Doctoral thesis summary

Neuroleadership as the New Business Integrator: Building Team Performance and Organizational Performance Through the Lenses of Knowledge Dynamics

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Uncertainty has been one of the most prevailing challenges humans need to face globally (Bolisani & Bratianu, 2017; Gitelman & Kozhevnikov, 2021; Chen et al., 2013). This may also be seen as a psychological barrier, which determines leaders to make the most out of their experience and expertise to simply the problems by employing solutions that proved helpful in the past (Bratianu et al., 2020). In a world that is structurally governed by the unpredictable and inherent nature of the future, the power of knowledge stands out as a strategic pillar which can be employed in conjunction with one's ability to learn, explore, and share the information within the organization to ensure the successful usage of available tangible and intangible resources.

In the ever-changing context of the modern organizations, where adaptability and innovation are essential for building a competitive advantage, the concept of neuroleadership has emerged as a promising avenue for understanding and enhancing team and organizational performance. Neuroleadership explores the intersection between neuroscience, psychology, and leadership, promoting the idea of understanding how the human brain functions and, practically, how behaviors can influence leadership strategies and organizational outcomes. As a result of the exponential growth and innovation in the technology sector, work processes, and standards are being redefined, and businesses undergo substantial changes and novel challenges, especially with the rise of Artificial Intelligence (AI). As a consequence, there is an increasing need to start applying neuroscience knowledge to improve leadership practices, enable and embrace change, adjust swiftly, and achieve sustainable performance. This shift, wherein organizations must adjust to the intricacies and cognitive demands of the modern workforce, is centered around the knowledge economy.

The dynamic and accelerated transformations occurring in the modern era, combined with the progressive evolution of generations and the emergence of new types of obstacles and challenges, have substantially altered and influenced the nature of work. Recent studies reveal that

Gen Z and Millennials currently make up around 38% of the global workforce, and this percentage is forecasted to rise to approximately 58% by the year 2030 (Deloitte, 2023). Also, 77% of Generation Z are said to prioritize work-life balance with the expectations from leaders to set up the standards for work that is more purpose-driven (McKinsey, 2024). When looking at the mental health spectrum, 41% of the millennials and 46% of GenZ reported that they feel stressed or anxious most of the time, with the latter having the least positive outlook of life from all generations in the workplace (Deloitte, 2021; McKinsey, 2022).

Traditionally, humans possess a natural inclination towards familiarity and comfort due to people, as mamipheres, are wired to survival. Therefore, it is in the human nature to express a fear towards technological disruptions like AI at first. However, neuroleadership interventions capitalize on the human brain's remarkable neuroplasticity, offering techniques and instruments to reframe perceptions and adapt behaviors. By understanding how neural mechanisms work, neuroleaders can empower individuals to cultivate a growth mindset, fostering openness to new technologies such as AI. Moreover, neuroleaders may promote cognitive flexibility, enabling individuals to embrace AI's potential with confidence and resilience. By employing practices such as mindfulness and cognitive reframing, neuroleadership enables individuals to view AI not as a threat to job security, but as a driver of innovation and professional advancement. Utilizing principles from neuroscience, leaders can foster an organizational culture that prioritizes continuous learning, thereby facilitating the acceptance of change and disruptive ideas. This approach positions neuroleadership as both a vital integrator of business practices and a crucial foundation for future growth of professionals and organizations.

Before studying neuroleadership principles in more depth and their implications on team performance and organizational performance, a theoretical analysis of traditional leadership and neuroleadership's differences and similarities was required. Historically, management and leadership theories and practices have relied on understanding and mastering external factors, such as hierarchical structures or strategic planning. However, in a period of rapid technological innovation and changing workplace dynamics, together with generational gaps and transforming the way people work, the classic paradigms of traditional leadership may not be enough to capture the current and future leadership challenges. Neuroleadership emphasizes the internal cognitive and emotional processes that support effective leadership and integrates neuroscience into leadership theory and practice, putting the focus on the internal factors, such as understanding how

the human brain works, why people act or react in a certain way, how the decision-making process is influenced by various cognitive biases etc.

The main objective of the research is to comprehensively investigate how neuroleadership and knowledge dynamics influence team performance and how this is reflected when it comes to organizational performance. In this light, some specific objectives were formulated, namely: to identify the differences and similarities between traditional leadership and neuroleadership; to examine whether and to what extent neuroleadership influences team performance; to examine whether and to what extent neuroleadership correlates with organizational performance; to examine whether and to what extent team performance leads to organizational performance; to examine whether and to what extent knowledge dynamics influence neuroleadership; to examine whether and to what extent knowledge dynamics influence team performance; to examine whether and to what extent knowledge dynamics correlates with organizational performance; to elaborate and build an organizational diagnoses instrument to assess the level of neuroleadership within an organization.

The research methodology for the present paper is structured around three key pillars. Initially, a qualitative approach was employed, comprising an extensive literature review and bibliometric analysis, to delineate the distinctions between neuroleadership and traditional leadership paradigms. This stage provided a foundational understanding of theoretical frameworks, empirical data, and practical implications.

Next, a focus group was conducted in order to integrate insights from practitioners and experts, facilitating dynamic discussions and a multifaced perspective of neuroleadership in practical contexts. This interactive method enriched the research by validating and refining the concepts developed in the initial qualitative phase.

Finally, a quantitative, statistics-based approach was adopted to operationalize key concepts and substantiate the research model's findings. With a sample size of 106 responses, this phase aimed to statistically corroborate the trends and causal relationships identified previously, thereby offering a comprehensive analysis of neuroleadership's impact on team and organizational performance.

In what concerns the structural model, only a few of the inferred relationships proved to exert significant effects. In what concerns neuroleadership, two hypotheses emerged as relevant, namely, neuroleadership positively influences team performance and neuroleadership mediates the

relationship, and team performance positively mediates the relationship between neuroleadership and organizational performance. Also, the hypothesis which presumed that team performance positively influences organizational performance was validated. When it comes to knowledge dynamics, three hypotheses were validated, namely knowledge dynamics positively influences neuroleadership, knowledge dynamics positively influences team performance, and team performance positively mediates the relationship between knowledge dynamics and organizational performance. No significant relationships were retrieved between individual knowledge types (emotional, rational, spiritual) and the neuroleadership, team performance, or organizational performance.

In terms of originality, this study represents the initial attempt to define the unique characteristics and skills of neuroleadership in comparison with traditional leadership models. By clarifying these distinctions, it establishes a fundamental comprehension of how companies might shift from traditional leadership models to those influenced by principles of neuroscience, thus improving leadership efficacy and organizational adaptability. Also, incorporating insights from knowledge dynamics theory developed by Constantin Bratianu represents a novel aspect of this research. By exploring how organizational knowledge processes interact with neuroleadership principles, this study enhances the understanding of how strategic knowledge management can improve leadership capabilities. Therefore, the paper underscores the novelty of integrating knowledge dynamics to enhance organizational performance through its facilitative role in neuroleadership and team performance, emphasizing the transformative process from individual knowledge to collective and organizational knowledge domains. This integration enriches not only theoretical frameworks but also provides practical guidelines for leveraging organizational wisdom to foster neuroleadership competencies. Lastly, by demonstrating how neuroleadership can facilitate AI integration and optimize team performance, the thesis emphasizes the transformative potential of neuroleadership in embracing change and adopting disruptive technologies and ideas, a mandatory step when it comes to ensuring a long-lasting competitive advantage.

Regarding the theoretical contributions, this study represents the initial attempt to define the unique characteristics and skills of neuroleadership in comparison with traditional leadership models. Clarifying these distinctions establishes a comprehensive outlook on how companies might shift from traditional leadership models to those influenced by principles of neuroscience,

thus improving leadership practices, team performance, and organizational performance. Additionally, incorporating insights from knowledge dynamics theory developed by Constantin Bratianu represents a novel aspect of this research. By exploring how organizational knowledge processes interact with neuroleadership principles, this study enhances the understanding of how knowledge dynamics influences neuroleadership. This integration enriches not only theoretical frameworks but also provides practical guidelines for leveraging organizational wisdom to foster neuroleadership competencies.

From an academic standpoint, this research makes a substantial contribution to the academic community by offering a well-organized paradigm that combines neuroscience with leadership theory. This framework can serve as a foundation for scholars and researchers to further investigate the application of neuroleadership concepts in various organizational contexts. Moreover, the confirmed hypotheses and methodology utilized in this study provide a systematic framework for future empirical research in the subject of neuroleadership and organizational behavior.

From a managerial implications point of view, in order to turn the outcomes of this present thesis into a practical instrument for leaders and organizations, we propose the development of an organizational diagnosis instrument to allow the organizations to assess their leaders' neuroleadership capabilities. The Neuroleadership Assessment Toolkit (Annex) offers a comprehensive framework for evaluating a leader's neuroleadership abilities. This three-pillar approach integrates self-assessment, 360-degree feedback, and a one-on-one evaluation with an expert, providing leaders with a holistic perspective on their neuroleadership strengths and areas for development. The initial pillar of the framework involves a self-assessment based on standardized scores obtained through a targeted survey instrument. This self-assessment allows leaders to gain initial insights into their neuroleadership profile, potentially revealing blind spots, gaps or areas requiring further exploration.

The framework extends beyond self-perception by incorporating a 360-degree feedback component. This multi-source feedback gathers input from a diverse group of stakeholders, including peers, managers, and direct reports. This comprehensive approach provides valuable insights into leader effectiveness from various perspectives, potentially revealing discrepancies between self-perception and external observations. Triangulating data from these sources allows

for a more nuanced and realistic picture of a leader's neuroleadership impact within the organizational context.

In addition to the managerial implications, at the team level, neuroleadership offers significant opportunities for neuroleaders to support their people through specific neuroplasticity techniques and promote cognitive flexibility. Leaders can encourage team members to engage in activities that stimulate neuroplasticity, such as learning new skills together or implementing monthly innovation days when they spend dedicated time brainstorming and trying new ways of doing things to challenge themselves. This can enhance cognitive flexibility and help the brain develop new neural pathways. Additionally, incorporating practices like daily mindfulness meditation and or regular team physical exercise can help team members manage stress and improve their overall mental agility and resilience. Neuroleaders can also promote cognitive flexibility by encouraging team members to embrace new experiences, such as changing their positions for a month to get outside their comfort zone or designing various shadowing programs for people to learn from each other and exchange knowledge. These strategies not only foster a culture of adaptability and continuous learning, but also empower teams to approach problems with fresh perspectives.

Also, creating an environment of psychological safety is essential for these neuroplasticity tactics to thrive. When team members feel secure in sharing their thoughts and taking risks, they are more likely to experiment with new ideas and learn from failures. Neuroleaders can cultivate this safety by showing their vulnerabilities as well, acknowledging their own mistakes, and demonstrating a willingness to learn from them. By encouraging open dialogue and actively seeking input from all team members, leaders can create a culture where diverse perspectives are heard, valued and collaboration is prioritized. This supportive atmosphere not only enhances individual creativity but also strengthens team spirit, ultimately driving better performance and innovation in the organization.

The study faced several key limitations that should be acknowledged. First, the novelty of the topic under investigation limited the availability of existing research and established frameworks for comparison, presenting challenges in contextualizing the findings within the broader academic landscape. Additionally, the relatively small number of survey responses received constrained the ability to generalize the study's results to larger populations. Furthermore, the lack of an experimental research design restricted our capacity to establish clear causal

relationships between the variables examined, thus necessitating a more nuanced interpretation of the observed associations rather than drawing definitive cause-and-effect conclusions.

Future research in neuroleadership should focus on leveraging advanced brain imaging techniques, such as functional Magnetic Resonance Imaging (fMRI) and Electroencephalography (EEG), to deepen our understanding of the neurological underpinnings of leadership behaviors and team dynamics. By conducting experiments that utilize these technologies, researchers can investigate how different leadership styles influence brain activity and emotional responses within teams, potentially revealing the neural correlates of effective leadership. Additionally, studies could explore the impact of neuroleadership interventions on organizational outcomes by measuring changes in brain function associated with improved decision-making, creativity, and collaboration. Longitudinal research could further illuminate how brain-based leadership strategies evolve over time and across diverse cultural contexts, providing insights into their long-term effectiveness. Overall, integrating neuroscience with experimental methodologies will enhance our comprehension of how neuroleadership can be applied to foster innovation and resilience in organizations.

In conclusion, this thesis represents a novel exploration into the integration of neuroscience and leadership theory, highlighting the transformative potential of this emerging field for enhancing team and organizational performance. Our research journey into the complexities of the human brain reveals not only the components and impact of neuroleadership but also the profound connection between neuroscience and human experience. As we deepen our understanding of how brain functions influence leadership styles, we uncover valuable insights that can guide leaders in becoming better professionals through lifelong learning. This exploration reminds us that at the heart of neuroleadership are the individuals - leaders and team members alike—whose unique perspectives and interactions shape organizations' success. By centering our research on people, we can nurture the insights of neuroscience to create more supportive and innovative workplaces, ultimately enriching both individual and collective potential. It is our shared responsibility, as researchers and practitioners, to create a future where leadership is not just a skill but a profound expression of our shared humanity that makes us all better.