A Conscious Convergence

Hawari-Latter, Sharifa; Bruce, Fraser; Baxter, Seaton

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A Conscious Convergence: Leading Innovation Through Design Thinking

Sharifa Latter, Fraser Bruce and Seaton Baxter
University of Dundee, UK
s.latter@dundee.ac.uk
f.s.bruce@dundee.ac.uk
seaton.baxter@gmail.com
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Abstract: Organisations need to create and sustain cultures that support risk-taking and entrepreneurial behaviour. Corporate Entrepreneurship has continued to gain traction in recent years as a process to develop new business and revenue streams to add value in the marketplace. Successful innovation management has therefore taken centre stage as a strategy to mitigate risk and create competitive advantage. Popularised by global design, innovation and management consultancies like IDEO and McKinsey, Design Thinking has spread its domain of activities into wider fields, where the value of the process is equally important to stimulating the innovation of new products and services. To improve the entrepreneurial capacity of organisations, leadership rooted in Design Thinking has the potential to inspire every employee to act in a creative way and to successfully engage in the process of innovation. This paper, which is both provisional and speculative in nature as it precedes empirical work, discusses how the convergence of conscious leadership and the Design Thinking process can provide the ultimate foundation for creating an improved entrepreneurial culture. It begins by considering the role of convergence before elaborating on a careful selection of published evidence on Corporate Entrepreneurship, Design Thinking and Leadership. We then shift our attention to the importance of Conscious Leadership, as a 'radically new and meaningful paradigm that enhances and enriches everyone who embraces it.' The paper concludes with a set of strategic principles to support organisational environments for entrepreneurial success, emphasising Design Thinking as a tool for sensing and innovating while also providing a foundation for leadership to act as a catalyst for change.

Keywords: design thinking, corporate entrepreneurship, innovation, conscious leadership, convergence

1. Introduction

In the last decade, we have seen the rapid adoption of Design Thinking into a variety of business, management and community practices. In many cases, this has been aimed at increasing innovation and stimulating economic growth at local, regional and national levels. During this same period, we have also seen an increase in the criticism of capitalism and especially the "profit only" motive for economic growth. However, a new business paradigm aimed at increasing "consciousness" seems to be gaining momentum (Kofman 2013; Mackey and Sisodia 2014; Cannon 2016). The integration of more conscious characteristics and behaviours in everyday business endeavours is a challenge for many organisations, as it demands a rethink, shift in mindsets and new ways of working. Organisations need to consider more carefully how to converge different aspect of business activities in order to re-focus and create better integrated systems and processes. We begin this paper by considering the role of convergence as a common occurrence before reviewing and elaborating on a careful selection of published evidence on corporate entrepreneurship, Design Thinking and leadership from the perspective of a convergence of these practices. It is likely that the convergence of these practices will influence what and how leaders select and promote ideas for innovation, thereby yielding competitive advantage in the short term through quick wins whilst inspiring every employee to act in a creative way, to develop and share knowledge, and to successfully engage in the process of innovation in the longer term. We discuss how the new paradigm of "conscious leadership" (Watkins 2014; Mackey, McIntosh and Phipps 2020) and its behaviours and characteristics can converge with Design Thinking principles. A 'conscious convergence' could simply mean a deliberate act of converging but, in this paper, it means this and much more. In particular, it implies an action(s) which entails raising the "stage of consciousness" in the development of organisational environments that encourages entrepreneurial behaviours within the workforce, thereby leading towards more natural and sustainable forms of organisational growth, management and innovation performance. Simply put, the convergence of Design Thinking and conscious leadership can create a better entrepreneurial environment for innovation.

2. On convergence

To 'converge' is simply defined as "to move towards or meet at the same point" and its opposite, to 'diverge' is "to separate and go in different directions" (Collins 2011). For specific situations, these definitions may take on

more sophisticated meanings. The two actions, converge and diverge, often occur as a noticeable sequence and sometimes as a pattern of multiple sequences. They are a common occurrence in everyday life. For example, for decades in 'normal times' school children converge on the local school, usually walking, early in the morning and finally diverge again in the afternoon on their diverse ways home. Now, many arrive on buses, in their parent's cars, on bicycles, scooters and skateboards and nearly all have a "smart phone' in their hands or 'hip pocket'. Humans and technologies are converging everywhere with significant consequences. Children can now stay in contact with their parents at home or even with friends across the world. Information is readily available and education systems change to accommodate the technologies and the science behind them. Behind all of this, the sciences too are converging, prompting the emergence of new sciences (Watson 2016) and the development of new technologies (Schmidt 2008). Companies are also converging in new ways to increase market share through business mergers, acquisitions and strategic partnerships. Similarly, different knowledge disciplines have come together in order to better solve problems and foster new innovations. Design Thinking, for instance, evolved out of the need of large corporations to be more creative when aligning their design, technology and business needs. Indeed, Martins (2009) usefully describes the process as the balancing of "analytical mastery and intuitive originality in a dynamic interplay" (p. 6). The consequences however, of the convergence of several of the failings of modern developments like social inequality, environmental destruction and political instability may even result in the decline of neo-liberalism and what may eventually prove to be a positive change in our social and economic systems (Streeck 2016).

Convergences come in all sizes, so we need to take them seriously. Lifestyles and new businesses arise, flourish and die as a consequence of convergence. How we manage convergences, will not only enhance or destroy our enjoyment of daily life but ultimately improve our chances of building more prosperous and sustainable economic, business and societal models. The success of convergence is particularly important in the context of Corporate Entrepreneurship, where new ideas evolve within an already existing environment.

3. The opportunities and challenges of corporate entrepreneurship

Companies of all sizes face immense pressure to continuously innovate within emerging new global, economic and technological advancements (Kuratko and Morris 2013). Entrepreneurial leadership is hard earned, and it is well-known that most successful innovative companies of our time allocate significant resources to create organisational environments that foster innovative, entrepreneurial mindsets and drive (Hornsby et al. 2009; Kuratko, Ireland and Hornsby 2001; Kuratko, Montagno, and Hornsby 1990; Kuratko, Hornsby and Covin 2014). Corporate entrepreneurship, or Internal Corporate Venturing, i.e., "innovation by established firms" (Baden-Fuller 1995 p. 12), can be the answer to more dynamic and sustainable business growth and performance. It offers opportunities to innovate outside existing core business operations as well as pathways for strategic renewal through new business - not just new products or services (Wolcott and Lippitz 2010). Dealing with risks, ambiguities, and uncertainties that characterise the process of innovation is however intrinsically challenging as it requires agile and opportunistic behaviour, usually attributed to start-ups rather than existing companies riddled with "administrative burdens, bureaucracy, and regulations" (Makarevich 2017, p. 189). Making an old dog learn new tricks appears to be easier than rejuvenating an old established firm through corporate entrepreneurship which requires an organisational culture that encourages entrepreneurial behaviour in the workforce. Points of failure commonly lie in the friction that is caused through the creation, differentiation and convergence of existing and new business units (Burgers and Covin 2016). Clear organisational structures and strong leadership are therefore indispensable. While there are also many other factors influencing successful corporate entrepreneurship, such as availability of resources, talent and market changes, to name a few, "the major thrust behind corporate entrepreneurship is a revitalization of innovation, creativity, and leadership in today's organizations" (Kuratko, Hornsby and Covin 2014, p. 44). It is this correlation of innovation, Design Thinking and leadership that will be examined more closely in this paper.

4. Innovation and leadership

Innovation is essential for the development of human endeavours, an ability to use our intelligence and cognitive ability or adaptive strategies to respond to complex and changing environments. The scholarly literature in the field of innovation is vast and complex, as is the growing body of research on leadership theory. Therefore, this paper will not set out to explore the different strands separately. Within the context of corporate entrepreneurship, however, successful leadership has the potential to grow and maximise innovation capacity while successful innovation in return, can create, improve and influence organisational structures, thereby positively impacting leadership activities (Agbor 2008). Therefore, the convergence between innovation and

leadership is undoubtedly worth examining in more detail due to the interconnectivity and strategic relevance of proactive or reactive responses to change. Definitions and opinions of what constitutes success within leadership and innovation are manifold. Traditional business theory lays emphasis on the bottom line and ascribes success to leadership and innovation that adds value to the company, either through increased profits, growth or improved market position. While this is not to be entirely dismissed as outdated, recent literature has argued that in order to achieve long-term economic success, innovation and leadership should be approached more holistically, given that human capital does not necessarily reach its full potential by being managed according to economic parameters only (Macke and Genari 2018). There is variation in the nature and terms used to describe the characteristics of different holistic leadership approaches, for example, transformational (Bass and Riggio 2006) or responsible (Waldman and Galvin 2008) leadership, and more recently, models around sustainable (Henriksson and Grunewald 2020), ecological (Marin 2013) or conscious leadership (Mackey, McIntosh and Phipps 2020). This paper will briefly discuss differences at a later stage (see section 6.0), however, they are all based on the belief that successful leadership, and subsequently successful innovation, is fostered by the conscious development of positive values and behaviours in the workplace (Marin 2013). Indeed, Marin (2013) points out that "Managers and Leaders have the unique opportunity, given their position of influence, to lead, inspire and grow others" (p. 12), which commonly requires empathy towards those who are being led, such as innovation teams, for example. Similarly, ideation within these innovation teams, is driven by the ability to develop empathy and a deeper understanding of consumer needs and target markets with the aim of delivering effective design solutions (McDonagh and Thomas 2010). Again, this is another form of convergence revealing empathy as a common denominator for successful leadership as well as successful innovation. This is not a coincidence, as both activities revolve around human needs. Handa and Vashisht (2018) point out that "…human needs tend to be complex, rooted deeply in behaviours and attitudes, governed by complex interactions and therefore hard to grapple through a purely analytical approach" (p. 11). In order to build empathy between leaders and innovators as well as end users, convergence might have something useful to offer to companies that value the process of innovation as equally important to the stimulation of new products and services. An increasingly globally recognised and widely applied problem-solving approach with empathy at its core is Design Thinking. It can be defined as "design practice and competence [...] used beyond the design context" (Johansson-Sköldberg, Woodilla and Çetinkaya, 2013, p. 123). Handa and Vashisht (2018) indicate that "All aspects of Design Thinking are applicable to different functional and leadership domains – be it marketing, sales, human resources, or finance" (p. 10). Design Thinking is therefore a practical and essential tool for sensing, simplifying and driving innovation as a strategy for business change (or transformation).

5. The characteristics and behaviours of design thinking

Design Thinking has spread its domain of activities over the past decade into wider fields (e.g. service, public policy and management) as a methodology for creative problem solving with a particular focus on innovation (Brown 2009; Cohen 2014), competitive advantage (Martin 2009), integrating customer experience (Lockwood 2009) and improving decision making (Liedtka 2015). Although many within the design community would argue that the term is now being oversimplified, even misinterpreted, Hobday, Boddington and Grantham (2012) suggest that by adopting the methodology "may lead to a major reorientation of innovation theory, research, and teaching, thereby moving toward a view of the firm as a creative, solutions-generating, social, and flexible organization" (p. 28). While definitions and opinions of Design Thinking vary in the literature, some authors see it as "a unified framework for innovation" (Cohen 2014) others view it as an "essential tool for simplifying and humanising" (Kolko 2015, p.6) and "a mindset, process, and toolbox" (Brenner, Uebernickel and Abrell 2016, p. 7). Lockwood (2009) provides a more overarching definition, capturing the importance of people and process in achieving alignment to business learning and strategizing, saying: "Design Thinking is essentially a human-centered innovation process that emphasizes observation, collaboration, fast learning, visualization of ideas, rapid concept prototyping, and concurrent business analysis, which ultimately influences innovation and business strategy. The objective is to involve consumers, designers, and business people in an integrative process, which can be applied to product, service, or even business design" (p. xi). As Design Thinking has grown to full recognition, several pioneers, design agencies and consultancies, have proposed a set of guiding principles and behaviours (Table 1).

The value of a Design Thinking process models (and appropriate design-led methods) to approach creative problem solving is now widely acknowledged in the academic literature. Even a quick Google search reveals a plethora of colourful visualisations and box-and-arrow diagrams that represent any given number of iterative and overlapping steps that aim to generate a set of alternative ideas before prototyping, testing and evaluating

them "against a whole array of requirements and restraints" (Simon 1969). One of the best known and most popular process models is the "Double Diamond" developed by the Design Council in 2005, as a visualisation to describe the design process and to introduce Design Thinking (Ball 2019). It breaks down the design process into four distinct phases, and at each phase, a series of activities are undertaken in order to help manage the risks associated with the design and delivery of new products, services and systems (Figure 1). In the context of this paper, it is interesting to note that the sequence of 'divergence' (i.e., broadening of alternatives) and 'convergence' (i.e. the narrowing down of alternatives) also occurs in the patterns of design problem solving. The Double Diamond Model is in effect a sequence of two 'divergent/convergent' thought patterns and actions. This sequence is probably central to all Design Thinking and to many other problem-solving activities. The Model can be enacted by a single person or by a group (team) acting in unison or by performing different actions within the same overall sequence to make innovation happen. While Design Thinking can be applied to increase acts of creativity in the problem-solving space, exploring it through the lens of making leadership and innovation more valuable through empathy grounded coordination of managerial endeavours, also helps to bring staff together united behind a common agenda (Handa and Vashisht 2018) - a conscious convergence.

Table 1: Five associated behaviours of design thinking (Ball and Docherty 2021)

Behaviours	Outline
1. Questioning –	Whenever addressing systemic (or wicked) problems (Rittel and Webber 1973; and later Buchanan 1992), take a step back, eliminate any assumptions, identify gaps in knowledge and understanding, look at things from a different perspective or through "different eyes" (Baxter and Bruce 2008), define and reframe problems and critically reflect on ideas and opinions.
2. Human Centred –	Design Thinking involves building empathy and engagement "with real people in real environments" who experience the problem (Townson 2017), thereby responding to human needs (Meinel and Leifer 2011).
3. Communicate creatively (visually) –	It is important to build and understand information visually to externally communicate value to stakeholders and customers (Anderson and Lilly 2004) and to promote teamwork through creative activities (Carlgren 2014). Creative visualisation is the cornerstone of good design practice (Liedtka 2004).
4. Co-creation and Collaboration –	It is essential to keep people central to the design process at all times through the use of established models of innovation and design-led approaches (Sanders and Stappers 2008). By designing "with and not for" people will ensure innovative teams are active in responding to human needs, going about projects in the right way, and ultimately working collectively towards new interventions and solutions.
5. Holistic and Iterative –	When practising Design Thinking, take a holistic view across systems (Stickdorn and Schneider 2011) and prototype early and often in recurring loops in order to gain feedback from users and all other relevant stakeholders (Dow, Heddleston and Klemmer 2009).

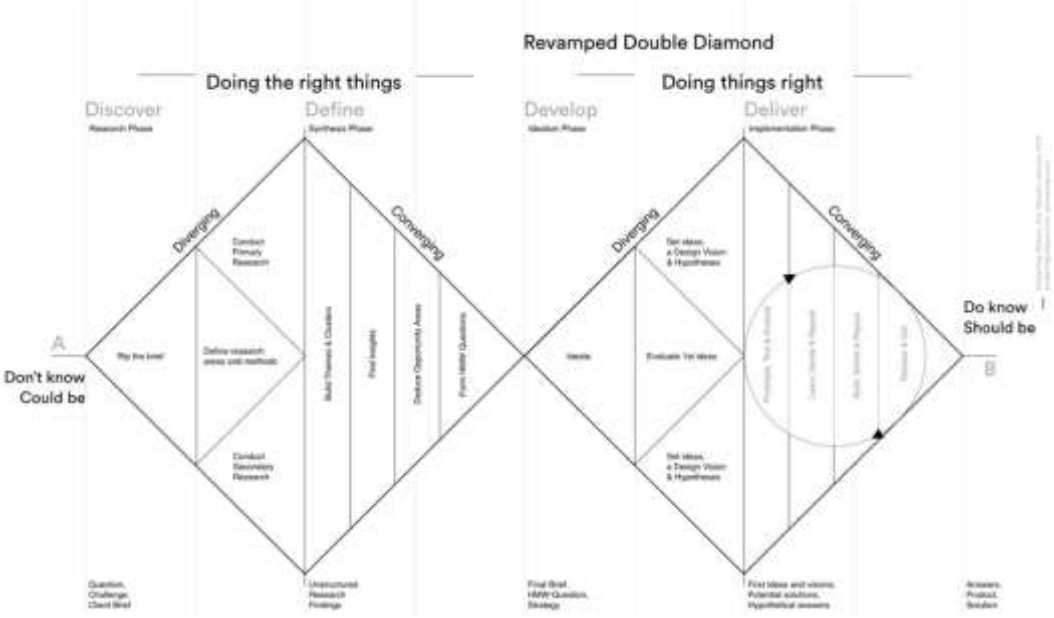

Figure 1: Revamped double diamond design process framework (Nessier 2018)

(Notes: Discover Phase is about questioning and gathering insights through deep user research; Define Phase involves reframing problems and refining the initial design brief; Develop Phase encompasses the activities of prototyping and testing ideas through recurring loops of making, iterating and reflecting; Delivery Phase focusses on the testing and implementation of the final solution.

Applying Design Thinking is about setting the conditions for an organisation to generate, embrace, and execute new ideas (Brown 2009), fostering collaboration, problem-solving and fearless innovation – just what an old firm needs to learn new tricks. However, the implementation of Design Thinking inside organisations often meets its own set of challenges and barriers and it is in this context that conscious leadership can support the process of innovation more successfully.

5.1 Implementing design thinking programmes inside organisations

We believe that Design Thinking is being used extensively in business and community studies and there appears to be a rapidly growing body of research studies, which have used different theoretical perspectives and methodological approaches to examine data from across all types of industry on the implementation of Design Thinking programmes inside organisations. A study to explore the value and effects of implementing Design Thinking processes across large organisations in Germany and USA, found that they were longer term benefits in developing an organisations innovation capability over small term gains like new ideas (Carlgren 2014). The longer-term organisational benefits included, for example, employee competency development and exposure to new processes and new ways of thinking thus leading to improved innovation efforts and more innovative outputs (Ibid). Moreover, the study highlighted the importance of creating an organisational mindset, where there is "a gradual changing of values and norms in the company, instilling value based on building openness, empathy and optimism" (Ibid, p. 414). While the study primarily set out to investigate the benefits of using a Design Thinking process, it also identified organisational challenges around its implementation, such as, the amount of time to learn the Design Thinking process due to conflicting pressures and other work priorities, as well as difficulties in understanding and applying the tools and techniques. In a more recent study across both public and private sectors, Dunne (2018) identified several systemic and cultural organizational challenges when establishing a Design Thinking programme, such as, a lack of leadership understanding and support; prejudices and perceptions held by the rest of the organization on the process; the paradoxical characteristics of organizational efficiency versus the implementation of new ideas; and stakeholder engagement across the whole system. In order to prevent isolation between the Design Thinking programme and the rest of the organisation, Dunne (2018) goes onto suggest 'the need for labs to take, simultaneously, a user perspective ("outside-in," in design vernacular) and an organizational ("inside-out") perspective'. In addition, positing that Design Thinking is more of an exploratory process than an exploitive one, he concludes by saying: "Design programs faced significant cultural barriers. The freewheeling nature of design, with its emphasis on qualitative research, storytelling, and iteration, can be a difficult fit in cultures that prioritize certainty, quantification, and efficiency. While the desire to change culture through design is often real, it is usually (by necessity in hierarchical organizations) driven from the top and may not initially have adequate buy-in at the grassroots; furthermore, cultural change can involve dismantling systems and processes that have built up over many decades, a daunting task for a design program" (Dunne 2018 p.13). It is within this "freewheeling nature of design" where divergent and convergent actions of innovation happen in the Design Thinking process and, where successful leadership is not only crucial for encouraging and supporting those actions by breaking down cultural barriers, but also responsible for creating and enabling positive change. Therefore, immersion into Design Thinking principles and behaviours needs to start at the leadership level to improve the entrepreneurial capacity of the organisation. Indeed, leadership rooted in Design Thinking has the potential to successfully engage all employees in the process of innovation.

6. Towards conscious leadership

Having established that leadership is a prerequisite for improving innovation and the successful application of Design Thinking, a closer examination of what constitutes effective leadership seems pertinent. Stogdill (1974) famously stated "there are almost as many definitions of leadership as there are persons who have attempted to define the concept" (p. 259). In this spirit, leadership can be explored through the examination of behavioural and interaction patterns, character traits, processes, administrational roles, influence and relationship roles, to name a few categories. Starting with Hemphill and Coons (1957) who ground their definition in "the behavior of an individual…directing the activities of a group toward a shared goal" (p. 7), research has evolved and produced a more process-based definition that recognises the fluid components of leadership. For instance, Antonakis

and Day (2018) see leadership as being a "formal or informal contextually rooted and goal-influencing process that occurs between a leader and a follower, groups, of followers or institutions" (p. 5). As there is not a single all-encompassing definition, leadership theory tends to be examined in the context of factors that can affect leadership, for example, different leadership styles or evaluation perspectives. Autocratic, transformational, transactional, situational, democratic or relational leadership styles are a few of the well-known concepts within management and leadership practice. To elaborate on each style would exceed the scope of this paper. However, it is important to acknowledge that leadership is not a one-dimensional, directive activity but rather an interactive process, which can only be effective when it builds collective capacity (Gauthier 2006) through naturally occurring divergent and convergent actions between leaders, their followers and situational and environmental conditions. So, effective leadership will have to demonstrate the ability to not only reactively acknowledge and manage the divergences and convergences, but proactively create and purposefully shape them. Leading change and innovation are immensely difficult challenges for managers within current competitive climates. It involves guiding, encouraging and facilitating collective efforts of members of the organisation to adapt in an uncertain environment and evolve through joint organisational learning (Hannah and Lester 2009). As alluded to previously, Design Thinking is well suited to help with collective problem-solving scenarios, but it will be most effective when underpinned by a leadership style that mirrors its values. In other words, a style that facilitates innovation and aims to contribute value rather than just profit, encourages higher standards of integrity, is rooted in empathy for people within as well as outside the organisation and can continually evolve through conscious and mindful behaviour. Mackey, McIntosh and Phipps (2020) describe conscious leadership as "an inner journey of character development and personal transformation, informed by a powerful understanding of human nature and human culture" (p. xviii). By striving to create better personal and professional life experiences not only for themselves, but also for their employees, conscious leaders can generate better stakeholder buy-in, higher motivation and engagement levels among staff and are therefore able to naturally nurture a sustainable form of organisational growth and innovation. Mackey, McIntosh and Phipps (2020, p. xix) suggest 9 characteristics and behaviours of 'conscious leaders' which they also allocate to 3 clusters (Table 2).

Table 2: Characteristics and behaviours of conscious leaders

Cluster	Characteristics
1. Vision and Virtue	1. Put Purpose First 2. Lead with Love 3. Always Act with Integrity
2. Mindset and Strategy	4. Find Win-Win-Win Solutions 5. Innovate and Create Value 6. Think Long Term
3. People and Culture	7. Constantly Evolve the Team 8. Regularly Revitalize 9. Continually Learn and Grow

Cluster 2 (Mindset and Strategy) is of particular relevance to this paper. Our experiences suggest that the techniques of Design Thinking are highly appropriate for searching for Win-Win-Win Solutions (4) as well as making a contribution to the creation of value through Innovation (5). In addition, the application of the design process as a way to continually diverge and converge in recurring loops around problem identification, idea generation and delivering solutions, allows leaders to take a step back, question things, think differently and co-create with others (Table 1). In doing so, this helps to orientate leaders more naturally towards achieving both short term outputs (or Win-Win-Win Solutions) and setting longer term strategic priorities and direction of the business to succeed in the marketplace (6). Moreover, with empathy and engagement at its core (Table 1), implementing a Design Thinking programme inside an organisation can have a positive impact on promoting and enhancing teamwork whilst at the same time helping to rejuvenate employees through exposure to new processes and new ways of thinking, sensing and acting (7 and 8). As a direct consequence, this ensures that organisations, as complex adaptive ecosystems, continually learn, grow and respond to rapidly changing conditions (9). Although the characteristics and behaviours of conscious leadership are clearly significant in the future success of any organisation, what is particularly noteworthy in the context of this paper, is how the convergence of conscious leadership and the Design Thinking process can provide the ultimate foundation for creating an improved entrepreneurial culture of trust, openness, authenticity and integrity. In other words, while entrepreneurial leadership guides and encourages innovation, often through active teamships in Design Thinking and prototyping, conscious leadership focuses on appropriate innovation embracing all employees, stakeholders, customers and concerns for the Planet and other than human living systems (1, 2 and 3).

7. Conclusion

Having established that innovation is key to successful corporate entrepreneurship, and that innovation is best nurtured through leadership, both elements need to be rooted in empathy to produce positive and sustainable outcomes for the company as well as its workforce. Therefore, Design Thinking with empathy at its core, is the vehicle that can align leadership and innovation endeavours thus creating improved organisational structures for successful corporate entrepreneurship. In our Conclusions to this paper, although many of the listed thoughts are directly relevant to specific issues like leadership, others, are reminders of the important on-going processes which need to be directed at guiding our long-term thinking.

We offer the following thoughts or reminders for future consideration and discussion:

- Everything continuously changes, evolves and flows. Evolutionary flow is the context for all divergent/convergent processes, including communities, innovation teams and organisations.
- Organisations have to learn to embrace convergence in order to live, adapt and flourish in changing situations.
- Organisations need to think more carefully about what and how they innovate. Often the consequences of humanities over-action, intervention and exploitation is to increase complexity beyond our innovative capacity to cope with subsequent emergencies. Innovation is a strategy for adapting to change, sometimes proactively and sometimes reactively.
- Design Thinking is a collaborative and holistic methodology for sensing and has the capability to support innovation through sequences of divergent/convergent thinking and acting.
- Leadership is the focal point or catalyst for the promotion of divergent/convergent actions as an innovative, adaptive response to change. A leader may be an individual, but leadership is a characteristic of the collective.
- Design Thinking by its very nature is an interactive process with empathy at its core and therefore has the potential to build collective capacity when applied at leadership level through naturally occurring divergent and convergent actions.
- Consciousness is a key aspect of growth and has its own evolutionary developmental sequence of divergent/convergent thoughts and actions and complexity. Conscious leadership can develop positive values and behaviours in the workplace.

Therefore, a conscious convergence of the characteristics and behaviours of Design Thinking and conscious leadership can, not only improve innovation in the context of corporate entrepreneurship but is also strategically relevant to enabling proactive and reactive responses to change while fostering a positive organisational environment.

References

Agbor, E. (2008) “Creativity and Innovation: The Leadership Dynamics”, *Journal of Strategic Leadership*, Vol 1, No. 1, pp 39-45.

Anderson, E. and Lilly, B. (2004) “Visualization in the Design Process”, In Lloyd, P., Roozenburg, N., McMahon, C. and Brodhurst, L. (eds) *The Changing Face of Design Education.* International Engineering and Product Design Education Conference, Delft, Netherlands, pp 561-568.

Antonakis, J. and Day, D. (2018) “Leadership: Past, Present, and Future”, In Antonakis, J. and Day, D. (Eds.), *The Nature of Leadership* (3rd ed). Thousand Oaks, CA: Sage, pp 3-26.

Baden-Fuller, C. (1995) “Strategic Innovation, Corporate Entrepreneurship and Matching Outside-in to Inside-out Approaches to Strategy Research”, *British Journal Management*, Vol 6, No. 1, pp 3-16.

Ball, J. (2005) *The Double Diamond: A Universally Accepted Depiction of the Design Process.* The Design Council, UK.

Ball, J. and Docherty, C. (2021) *Design Thinking Playbook: Design for Business V&A Dundee* (In Press).

Bass, B-M. and Riggio, R-E. (2006) *Transformational Leadership.* Lawrence Erlbaum Associates, Mahwah, NJ.

Baxter, S-H. and Bruce, F-S. (2008) “Steps to an Ecology of Product Innovation”, In Clarke, A., Evatt, M., Hogarth, P., Lloveras, J. and Pons, L. (eds) *New Perspectives in Design Education.* Artyplan Global Printers Ltd, Barcelona, pp 353-358.

Brenner, W., Uebernickel, F. and Abrell, T. (2016) “Design Thinking as Mindset, Process, and Toolbox”, In Brenner, W., Uebernickel, F. (Eds) *Design Thinking for Innovation.* Springer International Publishing, Switzerland, pp 3-21.

Brown, T. (2009). *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation.* HarperBusiness, New York.

Buchanan, R. (1992) "Wicked Problems in Design Thinking", *Design Issues*, Vol 8, No: 2, pp 5-21.

Burgers, J-H. and Covin, J-G. (2016) "The Contingent Effects of Differentiation and Integration on Corporate Entrepreneurship", *Strategic Management Journal*, Vol 37, No. 3, pp 521-540.

Cannon, L. (2016) *The Conscious Entrepreneur: A Guide to Maximizing Your Potential for Success, Freedom, and Happiness.* One Tribe Press, Maryland, USA.

Carlgren, L., Elmquist, M. and Rauth, I. (2014) "Design Thinking: Exploring Values and Effects from an Innovation Capability Perspective", *The Design Journal*, Vol 17, No. 3, pp 403-424.

Cohen, R. (2014) "Design Thinking: A Unified Framework for Innovation", [online], Forbes, http://www.forbes.com/sites/reuvencohen/2014/03/31/design-thinking-a-unified-framework-for-innovation/#7633677c56fc

Collins English Dictionary. (2011) HarperCollins Publishers, Glasgow, UK.

Dow, S., Heddleston, K. and Klemmer, S. (2009) "The Efficacy of Prototyping Under Time Constraints" Proceedings of the Seventh ACM Conference on *Creativity and Cognition*, pp 165-174.

Dunne, D. (2018) "Implementing Design Thinking in Organizations: An Exploratory Study", *Journal of Organization Design*, Vol 7, No. 16, SpringerOpen Journal.

Gauthier, A. (2006) "Developing Collective Leadership: Partnering in Multi-Stakeholder Contexts", [online], https://coreleadership.com/GauthierArticle.pdf

Handa, A. and Vashisht, K. (2018) "Great Leadership Informed by Design", In Elkington, R., van der Steege, M., Glick-Smith, G. and Moss Breen, J. (Eds) *Exceptional Leadership by Design: How Design in Great Organizations Produces Great Leadership*, Emerald Publishing Limited, Bingley, UK.

Hannah, S. T. and Lester, P. B. (2009) "A Multilevel Approach to Building and Leading Learning Organizations", *The Leadership Quarterly*, Vol 20, pp 34-48.

Hemphill, J. K. and Coons, A. E. (1957) "Development of the Leader Behaviour Description Questionnaire", In R. M. Stogdill and A.E. Coons (Eds.), *Leader Behavior: Its Description and Measurement, Bureau of Business Research*, Ohio State University, Columbus, pp 6-38.

Henriksson, H. and Grunewald, E-W. (2020) *Sustainability Leadership: A Swedish Approach to Transforming your Company, your Industry and the World.* Palgrave Macmillan, Switzerland.

Hobday, M., Boddington, A. and Grantham, A. (2012) "An Innovation Perspective on Design: Part 2", *Design Issues*, Vol 28, pp 18–29.

Hornsby, J-S., Kuratko, D-F., Shepherd, D-A. and Bott, J-P. (2009) "Managers' Corporate Entrepreneurial Actions: Examining Perception and Position", *Journal of Business Venturing*, Vol 24, No. 3, pp 236-247.

Jackson, T. (2021) *Post Growth: Life after Capitalism.* Polity Press, Cambridge, UK.

Johansson-Sköldberg, U., Woodilla, J. and Çetinkaya, M. (2013) "Design Thinking: Past, Present and Possible Futures", *Creativity and Innovation Management,* Vol 22, No. 2, pp 121-146.

Kofman, F. (2013) *Conscious Business: How to Build Value Through Value.* Sounds True Inc., Colorado, USA.

Kolko, J. (2015) Design Thinking Comes of Age. *Harvard Business Review*, Boston, Massachusetts.

Kuratko, D-F., Ireland, R-D., and Hornsby, J-S. (2001) "Improving Firm Performance Through Entrepreneurial Actions: Acordia's Corporate Entrepreneurship Strategy", *Academy of Management Executive*, Vol 15, No. 4, pp 60-71.

Kuratko, D-F., Montagno, R-V. and Hornsby, J-S. (1990) "Developing an Entrepreneurial Assessment Instrument for an Effective Corporate Entrepreneurial Environment", *Strategic Management Journal*, Vol 11, pp 49-58.

Kuratko, D-F. and Morris, M-H. (2013) *Entrepreneurship and Leadership.* Edward Elgar. Cheltenham.

Kuratko, D-F., Hornsby, J-S., Covin, J-G. (2014) "Diagnosing a Firm's Entrepreneurial Environment for Corporate Entrepreneurship", *Business Horizons*, Vol 57, No. 1, pp 37-47.

Liedtka, J. (2004) "Design Thinking: The Role of Hypotheses Generation and Testing", In Bolland, J-R. and Collopy, F. (Eds) *Managing as Designing.* Stanford University Press, Stanford, California, pp 193-197.

Liedtka, J. (2015) "Perspective: Linking Design Thinking with Innovation Outcomes through Cognitive Bias Reduction", *The Journal of Product Innovation Management*, Vol 32, No. 6, pp 925–938.

Lockwood, T. (2009) *Design Thinking: Integrating Innovation, Customer Experience, and Brand Value.* Allworth Press, New York.

Macke, J. and Genari, D. (2018) "Systematic literature review on sustainable human resource management", *Journal of Cleaner Production*, Vol 208, 2019, pp 806-815.

Mackey, J. and Sisodia, R. (2014) *Conscious Capitalism: Liberating the Heroic Spirit of Business.* Harvard Business School Publishing, Boston, Massachusetts.

Mackey, J., McIntosh, S. and Phipps, C. (2020) *Conscious Leadership: Elevating Humanity Through Business.* Portfolio, New York.

Makarevich, A. (2017) "Organizing for success in internal corporate venturing: An inductive case study of a multinational consumer goods company", *Creativity and Innovation Management*, Vol 26, No. 2, pp 189-201.

Marin, E. (2013) *Ecological Leadership: Practical Guide for Leaders to Create a more Ecological and Engaged Workplace.* Lulu.com., NC, USA.

Martin, R-L. (2009) *The Design of Business: Why Design Thinking is the Next Competitive Advantage.* Harvard Business Press, Cambridge, MA.

McDonagh, D. and Thomas, J. (2010) "Rethinking Design Thinking: Empathy Supporting Innovation", *Australasian Medical Journal - Health and Design 1*, Vol 3, No. 8, pp 458-464.

Meinel, C. and Leifer, L. (2011). *Design Thinking: Understand, Improve, Apply. Understanding Innovation.* Springer-Verlag, Berlin, Germany.

Nessier, D. (2018) "The Revamped Double Diamond Design Process Framework", [online], https://uxdesign.cc/how-to-solve-problems-applying-a-uxdesign-designthinking-hcd-or-any-design-process-from-scratch-v2-aa16e2dd550b

Rittel, H. and Webber, M. (1973) "Dilemmas in a General Theory of Planning", *Policy Science,* Vol 4, pp 155–169.

Sanders, EBN. and Stappers, P-J. (2008) "Co-Creation and the New Landscape of Design", *International Journal of Co-Creation in Design and the Arts*, Vol 4, No. 1, pp 5-18. Taylor and Francis.

Schmidt, S. (2008) *Coming Convergence: The Surprising Ways Diverse Technologies Interact to Shape Our World and Change the Future.* Prometheus Books, Amherst, NY.

Simon, H-A. (1969) *The Sciences of the Artificial.* MIT Press, Cambridge, MA.

Stickdorn, M. and Schneider, J. (2011) *This is Service Design Thinking.* BIS Publishers, Amsterdam.

Stogdill, R. M. (1974) *Handbook of Leadership: A Survey of the Literature.* Free Press, New York.

Streeck, W. (2016) *How Will Capitalism End? Essays on a Failing System.* Verso, NY, USA.

Townson, D. (2017) *The Seven Tenets of Human-Centred Design.* The Design Council, UK.

Watkins, A. (2014) *Coherence: The Secret Science of Brilliant Leadership.* Kogan Page Limited, London, UK.

Watson, P. (2016) *Convergence: The Idea at the Heart of Science.* Simon and Schuster, New York, USA.

Waldman, D-A. and Galvin, B-M. (2008) "Alternative Perspectives of Responsible Leadership", *Organizational Dynamics*, Vol 37, No. 4, pp 327-341.

Wolcott, R. and Lippitz, M-J. (2009) *Grow From Within: Mastering Corporate Entrepreneurship and Innovation.* McGraw-Hill Education, New York, USA.