked about the challenges of bringing a more integrative lens to organizations who were accustomed to top-down practices such as testing and finding solutions to problems based on disembodied metrics.

There were also significant differences in positionality. In particular, Elliot and Charles were distanced from those they worked with and tended to use IPNB in a way that supported this distance. Their separate-self positioning was not compatible with IPNB's relationality. In addition, they tended to other those they worked for and took a position of expert knower that was not found with the other participants. Rather than engaging with people, they diagnosed problems and prescribed solutions. Judy did so at times, however when she remembered to use IPNB she was able to step into engagement and was more reflexive of her participation.

It became clear to me that not all persons who take up IPNB embrace the principles in the same way. The consciousness required by IPNB implores practitioners, leaders, and consultants to reflexively examine their mind, embodied brains, and relationships. It requires leaders step into relationships with all of their being, rather than be utilized in a piecemeal fashion. IPNB is to be lived not applied. Finally, I have reflected on the depth of reflexivity that the integrative IPNB leaders and consultants needed to do in order to practice from this perspective. It wasn't enough to just know the principles. Their capacity to transform individuals, organizations, and systems was related to their emersion in IPNB's view of reality. IPNB required the involvement of their whole being so that they could act in accordance with the principles and underlying values.

IPNB and Leader Development

Through each listening step I noted each participant's developmental story. The first listening provided the themes and plotlines of their leadership development. For many, this traversed personal and professional aspects of their lived experience where their development as a leader both impacted and informed their personal domain and vice versa. For some, the second listening step also provided information about the evolution of their multiple-voiced experiences that contributed to their development. Finally, the main contributor to understanding participants' development was the third listening. This listening step added the contrapuntal voices/themes that propelled these individual's learning and development forward. The term contrapuntal is from music term that,

attends to the participant's voice not for its content or themes but for its quality or musicality. This means listening for different voices and their interplay, or harmonies or dissonances within the psyche, tensions with parts of itself. This step not only picks up on what is being said, and being said differently at different times, but it is also sensitive to what is not being said or what may be silenced. Listening for different voices and their

counterpoint further nuances our understanding of the data by resisting binary categories or dichotomies. (Gilligan & Eddy, 2017, p. 76)

As the leaders held and/or grappled with the tension created by these contrapuntal themes they learned, evolved, and integrated new ways of seeing, being and doing. At times, they chose one counterpoint over the other; however, more often, they found ways to integrate and/or hold both in ways that enhanced their development.

Most of the leaders viewed their IPNB leadership development as an ongoing process. For some, their story began prior to their exposure to IPNB and then continued after. These leaders were often discontented with dominant ideologies and ways of practicing within their chosen fields. This was not a superficial discontent; rather, it struck deep implicating their values and world views. These leaders felt deep resonance when they discovered IPNB and utilized it to inform their development and actions as leaders. They also revealed a multi-layered developmental journey that involved their relationship with elements of their own internality and with others. These leaders often held integration as a core principle, yet each focused on different domains, highlighting their unique developmental needs. There were also exceptions. These were the alternative leader consultants mentioned above, whose narratives were either absent of developmental information, or conflicted.

In some of the leaders' and consultant's narratives, different domains of integration were central to their development. For example, consciousness (awareness of the knower and the known), vertical (body to brain, brain to body and vertically within the brain), bilateral (between hemispheres), narrative integration (coherent sense-making across time), memory (implicit and explicit memory) (Siegel, 2012b). The domains can be understood through their different neurobiological processes in addition to their implications for mind and relationships.

There were a number of contrapuntal themes in the participants' narratives that had developmental themes. However, I have taken liberty to highlight the more dominant themes to present here in the service of clarity and manageability. In this segment I will draw heavily on the third listening, however I will also utilize the first and second steps, where warranted, in order to provide insight into these leaders' development.

Dissonance Driven Development

Some of the leaders and leadership consultants spoke about being on the margins of mainstream ontology and epistemologies in their chosen field. Some experienced internal disruption and turmoil about the disconnect between what they valued and the dominant values within the organizations where they trained and worked. While each of their developmental journeys were unique, these leaders shared how their leadership developed through the activation of their commitment to challenging dominant ideologies and practices.

Others were dissatisfied with ideologies because of a lack of depth and contextual breadth in framing human experience. Their discovery of IPNB was part of a search for deeper or alternative understanding of human experience than what was offered in their chosen field. These tended to be values-centered leaders who were often compelled to find a relationally considered perspective of human experience. They either felt disturbed by what was being offered and practiced in their professions and workplaces, or they were discontented with the depth of understanding being practiced. When these individuals found IPNB they reported feeling resonance. They were drawn to the science because it provided information that satisfied their quest for understanding. In addition, IPNB's relational perspective on neuroscience brought validation and language to their reflections and practices. They often shared how the science assisted them in bridging into their professional communities where the softer aspects (i.e.,

feelings) of human experience were held suspect or passed over. In addition, IPNB's focus on developing the capacity of the mind to monitor and modify relational and neurobiological processes, in the service of the promotion of integration, provided actionable direction for their leadership practices. These leaders' growth was propelled forward in time, space, and place through a relationally held dialectic between externally imposed non-relational approaches to human experience and their own value for relational practice, which honored subjective experience. Typically, their development was not served by choosing and promoting one preferred counterpoint over another; rather, their growth was an ongoing relationship between the contrapuntal themes, which is in keeping with RDT's view that growth is "change as a perpetual ongoingness of centripetal-centrifugal forces" (Baxter & Montgomery, 1996, p. 31).

Furthermore, as these leaders integrated IPNB into their professional lives, they noticed a shift in their personal relationships. Several commented on this and shared about IPNB's influence on how they navigated the *personal/professional* counterpoint. Interestingly, this seemed to be a natural outcome of their IPNB developmental journey rather than a sought out end. As IPNB touched down and impacted their realm of being and doing, these leaders noticed a natural outcome of integration across their professional and personal lives. Specifically, they did not live a life that was divided (personal or professional), rather a natural wholeness where both personal and professional emerged.

Some of the leaders I spoke to found themselves to be discontented with their formal education. Tina found herself to be dissatisfied with the depth of analysis and understanding offered in her education to become a psychologist. She shared,

I knew were doing clinical work, were very much focused on um ... more sort of behavior modification—like there was such a focus on behavioral change and on diagnoses and evidence-based practices, and those kinds of things. And no one was talking about more bottom up kind of thing. No one was talking about the brain is embodied and about the nervous system.

At the same time she practiced as a clinician, where she worked with children and families. Tina was dissatisfied with the dominant practice of diagnosing children based on their behaviours and symptoms, then prescribing treatment that was determined best for the disorder. She shared,

that just seemed ridiculous circular reasoning to me. Well I said, okay, what is anxiety? So here's my IPNB lens. It's anxiety is a nervous system that has a neuroception of threat even in a safe environment. Or you know, if it's appropriate anxiety, it's neuroception of something is not working, 'this isn't working right, I need to be alert.' But what happens if it's false neuroception or faulty neuroception where the environment is super safe and that's going on, what's that about? And as I started to peel back the layers, I found that a lot of the kids that I was seeing who had a significant behavioral problems, either had a learning challenge that hadn't yet been discovered like, really, really low processing speed even though they were gifted in other areas or they had a sensory processing disorder, or all kinds of things that were really outside of my training.

When Tina discovered IPNB it brought a neurobiological and relational depth to understanding human development and functioning. Since then, Tina has become a leader and scholar in the field. Her development as an organizational leader commenced when she created and developed the interdisciplinary center based entirely on IPNB principles.

Jemma also found herself feeling dissatisfied during her academic training to be a social worker and psychologist. Like Tina, she found her training lacked the depth she was seeking. Dissatisfied with diagnoses and prescriptive approaches to human development and experience, Jemma shared how she would ask her professors “why” in an attempt to understand more deeply, only to be left without answers. When she encountered IPNB it brought her the depth and wholeness she had been longing for:

When I was introduced to IPNB ... here was a biological explanation for things, and it took, it honored all of the strings. It honored the emotional, the cognitive, the physiological, the relational, um, the sensory you know, and, for me, it-it just embodied me to be curious about all the different streams that impacting where I was as a person as a leader.

She was exposed to IPNB during a conference where Dr. Daniel Siegel and poet John O'Donahue presented. Jemma found immediate resonance with the framework and found it added the depth to her understanding of human experience that had been missing in her formal education. Her development was informed through coming to terms with the counterpoints of *doing and being*; what had been missing in her education, was the latter. In addition, Jemma commented how, in the field of medicine, physician's and surgeon's do is paramount to the neglect of who they are. She recognized that both being and doing need to be considered in leadership and shared that her development involved learning to hold both counterpoints at the same time. She believed this focus was valuable for others as well. For example, she asserted that being needs to inform doing, and doing informs being, rather than privileging one state over the other. That being said Jemma found that she needed to be aware of her ever-dynamic state of being given it is foundational, "because what I do is secondary to who I am." This had implications beyond her professional life. Jemma was a highly values-centered leader where leadership was not separate from her person therefore it was essential that her doing was consistent with her being. For example, she reflected how IPNB assisted her to integrate her personal and professional lives together in relational wholeness:

I just feel intense gratitude for IPNB in my own life, and ... and because it's been such a moving and important part of my life in helping me understand myself and my relationships ... I think there are lots of other people also that have had an opportunity to go on their own journeys.

Jemma was able to seamlessly hold a profession/personal counterpoint through her recognition that both are part of an interconnected whole. It suggested to me that given IPNB has

implications for the realm of being that it has potential to implicate these leaders as whole beings. While the realm and scope of their doing or actions shift given different requirements in different relational environments, this suggests that IPNB can traverse both personal and professional spaces and places.

Kent also reflected on how IPNB had impacted both personal and professional realms. He shared that IPNB had become so much a part of his being that it was difficult to “separate it out” in order to speak about it. He shared how IPNB had assisted in understanding his personal relationships as much as professional. Like Jemma, IPNB invited a sense of wholeness, which linked both his personal and professional realm of being, rather than separating them, i.e., either professional or personal: “IPNB has been like a part of me.” The more Kent understood IPNB in his professional life, the more he understood his personal relationships from the same perspective.

Elliot also shared that he supported leaders to consider how their personal and professional lives are inextricably linked. In his leadership consulting practice, he regularly supports leaders to consider the relational and neurobiological underpinnings of their being and encourages them to understand how this implicates their leadership practices. He shared how “every person I worked with and the problems that they run into are basically revolve around early family dynamics that their brains and minds adapted to, and that they bring to the workplace for better and for worse.” He navigated the being/doing counterpoint with his clients through education and exploration. He shared how IPNB brought neurobiological and relational depth to his consulting work, which labelled him as an “unconventional leadership coach.” Like the others I spoke with IPNB had become a part of Elliot’s being: “I couldn’t think of any consulting position that I’ve had where I haven’t come from, you know, from that perspective.”

Offering a different perspective, Penny's leadership was deeply impacted by her exposure to IPNB and the relational practices of the leadership group she joined. Her story revealed that her development involved navigating the counterpoint of *autocratic leadership/relational leadership*. Unlike the other leaders, Penny wasn't seeking an alternative to the top-down leadership model she had been practicing; however, it was through her exposure to IPNB that she discovered the deep discontent she had been experiencing:

I had come from the corporate world, and I must admit I have a bent towards ... autocracy. You know, I'm in charge. I have the power. I tell you what to do. You do it. I was very comfortable with that and to come into a group of therapists who totally they—they don't react to that model. They don't even understand that model, right? So it was a real culture shift for me just to move into a group of therapists and also to understand that my management or leadership style had to totally change. That had to become more collaborative. I mean I am a woman so even in the corporate world I was more collaborative than most guys were. It totally changed my leadership style, in terms of getting by ends and understanding people's perspective and being collaborative.

Integrating a relational way of leading came with some challenging lessons; for example, Penny shared a story where early in her presidency of a community-based IPNB-organization, she had handled a situation from a more direct and autocratic stance. It did not go well. Yet this situation was enormously informative for Penny's development. Even though her top-down leadership action was out of place in the relational culture of this new organization, Penny received support from a colleague who had gently placed her hand on Penny's back during the open conflict that resulted. This provided Penny pause to reflect and move forward in her development as a more relationally integrated leader.

You know I have used that sort of freeze in place with like you know, no, no, no, in the corporate world because ... it was a very conflictual um, I don't even know if that's the right way to say it. I didn't have a lot of allies, a lot of times and you know being the only woman, you were often you know sort of fighting.

This served as a pivotal developmental moment where Penny experienced the "culture clash" between autocracy and relationality. Holding the dialectic between these two counterpoints, she

did not abandon autocracy; rather, she learned how to be more relationally “skillful” and sensitive while also utilizing more pragmatic and direct approaches when organizational tasks needed to get done. This developmental moment occurred in place (organizational meeting, relationships) when she was exposed to the negative impact that her autocratic leadership state had on her colleague. Through the agonizing exchanges that occurred, Penny not only recognized the difference between autocracy and relationality, but another colleague’s simple gesture of placing a hand on her back, shifted her to a more interpersonally integrative state. In this developmentally significant moment, Penny was conscious of memories of her isolation and loneliness during previous leadership experiences that were devoid of care.

Offering a different developmental trajectory in response to non-relational organizational and systemic cultures, Daylen’s early professional development was characterized by a core contrapuntal theme that involved the tension between *non-relational values and practices*, required as part of medical socialization, and his internal commitment to *honoring subjectivity and relationality*. During his residency, Daylen was reprimanded time and again for asking about his patients’ internal experiences; their feelings and thoughts, histories and aspirations.

Every time I’d see a patient, I’d asked the patient about their feelings about the meaning of the illness they had. And I would present that, when you had to present that to your attendings, and I was constantly being berated by my attendings for asking, um, my patients what they felt. ‘So the point we’re finding,’ one of my attendings said, ‘you’re in the wrong profession. You should be a social worker if you want to know about people’s feelings. You’re just becoming a doctor. It’s about their bodies.’ And that stands that the body [pauses] was a distinct thing from the mind’s experience of meaning and emotion, felt absolutely wrong.

He tried to comply, however, this began to take its toll:

I tried to ignore the feeling of it, but the feeling didn’t go away, until finally it just got so extreme when I just became despairing, and couldn’t feel the water on my skin when I took a shower, didn’t want to go dancing ... and just started having fantasy of jumping on a train and disappearing into the wilderness, you know?

Daylen was caught in a dilemma: abandon his own internal relational values, at tremendous personal cost, or refuse to comply and risk disapproval and reprimand, or worse:

these are really powerful professors—I mean, now they’re at the power of giving me a grade. These were super smart, some of them you know, Nobel prize winning people. These are really accomplished ... I was at a research institution, and these are really revered people talking like this. And it’s just ... so here they are with that kind of authority and it just felt completely wrong.

Faced with this counterpoint, Daylen refused to compromise his values as well as his commitment to recognizing the personhood of the individuals he was treating and the significance of relationship in healing and wellness. He decided to leave medicine but was dissuaded by the dean who approved a leave instead. When he decided to return he remained steadfast in his convictions and the resolution of this counterpoint was the development of a whole new way of understanding human reality based in relational science and the capacity of the mind to shape the embodied brain.

Like Daylen, Jemma also experienced conflict that resulted from externally imposed non-relational values and expectations in medicine with her commitment to relationality. She responded to this by challenging and transforming this non-relationality through her leadership as the director of the on campus student services department. Her development as a leader was fueled by her passion as well as her commitment to finding resolve to the non-relational/relational counterpoint. As an example of her efforts, Jemma shared a story that occurred in the medical school students were taught professionalism through rigid expectations. This occurred through a number of practices including students being docked a grade if they were late for class, no matter the reason. She shared the story of two medical students who, on their way to class, ignored a woman in distress because they didn’t want to be penalized for

being late. She died. Jemma reflected on the underlying culture in medicine, which she set out to transform:

That hall of rigidity, you know, doesn't it invite people to be integrated, so how do we do it in a way that creates that sort of face adaptive coherent energized and stable. So you know there were all kinds of teaching moments like that, that through the years and that's a very dramatic one, and extreme, most of them thank goodness were not like that, but I-I think that model though of-of COAL and FACES, you know, invites people to develop what I would say a learning mindset, not in knowing.

Jemma sought to transform the medical mindset from a *knowing mindset* to one that was more flexible, adaptive, coherent, energized, and stable (*learning mind set*). For Jemma, physician's need to be treated with, and trained in, compassion, openness, acceptance, and love (COAL).

The counterpoint of relational/non-relational practice was revealed through Kent's account of leading in the school system. He was conscious of the dominant lens through which student's behavior was viewed and treated and, like his IPNB leader counterparts discussed above, Kent experienced the non-relational/relational counterpoint daily in his work. In response, he sought to transform the way that teachers and leaders in the school system perceived students and acted upon them rather than engaging with them. He did this by inspiring change more broadly through speaking engagements and consulting as well as locally through everyday actions where Kent took the lead in modeling a relational approach. Kent was alone in these efforts and drew upon IPNB for inspiration and knowledge:

a lot of that comes from constant IPNB perspective, because they figure out how I can help sort it out. Mostly it works, I don't know—90% or something like that—pretty high. So it becomes in the school, in the culture of any school, that you have to, as the expert in anything you have to earn your credibility, and there is no way to earn your credibility other than like doing it and you have to be jumping into the middle of something that everybody is terrified about and have it come out okay.

Kent's leadership was linked with the success he gained through his IPNB-informed decisions and actions. His social capital was dependent upon this success and he embraced the

responsibility to gain his colleagues trust. In listening to Kent's story I also considered that his willingness to lean into difficult situations, and deal with the situations that his colleagues found frightening, also likely provided an opportunity for his social leadership identity to emerge. In other words, Kent became a leader as others trusted his leadership.

However, Kent's success was not without a sense of risk. Time and again Kent experienced the counterpoint of an internal and social sense of vulnerability along with strength. As he became more socially identified as a leader among his peers, his vulnerability grew. This *vulnerability/strength* counterpoint created a dialectically held tension that he had to learn to navigate.

There's a phase you know when you are in a different leadership spots where you talk about the imposter syndrome and when your looked at as an expert in something or you put yourself in that role then immediately people want to pop that balloon. I mean it's just part of the way that goes.

Kent's growth as a leader was linked with his navigation through this counterpoint. He indicated this contrapuntal undercurrent was woven into his leadership practice that was grounded in a perspective that deviated from the norm. There was both risk and reward. For example, Kent talked about the fear he experienced when he had to deal with "serious crises" as well as being publicly visible:

They feed you to the press because nobody else is going to do that, and ... get out there in front of the camera and tell them why ... and I'm like, oh my God. Or dealing with the court systems and all that stuff that um ... terrified of it. Maybe some of it has been just getting through those other difficult times but also knowing I have more of a solid basis where I can explain things where I couldn't so much before. You kind of learn from these negative things but then IPNB has added a lot into it, for dealing with you know school wide crises, and shootings and stuff like that from back in the day.

Here again, Kent reflected with acceptance. IPNB offered him a solid place to orient to while holding the vulnerability he was feeling. He noted that holding *both* vulnerability *and* strength are a part of being a leader. Although he clearly had developed more confidence in his capacity

to lead, this contrapuntal theme remained constant and, he considered, a realistic part of his leadership work.

Emergent Development

For some of the leaders, development occurred through their relationship with their body. The developmental trajectory was unique to every individual yet involved the cultivation of neurobiological capacity to sense, regulate, and respond through an awareness of their embodied experience. This required them to engage with integrative abilities across two domains of integration: bilateral (formerly referred to as horizontal integration) and vertical. Bilateral integration refers to the differentiation and linkage between right and left hemispheres via the corpus collosum (McGilchrist, 2009; Siegel, 2017). Vertical integration refers to the capacity for the bi-directional processing of energy and information from the body proper to the brain, as well as within brain where activation travels from subcortical to cortical circuits (Siegel, 2012). Vertical integration of top-down and bottom up processes facilitates emotion regulation and the navigation of complex realities (Siegel, 2012b, 2017).

Luuk did not utilize the terms bilateral and vertical integration, however, these domains were implicated in his development as a leader and person. Luuk experienced integration as both a process and a developmental outcome that occurred dialogically between different I-positions or states over time and in space. Luuk's search for integration between his body and his natural tendency for left hemispheric rationality, has been lifelong. Challenging his proclivity for top-down (cortical, rational, left-hemisphere dominant) processing, his integrative capacity grew from the bottom-up as his awareness of his body and sensations developed:

What I did is I found that there is a relation between ... and this is what we call moving and meaning. And this is what comes up from the bottom and not from rationality, and that's what how we work with you know, our workshop. When we try to explore symbolism, we work from let's say the physical, the embodied part and then bring it to

intuition and rationality, and opening up fragments of a language that are not coming from your brain, but are coming from your body.

It was through his growing ability to sense into and growing relationship with and through his body that Luuk noticed different capacities arise that served him as a leader and person. For example, the intuition that Luuk spoke about can be understood, through an IPNB neurobiological lens, as an outcome of vertical and bilateral integration. Luuk shared that his intuition was not an intended outcome but a natural process that emerged: “It was not me who integrated but I was integrated. It was not me integrating but it was me being integrated in a process. Which came from another level of being.” I found the implications of Luuk’s description to be striking given the emergence of vertical and bi-lateral integration was not intended nor consciously sought by him. Rather, it resulted from an embodied and relational realm of becoming. He was not an individual set on using IPNB, however what emerged through his intentional efforts to inhabit his body reflected IPNB’s principle of integration (Siegel, 2012b, 2017, 2020b).

However, the third listening step uncovered a recurrent contrapuntal theme between Luuk’s rationality and embodiment. Luuk’s professional roles as academic and leader consultant privileged and reinforced rationality. Therefore, as his sense of embodiment grew through his practice of martial arts, Luuk began to feel tension between this and his responsibility to provide financially for his family, which required he work in environments that privileged rationality. Early on in his development he was unable to find resolution. Initially, when he became more embodied he was dominated by bottom-up processes and was “disconnected from the real world. I was disconnected from the world of work and the world of academic research because I was more or less in the flow of moving and sensing meaning but without rational thinking.” This

created contrapuntal tension between the rationality that was privileged and rewarded monetarily, and Luuk's increased sense of aliveness and joy in being connected with his body.

This tension was a significant factor in Luuk's professional development as he strove to reckon his new-found embodiment with the required left-hemispheric functioning that was dominant in academia and leadership. Luuk began to integrate these counterpoints in his leadership consulting roles, which earned him a reputation of being a non-traditional consultant. However, this was not a consistent or easy process where Luuk found himself shifting back and forth between these counterpoints. He eventually found some resolution of this contrapuntal theme when he developed the capacity to hold both, and in doing so his intuition emerged:

make me

very confident in myself

my university practice

my consulting practice

I had to do

my work

I was a very good student

my rationality truly developed

my conceptual power

my physical sensitivity

my intuition

I kind of

reconcile my rationality

with my intuition

I was in relation with people

I was able to

my physical sense

I've been at Tai Chi

I practiced

many times in my

my professional life

helped me to integrate

the physical Luuk

the rational Luuk

the intuitive Luuk

which took me

I think

I was

when you talk about the IPNB perspective

where I reconciled these elements

my physical sensitivity

my rationality

my intuition

my career

I'm able to

what I sense

my rationality

I'm able now to work
with my intuition
I should know
you also have to be rational
my thinking power
I know a lot of poetry
I don't have to
I should not
nobody was there to help you

Luuk's **I-voice** reflects the rich internal relationships he fostered between his different states of being or, in DST language, **I-positions** (bolded). Rather than having a pre-conceived notion of integration, Luuk discovered it through the process of differentiation and linkage between his rationality ("the rational Luuk") and embodiment ("the physical Luuk"), which resulted in the emergence of intuition ("the intuitive Luuk"). Over decades of practice he was able to differentiate and link these states with more fluidity and flexibility.

In the above poem, Luuk's developmental pathway appears as an internal and deeply personal journey rather than in dialogue with others. Specifically, Luuk talked *about* relationships, rather than being embedded *within* them. For example, In the final line of the poem ("nobody was there to help you") Luuk used a distanced-you-voice (underlined). This statement invited a sense of loss and social pain within me as I listened. Although Luuk's integrative development supported his capacity for intuitively linking with others, his developmental narrative was absent of relational support.

For some, participants' developmental unfolding was shared through their different stories. Narrative integration is characterized by coherence that weaves linkages of meaning across time, in space, and place (Siegel, 2020). Some of the leaders had coherent narratives that were flexible and adaptive and had a beginning, middle, and end, called mental time travel (Siegel, 2012b). Through narrative internal and external experiences are realized and shared in ways that are both intrapersonally and interpersonally integrative (Siegel, 2020). The narrator is the observer, the "one that narrates its own unfolding" (Siegel, 2012a, p. 41). It involves other domains of integration including memory where the integrated/integrating narrator has the capacity to traverse past, present, and future. Of note, through the story of their development, some leaders I spoke to utilized IPNB knowledge retrospectively. In other words, from their presently held knowledge they reflected on past situations with an IPNB-informed lens, which they then used to inform their present and future actions.

The possibility of narrative to integrate disparate experiences was evident during my conversation with Geoffrey. He began his narrative with a story that was disintegrated and troubling to him. He had not made sense of the experience and it continued to trouble him as he reflected on the experience. Geoffrey was deeply disturbed by his incapacity to inspire change in the child and family justice system in his community. At the time of our discussion he was questioning his leadership capacity. However, as we spoke, Geoffrey's narrating voice shifted within the interview from uncertainty to greater clarity and coherence. Initially his voice was disjointed:

Um, you know, I think what I ... what I think part of what I ran up against was just the incredible fear and um ... um ... to some extent, suspicion. What are you up to? You know, what is this about kind of thing and um ... [clicks tongue] you know difficulty in we can't do it any differently because we're scared. You know, we're-we're not sure what that'll look like. Um, we can't envision that. And so um ... yeah. I—I—and

I don't know, I mean I'm sort of waxing a little bit, um, tangential because I'm not entirely sure I made meaning of how it unfolded in that way but um.

In this utterance, there are indicators of his struggle for coherence, with pauses, repeated words, stuttering and a direct expression of his difficulty to understand and bring meaning to this experience. However, as the interview progressed Geoffrey's coherence and understanding emerged stronger through the process of narrating within the context of our resonant relationship:

LYNN: Reflecting on change within those kinds of systems, those kinds of thought systems, those kinds of organizational systems ... I'm wondering what thoughts you have about your leadership within that dynamic and where this left you?

GEOFFREY: Yeah. I so appreciate that ... you're wondering about that because I-I have wondered and continue to wonder about exactly that myself, and that is, you know, I think so much of what IPNB does and points to, is again a deeper, more vibrant, more alive vision. I used the word vision, not sure that's quite the right words but—but for now okay. But vibrant and rich and really profound vision for ... who we are ... to one another as human beings. And I think ... for me, that's so much of what IPNB kind of brings forth and says, you know, here is this emergence, it's possible. Here's who we can be to one another. And so for me the question is—is related to that, like how does ... not just one, in this case it was, you know, hey I got this idea, but you know, how do we create sort of communities of small groups of people perhaps who can ... who um ... really ... practice that or-or kind of living out of that kind of vision for who we are.

As Geoffrey responded to my questions he shifted to a reflective state that brought greater coherence to his experience. As I reflected back key phrases he used, Geoffrey responded and through narrating his experience he gained clarity about his leadership. For example, Geoffrey had mentioned being a catalyst early on in the interview. Later in the interview I reflected this back to him. Although it was Geoffrey's own word, he received it as new and then wove this into his narrative in a way that was integrative:

It's just that often times, you know, there needs to be catalyst and I find myself being the catalyst and then going okay, here's this ... here's this thing going. Take it and run with it. Here's this other thing. Take it and run with it. You know. Um ... and so maybe that's a part of how this is evolving is. It's um ... yes, wonderful. I can't do it. I can support it, and so off you go.

In this utterance, Geoffrey's voice had more coherence and flow. As he continued to narrate alternative experiences where he recalled other initiatives that he had led and supported. As he spoke, IPNB provided a lens through which he could view his leadership that fostered change through his relationships with others. The resulting energy and creativity allowed for new innovative ways to deliver service that were based upon the relational values Geoffrey held dear.

For other leaders, integration was a developmental guide. Camille's development as a leader occurred within a group of like-minded therapists, who wanted to bring IPNB to their local community. Her leadership development was linked to this enthusiastic group of therapists who developed together as they manifested their vision into reality. Like her colleagues, Camille had knowledge of IPNB. This knowledge, and in particular, the principle of integration, assisted her in navigating the ebbs and flows of growth and development within the organization. In particular, integration assisted Camille's recognition of the recurrent counterpoints of *chaos and rigidity*, which arose not only the group's development but also her own.

Camille shared that her development as a leader occurred at the intersection of place (the organization and the relationships therein) and in internal space where she learned to navigate her own tendencies to overcommit during moments of enthusiasm. This overcommitment overwhelmed her and led to internal chaos. At the same time, Camille learned that chaos was necessary for growth in order for new ideas and actions to emerge, in contrast to leading through the imposition of more rigid predetermined plans:

sometimes group members or people would try to make it more rigid. If I tried to get more rigid or controlling with that, that never works, you know, and so trying to organize chaos or find the organization within the chaos ... sort of maybe stepping out a little bit to see the big picture. Um, so uh, maybe doing my own mindfulness practice would help. You know meditation, or yoga, or talking to colleagues, definitely, you know getting ideas. Not sitting alone by myself, so it was really a community exercise.

Her growth as a leader included learning how to hold relational space for this creative process while ensuring the group didn't move too far into chaos, or shift into rigidity in an attempt to suppress the discomfort that occurred. At the same time, Camille found mindful practices to support her capacity for regulation during these times of change. In addition, she turned to her relationships with others in the organization for support. The principle of integration was informative and provided a way of understanding the natural movements of systems as they move and develop across time. Camille consciously held this principle central, which assisted her in recognizing what was going on and how she needed to grow as a leader so that she could allow the discomfort of chaos to propel the organization forward.

Tina's leadership development was also guided by the principle of integration. Whereas Camille's learning surrounded the mitigation of her tendency for chaos, Tina's was focused on her tendency for rigidity (control). Specifically, Tina's developmental challenge surrounded the counterpoint of *control/collaboration*:

I don't really like a top down leadership style. I'm very collaborative. Um, there are definitely times where I have to call it, and I have to say, yeah we are not going to go that way, and I make the call. Like a parent does sometimes, but most of the time, um even if I disagree but I feel like it's better for my team to have an experience or it's the way I am thinking it should go, is really just a preference and it's not essential to who we are. Then I just, I want to empower them to um to grow and handle it how they want to handle it. And I'll be honest, that's really hard for me. I can be a control freak.

Tina was aware that her tendency for control was fueled by her conscientiousness and high expectations. However, her drive to be a leader who was guided by her desire for interpersonal integration within her organization and leadership role, which meant her staff needed to have the "freedom to be differentiated and celebrated for their differentiation." In addition, Tina did not want her team to be concerned that she might disapprove of their efforts. In managing this counterpoint, Tina has had to learn how, "to let go of, to be conscious of saying ... this doesn't

have to be my call. I don't need to be the puppeteer here to really allow that differentiation."

Tina said that her deep care and trust for the clinicians was "easy" given her inherent relationality. However, she had to consciously and intentionally cultivate differentiation both within herself and in her relationships with her team. She wanted the center's clinicians to not feel like they had to ask her permission but rather to know they had her full support to move forward with their ideas.

Developmental Exceptions

Three of the participants provided a different lens than their counterparts. Neither Elliot nor Charles revealed information pertaining to their development as leaders and consultants. Charles was the clearest in his assertion that he had always been a leader through childhood through to the present time. He did not have a developmental lens when he talked about his leadership rather he shared that it "was just a natural part" of him. Elliot did not make any statements about his development as a leader consultant.

On the other hand, Judy was very transparent about IPNB's influence on her development. She described her knowledge of IPNB as "basic" and "not intense." Judy had an ambivalent relationship with IPNB and, struggled to reconcile IPNB's relationality with solution-focused expectations of consultation. Admittedly, Judy stated that she did not use IPNB all of the time, and when she did, it was during situations when her clients became dysregulated and IPNB's relational neurobiology to assisted her to take effective action. In other words, Judy tended to apply IPNB to situations and people rather than embodying it as a way of being.

She struggled with the relational/non-relational contrapuntal theme throughout her narrative:

There are sometimes you don't have the luxury for long engagements for coaching. Sometimes I feel ... and maybe I'm wrong, I'm kind of hope that I am wrong, I don't

know that I would have the luxury to be completely in IPNB state. You know, if [snaps fingers] decisions have to be made in a way, I may not have the time to think about an empathetic approach. Um, I may not have the time to think about whether I'm triggering somebody or they're triggering me.

As indicated earlier, Judy conflated relationality with being empathic. She shared how, as a child, she had always been able to sense the experiences of others. In addition, her mother suffered with anxiety and depression, which heightened Judy's capacity for emotional empathy. In fact, prior to learning about IPNB Jenny stated, "I couldn't see that middle ground and I think some of it also because I didn't really understand some of the scientific underpinnings of what—what I was experiencing." She went on to describe how,

I've always been a very sensitive person. So I guess sensitive—maybe I just—well, sensitive not in a way that a lot of people use the word sensitive. Not like oh God, she's sensitive. You know, my feelings hurt. Sensitive meaning more like emphatic. You know, really ... truly sensing the energy, taking on the energy.

She was particularly conflicted about this in her consulting role, which called for a more pragmatic, solution focused, and direct approach. Judy didn't see this as a necessarily positive attribute when it came to leadership. She found it challenging to integrate being empathic with "getting things done." However, she also vacillated between each counterpoint, without apparent resolution.

You have to be really, really careful because I think when we take IPNB, if we only just look at a few elements of it there, if you only focus on triggers ... and empathy. Oh my gosh, you know, that must've come from the family. That must've—oh, this is—you know, she looks like my mother or I must have empathy for this person. And that ... that line between where you must lead this person and you also have to make some really hard decisions, and empathy, you might be caring but you know, I care and I care for the space we're creating. However, I have decisions to make.

Judy clearly struggled to find a way to integrate being empathic and solution focused. She was unable to provide direction while holding empathy at the same time. However, it was apparent that Judy's development as an IPNB-informed consultant was limited by her understanding of

IPNB's view of relationships. She mistakenly reduced interpersonal integration to a form of empathy that leadership scholars suggest is not appropriate for leadership. As mentioned earlier, Decety and Michalska (2010) identified five types of empathy: cognitive empathy, empathic concern, perspective taking, empathic joy, and emotional empathy. The first three are considered essential to leadership, particularly when paired with compassion, which can mobilize empathy (Goleman & Siegel, 2016). Judy referenced emotional empathy, which can lead to overidentification. It is not integrative because it facilitates linkage without the necessary preceding differentiation. Judy's description of "taking on the energy" of others is an accurate description of this. However, integrative empathy entails the ability to feel, sense, and understand the experiences of other people without losing one's differentiation (Goleman & Siegel, 2016). Furthermore, Siegel (2017; Goleman & Siegel, 2016) suggests that empathy is best activated along with compassion, because this offers leaders the capacity for responsiveness and action. However, Judy's solution was to become more boundaried: "I think that we also need to be very, very careful of that, how we talk about empathy ... I said, I had to put a container around it, and I didn't do that in my first years. I've done that more recently." Judy had to separate herself through containment and boundaries in order to achieve the differentiation she believed missing in IPNB's definition of empathy. Unlike the more integrative leaders, it was clear that Judy was struggling to reconcile her more directive ways, with being relational. As a result, she saw these two counterpoints as mutually exclusive rather than the possibility that *both* directiveness *and* relationality can co-exist in leadership practice. For example, the aforementioned alternative forms of empathy where differentiation and linkage are held and enacted in concert.

Implications

I attended to participants' development across three dimensions: time, space, and place. I did so in order to capture the anticipated layeredness of participants' developmental experiences. What I discovered was an intersectionality between space and place and the contrapuntal themes that propelled their development forward in time. The leaders and consultants who reflected on their development, had a robust internal reflexivity (space) where they consciously grappled with contrapuntal themes that emerged from various sources. These included externally ontological and epistemological counterpoints found in the organizations and systems (place) that inspired these leaders to find ways to foster change. Of note: while place figured in some of the leaders' developmental narratives, (i.e., relational place, organizational place, systems place), their development occurred through the intersectionality of this dimension with consciousness that was spatially (i.e., subjective awareness of being aware) integrative (Siegel, 2012b). In other words, these were not passive learners who took in leadership concepts and practices, which they then applied to situations (places). With the exception of the three consultants, these leaders' development was dominated by their conscious reflexivity that was guided by IPNB's emphasis on integration. In fact, these individuals were on the leading edge of deeply challenging themselves and the places within which their leadership was practiced to bring integrative mind, brain, and relationship to the center.

With integration at center, several domains of participants' experience were featured in their narratives. Interpersonal integration was at the core of leaders' development through grappling with organizational and systemic non-relationality and their own internal commitment to relational values, processes, and practices. The contrapuntal themes that highlighted these leaders' development often featured externally imposed non-relationality found in the

separate-self ideologies in dominant systems, which ran counter to their internally held relational values. RDT's informed my recognition and interpretation of these counterpoints. Specifically, this dialogically-based theory recognizes that internal tension can occur when external ontologies and epistemologies are imposed (Baxter, 2011; Baxter & Braithwaite, 2009; Suter, 2018).

Therefore, contrapuntal themes can arise between external and internal realms of experience. For example, personal authority/marginalization; relational/non-relational values and practices; autocracy/relationality, system rigidity/relationality. These themes were noted in several leaders' developmental stories. All of these leaders and consultants strove to bring more relationality into their leadership as well as the places within which they practiced.

In order to do this, other contrapuntal themes emerged which involved other domains of integration. For example, vertical integration was significant for leaders whose development focused on their connection between mind and body. For example, Daylen's development was inextricably linked to his embodiment and relational awareness. As he listened to and/or allowed his embodied wisdom to arise, his development found direction, which implored his leadership action. This also had implications for bi-lateral integration, where the logical, linear and rational left-hemisphere must be linked with right-hemispheric processing that receives information from the body and more holistic in its processing (Siegel, 2012b). For example, Luuk's development as a person and a leader was significantly impacted by his decades long practice for to integrate his sensing body with his rationality. Leaders, like Theodore, brought consciousness to understanding the implications of their own neurobiological activation as well as that of others as they practiced relationally integrative ways of leading.

Memory and state integration were both consciously and implicitly implicated in some participants' experience as well. The literature suggests that leaders are responsible to understand

the role that memory plays in their own, and others, perceptual biases, emotional tone, memory processing, mental models and response patterns (Goleman & Siegel, 2016; Pearce-McCall, 2008; Porges, 2017). Implicit and explicit memory plays a significant role in determining what states emerge with situations triggering specific neural networks and accompanying states of mind (i.e., perceptions, patterns of thinking, sensing, feeling). For example, Daylen's development was also a reflection of his integration of memories from the alienating and non-relational practices required in medical socialization, to becoming a global leader in relationally integrative ways of seeing, being, and doing.

In sum, most of these leaders' and consultants' development was multiple-layered and interconnected across domains of experience that were internally in relation across time. Their development was also relationally embedded and impacted by environments that were at times disparate and at others resonant. One of the threads that ran through all of the narratives, with the exception of Elliot, Charles, and, to a limited degree, Judy, was the presence of continuous conscious reflection. In addition, the principle of integration ran throughout these leaders' and consultants' contrapuntal themes, which propelled their development through time, in space, and place. This occurred as they intentionally fostered integration, or allowed the contrapuntal tension to evolve and transform.

IPNB and Leader Identity

From an IPNB perspective, an integrated identity is dynamic and self-organizing triad of mind, brain, and relationships that continuously and recursively intersect across time, in space, and place. This dynamic flow provides a flexible, ever-changing and adaptive, yet stable and energized sense of "who I am," moment by moment. (Siegel, 2017). As previously discussed, there are nine domains of integration, with identity being the final one. Originally called

transpiration, this domain has been renamed as Integration of Identity and refers to an outcome of integration across all the previous eight domains (Siegel, 2017). Integration of Identity exposes the essence of wellness: “This is the expansive feeling of being part of a much larger whole, a connection to the essence of being human and to all of humanity, to the precious rhythms of the global pulse of life ... at the heart of living a life of meaning and purpose” (Siegel & Pearce-McCall, 2009). As such, an integrated identity is not considered to be a developmental arrival point, nor bounded by a concept of a singular, separate-self. Rather, “identity is created as we interpret the sensory stream of the conduit of the mind, generating a sense of who we are in the world ... our self is truly a plural verb” (Siegel, 2017, pp. 322–323).

The Listening Steps and Identity

The first and second listening steps assisted me in understanding how, and/or if, IPNB influenced each participant’s identity. The first listening provided me with the leaders’ thoughts and perspectives about their leadership identities. These reflected their consciously acknowledged sense of who they were in the world of leadership, at the time of our conversation. As I made the interpretations of what they shared, I was fully aware that this was bounded by the confines of our brief time together; no one conversation could aspire to capture all of the complexities and nuances of these individual’s identities.

The second LG step offered a different and unique glimpse into these individuals’ multiple-voiced positioning as they shared their stories. This allowed me to experience these individuals’ positioning as they moved through their stories; it was as if I was able to touch into their non-consciously communicated, multiple-voiced aspects of their leadership identities. It is consistent with Bakhtin’s (1984) notion of polyphonic consciousness, where there are multiple voice’s from where “a story is told, a portrayal built, or information provided” (p. 7). These were

fluid voices, that revealed self as a *plural verb*, always forming and reforming. As such the voice poems communicate the movement of these leaders and consultants' positioning—where their “who I am as leader” was expressed moment by moment as they shared with stories. These poems trace *how* these individuals were positioned relationally within themselves and with other people. An integrated identity is relationally embedded and represented by a MWE-voice (Siegel, 2017).

This listening step impacted me in unexpected ways, influencing my mind, body, and relationship with these individuals and the topic as a whole. Given the significance this had during the analysis and interpretation of the narratives, I will reflexively provide comment where warranted and necessary. Of all the listening steps, this was most evocative of my emotions and embodied responses. These cued me to listen more deeply to my own response as well as to what was being said.

I discovered that there were differences among the leaders regarding their reflexivity about their leadership identities. Those who had consciously brought leadership and IPNB together tended to have a narrative describing their identity that was more nuanced and complex. These leaders also exemplified a capacity for more fluidity and flow between multiple expressions of their identity. For example, Jemma was conscious of the values that informed her leader identity, which were rooted in family, gender, place of origin, culture, and historical time. She linked this to her proclivity to “lead from behind.” However, Jemma was also aware of when and why her leader identity shifted into a more impassioned and direct style and had the capacity to do so consciously. At the other end of the continuum were less consciously integrative participants whose identities were less fluid and bounded by top-down constructs. These were the three leader and organizational consultants mentioned previously, whose identities were less

focused on integration. For example, their identities were dominated by top-down, constructor processes and were less reflexive than their counterparts. Their identities tended to be more static and linked to ideas about leadership, rather than being relationally responsive and reflective of integrative outcomes (flexible, adaptive, energized, and stable). In fact, when I took a wide-angled interpretive lens and reflected on the group of participants as a whole, a continuum of integrative attention and intention emerged. On one end of the continuum were individuals who did not consciously engage with integrative intentions and practices, and at the other end were highly intentionally integrative leaders. On a continuum of integration across key domains of integration, where one side represents no integrative attention and intention, these individuals would have had less awareness of themselves as knower and were primarily focused on the known. Given this, I will begin this interpretive discussion with the beginning end of the continuum where individuals with less integrative and dominantly constructed identities are represented.

Less Integrated

According to Siegel (2017) identity involves the stories we tell ourselves about who we are that are influenced by top-down cortical filters that are influenced by memory and shaped through relational experiences (with other people, the environment, culture, etc.). This top-down constructor,

can filter experience, create executive decisions on actions, and engage the with the world in ways that repeatedly shape what we are immersed in and even how we respond. These repeated experiences are often woven into a tale of our identity as we observe, witness, and narrate a story we've told over, and over, and over again about who we are. (Siegel, 2017, p. 140)

I will first explore those individuals whose identities were more significantly influenced by their top-down constructions of who they were. For example, their statements about themselves and other people did not have a reflexive quality. They frequently made conclusions that were

absolute and based on their ideas or theories, rather than having an openness to others subjectivity. These individuals were also less focused on relationally integrative practices. In addition, they tended to speak *about* people as well as their own internality, rather than engaging *with* them or *within* themselves

Traditionally Positioned Identities. Taking up the first position on the integrative identity continuum was Charles whose leader identity was more consistent with a traditional view of the natural born leader who has innate leadership traits and characteristics (Northouse, 2016). From this view, a leader is born not developed. Charles stated that other people, who had less fortune than he, could become leaders if they worked through their internalized “stereotype threat,” (a sense of inadequacy based on gender and racial stereotypes); however, he stated this was not true for him:

I’ve always tended to have a natural leadership type of, it appeals to me and people seem to be quite happy to let that happen and to follow that so I tended to be in school the head, you know, in the class, some formalized positions, but other times it was just—it was just a natural part. I never thought of myself as a follower.

Charles suggested that IPNB had assisted him to become more of who he was, rather than adding to his development and identity as a leader. Charles did not bring conscious reflection to his leader identity. He did not seek to become a leader, rather his identification as such happened when other’s followed him and “then you can say to yourself, I guess I’m leading there.” Charles provided some understanding that his privileged status as a white male, and secure attachment during childhood, contributed to this identity. He also stated, “I’ve got a certain amount of talent in the arts. I could do things that I was quite good at, maybe not the best but I was quite good. So there always was this sort of you are worthy type of thing in my life.” Charles’s leadership identity was constructed from his top-down ideas about himself (talents, abilities) as well as those he led (followers, people who like what he did).

Charles did not indicate he was conscious of his own role in constructing this identity, his voice poems were dominated by an **I-voice** that was prescriptive and active. The following voice poem follows his positioning during a consultation he had with an organization.

exercise that I did

I simply got

I bought

I stuck it on

I cut

I threw

I put

allowed them

letting the need for them

to help each other

I did

I just wrote

I saw

I think

I didn't

I led him

I facilitated

I didn't lead

I facilitated

my experience

your own understanding

to me

doesn't teach me

or lead me

I am not

encourages me

engages me

something I am

As indicated, Charles's leadership voice is expressed with an **I-voice** (bolded). This is an active voice that was not relationally situated, i.e., not responsive or impacted by the people in the group he was leading. He utilizes a *self-in-relation* (italicized) voice that situates his leadership in a traditional top-down position. I also coded these statements ("*allowed them; letting the need for them*") as a *distanced-you-in-relation-voice* (italicized and underlined) given he speaks *about* the people he is working with from a distanced relational position. His declarative voice was not made explicit, however it was present, voice was so distanced that Charles's self-position was not made explicit (for example, there is no pronoun describing his presence, however he is present as *the one who allowed* and *the one who let* the group member need each other. This suggests that Charles did not bring an integrative consciousness to his relational positioning in this situation. Charles was aware of what he knew but did not offer awareness about his role as the constructor of his identity. In contrast, an integrative consciousness requires awareness of the knower and the known. His identity, constructed by his ideas of leadership, were not relationally responsive, nor receptive to energy and information from bottom-up processes (i.e., sensations, emotions, interoceptive awareness). Siegel (2017) calls this conduit energy and information that

is “freer, more detailed, sensory-rich, bottom-up, living” (p. 141). From this perspective, an integrated identity involves both constructor and conduit processes that are embedded in mind, brain, and relationships.

Next on the continuum is Elliot. Elliot called himself a non-traditional leadership consultant because he focused on relationships, rather than finding solutions to problems. For example, he traced organizational leaders’ current challenges to early attachment patterns that he then showed were replicated in their present workplace. Unlike traditional consultants, Elliot stated he did not perform assessments and provide measured analyses. This resulted in some organizations finding his focus to be incompatible with their expectations. Despite these challenges, Elliot communicated a strong belief in his perspective and was committed to working from a neurobiological and developmental perspective.

Elliot was not identified with his roles, nor what others thought about him as a leader consultant. Rather, his identity was anchored in who he was, period. For example, he shared about a situation that arose where his views clashed with those of the administration at an organization where he worked. However, seeing no way to influence the closed system, Elliot decided to reconfigure his practice, which ran counter to what was expected. He made these changes subversively, without the administration’s knowledge and was unconcerned about the possible ramifications:

Yeah I mean a part of it is, you know, being-being old, and not necessarily needing the job, and also knowing how long the wheels would turn to get me out of there because I would get an attorney and talk about elder abuse and anything else. And they are so afraid of conflict, that they would probably back down.

The above quote, is representative of other statements Elliot made regarding his positional power. As a leader in his field and consultant, Elliot knows what he knows and is unconcerned about the consequences.

Many of Elliot's voice poems were dominated by a distanced-you-voice (underlined).

This voice often had a declarative quality to it. When he used an **I-voice** (bolded) it was all-knowing and prescriptive based on knowledge gained from prior observations and generalizations he integrated with his knowledge of the brain, and relationships. In the following voice poem Elliot describes his general approach with his consulting clients:

your relationship

with your family

your relationship

with your employees

feedback you're getting

what I'm looking for

get the person to have a memory

you know

once you get that

door that you can enter

you kind of

you kind of

hook your heart

I'm trying to think about

In this voice poem, Elliot speaks about consulting through a distanced-you-voice (underlined). He tells people what they are experiencing ("your relationship; with your family; your relationship; with your employees"). Like Charles, at one point he is so distanced his presence is implied ("get the person to have a memory"). The direction he takes is informed by his ideas about how a

leader's actions are impacted by their family relationships rather than the individual before him. His active **I-voice** (bolded) has a predetermined purposed that is informed by this idea, which is based on IPNB however, there is an absence of conscious reflection and relational responsiveness, which are cornerstones of integration. There are only two **I-voice** (bolded) lines in this poem (“**what I’m looking for;**” “**I’m trying to think about**”) that signaled Elliot’s positioning as a leader consultant who observes and theorizes. As evident in this voice poem, there was an absence of relationally situated voices (i.e., self-in-relation-voice; MWE-voice), which suggests that Elliot’s leadership identity is not embedded or expressed relationally.

Conflicted Leader Identity. Judy’s identity shifted between being a consultant or coach. She shared about her struggle to come to terms with what was required of her by each of these roles. For example, she described a conflicted situation that emerged in a consulting meeting where she struggled to determine how to intervene. As a coach, Judy felt more freedom to respond to emotions and relational processes. However, in this situation Judy was a consultant, which she determined was incompatible with deeper processing; yet the situation called for this:

As a consultant, you know, you have to have the answers, you need to problem solve, and I could definitely see that they were in a pretty scary place. And so ... and yet I had to take a step back. And I don’t ... I—I’ve told the story in various capacities but I’ve always shared that without the ... the exposure that I had to IPNB. I don’t think that would’ve happened.

In this situation, IPNB supported Judy to act in a way that considered what she and the two leaders needed to regulate their activated nervous systems and to repair the rupture that had happened in their relationship. Judy’s took the lead in the facilitation of repairing this once she connected with what she had learned through IPNB. Uncharacteristic of her usual consultant stance, Judy recognized that she and the leaders she was consulting were activated neurobiologically and needed to take a step back in order to regulate this activation. Although

Judy found this to be of enormous help, she did not see herself as and IPNB-informed consultant; rather, she utilized the framework in a patch-work manner; for example, in similar situations where emotions ran high and people became dysregulated.

The following voice poem reveals Judy's shifting voice as she navigates the roles of coach and consultant. Judy's conflicted identity is clear as she talks about her motivations to switch from consulting to coaching. However, when she identifies with one role and the associated expectations, she is unsettled when the situation calls for an alternative response. Unlike Elliot, Judy does not redefine these two roles in order to facilitate a more integrated identity, rather she remains conflicted:

I think

I got into coaching

I was tired

doing all the analytical work

having to solve all of the problems

if you didn't have all the right answers

you know

it fell on you

just being a coach

frustrating to me

answers that I could see

I understood

I moved into consulting

I would really move

I

I don't want to say

I've always

I think

I've always

I also approach it

we've got to get this done

I could sense

I could sense

I would do

my best to deliver

[wasn't acknowledging that there was]

BETWEEN US OR AMONG US

I'm supporting

I realize

I might've

I might've come across a bit harsh

I've got to help them see

you know

we have to do this done

I think before

a client experienced from me

you know

encouraging Judy

dictator comes in

she becomes nice again

oh and the dictator

you know

I don't think

I had

I mean

I think

I thought

I did

I think

I used

In this multiple-voiced poem, Judy's **I-voice** (bolded) is active, descriptive, and reflective. She sounds tired and, as I listened I felt a palpable sense of the responsibility and vulnerability she carried as a consultant (dong all the analytical work; having to solve all of the problems; if you didn't have all the right answer; it fell on you). Judy describes her position from a

distanced-you-voice (underlined), which suggests that she is distanced from her experience.

Through her double-voicedness, (double underlined), Judy communicates a reflective position.

She speaks through her imagined self's motivations ("I've got to help them see;" "we have to do this done"), with understanding. Judy then continues to use a double-voice (double underlined)

as speaks through an imagined client in the service of understanding what their experience of her back and forth positioning ("encouraging Judy; dictator comes in; she becomes nice again; oh,

and the dictator”). She observes herself from her client’s perspective, imagining what it would have been like to experience her back and forth between directiveness and a more relational response.

As I listened to her voice poem, I wondered: Who is Judy? I could not hear an integrated identity through her conflicted experience of her roles. Yet, as I listened carefully and closely, I heard her voice echoed in her **I-voice** and the *self-in-relation* (italicized) phrase: “*I could sense.*” I then recognized, she was there. I heard her in her experiencing **I-voice** (bolded) (i.e., “**I realize;**” “**I might have**”); her thinking **I-voice** (bolded) (i.e., “**I think, I don’t think**”), her active **I-voice** (bolded) (i.e., “**I did;**” “**I used**”). She was there.

Integrated Identities

From an IPNB perspective, and integrated identity is an outcome of integration across all of the previous eight domains of integration (Siegel, 2017). Consciousness is the foundational domain that “involves the experience of knowing and the awareness of the known” (Siegel, 2012b, p. 41–4). It requires the capacity for awareness, which involves receptivity and presence. Consciousness is an expression of mind, is ever present and fluid, shifting in response to the individual’s internal neurobiological and external relational environments, and shaped through attention and intention.

Those leaders who brought consciousness to their identities had a reflexive quality, bringing both an awareness to themselves as both knower and known. They had a capacity to observe, understand, and respond to the different domains of their own and others experiences, bringing an intention to foster integration, in the service of cultivating wellness. For example, these leaders were reflexive in their descriptions of themselves.

One of the metaphors that assists with understanding the flow and movement of consciousness is Siegel's (2012b, 2017, 2018) Plane of Possibility where neural firing and subjective experience intersect across time (x axis), probability (y-axis) and diversity (z axis). This three-dimensional model, suggests that consciousness shifts from an open plane (zero probability and complete openness) where all is possible, to plateaus that are primed by previous experiences (memory) and patterned neural firing patterns (creating neurobiological underpinnings of traits through to states), to peaks of activation where possibilities narrow and probabilities emerge and become actualities. The energy and information of mind shifts and flows continually across the axes. The neurological plateaus involve bottom-up (from body to brain) and top-down (from brain to body; from cortical to sub-cortical regions within the brain) circuits. The capacity for, and practice of, awareness of this energy and information flow (across time, space, place) integrates consciousness. Siegel (2017; 2018) states this process can be facilitated and developed through mindsight and mindfulness practices. From this perspective, identity arises from these plateaus, which are formed and shaped by past experiences and can be intentionally altered through conscious awareness and experience. The accompanying internal mental models and neurological top-down constructive mechanisms cohere into "what we believe we are" (Siegel, 2017, p. 40).

Moving further down the continuum, are the integrated leaders whose identities emerged within their relational embeddedness with others. According to Siegel (2017) an integrated identity requires an openness to the bottom-up conduit streams of energy and information in addition to constructor processes. Given integration of consciousness is foundational, I have organized this section to represent these leaders' increasing levels of consciousness about, and engagement with, the intersection between the primes of minds, embodied brain, and

relationships. In addition, different leaders highlighted different domains of integration, which will be discussed.

Situational Leaders. Further down the continuum are Camille and Penny who were both called into leadership positions because of opportunity, interest, and community need. Neither consciously sought out leadership roles, however they each brought skills and capacities that contributed to the formation of the community-based IPNB organization. Camille was a therapist who wished to bring IPNB scholars to her local community. During her time on the board, Camille identified herself as a co-leader. Her identity was relationally woven together with her colleagues. Once she left the organization, she did not return to an organizational leadership role although she continued to see herself as a leader who offered groups and programs to clients. This suggested that Camille's leadership identity was linked to her initiative, practices, and skills in bringing valued services to people.

Camille's leadership voice was relationally integrated. When she spoke about herself as a leader her MWE-voice dominated her narrative.

WE WERE IN CONTACT

BOTH OF US

WE DID

you know

WE WERE

I mean

WE COULDN'T HAVE CREATED

WE WOULD

WE TALKED

WE COMMUNICATED

WITH EACH OTHER

you know

OUR KIDS

WE HAVE

WE JUST KIND OF

WE WOULD

THE THREE OF US

back to your question

WE HAD A LOT OF AMBITIOUS PEOPLE

you know

WE STARTED THINKING

WE STARTED DOING

WE REALIZED

WE NEED

WE WERE BRINGING PEOPLE

you know

WE NEEDED

WE REALIZED

WE NEED TO GET INFORMATION

you know

people have different expertise

WE WERE ONE BIG BODY

right?

In this voice poem, Camille's leadership voice is a MWE-VOICE (capitalized). This MWE-LEADERSHIP-VOICE communicates, assesses, needs, responds, acts, and coheres (i.e., "WE WERE ONE BIG BODY"). Her relationally integrated leadership identity was reflected throughout her narrative. Camille did not identify herself as a leader who was separate from others; rather, her leadership identity was inextricably woven in her relationships with others.

Penny's pathway was different. Prior to encountering this leadership group, she was a corporate leader, who upon encountering IPNB, and then joining the collaborative organization, experienced a transformation in her leader identity. She had identified herself as an autocratic leader who was capable of decisive action. However, upon encountering this group's collaborative style, Penny's worldview and her leadership identity were shaken up.

Yeah the values were very different. I mean I-I think, and I've gone through a lot of training in group also, and the idea that nobody is um, you don't give up on anybody. You don't, you know, I mean you make pragmatic decisions in the corporate world to obtain an end, right? And sometimes it's very ruthless and so yes the values are totally different.

Penny didn't immediately buy in to the relational values of the organization, however her pragmatic mind was hooked when she learned more about the science of IPNB: "I am a very intuitive person but I could never really trust it until I had the underpinning of the science."

Penny's leadership identity was transformed through this new knowledge and her experiences on the board. However, this transformation reached even farther:

it's impacted everything so it's really hard to carve out a piece, and you know, this is really a passion that changed my life. That made me become a therapist that you know like, I totally different life I would have had if I hadn't started getting excited about these ideas and the potential that these sort of ideas opened up for me.

Over time, Penny was able to integrate her capacity and talent for pragmatism and providing direction, with being more relationally aware and considerate when doing so. Penny's narrative

voice poems communicate how she shifted between an **I-voice** (bolded) that was differentiated, a *self-in-relation-voice* (italicized) and a MWE-VOICE (capitalized) when she is positioned as a co-leader:

I was so proud

when I left the presidency

I left the board

when I left the presidency

WE HAD MONEY IN THE BANK

I felt so good

You know

OUR BY-LAWS

WE HAD A GOOD WEBSITE

I mean

for me personally

I had a skill they didn't have

They recruited me for those skills

WE NEED THIS

it wasn't like I decided

I would be president

I think

I was still

I might not

when I became president

I was still in school

waiting to get my licensure

they were

they were pulling me into leadership

Penny's *self-in-relation-voice* (italicized) communicates a differentiated I-position, that is relationally linked but not yet fully integrated within the group. She references her colleagues in a manner that suggests she is differentiated from them. Whereas her MWE-VOICE (capitalized) is both differentiated and relationally linked in a way that suggests movement in time, space, and place together. Through this poem it is possible to see Penny's multi-voiced leadership identity shifts between her more separated-self and her relationally integrated-self that emerged through her experience in this organization and exposure to IPNB.

Relational Leaders. All of the more integrative participants I spoke to referenced relationships as being central to their practice and orientation as leaders. In fact, for many, relationally-centered values and preferred practices often preceded their discovery of IPNB. As discussed, prior to discovering IPNB many leaders described a disconnect and, at times, deep disturbance with non-relational practices in their organizations and larger systems. For example, Daylen and Theodore were disturbed by medicine's non-relationality and lack of concern for the subjective experience of those they served. Tina and Jemma struggled during their academic training in psychology and social work, finding what they were learning lacked a deeper understanding of human experience. Kent sought to transform the way students were seen and treated within his workplace and the larger school system because he was similarly disturbed by the behavioral focus and punitive approaches to the complex realities youth were facing.

Some of the leaders I spoke with openly identified themselves as relational leaders.

Their narratives highlighted the components of Interpersonal Integration where relationships that are characterized by the acronym FACES (flexible, adaptive, coherent, energized and stable) (Siegel, 2020). By far, this was the most prevalent domain featured in the narratives of participants, with most referencing relationships as being central to their practice and orientation as leaders. In fact, the leaders presented here had relationally-centered values and practices that often preceded their discovery of IPNB. The following discussion features those participants who were consciously engaged and identified as relationally integrative leaders.

Geoffrey was a values-based, relational leader who questioned his leadership capacity within the systems of care he wished to transform. He was deeply committed to facilitating change in a system he considered to be damaging to the children and families it was supposed to serve. However, when he encountered a lack of openness to his relationally-based approach, Geoffrey's leadership identity wavered.

I used the word vision

I'm not sure

WHO WE ARE...

TO ONE ANOTHER

I think

for me

you know

WHO WE CAN BE TO ONE ANOTHER

for me the question

you know

I got this idea

you know

HOW DO WE CREATE

VISION FOR WHO WE ARE

For Geoffrey, leadership identity was linked his impact and capacity to effect change. This was called into question when he tried to engage with a judge who was entrenched in a rigid (“calcified”) system. Geoffrey’s initial hope was to find a way to engage this individual who was a key player in determining outcomes for children and families who were struggling. In the above voice poem, Geoffrey vacillates between a reflexive **I-voice** (bolded) that questions and then reflects upon his leadership identity crisis. Still anchored in a sense of MWE (capitalized), Geoffrey questions relationships (“WHO WE ARE ... TO ONE ANOTHER”) and what relationally integrated vision can be created. This poem was situated within an internal process where Geoffrey was questioning his capacity to lead given the lack of response from this judge and the system he represented. Geoffrey’s identity as a leader was linked to his capacity to facilitate meaningful change.

As mentioned in the previous section on development, as our conversation went on, Geoffrey was able to connect with experiences where he was able to effect change. This occurred when he resonated with the word “catalyst.” After he recognized this, Geoffrey was able to connect with the many projects and initiatives he had led as director of an agency dedicated to services for children and families. He also recollected times when he supported others to break away from his agency to develop other organizations that provided services with an ethic of care.

Well I

I’m still appreciating that word you used

you know

when we think about

for me that's IPNB

you know

I'm thinking of

you know

what you're naming

I see all that rigidity and calcification

I can beat

my head against the brick wall

my head really hurts

I can follow

you know

others and be with others

not just for me but for the community

you know

WE'RE FINDING WAYS

WITH ONE ANOTHER

that's what I see [name of colleague] is doing

I think

WE'RE DOING SOME OF THAT

Geoffrey's multiple-voiced poem communicates his reflexive movement as he connects with his relationally integrated leader identity, (represented by a capitalized MWE-VOICE). He is not invested in being the leader, he can follow if it serves the larger good ("*not just for me but for the*

community”). Geoffrey’s leadership voice is relationally flexible and adaptive. When I read his MWE-VOICED words, “WE’RE FINDING WAYS; WITH ONE ANOTHER” (capitalized), an image of a relationally integrative dance came to mind, where no one person is leader. Rather, the musical vision is the center, and the ever-emerging leadership dance shared through attunement and response.

Theodore was dedicated to relational practice since the beginning of his career as a physician and now, as a leadership scholar and consultant. He shared: “I got my start in terms of communication and relationships, being interested in patient-clinician partnership. [The] patient-clinician relationship. And how to make a trust to the relationship.” When he discovered IPNB it resonated with his identification as a relational practitioner:

So it wasn’t always knowing that it was an interpersonal neurobiology point of view. To me the importance of interpersonal neurobiology is that it shows how we’re quite literally activating each other’s brain by the way we relate to each other in every moment. And so knowing about that, we can be intentional about the quality of relationships and try to show up as a friend and not as a foe to meant to be, trying to be careful about it and what happens in the amygdala and all kinds of other neurons and all these other mechanisms. To me that provided the neurobiological account of what was going on in relationships and it kind of at deeper level, physiologic description of what I’ve already been doing.

Relationally centered care has touched every corner of Theodore’s work, from the micro (his relationships with patients), to meso (organizations), and macro (culture of medicine).

I started paying attention to the organizational environment in which both the care and the education on communication and relationship skills were taking place. There’s like, a-ha! A part of me but not paying the attention to this ... the idea of relationship-centered in administration backstage to support relationships at the front stage because the thing is kind of the perfect idea for me. And that became the focus of all my work, almost all my work since then.

He shared how bringing IPNB’s relational neuroscience to understanding relationships in healthcare had enhanced his ability to communicate and engage his physician colleagues and healthcare leaders. Theodore also focused on care of the physician and shared how, at times,

healthcare leaders have to disrupt the status quo in order to promote relationally-centered care. Theodore stated that this can leave physician's feeling alone and vulnerable. Utilizing an attachment lens, Theodore strongly advised that healthcare leaders need to find relationships where they can meet their own attachment needs. In addition he urged leaders to consider the attachment needs of employees, which are particularly significant during times of workplace change.

Theodore's voice poems reflected his interpersonally integrative identity. His voice was relationally situated and reflected the different leadership positions he held. For example, in this first voice poem, Theodore described a conflict that had arisen between him and his colleagues when he was brought in to consult about a new healthcare initiative. What I found notable in this poem is Theodore's voice, which is consistent in its relationality (dominantly a *self-in-relation-voice*) even as he faced disconnection and challenge.

WE WERE GOING TO TRY

I was

WE CAN BE AN ALLY

WE'LL

WE'LL

WE'LL HELP YOU WITH IT

WE ARE A GRASSROOTS LEVEL

WE ARE TRYING TO ORGANIZE

I'll just help get all the docs

SUPPORT YOUR PART OF THE ORGANIZATIONS

WE HAD NEVER HAD A CONVERSATION

DIRECTLY WITH EACH OTHER

people used to be my friends

they are feeling like enemies

I went to a particular cardiologist

I said you know,

you and I have worked together

now I find

a lot of tension between us

Can we talk about it?

I feel really bad

can we talk?

I heard his concerns

I was able to respond to them

show I was not trying to threaten

WE BECAME REALLY GOOD ALLIES

I had a similar meeting with somebody

I had a similar kind of conversation with him

where I

I get the idea that you are not very happy

THAT WE ARE TALKING ABOUT

Could you just tell me what is going on?

I could address his fears

chance for him to see me

my organization

SEE THE POTENTIAL FOR US TO BE ALLIES

stop seeing me as a threat.

they were seeing me as a threat

They could not read anything I wrote,

or hear anything I said

Theodore's voice poem indicates his relationally-situated leadership identity. However, it also reveals the multiple-voiced layeredness of the more integrative leaders. For example, Theodore not only spoke with a MWE-VOICE (capitalized), but also with a *MWE-IN-RELATION VOICE* (italics and capitalized). In other words, his integrated identity (MWE) was also in relation with the people he/they worked with. He was not a lone actor nor a solo communicator. His MWE-leader identity sees, intervenes, envisions, and organizes. Theodore's *self-in-relation-voice* communicates a more differentiated positioning; however, as mentioned, this indicates his relational capacity and commitment to finding a way to work through conflict. This voice listens, speaks, and is responsive. He also uses a *double-self-in-relation-voice* (double underlined and italicized) (i.e., "*I get the idea that you are not very happy*") when he communicates through a story where he is positioned and speaks through a self-in-relationship. This indicates how deeply Theodore's leadership identity is relationally embedded. Throughout his entire narrative, Theodore did not refer to himself as a singular, separated-self.

Jemma's leadership identity encompassed kindness, compassion, and relationality. She identified as being an invitational leader who preferred to lead with "open hands" rather than "charging head on, on a horse," and "following two steps behind and shining a light on the path." Jemma admitted, however, that this position shifted when she felt passionate about an issue. She

identified with being a supportive and transformational leader that held relationships central to her practice.

Jemma has held formal leadership positions in health services; however, like many of her IPNB counterparts, she did not seek leadership for leadership's sake. She led because she was committed to bringing relational values and practices into healthcare. Her leadership was absent of ego:

I don't know, what my leadership is, I never really thought of myself in that role if that makes any sense [laughs]. I just wanted to be someone with integrity and authenticity and to share the things I was learning in a way that others could benefit and um, I guess those are my goals.

When Jemma spoke it was with humility and grace yet her voice poems featured an **I-voice** (bolded) that was clear and strong, yet not in a dominating way; rather it expressed a relationally integrated identity that flowed between her multiple-voiced positions.

I

I think

you know

IF WE'RE INVITED

CONVERSATION WITH EACH OTHER

I mean

SOMEONE WHO HEARD US SPEAK

AND ASKED US

WE'D BE INTERESTED

you know

you know

I probably shouldn't talk

you know

WE HAVE

WORK WITH US

WE'VE DONE A LOT WITH

you know

you know

WORK WITH US

INVITE US TO COME TO THEIR INSTITUTION

I don't know if that's answering

I guess

I think

WE PUT OUT

WHAT WE HAVE FOUND

IN OUR OWN LIVES

INVITE US INTO THEIR LIVES

I would say

HOW WE LEAD

WE SAY HAS RESONANCE WITH THEM

THEY'RE OFTEN INVITING US

Like Theodore, I was struck by the multiple-layered relationality of Jemma's voice. Her leadership voice reveals an integrated MWE-VOICE (capitalized). Her differentiated identity is not subsumed by the relationship she has with her leadership partner. There was an added relational complexity, spoken through her *MWE-VOICE-IN-RELATION* (capitalization and

italicized) (i.e., “*INVITE US INTO THEIR LIVES;*” “*WE SAY HAS RESONANCE WITH THEM*”). This suggested that Jemma’s leadership identity was multiple-layered in its relationality. In addition, her *you-voice* (“*you know*”) was connecting, drawing me into her narrative (underlined and italicized).

Although he did not utilize IPNB language, Luuk shared at length about his identity as an embodied leader in ways that were reflective of integration across several domains. I was struck by Luuk’s discovery of, and engagement with, different streams of knowing, which emerged from his conscious engagement with his body and mind. His integration of consciousness was not purposefully sought, rather it emerged as he became more embodied and attuned relationally. He did not seek integration as a predetermined destination, rather he discovered it through his efforts to integrate his rationality with his sensations.

when I

when I started practicing Tai chi

I

difficult for me

from my physical perspective

took me a lot of energy

I felt it could

bring me integration

I could feel

in my body

I use this word

I did not use

I also...

my

my feet came back on the earth

I was more grounded

Tai Chi brought me

I was so happy

Luuk's voice poem communicates his transformation from being dominated by his rationality to feeling his grounded-ness through his body. His integrative development was predominantly internal where Luuk moved into relationship with his body as indicated by the *self-in-relation-voice* (italicized). Of note, Luuk's self -in-relation voice appears in reference to his Martial arts practice ("*Tai Chi brought me*"). I chose to code this as such because Luuk's voice was clearly relational, in this case with his practice and his body. His practice was alive and participatory and it brought him to happiness.

The way Luuk portrayed his internal and relational transformation reflected his integration of consciousness. Specifically, as knower, Luuk was able to intentionally shift his attention from his rational mind to his body (bilateral and vertical integration), and developed relational capacities (intuition, sensing, feeling) that are necessary for Interpersonal Integration. Of all the participants I spoke with, Luuk's conscious awareness of himself as embodied knower was primary in his development and identity as a leader. I was stuck by how exquisitely attuned Luuk was to his internality, and the unfolding transformational process that emerged.

Highly Integrated Leaders. Kent identified himself as a clinical leader in a school for youth who struggled to manage in the regular system because of mental and behavioral challenges. Formally, he was a school psychologist, however his leadership emerged through his

willingness to be “in the trenches,” addressing crises and challenging situations. This earned Kent the respect and trust of the administration and teachers, who called on him with regularity to intervene:

a lot of that comes from constant IPNB perspective, because they figure out how I can help sort it out. Mostly it works, I don't know, 90% or something like that. Pretty high. So it becomes in the school, in the culture of any school that you have to be the expert in anything you have to earn your credibility and there is no way to earn your credibility other than like doing it and you have to be jumping into the middle of something that everybody is terrified about and have it come out okay.

Kent was clearly a values-based leader who was interested in the wellness of the people he worked with. He also identified with servant leadership and stated that he prefers “leading from behind.” Kent is also an author who has consulted with leaders in school systems. He has also done speaking engagement in the US and abroad. However, he was far more identified with leading from the front line:

that looks good for a while and you know thinking and hoping that changes things, but kind of for me it's more than that, and the trenches and actually doing the work rather than talking about doing the work is, I find much more effective cause part of that is I'm there so I can see the effect um, but when you are lecturing to groups of people you kind of throw this stuff out there and you don't know what is going to happen next, you know, it's just sort of gone and you move onto the next event. I guess there is a lot of fame and fortune in that kind of stuff, seems like there is for some people but it just doesn't seem, I don't know, I don't, it's hard for me to see the impact but if you are there with teachers and students day to day and you come back more than once, and they you know you can see things move ahead. But that's small and much more challenging because if it's not going well, people tell you.

Kent reflected on the value of relationship and being a leader who is leading from being closely connected in community. His leadership identity is relationally embedded where immediate feedback continually informs his actions. Kent noted that speaking and teaching to large audiences does not provide the same relational connection where he is engaged with uncertainty and unpredictability. He sees this as more challenging, but it is more congruent with his leader identity. In addition to his front line clinical and leadership work in the school system, Kent was

co-leader of a collaborative psychology practice, where he led from a relationally-attuned perspective. For example, he shared a story about a conflict that arose with his colleagues and how his understanding about the neurobiology of threat and safety assisted with his response. Kent realized that the dynamic between individuals who were opposed to the change was fueled by feelings of threat. He then decided to take action in a manner that addressed the underlying fear, rather than continuing to try to convince or change his colleagues response.

Stating that “IPNB is a part of my identity” Kent shared that IPNB has impacted all areas of his life including his identity:

you know

part of my identity

you know

I’m not talking about

I’m trying to think

when my friends are talking

you know

I’ll bring this stuff up

I’m thinking about

my own grandkids

you get more personal

my son and daughter

You know

I can

you know

I'm coming from

you know

I don't know

I just think about it

part of me

seems to me

I see

I remember

talking with him

you know

I can kind of

I said

I think

I think

my brain

I

I'm using with different things

you know

I

you know

watching your own process inside

Kent brought an IPNB-informed consciousness to all of his relationships, including those that were personal. His **I-voice** (bolded) is reflective (“**I remember;**” “**I can kind of;**” “**I think**”) and

active (“**I’m using with different things**”). An IPNB lens also informs his relationship within himself; he takes an observer stance (“watching your own process inside”) communicated with a distanced-you-voice that facilitates his reflexivity. In another part of our conversation, Kent shared that he has integrated an IPNB lens to such a degree he struggles to “separate it out” from who he is. Additionally, he brings it into his relationships with his friends and family as communicated by his *self-in-relation-voice*, through an IPNB-informed lens (“**I’m trying to think, when my friends are talking**”).

Tina is also a highly integrative leader who has brought consciousness to her role as director of an IPNB-based clinic and her relationships with the clinicians who work there. In our conversation, Tina was reflexive, holding awareness of herself as both knower and known. This positioning was key in her development and identity as a leader. In addition, IPNB guided not only the formation and functioning of the organization she started, but also Tina’s understanding of her leadership in relation to the individuals, teams, and integrative infrastructure that they all constantly co-constructed and reconstructed in response to emergent needs and situations. She viewed herself as a collaborative leader who was committed to fostering integration across all levels of the organization as well as within her role.

As a leader, Tina did not lose sight of herself as a person. She was able to establish and maintain personal connections with the clinicians who worked at the center. She shared how the principle of integration assisted her in doing so: “I just see myself as the leader as having differentiated roles as a leader that has to be functionally linked. So, you know I have friendships with many of my team.” Tina shared examples of times when her care for her employees during times of personal crises took precedence and she, along with others from the center, rallied around their colleagues in order to provide emotional and material support. In fact, at the time of

our interview Tina was planning to take a step back from her role in order to draw less of an income so that others could have adequate earnings given the downturn in referrals because of COVID. She was also committed to her team's growth and development. As a leader, Tina walked her talk.

Although Tina identified as being a collaborative leader she recognized there were times she needed to take a more directive role. However, she strove to do so from a relational perspective where she honored differences among her team:

There are definitely times where I have to call it, and I have to say, yeah we are not going to go that way, and I make the call. Like a parent does sometimes ... I feel like it's better for my team to have an experience or it's the way I am thinking it should go, is really just a preference and it's not essential to who we are. I want to empower them to um to grow and handle it how they want to handle it. And I'll be honest, that's really hard for me. I can be a control freak.

As indicated earlier, she was consciously aware about her own propensity for control and spoke about her openness to grow and learn as a leader. She described how challenging this was for her because this required her to be more differentiated from her team.

I have strong preferences

how I think things should be

I'm super conscientious

I have high expectations

I don't want to be

I want to be a conscientious leader

I'm making sure my people

I'm thinking about them

I'm making sure my people

I'm thinking about them

I'm thinking about the details

I

I really want them

personal journey for me

I don't

I don't need

I definitely have made mistakes

learning process for me

I've

I've

I've also even

I guess

I think

you know

I've had to fire people

one thing you have to know about me too Lynn

I tend to be very conflicted avoidant

helped served me

it's made me

made me

you know

once I moved into this leadership position

I think just as a parent

I think

I FEEL SO PROTECTIVE OF OUR TEAM

WHAT WE'VE BUILT

WE HAVE A REALLY GOOD FRIEND

the longer you let them stay

undermines the trust of your team

your team is thinking

SHE IS NOT TAKING CARE OF US

Tina's multiple-voiced poem weaves back and forth between a reflexive **I-voice** (bolded), a *self-in-relation-voice* (italicized), and, similar to other highly interpersonally integrated leaders a MWE-VOICE (capitalized) that is layered. For example, she uses a *MWE-IN-RELATION-VOICE* (capitalized and italicized) where the differentiated and linked identities of Tina and her team are present (i.e., "*WHAT WE'VE BUILT*;" "*WE HAVE A REALLY GOOD FRIEND*"). When Tina references her leadership within the Center, she utilizes a MWE-VOICE (capitalized) rather than an **I-voice** (bolded), indicating that her leadership is relationally embedded. In addition, she speaks from an integrated identity where she is both differentiated as a leader and part of the team as well (i.e., "*I FEEL SO PROTECTIVE OF OUR TEAM*"). She does not lead from a separated-self; rather, her differentiated experience is both in relationship with, and relationally embedded with her team at the same time. As the leader, Tina's had held the counterpoints of a control state and collaborative state in consciousness as she has navigated her positioning as leader. It is clear that IPNB's notion of integration informed her process as she endeavoured to facilitate a caring and safe organizational culture, where her employees are honored for their differences.

The literature suggests that leaders have a responsibility to monitor and modify the ever-changing states of the organization and larger contexts within which it is embedded (Siegel & Pearce-McCall, 2009). Tina spoke to this when she discussed her differentiated responsibility as the leader:

My leadership has required me to, and this is a metaphor, sort of remake the map over and over and over so I'm constantly having to almost think in terms of seasons like fall, spring, and summer. As like three seasons of the year, and I'm like okay where are we right now, what are the needs in our community what are the needs of our staff. Where are we going with this, do we want to innovate more or do we want to just get really good at what we are doing? So always asking those kinds of reflective questions but constantly revising our map ... I'm the founder and I'm the executive director so I feel like it's my job, almost in a way to be almost in a way the attachment figure where the people, where my staff all feel safe, seen, soothed, and secure knowing that if they have a need I'm going to show up or them and I got their back. So they feel safe to innovate and to show up for their clients.

As the founder and director, Tina's identity was as an attachment figure for her staff, as well as map-maker that is responsive to the organizational and community needs. She recognized this as essential to the health and well-being of her staff, providing fertile ground for innovation within their center and the community at large. Her positioning reflected the flexibility and adaptability of an integrated state, which is coherent, energized, and stable.

Finally, Tina spoke about her leadership vision in the following voice poem:

I like

I need

I don't

I don't ever want to be

I want to be the kind of leader

I want people

who are on my team

who can challenge me

who can help me

differently than I can

on my own

Through this poem, Tina communicates a relational openness and an identity that continually evolves. She is willing and desiring of being challenged as a person and within her role. As I listened to Tina my mind turned to Open Plane of Possibility. I recognized how her consciousness and relational action moved from plateau (i.e., tendencies for control; conflict avoidance) and peak (i.e., actions she took, decisions she made) to the open plane and possibility. This required her continuous engagement with multiple domains (consciousness, interpersonal, temporal, memory, state, bilateral and vertical) of integration.

Taking up the final position on the integrative continuum is Daylen. Along with Tina and Kent, his development as a professional, leader, and person has been inextricably woven with the principles and integrative domains of IPNB. Daylen's leadership emerged from his life-long commitment to bringing the science of mind, brain, and relationships to the domains of human experience. This evolved since his initial crises about the non-relationality of the medical system though to present time where he holds several formal leadership positions and is globally known as a scholar and thought leader in the fields of mental health, human development, and leadership. Despite this, Daylen did not identify himself as a leader. It was as if this description had little relevance to his identity. Rather, his leadership was an active and embodied calling that he heeded time and again.

From the beginning of his professional life, Daylen had pursued his truth, which often ran counter to dominant views. Therefore, his development and identity were shaped by externally

imposed constraining factors and his response, which seemed to come from deep within. For example, Daylen shared the following story from his medical training:

I started to get a lot of pushback from people above me, I don't really exactly call them mentors. They were more like the senior faculty governing my progress in the tenure track at the university, whatever you call them ... And they said, no no, there's no future for you in the relational science you should study a disease or a medication because that's where the money comes from, I said but you know that's all about disease but I wanted to study wellness. And they go, why would you study wellness, there's no money in that. And so I'm not really interested in the money, I'm interested in the knowledge. And they go well, that's not how you get tenure.

Daylen encountered messages like this throughout his career. In response, he became clearer and more active in his pursuit of a way of seeing, being, and doing that honored people's subjectivity and the power of relationships across all domains of lived experience.

The following short voice poem summarizes Daylen's leadership identity. It carries the essence of an integrated identity, where consciousness and embodied action are embedded relationally. Daylen listens inwardly and outwardly, receives, and acts. His MWE-VOICED (capitalized) invitation at the end of the poem is relational call to all.

I say all of this

you know

I guess the leadership call

[is a call to truth]

how can you stand up

you know

I think dropping into knowing

WHAT WE NEED TO DO

Implications

IPNB introduces a different lens for leaders' identity, which challenges traditional notions of the leader who is all knowing. An integrating consciousness requires the awareness of the known and the knower (Siegel, 2017). This suggests that leaders and leader consultants need to exercise a reflexive capacity that recognizes their own top-down constructor processes (peaks and plateaus) that shape their identities. Furthermore, an integrative perspective requires leaders be open to bottom-up processes that facilitate new ways of seeing and being that can challenge the notion of a fixed identity (Siegel, 2017).

As indicated, the leaders and consultants I spoke to were varied in their integrative consciousness with the three consultants mentioned at the beginning of the continuum communicating the least reflexivity. They communicated little awareness of their integrative impact on others. These three leader consultants were more identified with, or defined by, their positions and the associated expectations they experienced. These individuals tended to adhere to a separate-self model, where they talked *about* the leaders and organizations they worked with rather than describing the relationships they had *with* them. Their voice poems were dominated by an I-voice that signified separation from others, in contrast with the more integrative leaders' whose I-voice was descriptive and reflective. They spoke about others using a distanced-you-voice and a we-voice that was prescriptive and declarative and identified themselves as expert knowers who were tasked to find solutions to the problems that were brought to them. IPNB informed the way they did this work, however it did not consistently inform their development nor identities

As I reflected on these three participants several implications arose. Given all three were consultants it is possible that the difference between a consultant role and a leadership role

accounted, at least in part, for the variation. Judy highlighted this in her narrative when she reflected on IPNB's suitability to a coaching role rather than a consultant role. She explained how, as a consultant, she bore the expectation that she was coming into an organization to address and resolve problems. As a result, she struggled to integrate IPNB's relational foundations, which she attributed to the longer-term coaching relationship that could also entertain leaders' deeper (i.e., internal) challenges. Elliot also reflected on this when he discussed being an untraditional consultant who often didn't meet the expectations of those who hired him. He shared how he did not perform diagnostic tools, which many organizations expected and his focus on relationships was unexpected and, at times, rejected. Charles did not reflect on the relationality of his work with others although he focused on promoting integration among teams and the groups he worked with through activities. All three seemed to adopt a more traditionally top-down, identity where their expertise and skills were called upon to assist others.

However, there were three other consultants who embraced integrative ways of being and acting. Luuk offered a helpful reflection on his practice when he stated that he has been seen by those who hire him as a consultant to be an "organizational therapist." He embraced this difference and chose to practice from a more integrated stance. However, this was not without financial consequences as he had been very successful at assessing, measuring, and reporting recommendations for change. This suggests that bringing a holistic and integrative approach to leadership consulting work may be met with ideological and practical challenges. However, Theodore and Jemma's experience provided me with inspiration and hope that it is possible to bring IPNB to consulting practices. Their consulting was intentional in bringing a relational perspective to medicine. This is contrasted with the less integrative leaders, who were called upon to do general or non-relationally specific leadership consulting. In other words, perhaps one

of the differences between the less and more integrated consultants rests in their purpose, intention, and reason for being hired. What is clear is that the three more integrative consultants stayed true to their relationally-situated identities while navigating the dominant non-relational culture of the organizations with whom they worked.

The remaining participants, all leaders, brought consciousness to their identities, which were multiple voiced. These leaders spoke frequently with an integrated MWE-voice, which signified the relationally embedded nature of their leadership identity. They had the capacity to differentiate their identities as leaders from those they led, yet their identities were also linked with others. Interestingly, although many of these leaders I spoke to held official leadership positions they did not identify themselves by their titles or other accolades. Instead, their identities were associated with the way they thought, practiced, and were in relation to and with other people. Many of these leaders were driven by deeply held values that compelled them to act and sought out leadership because of these values. These were unassuming individuals who were more focused on the integrative task at hand than defining themselves as leaders or seeking leadership for leadership sake. These were leaders who were change agents and identified more with facilitating others' capacities and strengths than being out front and looked up to. In fact, none of the leaders I spoke to positioned themselves traditionally, i.e., above, in charge, or part of a leader-follower construction. These leaders were intentional in bringing an integrative lens to their work as well as their development and identities. Their leader identities were not static but constantly in movement and emergent as they interacted with those they led. In addition, they were changed in as much as they were agents of change.

Organizational Implications and Beyond

The second research question involves understanding the implications IPNB has at the organizational level. As I listened to the participants' organizational stories, it became apparent that there was a continuum of IPNB uptake and engagement. Therefore, this section will be presented from the most IPNB-considered and integrated teams, organizations, and systems to the least. At the end of this section I will offer a brief discussion that features key highlights that illuminate the research question.

The Importance of Organizational Integration: Daylen

Although Daylen did not situate his leadership with an organizational context, he offered reflections on systemic change and the process through which IPNB-informed leaders can facilitate integrative movement. Specifically, Daylen commented that there is limited discussion of energy in leadership and organizational literature, yet he believed this is central to understanding the essence of leading change in systems:

It's a rare person that actually talks about energy, and it's a rare person that talks about integration, even though from my point of view, since ... the first presentation in interpersonal neurobiology, I said ... that energy is what the mind emerges from and integration is what—a healthy mind is cultivating so I had no problem saying this is what interpersonal neurobiology says but it's not what many, or any of the authors of interpersonal neurobiology really write about.

Daylen went on to explain that integration is fundamental to understanding well-being at all levels of complex systems, “whether you are talking about making sense of your individual life or neural networks or group behavior, or whatever; even the ecological challenges of what’s happening on the planet now.” He suggested that in order to tap into the necessary integrative potential for systems change, leaders need to have the capacity for “systems sensing,” a term he attributed to Peter Senge:

And so, so system sensing, I think is actually letting into awareness, an energy field. I really think that Michael Faraday told us, you know in the 1800s, that there are these things called fields, you know. And um, while I know my colleagues in straight forward Psychiatry, or Neuroscience, you know, they think fields are dumb, but then they should stop using their electronics. Cause they're all based on fields. So dumb or not they exist, you know.

Daylen asserted that the body is like and “antenna that is immersed in a system’s field” or a “relational field.” Through this leaders can recognize when systems move out of integration, into chaos or rigidity. He reflected on the relationally embedded mind which is, “an emerging property of energy that is happening within us and between us and that integration of that energy is what health is.” Through this Daylen invited leaders to centralize integration as an organizing principle to understand the wellness of systems and to tap into their own bottom-up neurobiologically mitigated resources through which they can access necessary information through sensing the relational field.

Daylen offered an invitation for leaders to access their capacity to sense into the relational field and to develop the capacity to utilize this embodied and relational aspect of mind to guide their leadership practices. He asserted that leaders need to legitimize energy as a valid resource for understanding systems at all levels (individual, organizational, and larger systems). This offering flips top-down leadership on its head, honoring that leaders are embedded in the natural systems within which, and through which (bodies), they lead. This is a whole body endeavor where leadership emerges through bottom-up energy and information that informs top-down decisions and actions. Through this, leaders are vertically, bilaterally, and interpersonally integrated, tapping into the wholistic processing of the right hemisphere that informs the more categorical and linear left-hemisphere that moves leadership action towards integrative/integrating practices.

Building an Organization Around IPNB Principles: Tina

Tina offered a rich description about how she intentionally built her organization around IPNB principles. She founded the Center for Connection because of her wish to create an interdisciplinary IPNB-based organization that offered services to individuals and families. The center provides a whole-person, team-based approach to care. No single clinician works with the client(s); rather care is based on specific needs that can benefit from different disciplinary approaches. Initially a collection of five to seven clinicians, the Center has grown to over 40 psychologists, occupational therapists, social workers, neuropsychologists, education therapy, parent education and nutrition. Integration is at the center's foundation and informs the operations, as well as clinical approach and functioning. For example, rather than constructing treatment plans based on diagnoses, the team meets each individual and family's experience from a neurobiological and relational frame, tailoring the treatment to facilitate integration across mind, brain, and relationships. Tina spoke about how each member of the team is vital in providing specific interventions towards this end and honoring each person's skills and capacities are integral to the functioning of the organization:

So what I decided to do was start a clinical practice that was an IPNB based clinical practice that was multi-disciplinary. So what that meant was, I needed lots of people looking at different parts of the elephant. So that we could come together, to have multiple perspectives to have a better sense of what was happening.

For example, when the interdisciplinary team comes together they consciously bring curiosity to the challenges and needs of each individual and family, considering the treatment possibilities they can offer.

Tina spoke at length about her commitment as the center's founder and director, to ensure the differentiated roles and operations are functionally linked. This had far reaching effects including how the individual clinicians and teams function together in providing care as well as

in their relationships with each other. For example, Tina paid significant attention to the structure of the organization. She has created teams that have distinct functions at the center but she has ensured there are meetings where all teams meet together.

All the individuals differentiated but functionally linked but as a whole to be differentiated and functionally linked, and what I've, what I've really thought about from the beginning in terms of our development as business as a as a clinical practice, we should as a business be flexible, adaptative, coherent, energized and stable, and we may see some um, if we see chaos and rigidity that lets us know either we are too differentiated or there's so much linkage that we are not honoring the individual differences or the team differences or something like that.

Tina used integration to inform the structure at all levels of the organization. For example, she shared that, "each differentiated team meets together, we might meet together once a month during that time. Then we also have pods, where someone from each team splits up so there's multi-disciplinary pods. We've had to get creative as we have gotten bigger." As the lead, Tina attended to disintegrated states of chaos or rigidity and has consciously worked to foster integrative outcomes.

Integration has also provided a lens through which Tina reflected on the development of the organization. She discussed that the organization has moved through stages of development, which have been characterized by chaos; however, she has come to recognize that there are "periods of disorganization before reorganization:"

However, I said, you know I said to my team look developmentally you wouldn't expect a toddler, a two or three year to not ever have times of chaos. You know? And developmentally as a business we through periods of chaos. Just like Brazelton says there are periods of disorganization before reorganization.

As I listened to Tina, I was reminded how uncomfortable chaos can be. Furthermore, I reflected upon the benefit of building organizational tolerance and resilience for this state, so that creativity and growth can occur. However, knowing that a degree of chaos is a part of organizational growth can assist with tolerating this discomfort. Tina recognized this as an

essential part of organizational growth and development. This IPNB-informed understanding of integrative processes not only provided Tina with understanding, but also supported her team during times of growth and change.

Offering another integrative angle, Tina reflected on training opportunities in the organization. In her leadership role, Tina provided training to her team as well she brought in external scholars and trainers. However, she has a desire to capitalize on the knowledge and skills of clinicians at the center, who have valued expertise in different disciplines:

I want them to be leaders. And I want them, I don't want the whole sole responsibility of that. I want them training everybody and um and training me. And then we often are reading other people's work as well, or coming back and sharing from a training that somebody has been too. So again it's a very um I think everybody knows there's a responsibility that they have to share themselves with us. You know and that's an expected part of our culture too.

In addition, integration has informed the physical environment in the organization. For example, Tina listened to her team's wish to not to split up their shared physical site into different, physically distant locations. In addition, the teams have intentionally attended to fostering integration through the artwork on the walls, the layout of clinical rooms, and to other environmental elements such as sounds that have been linked to nervous system activation. At every level, Tina and her team have woven integration into the structure, functioning, and culture of the center.

Tina also shared stories of when she had to make the difficult decision to ask team members to leave; this occurred when these individuals were too differentiated from the team and values of the organization. However, when she spoke to them about their dismissal, rather than focus on the difficulties that occurred because of this, Tina was able to frame this constructively using integration as the lens and language. This afforded a respectful parting that

attended to the relational process and subjective experience of these individuals. Here, she spoke about one of these situations:

I hated doing it. But there was something that just wasn't right. I got to a point where I didn't trust his clinical instincts ... So, I basically said you know I need to visit with you. And I did it in the most relational way I could do it. And so what I ended up saying to him was, at the Center we feel a responsibility to our whole team and to our community to have clinicians that I feel so much trust in that I would send my own family to. And here's some things I have been noticing, and here are some things I have been hearing, and I wanted to check on you. Are you okay? Like I'm not sure what's really happening with these but how are you? What's happening in your life? Is there a way that you need to be supported? ... I just said maybe the Center is not the right fit for you or for us or for both. And so either we would love you to come up with a plan for how we can get to where we are now to where I can really, really trust you, or we need to just decide that it's not the right fit, and that the way that we do things isn't sort of your zone of excellence.

Integration helped Tina to assess the situation, (i.e., this individual was too differentiated from the other clinicians and organizational commitments). In addition, IPNB assisted Tina to present her concerns in a relational manner that was truthful and allowed for a response from this individual. Through processes like this, Tina has learned to how to lean into difficult conversations with integration in mind to both guide and hold to leadership actions to account. In order to do this she has had to face a recurring contrapuntal theme: *conflict avoidance/leadership responsibility*. Tina recognized that, as leader, she must have the capacity to do the latter and it has been her commitment to lead from an integrated stance that assisted her in her development.

Even though she was the founder and director, it was clear that Tina had embodied her commitment to joining with others in the co-creation and evolution of the organization, where differences are considered to be an asset and the functional linkages, purposefully nurtured, provided an energetic and stable coherence to the organization's development across time. Tina talked about attending to top-down and bottom-up processes within the organization she led. She consciously fostered vertical integration (top-down and bottom-up processes) organizationally

through the promotion of her staff's leadership and expertise. Although the organization was formally structured hierarchically, it was important to Tina that she provide opportunities and encouragement for other clinicians to take the lead. In this way, although their roles were differentiated across traditional roles, Tina was committed to finding linkages that honored the talent and capabilities of the clinicians that worked there. It was important to her that they not defer to her as the director and founder, to provide all of the training and leadership within the organization.

In addition, she was conscious of linkages horizontally. This involved attention to structures and functions within the organization, ensuring that individuals and teams are well supported in their connections with each other. This mirrors Pearce-McCall's (2008) suggestion that leaders must attend to interpersonal processes within organizations using the nine domains. She suggested that it is leaders' responsibility to attend to vertical organizational processes (management to employees) and bilaterally (across teams).

The relationships within the organization also extended into Tina's personal realm. Once again, differentiation informed how Tina and her team navigated this:

So, you know I have friendships with many of my team. I'm also their leader and I'm you know, a couple of the moms, our kids go to school together and we are all so neighbor parents. So we have, I have, these multiple differentiated roles as a leader, but I think they feel absolutely loved and cared for.

Tina introduced a complexity and layeredness to the relationships in this workplace and offers how they navigated this by attending to role differentiation and functional linkages not just in the workplace but also between personal and professional realms. Tina and the Center's clinicians had relationships outside of the workplace. These connections were both differentiated and linked in ways that honored the ebbing and flowing of multiple-faceted relationships rather than imposing rules of engagement. She shared a story of when she supported one of the clinicians

whose husband had died unexpectedly. Tina's support included ensuring the family had meals and emotional support. Tina consciously cultivated an organizational culture where the foundational elements of secure attachment, (being safe, seen, and soothed) were present. For example, Tina and her staff were able to navigate different roles and functions without losing the integrity of one role or function. Tina held the differentiated leader position in the workplace, yet maintained friendships in the personal realm. Tina did not shy away from communicating care for her employees. Like the other more highly integrated leaders I spoke to, IPNB's notion that compassion and kindness is an outcome of integration was embraced and intentionally fostered by Tina and her colleagues.

Of all the participants I spoke to, Tina's explanation about integrating IPNB at the organizational level had the most depth and breadth. Her intention, from the beginning, was to create an organization built entirely upon IPNB principles. The implications are multi-faceted and far reaching. Not only has IPNB implicated her leadership, but also the way she has structured the organization and the processes within. At its foundation, the Center for Connection is relational. In fact, Tina's criteria for hiring new clinicians involved hiring individuals who had expressed relational values over and above having exposure to IPNB. She stated that the latter was teachable, however she believed that her employees had to have an ontologically relational orientation.

Tina mentioned time and again that she was guided by her commitment to bring the different elements of the organizational system into functional linkage. This implicated her relationship with individuals and teams, as well as individuals and teams' relationships with each other and the clients they serve. This kept the organization's operations and processes fluid, ever dynamic and responsive. The always unfolding process of integration served Tina's decisions as

a leader rather than pre-determined ideas and practices. This centered relational wellness across the organization as well as the organization within the community at large.

Transforming a Culture: Jemma

Jemma also viewed team and organizational practices and processes through the lens of integration and sought to enhance it consciously. She and her consulting partner worked together to transform medical teams and medical systems to more integrated states. This has meant they have worked to challenge both practices and long-held values within medicine. Jemma has also had numerous leadership positions and roles including being a director of a medical student services clinic, creating and delivering a state-wide program to educate physicians in relational practice, and consulting with doctors and medical leaders.

Jemma was passionate about transforming the culture of medicine, which she viewed as punitive and non-relational. Like the other more highly integrative leaders, Jemma is a values-centered leader who introduced the language of care into her narrative. Similar to other IPNB-informed leaders, Jemma was intentional in her desire to bring this into the organizations she worked with. She understood how non-relational values and actions were detrimental and, in the case of shaming practices, damaging. The care she had for medical students' and doctors' well-being was a driving force behind the change she wished to facilitate. Her efforts to address this were directed at micro (within individuals), meso (between individuals, within teams), and macro (systems) levels. Jemma did this through multiple activities.

As director of a student services department she witnessed how the medical socialization process was based in rigid ideals and practices that neglected relationships and the subjective experience of medical students and doctors. In one example, she shared a story about two medical students from one of the universities where she consulted. They were placed in an

ethical dilemma when, on the way to class, they happened upon an individual in medical distress. In an effort to teach professionalism, the institution punished students for lateness and did not consider any reasons valid. Faced with punishment or assisting the woman, the students chose to ensure they made it to class. The person died.

Integration and IPNB offered Jemma a scientifically-based pathway through which she could challenge these harmful practices and values:

Dan's model of differentiation and linkage creates integration rather than creating a system that supports the outcome, or supporting the people to develop their tools or their skills so that they're more effective. You know, when people got punished, they just shut down. And I think everybody suffers, I don't think quality is better. I'm kind of like, this is one of those areas I kind of get on a rant about [laughs].

I was drawn in to Jemma's passion, which was undeniable as she described how she has been dedicated to changing this and other punitive practices. Jemma also focused on educating physicians and medical students about top-down and bottom-up processes. This served her commitment to challenging traditional medical training, which is typically dominated by top-down learning. She shared, "You know, whether it's a physiological bottom-up information stream. A top-down more cognitive you know, information stream." Therefore, Jemma has led many physicians to connect with their embodied wisdom (emotions, intuition, sensation) as sources of information and to develop a learning mindset rather than relying solely on a knowing mindset, which she pronounced requires curiosity and facilitates safety rather than fear and shame. In order to do so, Jemma consciously worked with IPNB principles such as cultivating FACES (flexibility, adaptability, coherence, energy, and stability) in systems and safety through COAL (compassion, openness, acceptance, and love). As I listened to her stories I noticed a warmth spread within me as I received her courage, strength, and success in addressing established values and norms.

Jemma's efforts were also directed at transforming medical practices and processes within surgical teams. She had witnessed the alienating practices that typified physicians' and surgeons' medical training through to their workplace practices once established. She shared that shaming practices typify surgeon's experiences. She stated that she taught surgeons about the value of relationships on their team:

How do you differentiate the different roles of each member of the team? And then link them together to create um greater safety for the patient, and so that even if the surgeon is directing, has access to all these different streams of information that determine patient safety? And there's also a value, of each member of the teams input and not putting one person's input above, as being more important.

Jemma was able to show surgeons the value communication and interpersonal processes. This de-centered the long-held top-down practice where the surgeon "barked orders" and was the director of the surgery. Jemma focused on shifting the traditional hierarchical structure in surgical teams with highly differentiated roles, and linked the team members through the promotion of team-based communication and other practices that fostered relational integration. Jemma taught surgeons that "each member of the team brought something important" and how they could benefit from listening to "all the streams of information" on the team. She asserted this fostered greater patient safety.

Like Tina, Jemma modelled her student services clinic on IPNB principles. She was adamant that the focus be on wellness rather than pathologizing student's experiences. As a result, the clinic did not use the traditional approach of diagnosis and treatment. Rather, she looked for neurobiological and relational processes that could transform rather than fix or treat:

The more we talked about our biological and neurological makeup, you know, the bottom up and the top down processes, the less it embodied shame. Because you know it took it out of that DSM diagnosis category but to talk about oh you know, maybe there is some dysregulation here or maybe I need to develop more networks in this particular area so it was just gave me a language.

As she described harmful practices within medicine, Jemma focused on finding ways to engage with physicians to foster change. She strove to create relational spaces of safety where errors could be embraced and explored. Jemma described a story where a medical student presented to the center with a need to hear the “failures” of his faculty in the service of learning and normalizing errors. Jemma heard this as an opportunity and created a safe space where faculty could share their stories. This proved to be a well-attended regular event, where students and faculty felt safe enough to be vulnerable with each other and learn from each other as well as dispel the shame that is actively cultivated in medicine.

At the systems level, Jemma brought IPNB to a mandated statewide program aimed at teaching physicians to consider the relational aspects of their practice. Jemma found IPNB’s neuroscience to be essential in the facilitation of physician’s uptake of the information she provided. The fact that this program was mandated is of interest. Although not her determination, Jemma believed that this measure ended up being necessary in order to assure attendance. This measure struck me to be more consistent with a traditional, command and control way of leading. However, it brings forward an interesting consideration about introducing relationally-centered ideas and practices to individuals and organizations that do not hold the same ontological premises. Several of the leaders I spoke to grappled with this challenge: how do leaders change individuals, organizations, and systems that rigidly adhere to non-relational epistemologies and are not open to change? Jemma’s story suggests that IPNB can be taught in mandated programs and that the science-based information and positive outcomes are what engaged them.

Fostering Relational Organizational Practices: Theodore

Theodore is a scholar and leadership consultant to healthcare organizations. His interest in relational practice began when he was a physician. Theodore stated that IPNB resonated with his long-held, deep knowing about the significance of relationships in human well-being and, as a natural extension, the provision of healthcare. His desire to reach other physicians took his focus and efforts beyond his own practice to teaching then eventually to being a consultant to organizational administrators. IPNB brought together Theodore's passion for fostering relational organizational practices, with science:

To me the importance of interpersonal neurobiology is that it shows how we're quite literally activating each other's brains by the way we relate to each other in every moment. And so knowing about that, we can be intentional about the quality of relationships and try to show up as a friend and not as a foe to meant to be, trying to be careful about it and what happens in the amygdala and all kinds of other neurons and all these other mechanisms.

He found IPNB's grounding in neuroscience tremendously useful when he communicated with his physician colleagues because they respected science. He stated that IPNB has assisted him: "I think in every single story, you can, you can just overlay the channel, the brain channel to say here's what's likely happening ... Here's why this worked or why that worked. Here are the things that have been getting done." Not only did Theodore notice the neurocorrelates of behavior, but also how relationships and behavior impact and shape neural firing patterns, in other words, the recursive and iterative nature of mind, brain, and relationships.

In order to bring relationally centered healthcare to individuals and larger systems, Theodore said he needed to pay attention to his own mind, brain, and relational practice. He described this as "reflecting in action" where he monitored his nervous system moment by moment, so that he could attend to his own neurobiological activation. For example, he shared a story about the resistance he experienced from his colleagues when he was hired to bring a new

program into their organization. In order to address the rising tension in the room, Theodore reflected (mind) on the underlying neurobiological response to perceived and actual threat (embodied brain) that he and his colleagues were experiencing. He then intervened with this knowledge in mind by responding in an open manner that named and respected the resistance (relationship) rather than trying to fix the situation or push his agenda through.

Rejecting the “machine model,” Theodore views organizations as conversations and relationships. He saw organizations and change processes from a “dimensional holistic view that’s technical and social and psychological at the same time.” Therefore, he regarded change as relational process that recognizes the intersection of mind and brain:

Yeah there’s another-another neuroscience mechanism I use quite a bit in my teaching. I—I again I think I was already practicing that way but it’s helpful in letting other people learn about that. Helping other people to learn about that, and that has to do with attachment. The regulation of opioid levels in the brain, whether we are feeling connected or feeling rejected and ostracized. So what kind of high opioid levels or very low levels of opioid based on understanding quality of our relatedness so we want to be part of this—it’s part of our sociality is hardwired into our social, you know this better than I do.

Theodore also stated that leaders must have their own attachment needs met in order to do this often vulnerable work. He expressed that leaders need to be aware that their attachment needs might be jeopardized in the “organizational community.” In addition, individuals within the organization have attachment histories that are implicated, i.e., during times of change.

Subsequently, he suggested leaders need to consciously attend to the cultivation of “patterns that help them feel even more connected.” He shared how he and two other colleagues met regularly to share about their leadership experiences and receive feedback and support: “[a]s soon as there were three of us reinforcing each other, we were kind of unstoppable. So that’s a story of how—how to meet those attachment needs when they are being put at risk, through the nature of leadership work.” This was invaluable for Theodore as his work called him time and again to

step into vulnerability and strength in bringing the relationally-centered perspective to individuals and systems that were not always welcoming.

Theodore reflected further on the vulnerability and strength required to lead. He asserted that as disrupters of the status quo, leaders need to be prepared to experience and handle people's responses. They need to be prepared to lean into the discomfort of change work:

Part of your job as a leader is to hold that tension and to help people to hold that tension, to manage that tension. That is a necessary part of change leadership. I think that's the single biggest neglected part of change work is to recognize and manage that there's tension. People think, or they think their job is to make everybody happy, and when people start to get unhappy, oh I can't—I can't do that. You know, all—all of these, all of these inappropriate expectations. So having an accurate understanding of what their work is really all about.

At times, this requires intentional conversations that attend to the relational in-between and stretch leaders to ask “[w]hat guesses do I have about what is going on with you?” Theodore practices and teaches leaders how to do this in real time as well as taking reflection time after conversations so they can go deeper with their inquiry. In addition, Theodore stated that leaders are responsible as role models who set the organization's cultural tone. This requires integrity and asking, “How much are we walking the talk ourselves?”

Like Jemma, Theodore spoke about medical culture and the punitive practices that are performed in the service of enforcing professionalism. He shared a story about a “ding letter” that was given to medical students if they were late to class. Theodore addressed this directly by asking the institution's administration if this practice reflected the professionalism they were striving to achieve. His intention was to “find a more relational, supportive partnering kind of way” to address lateness. The response was positive and “instead of punishing them” the administration changed their focus “to try to help them, bring them along.”

Theodore pointed to the significant contribution that IPNB brings to relationally-based approaches to leading organizations. Specifically, Theodore found great value in IPNB's relational neuroscience, which illuminated processes within himself as leader, his relationships with others, and the organization at large. IPNB brought a necessary complexity to his understanding of the work of being a relationally centered change agent in healthcare. Theodore engaged his mind in ways that supported organizational conditions necessary for people's neurobiological receptivity that served functional and healthy relationships. For Theodore, organizations are conversations, alive and ever-evolving.

Like Jemma, Theodore found IPNB's neuroscience provided a respected avenue for engagement with his medically trained colleagues. In addition, he highlighted how integral and inextricably interconnected the mind, brain, and relational triad is to leading organizational change. Theodore regularly reflected on his role as an organizational change agent through active engagement with the triad. His understanding of the neurobiology of his own and others responses informed his actions as a leader. His leadership was a prime resource in promoting organizational change. Theodore was clear that leaders need to practice what they teach others. This quality was present during our interview. Throughout our conversation, I had a felt sense of Theodore's respectful and open presence. Despite his achievements as a leadership scholar and author, he did not position himself as an expert knower; rather, he offered connection and grace through the quality of his being and active engagement in our conversation. Theodore exemplified IPNB's invitation, and perhaps requirement, that organizational leaders and/or leader consultants must actively embody the principles in such a way that these become a way of being and doing.

Holding the Tension Between Collaboration and Order: Penny and Camille

Penny and Camille were co-leaders of a community-based IPNB organization. Both shared that this organization was based on IPNB principles. Relationships were held central to the organization's functioning. This manifested in conscious reflection and processes where collaborative decisions were made in the formation of the organization as well as its development. For example, Penny talked about IPNB's impact on the organization's structure and functioning:

So it was that welcoming and that flat and that, you know everybody has a role. You give yourself to define a role, so it was really, I mean part of what we were struggling with was, as we went on was we have this really flat, you know female dominated, fluid, everybody gets to define their place, and I love that, but now we want our organization to like you know break even, and to continue and to have a life after we have run out of energy, so it wasn't always this, and you know I think, I don't think that, I think that's exactly what IPNB sort of describes. You know, this sort of tension you are working with you know.

At times, Penny reflected on the contrapuntal theme where *relational and non-relational* organizational operating principles resulted in tension. With this Penny introduced the organizational challenge of honoring relationships while attending to the practicalities of meeting goals and moving forward. Penny spoke about the developmental nature of to the rising tension:

At the beginning evolved naturally. But when we had to—like we wanted to become a non-profit so we had to put together, what do you call them, by-laws. And so there was a lot energy spent around, one of the things that we were very careful about is that we did not want to create rigidity and bureaucracy in an organization that talks about fluidity and being responsive to what emergence so we, this was a huge, you know back and forth and how were we going to do this and-and you know we were more or less successful at different parts of that, I'd say. Um, but particularly the bringing people in was the center.

Camille also reflected on the organization's need for increased structure, which emerged as the organization grew. She noted that there was considerable chaos at times. She found that the group's leadership was committed integration had therefore responded in a way that ensured the organization did not move into a structure that was too rigid. Also, this group was informed by

neurobiology and relationships. The latter was particularly significant as they built in a collaborative structure, where leadership was shared and relationships nurtured. Their commitment to embracing the whole-person ran throughout their activities and interactions.

The organizational structure allowed for individual talents and energies to emerge and find expression. When integrated, these were linked in ways that served the vision and goals of the organization. Penny and Camille shared how creativity and responsibility supported movement. When individuals or groups had an idea and desire to pursue a specific project, they would see this to completion. Also, the leadership team worked well together, bringing different strengths to the organization.

Finally, Camille reflected on the leadership team's awareness that the organization was relationally embedded in community. Therefore, they consciously cultivated ways to connect (link) with other, more established organizations.

We also were conscious of that. Like, so we are adding this new organization into a community that is not huge but we have other organizations, already, in place that support therapists. So we also did some reaching out to these other groups. And we had a really thoughtful group when I think back on it. You know, that wasn't my idea, somebody else thought of that like oh well we also got, I'm part of this organization, part of that organization, and what about this organization? And so we reached out to all of them with some of our early workshops to collaborate with them. So, I think there were some trainings we did where we worked with the other groups and we shared the running of it, and the income of it and. So that, you know, we were thinking about how we were fitting into the group.

In taking actions to seek out and find collaboration with community, the group consciously held the relational positioning of the organization in community.

Neither Penny nor Camille sought out leadership for leadership's sake. Rather, they were drawn to the non-profit organization's vision and mission. Each of these leaders were drawn to the cause and leadership was the means through which they could achieve their shared goals to bring IPNB scholars to their home community. This seemed to be reflective of others who co-led

the organization as well. Their stories highlighted IPNB's applicability to different leader experiences. It provided a framework that guided this collaborative group of therapists to develop the organization and find ways to lead together. The group was highly relational with collective attention paid to ensuring in-group leadership practices as well as interactions with the larger community were in accordance with the principle of integration. Each member of the organization's leadership team was considered to have unique and valued skills, which were honored and linked through collaboration and action.

Camille appeared to find more capacity to hold the tension between collaboration and more structure among the leadership team. Like Penny, she identified the organization's developmental need to hold the counterpoint in such a way that the group did not default to rigid practices in order to move things along. On the other hand, prior to her involvement with this organization, Penny had been a leader in corporations, where autocratic styles dominated. Therefore, her reconciliation of being a collaborative leader while providing enough structure and direction was impacted by her prior experience.

Camille and Penny's struggle with the contrapuntal theme of integrating relationality with structure and directed processes in organizations can be considered against the backdrop of traditional, top-down organizational structure where leaders direct more than engage. Penny's experience is instructive here given her leadership had been dominated by traditional autocratic practices. Their experience suggests that transitioning organizations to an integrated, both/and, (both structure and relationality) requires knowledge of complex systems and the promotion of wellness through the process of integration.

For example, as I listened to Penny, I wondered whether a more conscious engagement with IPNB's notion of bilateral integration could have assisted her and the organization;

specifically, the recognition that both right hemisphere processes (presencing; being) and left (representational; doing) processes are necessary for integration. In other words, although IPNB is foundationally relational, wellness requires integration across both ways of processing. From this perspective, integrative relationality does not exclude action and decisiveness. While Penny mentioned this (i.e., creativity and responsibility), she also struggled at times with the organization's tendency for relational processes at the expense of directed energy.

Confronting Systemic Rigidity: Geoffrey

Geoffrey is a humble leader who is also committed to transforming rigidity in the childcare and family justice systems, an undertaking he found to be confounding and dispiriting. Unlike Camille and Penny, his leadership efforts were presented as a solo experience. Geoffrey communicated considerable disillusionment with his attempts to inspire change in a system that he believed was harmful to children and their families. This was a heart-felt passion, and the commitment and care Geoffrey brought to this work was palpable. At the time of our conversation, however, he was disillusioned and carried a tone of brokenness. He questioned whether change was possible and if he had the ability to facilitate processes that were informed by the integrative principles of IPNB.

As mentioned previously, Geoffrey shared a story of deep disappointment about the outcome of his efforts to influence the “calcified” child protection system. As he spoke, he seemed to recognize the system's rigidity and impenetrability, rather than focus on his failure as a change agent. In response to these reflections, Geoffrey began to recognize alternative leadership opportunities where he had inspired others in the creation of programs. In addition he recognized his effectiveness as a leader in his own agency, where there was a value for integrated relationships.

I was struck by the disintegration, the internal chaos that Geoffrey experienced as he encountered the system of care he so much wants to change. His leadership was in question; he did not know what to do in the face of extreme rigidity. His leadership experience traversed two domains of leadership: change agent in the larger system of care; and organizational leader and catalyst. His passion for bringing neurobiologically and relationally sound research and practices to the child and family justice system was met with absolute resistance. But Geoffrey's knowledge of integration and disintegration (chaos or rigidity), facilitated his sense making of his struggle. I was touched by his transformation as he utilized IPNB's principle of integration to understand his experience along with the relationality that emerged. In response, Geoffrey tried to find a way to engage key players in the system but he was unable to find a way to influence change. In contrast, Geoffrey had created an agency where his IPNB-informed programming was met with openness and engagement. His capacity to inspire change was no longer situated solely within him; rather, he recollects himself and his leadership as embedded in relationships with like-minded change agents.

Geoffrey's story invited me to contemplate the conundrum of influencing change, which is a fundamentally relational process, in non-relational systems and organizations. As seen in Tina, Camille, and Penny's stories, creating programs and organizations based on IPNB principles carry different challenges and opportunities than effecting change in systems that are not open. Geoffrey struggled to reconcile relational leadership practices, such as being invitational, with systems that are fundamentally nonrelational. IPNB cannot be mandated or forced. However, Jemma's story is also informative. As indicated, the program to teach physicians about relational centered care that she developed and carried out statewide, was mandated. This has added another layer for consideration in an obviously complex undertaking.

Integrating Rationality and Embodiment: Luuk

As a leadership consultant, Luuk also struggled to navigate the left-hemisphere (i.e., rigid, rational) dominant culture of consulting in organizations. He shared that he was very skilled at testing and analyzing when he consulted with organizations, however this hyper-rational approach left him wanting despite the monetary gratification. He recognized that in order to operate in a solely rational mode he had to disconnect from his embodied knowing. This imbalance disturbed him so Luuk began to bring a more vertically and bi-laterally integrated approach to his consulting practice, although this did not bring as much financial success:

So one of my clients said to me, you are an organizational therapist ... Then I said if you define it in terms of traditional therapy I don't agree. But if you define it in terms of Irvin Yalom, I agree, so I'm an organizational therapist.

Luuk redefined his consultant identity in order to integrate his rationality (left hemisphere dominant mode) and sensing (right hemisphere/body dominant mode). At the same time, Luuk struggled to bring this into the organizations he consulted with, given the expectations were more traditional: test, quantify, recommend. In addition, he was conflicted about writing his approach down and fitting it into a program.

let's say the concept of energy what happens, this is what brought me true real insight. And it's the moment you start writing it down and fixing it into a program, but that's also my hinderance let's say let's say everyone is like everyone wanted to put it into a program immediately and then scaling it up, and leveraging it. Let's say you ... and that's not possible because you really have to develop it yourself you have to develop it and then it must happen to you.

Luuk found that organizations tend to want to control, replicate, and act. However, his embodied wisdom had taught him that as soon as an integrative approach is put into a form, it is lost. Rather, integration is alive and deeply embedded in a constant relational unfolding.

Like Penny, Luuk was is a skilled leader and consultant in traditional organizations that valued rationality. However, as he became more embodied and able to sense the relational field,

he was unable to tolerate the disconnect between these two orientations. His sensations and emergent intuition had become a valued source of knowledge. Like Geoffrey, Luuk's experience was suggestive of the struggles leaders and consultants may face as they bring this new way of seeing, being, and doing into organizations that are ideologically different and prevalent in Western culture. Although he had experienced some receptivity to his more integrated approach to organizations, it was not financially viable enough to provide for his family's needs. At the time of our conversation, Luuk had left the leadership field and returned to academia.

Luuk's experience gave me pause to consider that leaders might be served by anticipating resistance and barriers at the organizational and systems level, some of which might not be surmountable. Both he and Geoffrey were isolated in their efforts to enter and have impact in an ontologically different system. Their discouragement was palpable. In contrast, both Jemma and Theodore brought relationally centered approaches into similarly structured organizations and systems but they found sustenance in the process. What is striking is that these leaders were embedded within relationships. For example, Theodore had a group of safe and trusted colleagues that met his attachment needs; Jemma was partnered with another consultant and worked among like-minded colleagues at the student services clinic. However, more revealing was their voice poems, with Jemma and Theodore speaking with a predominantly MWE-leadership-voice, and Luuk with an I-voice. Geoffrey's voice was particularly revealing. When he talked about not being able to influence the rigid and closed child justice system, his I-voice dominated. However, when he recollected stories about the agency he directed, which was informed by a value for people's subjectivity and the relational in-between, Geoffrey used a MWE-voice. When I reflect on Geoffrey's experience, along with the other consultants I spoke to, it became clear that leaders' who facilitate paradigmatic change in non-relational systems,

need the relational support of others. Geoffrey's story suggests IPNB-informed leaders need to attend to their own well-being when working in non-relational, closed systems. His disillusionment, despair, and self-doubt were understandable and heart-breaking. His experience is an invitation to leaders to ensure they are resourced and supported. For example, when Geoffrey was able to connect with the positive impacts of his leadership in other, more resonant organizations, he was able to access stories of his capability and effectiveness. For these consultants and leaders, supportive and dialogical relationships provided an energizing and stabilizing force that propelled them forward and sustained them.

Trusting System Self-Organization: Kent

Kent was also a solo change agent within the school system. Like Luuk and Geoffrey, Kent's leadership voice was predominantly an I-voice. He was fueled by his personal vision for a more relationally and neurobiologically considered approach to youth and their mental health care. His story is one of organizational and systems change from the bottom-up. Kent did not have positional power to make change happen however, he was steadfast in his commitment to modelling and teaching his colleagues about mind, brain, and relationships. Kent believed in the impact and power of a small group of individuals to effect change within a larger organizations and systems. He referenced quantum physics in helping him understand the self-organizing properties of complex systems and he could see that his efforts as a single change agent had made an impact at the local level. As an IPNB author he was called to present to teachers and leaders in other parts of the country and globe. His preference was for small groups, so that those in attendance could dive more deeply into the material.

I talk about how the complexity theory and how small interventions, now pretty much cliché, a butterfly flaps it's wings out where you are and I get a hurricane here in the east coast. But that idea that a small thing can change a big system um, has been really helpful

and that's my latest part of that belief for me as far as my work with trying to change systems.

One of the characteristics of complex change is emergence, where the differentiated elements of a system interact in time and space, in a recursive manner resulting in new possibilities, probabilities, and ever-changing certainties. Kent shared, "you don't have to come into a system like, you know with sledgehammers and stuff, you know, the big stuff. Well that's great if you can ... But anywhere you intervene in a system can have this huge effect on the rest of the system."

Kent shared that IPNB had offered him a way of seeing, being, and doing that sustained his efforts to foster change within his workplace and the larger system. Unlike Geoffrey's disillusionment and confusion in response to systemic rigidity, Kent found that the positive effects of his work "in the trenches" reinforced Kent's belief in what he was doing. Although his colleagues and the administration at the school came from a fundamentally different orientation, their growing respect for his capacity to successfully intervene in difficult situations also seemed to fuel Kent to continue. Kent's experience offered a glimpse into organizational and systemic change from the bottom-up. The influence Kent had was interpersonally distributed, like the effects of a single pebble rippling through a body of water.

A Limited Focus on Organizational Integration: Judy, Charles, and Elliot

Judy did not speak about organizational implications of IPNB. Her use of IPNB as a consultant tended to be with teams and leader development. Judy was ambivalent about IPNB's utility, however she noted the benefits of relational neuroscience when she intervened with clients who became dysregulated. Therefore, her use of IPNB was more situational and did not extrapolate to teaching leaders or organizations about mind, brain, and relationships. As a teacher of coaches and consultants, Judy shared the following:

I have to work within the confines of the culture of the organization and bring as much IPNB as I can to the position, but there are times when it's kind of like when I trained people to become coaches, I train them in a hybrid approach and I say you do not, you really don't want to get advising, you don't want to be ... but there are times where, especially if you're in crisis mode—when I mean crisis, I don't mean crisis like suicide crisis. I mean, you know, you're coaching and they just lost their job.

Judy's approach to organizational change was more traditionally strategic and formulaic. When we started our interview she shared that her current energies were focused on developing a particular strategic model, which did not have IPNB content or influence.

Judy's narrative suggests that IPNB does not resonate with everyone. When she discussed the principles she found to be useful, it was with considered ambivalence. However, it was also clear that she did not fully understand some of the principles accurately and that her scope of her knowledge was limited. For example, when she talked about her metaphor “the caramel effect” she did not recognize she was describing Siegel's (2012b; 2020) River of Integration. When I offered this possibility in our conversation, mixing two IPNB metaphors, Judy replied with amusement that she had not recognized the Wheel of Awareness and “the hub.” Further, as mentioned previously, she conflated IPNB's perspective on relationships with emotional empathy— a particular form of empathy that the literature suggests is not conducive to leadership (Decety & Michalska, 2010; Goleman & Siegel, 2016). Judy's limited view of interpersonal integration, coupled with her lack of knowledge about empathy significantly impacted her experience of IPNB. It left me with a sense of caution about the impacts of leaders and consultants' partially informed uptake of this complex framework.

Charles's comment on organizational change was relatively limited. He shared Kent's view that organizational change needs to be understood through a complex systems lens:

So it's really this thing of emergence-emergence feedback, emergence feedback, emergence feedback, emergence feedback. Lorenz discovered that you can have a very small change, a very small feedback influence, which can have a very large effect; or you

can have a very large feedback and which could have a very small effect. Um, so this idea that we've got in our culture that there's input in and uh energy in and energy out and that it's equal and that if you don't get that-that equal framework, then somebody has made a mistake and there's wrong. So there's KPIs, you do this, you work hard, you get more-more production so on and so forth. And it's not necessarily true.

Charles went on to say that this means teaching organizations about mindfulness and connectedness does not guarantee desired results. He shared that IPNB had given “an opportunity for us to understanding something broader and wider” and the realization “that we can't actually predict what is true.” He believed in system wholeness and as such shared that he trusted that the outcome of integrative change might not be anticipated, but it was always what was needed.

Charles offered two fundamentally different views of organizational change. At a theoretical level, he upheld a complex systems view that challenged traditional ways organizations measure outcomes and success. However, although he suggested that change is unpredictable, his actions were more technically applied and aimed at getting intended results (i.e., greater integration). This suggests that leaders and leader consultants can have different, and sometimes contradictory, ways of understanding and utilizing IPNB. In Charles's case, integration can be viewed as a noun—something to be achieved—whereas integration can also be a verb, an active practice that is both embodied and relational. Leaders can be integrative in their way of seeing, being, and doing.

Finally, as a consultant Elliot focused on leaders' capacity to influence change in their organizations and did not direct his energy towards the larger system. His work also focused on supporting leaders to understand their own family histories and how this impacts their leadership practices. He believed that change occurred through leveraging access points for engagement and buy-in. For example, Elliot stated that individuals remember the positive emotional connections

they have with information, rather than the information itself. Elliot highlighted anger in this discussion. He stated that anger is a much maligned and ignored emotion, which can provide significant motivation for change. He suggested that people, especially therapists, are conflict avoidant and that leaders and organizations need to learn how to tolerate anger.

Elliot's view of organizations and change diverged from the other leaders and consultants. He was the only participant who discussed power as a significant factor that he capitalized on in change management. Elliot was adamant that organizational change can only occur when individuals who are in positions of power are open to take up the new information he offered. He believes he needs leaders in the organization who have power and are able to leverage the attention of others. Elliot also made it clear that he does believe that complexity theory applies to organizational change processes. He stated that when he enters an organization he tends to work individually with the leaders rather than the broader organization. Most of the other individuals I spoke to had committed efforts to engage organizations through relationship, for example, through education, support, coaching, attention to the creation of safe spaces and places, reflexive processes, and so on. These leaders sought to actively challenge top-down organizational structures and ways of leading that relied on leaders' power over others. Although Elliot had a critical lens about the impact of unacknowledged power differentials in organizations, he also chose to leverage it towards change. He considered relationally-based questions that are aimed at assessing the leader's power and impact: "the person has to have the authority and the position to make the change. They can't be a butterfly."

At times, Elliot's views on organizational change conflicted with IPNB's principle of integration where wellness is dependent upon honoring differences and finding linkages within and between the elements (i.e., people, conversations, teams, processes, structures) that cohere in

time, space, and place. Like Charles, Elliot's perspective on leadership and change was internally contradictory. He utilized integration in specific situations (i.e., it informed his overall consulting goal of greater leader wholeness), but did not carry this through all levels of organizational and leadership functioning.

Implications for Organizational and Systems Change

In reviewing the collective comments from these consultants and leaders, the integrative and positional differences deserve comment. Three of the leaders I spoke to shared their experience in IPNB organizations, where the principles were known and there was collective buy-in by organizational members. These leaders' experiences were highly informative about IPNB's potential to guide structures and processes that influenced the development of the organization, its functioning, and values. Integration was at the heart of the organizational functioning where honoring the different individuals and teams were linked through relationally attentive processes and practices. In addition to serving how these leaders assessed organizational dynamics, integration helped them make decisions that centralized the well-being of the organization as a whole. At times this meant that individuals who were differentiated and not linked with the organization's vision, purpose, and practices were unable to continue in their roles.

However, other leaders were more alone in their IPNB-informed practices and were working to bring more relationally considered ways of seeing and being into their workplaces and larger systems. These leaders and consultants faced different challenges than the above, with many facing resistance from colleagues and the larger system. These individuals had variable success within these contexts and experienced considerable personal and social challenges. This was evident in Geoffrey's state of social discouragement along with the despair he encountered

about his own leadership capacity to foster change in a calcified system that did not want to consider an alternative way of providing care to the most vulnerable. Luuk and Elliot also spoke about the challenge of finding success as non-traditional consultants who brought a different lens to the challenges they were called upon to address.

These individuals dealt with this challenge in numerous ways. Theodore discussed the importance of finding a group of like-minded leader colleagues where there was enough safety to grapple with emergent leadership challenges. Jemma, Kent and Daylen found strength in the science and principles of IPNB that validated and provided direction that supported them with acting with courage time and again. Geoffrey found grounding in his leadership potential when he reconnected with the many ways he had fostered and supported initiatives, within the organizations he led, as well as those of others that he mentored and who went on to create new, more relationally responsive programs. Daylen spoke about the importance of knowing the science when challenging dominant ideologies. Jemma and Theodore also shared that leaders need to know the science of IPNB when trying to engage others, particularly in medicine where science is respected and the language through which people speak. Offering a different approach, Charles talked about communicating the essence of IPNB through language that groups can understand, rather than using IPNB terms and concepts.

Clearly, the social positioning of these participants impacted their experience of IPNB. Consulting and leading are very different. The expectations and parameters of consulting work are different than for those in more ongoing leadership roles. Given that consulting work is more defined and time limited suggests the window of possibilities for engaging with this new way of seeing, being, and doing may be more narrow. Given that IPNB invites paradigmatic change that transforms perspective as well as behavior, time may be critical for the deep learning

and uptake. In addition, the positioning of leaders and consultants is different. Leaders have the potential to influence organizations and systems through various means, including their use of power. On the other hand, consultants must rely on others to implement the changes they suggest. This requires buy-in, which from an IPNB perspective rests upon engagement, curiosity and openness. The question of how leaders and consultants bring this ontologically different view of human experience to traditional organizations and systems is likely to remain a fundamental component of leading change.

Concluding Remarks

This inquiry process was aimed at exploring and understanding IPNB's influence and impact on leaders' practices, development and identity as well as the organizational implications. What I have presented are the highlights of the rich conversations I had with twelve leaders and leadership consultants. What I discovered was that for most of individuals I spoke with, the assertion that IPNB is not a theory to be applied but is rather an orientation or means through which seeing, being, and doing can be understood and developed.

IPNB had different impacts for the leaders and consultants I spoke with. For some it brought language and a deeper understanding to their own values and longing to understand human experience from a more deeply rooted and relational premise. A few common threads wove through the narratives. Integration was the dominant consideration that informed their practices, development, and identities. Although not always articulated, their different ways of engaging with integration involved varied domains or combinations of domains. One of the most significant domains for the most integrative leaders and consultants was consciousness. These individuals had a profound capacity for reflexivity, whether it be in their present moments when leading, or from a reflective distance (i.e., processing after the fact).

In addition, interpersonal integration was central to these leaders' reflections and efforts. They were deeply concerned about the relationships they had with others and viewed organizations with a relational lens. These leaders honored differences and promoted linkages across all levels of organizations and worked towards bringing this perspective to larger systems. This often put them in touch with the vulnerability of being change agents, particularly in more traditionally oriented places. This was not without fear, struggle and disillusionment. Clearly this work is not for the faint of heart. As they faced their vulnerability these leaders found strength within themselves and in their relationship with others. Interestingly, some also found validation and the basis from which to carry on through the information and practice of IPNB itself. At times, it was as if they were in relationship with the field and the knowledge it offered them.

In addition, many of the more integrative participants had a rich internal relational dialogue that implicated their development and sustenance. Through practices such as mindsight and mindfulness, or body-based practices, these leaders explored and discovered, evolved and developed. They consciously and actively engaged with the various aspects of their being-ness. What was remarkable was that they did not steer the directionality of these processes; rather, they prepared their minds and stepped into relationship with what arose.

The foundational understanding that mind, brain, and relationship are irreducible primes of human experience ran through these leaders' narratives. This was at times implicit and at other times explicitly named. In addition a mixed pattern emerged; for example they may have named two of the primes, however the third was implied. These individuals worked consciously with developing and practicing integrative capacities across the three primes. However, their use of neurobiology and the neuroscience of relationships was at a relatively high level. For example, they did not speak about the neurobiological mechanisms that were involved.

The three leader consultants provided considerably different ways of working with IPNB. At least within the context of our conversation, these individuals did not focus on their integrative presence as a component of their practices, development, or identity. While IPNB entered into their consciousness in various ways, they did not consciously engage with the reflexivity of the other leaders. In addition, their focus on integration differed from the other participants. It was a skill to be taught or a state to aspire to. This is in contrast to the living and ever dynamic unfolding and recursive nature of integration communicated by the other participants. Also, they were distant from those with whom they worked. At times this distance was significant and othering. They spoke for people rather than engaging with them. Furthermore, their leading practices were one-directional: from their position as consultant to those who needed their consulting. The more integrative leaders were embedded in their relationships with others and acknowledged the mutually impacting and recursive nature that these relationships had in creating their own leadership experience. As discussed, the less integrative consultants had different ways of understanding and applying IPNB; however, these individuals were not embedded in organizational cultures, rather they were hired to fulfill a purpose defined by those who had employed them.

Finally, for those leaders who practiced in organizations and for those who were working for systems change, IPNB provided a rich framework for understanding and taking action. Here again, integration was key. Tina's organization was significantly developed in its integration of IPNB. As a leader, her focus on honoring differences and functionally linking these across all levels of the organization hold instructive and valuable information for other organizations. However, other leaders brought IPNB to organizations and systems that were varied in uptake

from purposeful integration to rigid rejection. Across all of these experiences, IPNB served to guide, understand, and support.

CHAPTER VI: REFLECTION ON PRACTICE AND METHODOLOGICAL IMPLICATIONS

In this chapter my voice joins with the leaders and leader consultants I had the privilege of speaking to, in a desire to contribute to change within the field of healthcare leadership. Like them, I have been driven to find ways to introduce relationally centered perspectives that respect and engage rather than categorize and label. I want to inspire more listening and less telling, so that curiosity and openness are fundamental to leaders' practice and positioning. I have been, at times, desperate to find inroads into organizational cultures that leave people isolated and disconnected from each other and the people they serve. This desire arose early on in my career as a clinician and has remained steady through decades of practice, and now as I develop and practice as a leader.

In this quest, many questions have surfaced about how to practice and advance relationally centered care within a culture of disconnection that is, more often than not, resistant to influence. Change is difficult. Paradigmatic change even more so. Leaders, and those who consult with leaders, hold a particular responsibility to listen and respond to calls for change, which often come from those who experience the impact most significantly. These are often the consumers of the service and those who serve them on the front lines (MHCC, 2012; M. L. Crossley & Crossley, 2001; Nelson, Ochocka, et al., 2006).

Interpersonal Neurobiology is a field that demands a paradigmatic shift from dominant models of care that are based upon values and practices that distance, separate, and other. Based in science, IPNB holds three fundamental primes central to understanding human experience: mind, brain, and relationships. This indivisible triad requires shifts in perspective, orientation, and practice. It views wellness from a complex systems perspective that holds integration as a core organizing principle where differentiation and linkage result in ever-dynamic and evolving

self-organizing outcomes that are characterized by flexibility, adaptability, and coherence that are energized and stable (Siegel, 2012b).

Purpose

Through this narrative inquiry I sought to contribute to leadership scholarship and IPNB scholarship by providing the first systemic inquiry into what and how leaders understood, utilized, and were influenced by IPNB. The research questions for this inquiry were: How, if at all, have healthcare leaders integrated IPNB in their leadership practices, and what impact has this integration had on their development and identity? Secondly, what, if any, implications might their experiences hold for leadership in health and mental health organizations? I spoke to thirteen individuals who were either leaders or leader consultants in various leadership capacities within healthcare. Twelve remained through to the final analysis and interpretive stages.

Although important, I did not want to limit the inquiry to an exploration of *what* IPNB-informed leaders were doing. Rather, it was essential that I find a way to understand *how* and *why* this particular approach has been beneficial to leaders and organizations. In addition, because IPNB has implications for development and identity I needed to find a way to capture the multiple-layered ways this framework can influence and shape leaders' learning over time as well as how they positioned and viewed themselves as leaders.

I found guidance in the Listening Guide (LG) (Gilligan & Eddy, 2017; Gilligan, 1982), which offered a relationally-based method for extracting a multi-layered understanding of leaders' and leader consultants' experience of IPNB. In addition, I enhanced this methodology with three theories, which deepened the exploration. These were Dialogical Self Theory (DST) (Hermans & Gieser, 2012; van Loon, 2017), Relational Dialectics Theory (RDT) (Baxter, 2011; Baxter & Montgomery, 1996), and Dynamic Systems Perspective (DSP) (Thelen, 2005).

Although this study did not seek to prove IPNB's effectiveness, it provided a systematic, interpretive inquiry into IPNB-informed leaders' perceptions of influence and benefit.

Significance of the Study

To date what is known is that leaders and leadership coaches/consultants are utilizing IPNB by direct application of the framework's principles (Hill, 2008; Page, 2006; Pearce-McCall, 2007, 2008; Siegel, 2015a; Ungerleider & Dickey Ungerleider, 2018). In addition, the literature features ways that IPNB can enhance other approaches to leadership and organizations (Betz & Kimsey-House, 2015; Goleman & Siegel, 2016; Kimsey-House & Kimsey-House, 2015; Kryder, 2009, 2011). As stated, current IPNB leadership scholarship tends to be anecdotal, conceptual and instructive. For example, reflecting on the principle of integration and reflecting on how it can be used in understanding organizational processes (Pearce-McCall, 2007, 2008; Siegel & Pearce-McCall, 2009). However, what has not been known is how leaders and leader consultants are actually utilizing this framework. Given IPNB focuses on the nature of mind, the embodied brain, and relationships the implications for leaders and organizations runs both broad and deep. The paradigmatic shift that IPNB invites requires more than behavioral change. It requires a modification to how reality is viewed and necessitates practitioners and leaders to reorient themselves in relationship with their own internality as well as in their relationships with others and the environment within which their practice is embedded.

In addition, IPNB offers a science-based approach to understand human reality and wellness that is brought into being and action through processes that are integrative. As such, it challenges the ways of being, seeing, and doing that often dominate healthcare organizations. Offering a relational lens, IPNB recognizes that wellness occurs in complex living systems when

differences are honored and linkages are found in ever-evolving and self-organizing processes (Siegel, 2017, 2020). As such, IPNB holds potential to transform leaders and healthcare systems in ways that are both foundational and profound, and are in keeping with changes being demanded by healthcare consumers and activists who have lobbied for change (MHCC, 2012; Nelson, Lord, et al., 2001; Suchman et al., 2011; WHO, 2014). It also offers leaders a way to conceptualize wellness that can be fully integrated into the operation and culture of an organization rather than offer tertiary measures that address health issues after they arise; for example, through employee assistance and disability programs. Therefore, this inquiry offers an opportunity to explore and articulate how leaders are using this approach in ways that are consistent with these broader calls for change.

Methodological Significance

The LG is a voice-centered methodology that considers the following: “Who is speaking and to whom? In what body or physical space? Telling what stories about what relationships? In what societal and cultural frameworks?” (Gilligan & Eddy, 2017, p. 77). The LG also requires researcher reflexivity throughout the process. As a relational and voice centered method this required me to consider not only the subjective experience of the participants across multiple domains, but also my own subjective experience and relationality as I interacted with each person during the interview process and then their narrative during the analysis and interpretation phases. During the interview, I was a participant in a relationally embedded making-making process where my responses were guided and shaped by each participant’s sharing, which influenced my decisions in forming the next questions. As the researcher, my position in determining the direction of the conversation, and then later when analyzing and interpreting what was said, carried considerable power as well as responsibility. At the same time, I

consciously tried to hold a position of open awareness and curiosity so that I not only listened to the participants, but also my internal responses, which also guided my interpretations.

Each of the listening steps provided a different way of understanding, and then interpreting, participants' experience. The LG's multi-layered analysis provided an opportunity to explore the phenomenological experiences of IPNB-informed leaders and consultants. While the first listening step uncovered the practices and themes that wove through their narratives, it was the second and third listening steps that added depth to understanding the experiences of IPNB-informed leaders and organizations.

Offering a broad overview, the first listening step was essential in understanding *what* elements of IPNB were essential to participants' leadership practices. It also provided an opportunity to discover the plotlines and significant themes of their leadership story, which helped me to understand each person's narrative and how they perceived IPNB's influence for their leadership practices, development, and identity. There were several themes that were similar across multiple participants as well as those that were unique. This provided a foundational understanding of each participant's leadership story as they chose to share it. In addition it highlighted some common experiences. For example, many of those I spoke to were disturbed by dominant non-relational practices in healthcare and found IPNB to resonate with their desire to foster organizational and systemic change. I did not provide structured questions, rather I was curious to hear what was most significant for each person when they considered IPNB's influence on their leadership and organizations. While this provided variability in what was highlighted, it served the purpose of this inquiry and its place in IPNB leadership scholarship. Specifically, to begin a foundational conversation that may stimulate further research into this untapped area.

However, the most impactful discoveries came from the LG's capacity to tap into participants' voices in a way that revealed participants' multiple and dynamic relationally situated selves. The voice poems answered the question "*who is speaking?*" as the participants shared through multiple voices. This step provided insight into the participant's multi-voiced relational positioning as they shared their stories. The voices that emerged were reflective of, and guided by, IPNB's notion of the relationally embedded nature of consciousness. Initially, I positioned myself with openness so that I could hear and identify each person's voice(s) as they emerged. As I listened to several narratives the following voice categories became clear: I/me-voice, we-voice (undifferentiated we), distancing-you-voice, connecting-you-voice, self-in-relation-voice (differentiation with less linkage), double-voicedness (using the voice of another), and MWE-voice (differentiated and linked). This listening step ended up being critical in recognizing participants integrative differences. This was an unexpected finding and proved to be significant in how I interpreted the other listening steps. Specifically, there were significant differences between leaders and consultants who I recognized as being highly integrative in their practices and identities from those who were less integrative. This listening step provided an interpretive opportunity for the emergence of a continuum of integration with one end representing those who were less integrative and those who were highly integrative at the other. It also revealed how nuanced some highly integrative leaders' and consultants' relational positioning was. For example, not they not only used a MWE-voice that embedded their leadership in relationship with others, but they also used a MWE-in-relation-voice that communicated a relational embeddedness of this MWE-voice (i.e., "a conversation with each other;" "we need to put this out there"). This second listening took me deeply into the shifting

beingness of each person as they shared their IPNB leadership story in ways that, at times, seemed to rest outside of their awareness.

In addition, the contrapuntal themes that propelled participants' development were discovered through the third listening step. For the third listening, I traced participants' contrapuntal themes by listening for the voices that grappled with conflicting or contrasting themes. These created tension in ways that propelled participants' development and growth. I was interested in analyzing whether these counterpoints emerged in time, space, or place given IPNB's potential to inform multiple dimensions of experience. This widened and deepened my lens in ways that allowed me to understand these individual's development across these dimensions of experience.

Rather than view development as a linear process of knowledge acquisition, IPNB requires a more complex way of capturing these multiple dimensions of learning and development. For example, in this inquiry much of participants' development occurred in space; specifically, internal space and the relational space between internal states, neurobiological mechanisms, and processes (thought, emotions, sensations). Exploring these and other spatial relationships between contrapuntal themes had implications for participants' development. IPNB attends to, and engages with, the embodied and relational mind, which is experienced spatially. I was assisted by a DSP (Thelen, 2005), which conceptualizes development beyond a linear and time-bound understanding. Specifically, this perspective views development as nonlinear and dynamically relational, challenging traditional notions that development is set in time, in stages, and is a linear process. This view is based in a complex systems perspective on development that "reconciles the ceaseless flux and variability of real-time action with the orderly, organizational flow of development" (Witherington, 2007, p. 128). Thus, when I analyzed participants'

narratives I recognized the nonlinearity of their development as leaders. For example, some leaders and consultants described their development in a linear fashion where knowledge and skill acquisition occurred in the past, was applied in the present, and projected into the future. However, others described their IPNB development from a presently located position, reflecting on past leadership experiences from which a newly acquired perspective emerged. This then informed their future decisions and actions as they developed as leaders across time (backwards and forwards), in space, and place.

In addition, many of the participants' counterpoints encompassed more than one dimension although much of their development occurred in space (i.e., internal: between states, external: relational-in-between). It became clear that these leaders and consultants had factual knowledge about IPNB, however those who were highly integrative had developed the capacity to connect with their internal experiences with a consciousness that was attentive to integration. In addition, these individuals linked their internal leadership development with their relationships with others. These capacities involved bringing conscious awareness to varied streams of knowing, including sensations and emotions. For example, one leader talked about leading a group that had become disintegrated. Through his conscious connection with his body he was able to tap into this disintegration by sensing into the relational field of the group. Another leader and consultant talked about his growing sense of embodiment through decades of martial arts practice. He noticed that through his capacity to sense his own internality he began to intuit the experiences of others.

As well, development occurred through participants' conscious recognition of, and interaction with, relational processes between themselves and those they led. This allowed for the discovery of integrative processes between individuals, groups/teams, and the organizational

processes within which their development was embedded. In addition, given relationships are foundational to IPNB's view of development relational places needed to be considered and understood. IPNB requires a methodology that can uncover this relational dimension as well. For example, understanding the influence that physical and cultural places have had for leaders' development.

The dimension of place also contributed to participants' development. Many experienced contrapuntal tension between their own value for relationship centered care and the non-relational values, practices, and cultures of their workplaces and field of practice. The power of this counterpoint, and its influence on leadership practice (i.e., autocratic/relational leadership; top-down/bottom-up and top-down leadership) cannot be understated as a driver in the leaders' and consultants' development. For example, one of the leaders I spoke to talked about the deep depression he experienced during his medical training because he was being chastised by his attending physicians for caring about what his patients' felt. Unable to resolve the moral dilemma that the medical socialization process put him in, he left medicine only to return with a determination to change the non-relational way medicine and healthcare is approached.

RDT assisted me in recognizing the different ways leaders and leader consultants navigated the contrapuntal themes between place and space (Baxter & Montgomery, 1996). For some, the resolution of counterpoints occurred when they chose one over the other, such as those described previously who chose to transform the non-relationality that permeates healthcare. However, more often than not, participants' development was propelled forward as they grappled with the dialectical relationship between contrapuntal themes. Therefore, RDT enhanced my third listening through the recognition that contrasting themes or contradictions are not always negotiated through binary, either/or processing; rather, they can co-occur in a dialectical

relationship with each other (Baxter & Montgomery, 1996). RDT recognizes the presence of both internally held contradictions, as well as those “at the nexus of the system with the larger suprasystem within which it is embedded” (Baxter & Montgomery, 1996, p. 16). RDT’s view that the dialectical relationship(s) between contradictions propel the system forward through a constantly fluctuating dynamic allowed me to capture the often complex nature of these leaders and consultants development over time, in space, and place. In fact, some who grappled with the *non-relational/relational* counterpoint, often held it dialectically. For example, one leader talked about learning how to be more relationally attuned and responsive, while at the same time, acting more directly. In doing so, she held both autocracy/relationality in a dialogical relationship, each counterpoint informing the other.

Finally, listening four can be tailored to the needs of each inquiry process. Given I gathered a large amount of information through the first listening steps I chose to return to the research questions and review each person’s previous listenings so that I could organize the information that was most relevant to answering these questions. The fourth step of the LG brought all of the previous listenings back to the research questions with each listening providing a different angle for understanding IPNB’s potential for leadership practice and scholarship. This helped to bring focus and coherence that was gleaned through the analysis. The fourth step brought light to the ways that IPNB can be useful to organizations.

Reflexive Comments

As indicated, researcher reflexivity requirement of the LG methodology and is woven throughout this account given it was part of the process from interview, analysis, and interpretative phases. Across all the stages (interview, analysis, and interpretation) and listening steps I was influenced by my knowledge of IPNB. I began studying and integrating this

perspective in my clinical work and leadership practice over a decade ago. Like many of the leaders I spoke to, this way of seeing, being, and doing has become a part of me and informs the lens through which I see and experience the relational field within which I am embedded. In addition, it has become a way that I reflect upon my own internality. Therefore, I could not separate this from how I received or understood the stories and how they were shared. For example, during the interview phase, I noticed that I was hearing people's stories through an IPNB informed position. This became most apparent when the individual did not directly reference IPNB but shared in way that reflected an IPNB principle or concept. While they seemed unaware of the connection, my listening drew connections, which I offered in the moment or noted later as I analyzed and interpreted what was said. Rather than ignoring this, or trying to take on an inauthentic objective voice, the LG required me to account for my own listening positionality.

Of all the listening steps, the second step impacted me in unexpected ways. I noticed that my positioning shifted from the first listening step, where I received, coded and reported the experiences offered, to a more participatory role in knowledge construction. This occurred when I became aware of my embodied responses as I dove deeply into the voices through which participants spoke. It was surprising and undeniable, and had implications for the analysis and interpretation phases of the methodology. I used these embodied responses to assist me given they occurred when there was a shift in the relationality of the voice(s). Thus, my embodied response became another source of information and invited me to pause and to listen more deeply to *who* was speaking and *how* they positioned themselves in relationship with others and the world around them. This listening brought me into the nonconscious realm of participants

stories in such a way that I felt immersed. My body was the first to hear the presence and/or absence of integration as well as the integrative movement that participants expressed.

Implications for Leadership Theory and Practice

This inquiry has relevance for the general field of leadership particularly given IPNB brings science-based insights to what it means to be human. It invites leaders to consider organizational processes from the perspective of wellness. Resting on the irreducible primes of mind, embodied brain, and relationships and illuminates how leaders can consciously engage with this triad in ways that promote wellness across micro, meso, and macro systems. IPNB offers leaders and leader consultants a way of seeing, being, and doing that is wholistic and intentional in fostering wellness in all systems whether small or large. It has applicability for leaders and leader consultants, the people they work with, as well as the organization and systems within which their work is embedded. IPNB is not a theory, rather it is an orientation that has implications for how leaders' show up, learn, and act. As such, it does not point to specific tools or strategies, rather it teaches leaders how to perceive situations and respond in ways that promote integrative flow across time, in space, and place. Given this, there is no one way to do IPNB-informed leadership. In fact, some of those I spoke to didn't use IPNB terms, which can be challenging to understand for some groups. Rather, the principles of IPNB can be adapted to the vernacular of organizations and systems.

IPNB can bring a science-based approach that has far-reaching effects for leaders who are unfamiliar with this framework. In fact, the leader consultants I spoke with frequently found that the science was a place of engagement for leaders and organizational members who might not be open to considering relationships and other "softer" aspects of leading such as relationships and emotions. For example, IPNB places wellness at center and connects

organizational functionality and links success with the well-being of individual workers and teams as well as the relationships they have with each other. It provided leaders with a way of seeing the unseeable processes of mind and the relational in-between so that they can guide practices with the aim of fostering integration. IPNB takes this beyond skills-based approaches to leading by recognizing the scientific basis of integrative processes where differentiation followed by linkage is of prime focus. For example, one of the less integrative leaders I spoke to talked about teaching “integration skills.” Whereas those leaders on the more integrative end of the continuum embodied integration in such a way that it informed not only what they did but their perception and ways of being with those they led.

The Foundation: Integration

Integration is considered to be both property and a process inherent to the well-being of systems. At a practice level, the principle of integration can inform how leaders view and understood situations as well as the decisions they make. For example, leaders and consultants can assess the presence or absence of integration in small and large systems (i.e., individuals, teams, organizations) by looking at the capacity for flexibility, adaptation, coherence and the emergent outcomes of being energized and stable. Given the primes of human experienced are considered to be mind, embodied brain, and relationships, integrative processes can be accessed through any or all of these realms. For example, leaders can use their embodied experience to sense the presence or absence of integration. One way is for leaders to bring attention to their emotions, which signal shifts in integration (Siegel, 2017). This capacity involves present moment awareness where attentional focus of the mind is intentionally directed inwards to connect with sensations in the body as it is embedded in the relational field. As such the leader’s mind and embodied brain becomes an integrative resource through which relational knowledge is

accessible. Leaders are able to weave both embodied and relational reflexivity in a back and forth movement with one prime informing the knowledge gleaned from the other in a continuous flow.

From this perspective, the development of this resource requires leaders practice of internal attunement, for example, through mindfulness and mindsight. This rests upon their capacity to harness consciousness, which includes the ability to be aware of themselves as knowers and while being aware of the known.

Those I spoke to brought consciousness to several different domains of integration. For example, they consciously attended to tapping into both vertical (energy and information flow between the body and brain as well as between subcortical and cortical areas of the brain) and bilateral (between right and left hemispheres) integration as resources for understanding themselves and their relationships with others and for guiding practice. In addition, memory integration was featured as a significant factor in understanding reactions that may be influenced by implicit memory. These findings suggest that leaders and leader consultants can benefit from understanding the function of these integrative domains for their practice. One significant application is the increased understanding about how neural mechanisms impact individual and relational functioning within organizations and systems. For example, understanding and mitigating neural activation during times of change and/or crisis.

In addition, the leaders and consultants I spoke to were attentive to fostering interpersonal integration by honoring difference and finding linkages through curiosity, openness, acceptance and love (care, compassion) (COAL) (Siegel, 2012b). This translated into practices that were oriented to the present moment as well as reflexive. For example, one leader consultant talked about *process awareness*, a term he created to represent a relational practice of engaging in

dialogue about the relational in-between. This was particularly useful when relationships had fallen into disconnection and disintegrative states. Rather than trying to convince others of his viewpoint, this leader brought curiosity to conversations about the dynamic relational unfolding with the intention for understanding and integrative movement.

At the organizational level, integrative leaders and consultants are encouraged to hold the triad of mind, embodied brain, and relationships in consciousness as they consider the integrative potential of organizations and systems. For example, instead of solely focusing on technical solutions or universalized policies, they approach problems with relationships and the embodied brain in mind. This integrative intention can be practiced at all levels of organizational life and the triadic perspective taught and encouraged among individuals and teams. For example, having dialogue about procedures and processes that consciously attend to integration across mind, brain, and relationships.

This inquiry indicated that the more integrative organizational leaders were concerned with establishing structures and procedures that are relationally centered, which has implications for how they approach challenging situations. For example, the more integrative leaders I spoke to, were primarily concerned with fostering integration within themselves, their relationships with others, and the organizations or systems within which they worked. As a result, these leaders focused on developing capacities and practices for wellness across these dimensions, which, at times, meant they assessed when systems moved into disintegration (chaos or rigidity) and then expended efforts to promote differentiation and linkages that create integrative flow. Integration informed emergent and situationally responsive decisions and practices that leaders and consultants made. These flexible and adaptive responses are reflective of IPNB's foundation in complex systems perspective, which requires in-the-moment responsiveness to unfolding

dynamics. In other words, IPNB informed the lens through which leaders and consultant understood specific situations and then their actions, which were shaped by the principle of integration.

Leader Self-Awareness

The highly integrative leaders were attentive to their own well-being. Many acknowledged the vulnerability and risks they faced in bringing this perspective to organizations and systems that were either resistant or hostile to relationally-centered practices. Given this, they attended to their own self-care with integration in mind. For example, these individuals regularly engaged in practices such as mindfulness and body-based practices that connected them with their internal and embodied experience. They focused on honoring their different internal states and mental/emotional processes, along with the neurobiological correlates, in ways that fostered integration. Some leaders employed practices that have been developed by IPNB scholars. For example, the Wheel of Awareness practice; approaching situations with a Tri-pod lens of objectivity, observation, and openness; approaching situations with compassion, openness, acceptance and love (COAL) (Siegel, 2012b). Further, they consciously cultivated safe spaces with trusted individuals where they could participate in reflexive dialogue about their experiences from an IPNB perspective. These activities not only supported them to moving forward, but furthered their embodiment of the principles and leadership development.

Domains of Integration

The foundational domain of integrative processing and action is *consciousness*. Integrative leaders both explicitly and implicitly engaged with the elements of mind, which are considered to be subjective experience and consciousness (the knower and the known). In addition, mind is recognized as an emergent process of energy and information that is both

embodied and relational (Siegel, 2017). IPNB's notion of energy is based in physics and refers to "the capacity to do something" (Siegel, 2012b, p. AI-29). Information references the "pattern of energy that symbolizes something other than itself" (Siegel, 2012b, p. 1-8). Thus, these leaders engaged with their own minds and internal relationships between different states, memories, relational positions, through reflective and contemplative practices such as mindfulness, martial arts, mindsight.

In addition, these leaders had a well-articulated and integrated *narrative* that brought coherence to their leadership practices, development, and identity. They had a capacity to articulate their consciousness as they reflected on their leadership practice from an IPNB perspective, attending to the intersection of mind, brain, and relationships in their various capacities. Their reflexive capacity fostered integrative movement and growth across time, in space (i.e., *state integration*), and place (*interpersonal integration*). For those who were organizational leaders and/or systems change agents indicated that they consciously brought an IPNB lens to their assessment of situations and dynamics. They sought to foster procedures and processes that were functionally integrative. These individuals did not represent themselves as all knowing, rather their development was ever-present. They engaged with what was presented in a way that was non-prescriptive. Rather, IPNB guided how they saw, what they did, and who they were.

For example, one of the more integrative leaders talked about the importance of considering integration within the *domain of memory* when he approached students who had become activated. He shared how this was essential in understanding the underlying reason for their behavior and, rather than judging it negatively and punishing students, he taught them and his colleagues about the nature of traumatic memory and its adaptive influence on the present.

Further, his integrative approach attended to elements that are necessary for *interpersonal integration* where differences are honored and connections cultivated. This manifested in different ways that were responsive to the emergent relational in-between. He fostered connection with students and his colleagues by pointing their shared human neurobiology that influences behavior. Referencing his own neurobiological response to safety and threat, he educated principals, teachers, students, and parents about how the vagus nerve influences students' behaviour that can appear oppositional or defiant.

Other leaders I spoke to also attended to interpersonal integration at a community and organizational levels. For example, two leaders were involved in developing a new organization and recognized the organization's presence could trigger a threat response in other non-profits. Therefore, they were attentive to cultivating linkages by reaching out to other organizations and inviting them to partner on community projects. As well, they were clear to differentiate this new organization's purpose and focus from the work being done by the other organizations. This was intended to invoke a sense of safety, which calls forward neurobiological response for social engagement (Porges, 2011, 2017).

Fostering Change

IPNB contends that leadership is about attending to mind, brain, and relationships. This awareness needs to be core of leadership development and held in consciousness as leaders assess, make decisions, and act. This requires a shift in orientation. Those who were successful in bringing about this change to organizations and systems that upheld dominant, non-relational ideals and practices, did so through the science that IPNB draws upon. Many shared that people tend to respect science and so they taught and coached leaders about the neurobiology and neuroscience of relationships, linking this to positive outcomes that were meaningful to each

setting. Not all leaders had successful stories about these efforts, particularly when encountering extremely rigid systems that were not open to new ideas. For example, one leader was committed to finding a way to inspire change in the child welfare and justice system. However, he could not find a way to influence what he called a “calcified system.” There were four approaches to change among those I spoke to. Those leaders who focused on *relational engagement* tended to relational processes such as cultivating safety, being invitational, inviting dialogue, and being a catalyst for change. Other leaders, had a *complex systems approach* to change. They focused on disturbing the status quo, guiding, contributing, and shaping, but not controlling organizations and systems. One leader shared how he invited people to change through successful action (attraction rather than promotion). These individuals believed that introducing small integrative changes or inputs into the system had potential for large impacts. They were not focused on a specific outcome; rather, their guiding principle was the promotion of integration. One of the people I spoke with described this as having “no sledgehammers.” The focus was on engagement with different elements of the individual, group, organization, or system.

A third approach to change involved recognizing and leveraging *power* within organizations and systems. Several of the leaders I spoke to acknowledged the implications of that power had in implementing change. This included positional power as well as the power of enculturated ways of seeing, being, and practicing that were encountered by many. Several ways of navigating this were shared. This involved engaging with individuals who have power to effect change in this new perspective and utilizing the power to mandate participation in programing that was IPNB-based. Others were inspired to create new organizations and programs that were based on IPNB principles rather than, or in addition to, trying to transform those that based in non-relational ontologies.

Finally, some leaders focused on fostering *neuroplastic change* at individual and team levels of the organization. They engaged consciously with creating experiences that engaged the minds and brains of those involved towards integrative change. This included creating places that optimized experiences and places that held brain and relational health at center. For example, attending to the physical environment (i.e., noise levels, lay out), or structure of team communication. For others this meant attention to the relationships they had with others and optimizing potentially integrating processes, such as empathy, compassion, and openness.

Healthcare Organizations

IPNB brings science to understanding the fundamentals of human experience in ways that validate the necessity for leaders to attend to mind and relationships in their practice. This has implications for all levels of healthcare systems, which have been criticized for practices that objectify those who are often at their most vulnerable (Carroll, 2017; Mulvale & Bartram, 2015; Swerdfager, 2016). It provides an opportunity to engage healthcare organizations and systems in transforming how they approach care of consumers of their service. IPNB connects the different levels of healthcare by demanding that those who lead, as well as the structures and processes that are the connective tissue of organizational life, cohere with integrative practices. This brings subjectivity and relationships front and center. It also requires leaders consider wellness from a wholistic perspective, (i.e., no longer splitting mind from body, or treating parts of the brain and body as if these were not connected to the whole and the relational environment within which minds and bodies are embedded). IPNB brings a depth of understanding to mind, brain, and relationships that identifies specific mechanisms and practices that can be consciously engaged in the service of systemic wellness at micro, meso, and macro levels. This way of seeing and

doing has implications for healthcare practitioners and teams as well requiring leaders to attend to the integrative wellness of those who do the work on the front lines.

Implications for IPNB Leadership Scholarship

In addition to providing specific ways that leaders and leader consultants are approaching their practice from an IPNB perspective, this inquiry revealed differences in integrative capacity and focus among the participants. As mentioned, these differences fell across a continuum from low integrative capacity/focus, to more contextual integration, to those who were highly integrative. There were differences among these individuals including their reflexivity about their practices, development and identities. The less integrative leader consultants were more traditionally positioned as separate from those they worked with rather than relationally embedded. For example, they tended to *look at* individuals, groups, and organizations rather than experiencing themselves as *part of* the relational field within which they practiced. In addition, they tended to speak with a declarative I-voice, an undifferentiated we-voice with which they spoke for or about others and a distancing-you-voice. This positioning was not shared by the more integrative consultants who embedded relationally, no matter how temporary the encounter. In addition, integration was at the heart of how they approached leaders and organizations. This often resulted in them being identified by others as offering consulting that was different than the norm. For example, one individual commented that he had been called an “organizational therapist.” In addition, the integrative consultants were more likely to seek engagement with the individuals and systems to understand, to influence, and to engage, rather than prescribing an intervention. The more integrative leaders’ voices were more fluid and spoke with relationally-embedded voices including a MWE-voice, when describing their leadership positioning. Although the less integrative consultants used IPNB principles to understand a

problem area and/or provide specific IPNB-inspired interventions, they did so from a more prescriptive stance.

This has implications for IPNB and leadership development. It was clear that IPNB leader development is variable and that to embody the principles, individuals need to not only know about the fundamental underpinnings of mind, brain, and relationship, but also need to develop their conscious engagement with these primes. Much of the integrative leaders' and consultants' development occurred in space; namely internal space and in the relational-in-between. While they acquired knowledge and skills over time, their development was ongoing as they grappled with contrapuntal themes that emerged moment by moment. IPNB assisted them to reflect on complicated leadership dilemmas and emerging situations in ways that further their development as well as that of their workplace settings. This was, at times, an uncomfortable process, particularly when they encountered individuals and systems (relational and/or organizational places) that held different ontological positions. However, rather than defaulting to rigid solutions that could quiet the discomfort of risk taking, and the chaos of change, these leaders saw value in holding counterpoints (i.e., relational/non-relational) dialectically and found ways to hold the space for uncertainty.

Except for one consultant, there was a consistent understanding of IPNB principles among those I spoke to. However, the variability involved depth of practice and leadership positionality with respect to relationships. This has implications for IPNB leadership training and development. Specifically, in order to promote integrative wellness, it is not enough to learn the theory of IPNB; rather, it needs to be experienced and developed in the body as well as the relational in-between. This requires investment and personal commitment given these capacities emerge through conscious practices and attention. This calls into consideration what IPNB

leadership scholarship and training needs to include, for example, developing capacity to cultivate and sustain internal and relational integrative spaces and places. This brings up questions such as: What does this mean for leaders and consultants in the place(s) where their practice is embedded? This is particularly salient for those who may be in settings where they are the only leader coming from this perspective—or are in organizational cultures who may be resistant to this way of seeing, being and doing.

Those who were highly integrative expressed that IPNB had impacted them personally as well as professionally. It not only had profound impacts on their work, but also how they viewed and interacted in their personal relationships. These individuals consciously engaged their mind to monitor and modify their embodied brain, and relationships in ways that promoted wellness. It was not something they did in as much as it was *who* they were and *how* they were in relationships, both within themselves and with the people around them.

In addition, organizational leaders were consciously committed to bringing integrative perspectives and practices to every level of the organization. The highly integrative leaders considered themselves to be embedded in the organizational relationships, yet recognized their responsibility to respond in ways that promoted integration. This meant that structures and functions within organizations were geared towards promoting integration. For example, ensuring individuals and teams were honored for their differences and then finding ways to link vertically (between leadership and employees) and bilaterally (between organizational members and teams). In addition, they consciously brought attention to their own mind, embodied brain, and the relationships they had with organizational members. This also meant that they recognized the ways employees responses and capacities were impacted by neurobiological mechanisms. This was particularly relevant during times of organizational stress (i.e., attending

to the stress response that comes with change). Those who were not positioned in decision making capacities, (i.e., leading from position), tended to view the whole system and engaged where and how they could to influence larger uptake of IPNB principles. These were not always named explicitly. For example, often engagement occurred through educating people about the neurobiological underpinnings of thoughts, emotions, and behaviors.

Finally, most of the participants had a relatively high-level understanding about the science underpinning IPNB. They did not speak with specificity about the neurobiological mechanisms that came into play. This may have been influenced by the time limitations of our encounters and, had I returned to them for clarifying conversations, I may have learned differently. However, it appears that knowing the broad neurobiological mechanisms that came into play had assisted these individuals in approaching their practice and relationships. This discovery suggested that an understanding of basic neurobiological processes might be adequate for leaders to bring the science of IPNB into their practice. Alternatively, it also invited a potential area for advanced leadership practitioner development.

Limitations of The Inquiry

There were several limitations of this inquiry. First, all interviews were conducted remotely utilizing an online meeting platform. While this facilitated meetings across distances it had relational limitations. For example, the technology allowed me to see participants' faces only. I was not able to see nor experience the language of their bodies. IPNB acknowledged that energy and information is not just shared through what we say but is also received and spoken through the body (Porges, 2011; Siegel, 2020).

In addition, each interview was approximately one hour and could not encompass the entire leadership story of everyone. The decision to do so was based upon the sample size and

time limitations for this inquiry. In addition, I wanted to explore a larger number of individuals given this was the first inquiry looking at IPNB and leadership. In order to mitigate this a reduced number of participants with multiple interviews could be considered for future inquiries. Alternatively, a longer time for the inquiry process would facilitate a return to participants for further clarification and a more in depth exploration of significant findings following an analysis of the initial interview. Finally, a research team could extend capacity given this methodology requires significant time for the analysis and interpretation phases, which are done multiple times and with significant depth.

Lastly, the interpretation phase was bounded by my own knowledge, development, and positions through which I received and understood each person's narrative.

Implications for Future Research

The LG methodology has proven to be very valuable to understanding the experience of individuals who are utilizing IPNB. Although it is classified as a narrative method, the LG is also phenomenological in that it provides an opportunity to take a deep dive into the subjective experience of those who participate. In addition, the LG is a relational methodology and, as such, is harmonious with IPNB, which is foundationally relational. Furthermore, it is a flexible and responsive to the inquiry at hand. Although I chose to keep the opening question to one, broadly stated question, other inquiries may be better suited to a more structured interview process. For example, Gilligan (1982) offered a structured interview format given she was explore specific questions about girls and boys moral decision making. Thus, for researchers interested in using this methodology to explore specific aspects of IPNB leaders' experience, having a standard set of interview questions may be advisable.

It was clear that this present inquiry was just the beginning in understanding the richness that this field can bring to leadership. During the analysis phase I realized I could have had multiple interviews with a single participant, particularly with the more integrative leaders, in order to understand more deeply about their IPNB inspired practices and development. In addition, it would be interesting to do a longitudinal inquiry that explores leaders' development and identity over time. Although this inquiry was broadly focused given there had been no previous research into IPNB and leadership, it could be used for more narrowly focused studies. For example, it could provide the methodological means to explore a single leader's experience across multiple interviews over time. In addition, the LG could be used to explore an IPNB-based organization.

Another consideration involves the impact of depth of analysis that occurs through this methodology. The LG is a voice-centered methodology that analyzed not only *what* these leaders and leader consultants said, but *how*. It not only uncovered the overall themes and plotlines of their stories, but it provided a way in to deeply explore the developmental themes and voices through which these individuals spoke. While this level of analysis was essential to understanding IPNB's complexity and the layeredness of influence on leader's experience, participants may not have been prepared for this. As a result, it is recommended that future research ensures participants receive some information about the methodology and depth that it will uncover, some of which may not be consciously known or intended.

The LG could be used to studies across a broad range of IPNB research in other areas of practice. For example, mental health, education, and parenting. There has been a broadening of the arenas where IPNB is being used, however the research has not caught up. In order to advance the field, it will be essential that research efforts do also in order to understand more

fully its significance in evolving our understanding of what it means to be human and how a conscious engagement with mind, brain, and relationships can facilitate integrative wellness for all.

Alternate Methodologies

There are other methodologies that would lend well to exploring IPNB leaders' experience. This study suggests that understanding leaders' phenomenological experience is crucial to understanding their development, identity, and practice. IPNB is not a skills-based approach, rather its influence in the realm of these leaders' and consultants' being, including their embodiment, was foundational to their practice. It informed who they were, leadership moment by moment, as well as how they perceived and then approached situations and relationships. IPNB informed their decisions and actions. Therefore, it would be beneficial to take a deeper, more focused phenomenological study into these leaders' minds, brains, and relationships. For example, it would be helpful to understand more about their engagement with their own minds and those of others. As well, I was left wondering about their use of neurobiology and neuroscience given this research uncovered the benefit this brought to their practice. For example, it would be useful, to know the depth of their neurobiological understanding and how they utilize this in their relationships within themselves and with others. In addition, a quantitative study to measure the effectiveness of teaching the neuroscience of relationships within an organizational setting would be useful.

In addition, a case study of organizations that consciously integrate IPNB into their structures, processes, and practices would assist in understanding the potential this framework has within this context. At this point, IPNB-informed organizations are rare, therefore this is an untapped area for research. It would be useful to study an organization like the Center for

Connection, which is entirely based on IPNB in order to provide information to others about their experience and practices. In addition, some of the leaders and consultants I spoke to were bringing this framework into organizations and systems that were ontologically non-relational. These individuals' desire for transforming these systems was a driver for their leadership. It would be useful to understand this experience as well including the organizational outcomes of their efforts.

Finally, more research into IPNB-informed change efforts is needed. Most of the people I spoke to were drawn to IPNB because of their desire to find a new way of seeing, being, and doing in their chosen fields. Their call to leadership was founded upon a deep desire to bring relationally-centered care, that honored people's subjective experience, into healthcare at micro, meso, and macro levels. For some, finding ways to influence change in rigid, closed systems was painfully challenging. Exploring the nature of successful change efforts and the benefits would greatly assist in articulating an IPNB-informed theory of change. This might require a mixed-methods study where the qualitative depth that IPNB brings could be explored along with measuring concrete outcomes.

There may be other compatible theories and research methods that could inform this exploration such as Amy Banks (2015) work in integrating neurobiology with the Relational Cultural Theory's articulation of key elements in growth fostering relationships. Specifically, Banks offers ways to transform relationships from disconnection to connection where differentiation, mutuality, and empowerment are possible. She has developed a relational scale that measures the presence of growth enhancing qualities, which holds potential for studying interpersonal qualities that shape neurobiology and have implications for a leader's mindscape and mindsphere. Jody Hoffer Gittel's (2016) well-researched Relational Coordination approach

to transforming organizations and systems where relationships are held central and operationalized in the service of shared goals, knowledge and mutual respect. She has also quantified the relational domain in organizations and offers a methodological example that validates the power of relationships in facilitating healthy and productive workplace cultures. In addition, Mary Uhl-Bien and colleagues (2007) efforts to articulate a Complex Adaptive Systems Leadership Theory (CAS) offers clear approaches to change that consider both complexity and, at times, the need for structure and control in organizations. This approach honors adaptive leadership, which emerges through the interaction of individuals and teams without authoritative action as well as administrative leadership, performed through the actions of managers and positional leaders in an organization. In addition, CAS articulates a third positioning called enabling leadership, which capitalizes and facilitates processes that support catalyzing forces in the organization or system. This approach suggests a dynamic model that defines and measures organizational engagement to better understand relational characteristics of complex systems. While this is not an exhaustive list, these theories provide both inspiration and the potential for IPNB's growth as a leadership through research that measures and articulates the relational in-between. This would lend itself to IPNB leader knowledge acquisition, leadership development and practice.

Final Reflections

As this inquiry draws to a close, I recognize that I have been touched deeply by the individuals I had the privilege of speaking to and the LG process of inquiry process. On the surface, my knowledge has deepened about IPNB's implications for leadership and organizations. I am inspired and draw courage from those leaders who have dared to bring this relationally foundational way of seeing, being, and doing to organizations and systems that do

not espouse the same ethic. Their authenticity and commitment to fostering individual and systemic wellness, based upon honoring difference and finding ways to connect across these differences, gives me pause to consider my own presence and practices. These were individuals who are willing to lean into the hard places both internal and external.

In addition, I leave this experience feeling more connected with others. Like many I spoke with, I have experienced the disturbance with non-relational ontologies and practices that permeate healthcare. I too share desire to find ways to change objectifying and non-relational practices and have found myself isolated and demoralized in this endeavor. This inquiry has given me an invaluable opportunity to connect with others who have not only found themselves with similar aspirations, but who have managed to put these into practice wherever their leadership was located be it locally, organizationally, in community, or globally.

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APPENDIX A: INVITATION TO PARTICIPATE LETTER

Date

Re: IPNB and Leadership Interview

Dear Name of Participant,

I am a doctoral student in Leadership and Change, Healthcare Concentration at Antioch University. I am undertaking a dissertation focused on understanding the experience of healthcare and mental healthcare leaders who have utilized Interpersonal Neurobiology (IPNB) in their practice(s). The purpose of this research is to better understand what IPNB principles leaders are using as well as how IPNB has impacted their development and identities as leaders. Further, I wish to discover how, if at all, IPNB has impacted their organizations, if applicable.

I am writing you to inquire if you would be interested and willing to be a part of this research project. It will require one hour of your time for an interview, which will occur by an online meeting platform (zoom). Following this you may be contacted for a second interview if further clarification is needed. This interview will be audio recorded for transcription as well as video recorded for analysis and interpretation. All recordings and information will be kept strictly confidential.

Upon completion of my dissertation, you will have an opportunity to receive a copy.

If you are interested in participating in my research, please contact me at: (email)

Thank you for considering my request. I look forward to any future contacts we may have.

Sincerely,

Lynn Redenbach

APPENDIX B: GAINS NEWSLETTER ANNOUNCEMENT

Are you a healthcare leader who utilizes IPNB in your leadership practice?

I am a doctoral student in Leadership and Change, Healthcare Concentration at Antioch University. I am undertaking a dissertation focused on understanding the experience of healthcare and mental healthcare leaders who have utilized Interpersonal Neurobiology (IPNB) in their practice(s). The purpose of this research is to better understand what IPNB principles leaders are using as well as how IPNB has impacted their development and identities as leaders. Further, I wish to discover how, if at all, IPNB has impacted their organizations, if applicable.

I will be conducting interviews with interested participants utilizing an online meeting platform. These private and confidential interviews will be audio and video recorded for analysis and interpretation purposes.

If you would be interested and willing to be a part of this research project please contact me for further details at (email).

APPENDIX C: CONSENT TO TAKE PART IN A DISSERTATION RESEARCH PROJECT

Antioch University Leadership and Change Program (Healthcare Concentration)

TITLE OF STUDY: Integrating Interpersonal Neurobiology (IPNB) in Health and Mental Health Care Leadership and Organizational Practices
Principal Investigator: Lynn Redenbach

Study

If you have questions at any time during the research study, you should feel free to ask them and should expect to be given answers that you completely understand.

Lynn Redenbach will also be asked to sign this informed consent. You will be given a copy of the signed consent form to keep.

You are not giving up any of your legal rights by volunteering for this research study or by signing this consent form.

There are no sponsors, invested parties or financial interests involved in this study.

Study purpose:

To explore and understand how healthcare leaders have utilized Interpersonal Neurobiology (IPNB) in their practice(s) and how it has impacted their development and identity. Further, this dissertation seeks to understand the perceived impact this has had on the participant's organizations where applicable.

Expected length

This study will take place over four to six months. You will be expected to participate in a one-hour interview. The transcript of your interview will be made available to you for review. A shorter follow-up conversation may be needed to clarify any questions or new lines of inquiry from the first interview.

Location of the study

The interview will take place virtually, utilizing zoom.us technology. Every attempt will be made to accommodate to your schedule.

Expectations of Involvement

You will be asked to take part in interview/conversation, which will last one hour, minimum. This conversation will occur using zoom and recorded for the purposes of transcription for

analysis. You will have an opportunity to review the transcript and should you wish to omit any comments from the analysis and case study document, they will be removed.

Potential risks and/or discomforts you may experience

You may feel discomfort should you discuss concerns or issues with regards to your leadership experience. As well if you have an ongoing relationship with the investigator for example, as a colleague, you may feel uncomfortable discussing issues of concern that you may encounter as part of the interview process.

Potential Benefits that you may experience

However, it is possible that you might benefit from reflecting on your experience as an IPNB-informed leader. As well, your participation may help in understanding IPNB principles that inform leadership practice and the impact this has had for leader's development and identity. This exploration may assist in identifying areas for further growth and/or contribute to and understanding of how IPNB can inform leadership practices and principles in addition to its impact on organizations. This knowledge may assist in educating future leaders, elucidating areas for future research, and enhancing the field of IPNB and the leadership canon.

Participation

Your participation in this study is entirely voluntary. As such you are free to withdraw your participation at any time.

If you do not want to enter the study or decide to stop participating, your relationship with the investigator will not change.

You may also withdraw your consent for the use of data already collected about you.

Costs of participating

There will be no financial costs incurred to you for participating in this study.

Privacy and confidentiality

Efforts to ensure privacy include conducting the interview using an online meeting platform that will only be accessible through a link that will be provided only to you (Zoom.us). This meeting platform has the capacity for both audio and video recording, which will be utilized for the purposes of this research. However, only the audio recording will be provided to the transcriptionist without identifying information. Video will be viewed by the researcher only for the purposes of analysis.

All audio and video recordings will be encrypted and kept in a password protected computerized vault. These will be destroyed upon immediate completion of this research project.

Every effort will be made to keep your personal information confidential by removing any identifying information from the interview materials. *However, should you wish to be identified as a participant and have your name associated with the information you provide, please indicate by initialling here: _____(initials).*

Your personal information may be given out, if required by law. Presentations and publications to the public and at scientific conferences and meetings will not use your name and other personal information. The dissertation report will not bear your name, unless you have indicated above, and all attempts will be made to conceal details that may reveal your identity through other means, i.e., because the interviewees are known to each other, identities may be deduced from specifics, therefore caution with revealing such specifics will occur.

If printed, transcripts of the recordings will be kept in a locked filing cabinet. Computerized files will be password protected.

Dissemination of the findings

Antioch faculty will review this case study for the purposes of fulfilling the dissertation requirement in the PhD Leadership and Change (Healthcare Concentration) program.

Study participants will have option to receive a copy of the dissertation.

Given the investigator's interest in the application of IPNB to leadership theory and practice, themes and identification of IPNB principles in leadership processes may be utilized to guide future investigation, inquiry, and projects. Findings from this study may also be presented in future publications including journal articles, books/book chapters and conferences. However, should this occur, further notification and consent will be sought.

If you have any questions

If you have any questions about taking part in this study please contact:

Lynn Redenbach
Principal Investigator
(phone number)
(email)

If you have any ethical concerns about this study, contact:

Dr. Lisa Kreeger,
Chair, Institutional Review Board
Antioch University Ph.D. in Leadership and Change

(email)

AGREEMENT TO PARTICIPATE

I have read this entire form, or it has been read to me, and I believe that I understand what has been discussed. All of my questions about this form or this study have been answered.

Signature

Date

APPENDIX D: PERMISSIONS

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Thank you.

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