BEYOND DESIGN THINKING – WHOSE PERSPECTIVE IS DRIVING THE PEOPLE-CENTRIC APPROACH TO CHANGE?

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ABSTRACT

This research paper attempts to position fundamental principles of design thinking within a framework of problem-solving theory. The roles that are assumed in a co-creation community, team or workplace, are influenced by a champion who arises and systematically anchors alternatives and ideas once proposals are about to be realised. By embracing diversity, design thinking introduces interdisciplinary challenges that can lead to radical change and break-through innovation. This paper attempts to trace design thinking back to its foundational concern with the design of novel products, services, and business models. Regarding design thinking as a **problem-focused** (rather than **solution-fixated**) ethos, mindset or disposition, instead of merely a practitioners' tool, we believe that this perspective is needed to deepen our understanding of design thinking. Hence, this paper provides a literature review at some depth, guided by a purpose-driven question: How do individual roles in an organisation become utilized throughout the anchoring and implementation of design thinking among stakeholders?

Keywords: Design thinking, co-creation, roles, organizational change, anchoring, problem finding.

1   WHY DO WE NEED TO GET BEYOND DESIGN THINKING?

This paper considers how *design thinking* can be integrated, as a protocol to realise innovation, in organisational practices. This all comes down to the actions and behaviour of people. We have learned that organisational contexts in universities and large multinational organizations are critical determinants of innovation potential [1], and thus recognize that insightful change should be nurtured empathically and harmoniously rather than rigidly driven by technological considerations. Although design thinking in the public eye is tied to one design consultancy, IDEO [1,2], the history of design thinking is more complex. It has been explicitly recognized since at least 1969, following publication of *Bounded Rationality* [3]. This book highlighted how the human mind is bounded by cognitive limits and therefore tends to restrict itself to acting out due to various forms of preconditions. About the same time, the nature of problem-solving received attention due to its hidden mechanism for unlocking all kinds of imaginary solutions. A seminal treatise created a link between novel design and ways of thinking and perceiving the world around us [4]. Ever since, problem-solving and design thinking have been interconnected, with an attached meaning intended to support decision-making, and thus chains of actions leading to innovation. Today, design thinking is widely regarded as the key trigger for all kinds of design-related innovations [1]. Crucially, the cognitive skills used to pursue innovation are based on actionable thoughts, countering tendencies for proposals to be ignored because there is no link between designers' intangible work and more widely perceived challenges or problems [5,6,7]. At the same time, design thinking has provided approaches for embracing greater complexity when addressing challenges, and in this respect design thinking is more of a mindset than a methodology. A co-evolving process occurs in design-related work, that has been described as follows: 'Creative design seems more to be a matter of developing and refining together both the formulation of a problem and ideas for a solution, with constant iteration of analysis, synthesis and evaluation processes between the two notional design spaces, problem space and solution space' [8, p. 434]. This captures the basis of the "double-diamond" framework regarded as the core of design thinking [5], which is held to encourage diverse thinking about the identity of effective solutions to evolving problem definitions as contexts evolve.

The *design thinking paradigm* is a framework that encourages diverse thinking about solutions and problems as co-evolving dualities intended to better meet needs of customers, clients and/or diverse stakeholders [1,5,8,9]. It encourages participants to be more people-centric when defining and solving problems through an experiential process. A typical design thinking protocol involves several distinct stages: research, problem definition, ideation, prototyping, decision-making, building, and reflection on what was learned from the process. It is iterative, evolving through successive prototyping cycles that may, or may not, converge to a desired problem/solution duality. However, as practitioners become more enthusiastic about adopting design thinking it becomes increasingly important to deepen scientific scrutiny of the phenomenon. This is partly to improve fundamental understanding, partly to counter shallow interpretations and misleading assumptions (such as regarding design thinking as a business fad) and, most importantly, to 'enable organizations to reach peak performance in their design thinking practice' [10].

In efforts to develop such understanding and abilities, in the last decade there has been escalating interest in various aspects of design thinking, reflecting its broad uses and potential applications [12]. However, although design thinking has been recognized for several decades, much of the literature regarding it lacks a coherent, comprehensive, consensual theoretical framework. This indicates that further conceptual elements may be needed. Moreover, parallel to the rise of design thinking as an approach for designers to gain greater leverage in their explorations, organizational theories have paid increasing attention to the vital roles of certain people for establishing change [11], regardless of the applied approach. Thus, as discussed below, some (at least) of the required conceptual elements may be people-centric.

2   WHY PEOPLE-CENTRIC CHANGE?

Design thinking encourages participants to be more people-centric when solving problems through an experiential process. The nature of human needs, human desires, problems faced, possibilities for reframing, and omni-present constraints include the risks associated with any change, and converse risks associated with stagnation. Thus, innovative thinkers' creativity and willingness to accept various degrees of risk, together with the ability to diffuse innovation [13], has been crucial for organisations' capacities to regenerate themselves and thrive. Rooted in uncertainty about the fallout from certain situations and the complexity of organisations, progress and agility are constantly hampered by resistance from those passively affected by and those actively engaged in the process [14]. Active support provided through collaboration and cooperation become vital for commitment to realise the type of innovation that generates breakthrough paths. Since people are the sources of creativity and innovation, researchers are showing increase interest in the characteristics and processes that may enhance the performance of people, groups, and teams [8,9,16]. Nevertheless, people involved in innovation keep repeating past mistakes, so it is not enough to expose certain people to problems. Instead, creative problem-solving has diverse elements and is influenced by diverse factors. Creative people appear to have detached devotion to their work; they have a deep commitment to the problem they are trying to solve, but they are not so deeply immersed that they cannot see problems from a broader perspective [15]. They are receptive to all kinds of ideas, which they will consider and judge on their merits, relishing exploration of new alternatives, advice, ideas, and opinions from diverse sources [12]. Creative individuals appear to commit themselves to specific solutions to problems later than their less creative counterparts, and tend to be non-conformists, questioning authority and existing solutions to problems [15]. With creative people, an organization becomes more adaptable in responses to unpredictable market forces, and together they team up in the organisation's deep intellectual resources, thereby increasing organisations' prospects [13,14]. However, not all people in an organisation are equally innovative or willing to take risks. Hence, a fundamental challenge is to nurture an inquisitive environment that fosters creativity, and simultaneously provides a stable foundation for business efficiency; people need to question accepted ways of working and challenge traditional wisdom (without stimulating pointless or damaging revolution) for companies to excel.

3   WHAT ROLES NEED TO BE COVERED BY THE TEAM?

Successful innovation requires involvement of people with appropriate qualities, abilities and strong personal commitment to innovation and improvement. Research concerning innovation has identified various key actors (with a bewildering array of overlapping names and conceptual roles) in innovation processes involving inter-organisational cooperation, which is crucial for successful co-creation

efforts. So-called "deep collaboration" [10] reportedly allows collective knowledge to grow, and can be maintained, supported and controlled through interactions in an appropriate team. Once decision-making becomes crucial in convergent stages, past research indicates needs for people with designated roles such as gatekeepers, boundary role persons, change agents, product managers, new product managers, and champions. This is because without their strong personal commitment to, and enthusiastic support for, an innovation, numerous potential innovations would have been repeatedly rejected, often due to people's natural resistance to change. Further, dynamic, complications are that key people's roles may change during the innovation process [13,14], and more people get involved as the influence of the carriers/promoters/champions progresses up in the organisational hierarchy. A crucial element for the efficiency of any innovation process is the increasing involvement of technically skilled people who can promote the idea in concept formulation, actual development, and testing [14]. A distinction between the champion and promoter concepts should be noted here: the former assumes the involvement of one person as the motor of an innovation process, whereas the latter distinguishes between key functions and key actors [14]. There are clearly strong similarities in these models, although the presence of some kind of champion seems to dominate design projects.

4   WHO ARE THE CHAMPIONS?

The importance of committed people has been described as follows: 'Without dedicated champions, ideas for product innovations may remain dormant for future development and implementation' [17, p. 270]. Moreover, personal commitment has recognized importance in the earliest phases, for survival of ideas before they have been evaluated. Champions are people who informally emerge to actively and enthusiastically promote innovations through the crucial organisational stages. Thus, they may be viewed as 'going above and beyond the call of duty' and acting beyond their normally prescribed roles to contribute to contribute to the creation and realization of innovative products or processes. Thus, flexible role orientation and integrated understanding may be key elements of the contextual behaviour of champions, who have been described as articulate and convincing, having their own master strategy for an idea in terms of 'acting as scavengers, reaching for hidden or forgotten resources to demonstrate feasibility' [18, p. 238]. Ideas require a champion to exert social and political effort to galvanize support for them. It was noted almost 40 years ago that champions tend to engage in coalitions that strive to secure organisational support for innovation [19]. More recent studies [9,20,21] focus on the collective, operational-level creation of proactive momentum towards innovation by the design team. A model of a "two-tailed feedback system" that nurtures the design team through "in-action" and "post-action" has also been proposed [22], to assist efforts to dissect working processes and discern in detail factors that influence decisions to allocate resources and the mobilization of champions. Both within the design team and externally, tactics played out and leadership behaviours influence the leverage of the team's performance. Rooted in the design team, formal and informal champions are distinguished by communicating a clear vision of what the innovation could be or do, while enthusiastically supporting the innovation, demonstrating commitment to it, and involving others in supporting it.

5   HOW SHOULD DESIGN THINKING BE APPLIED TO EDUCATION?

The champion's role is to persistently promote an innovation, secure resources, and motivate others to participate in or support its creation and realization [14]. However, to do this effectively, champions need a broad set of skills that include an understanding of the fit between the innovation and organisational context. Thus, in addition to idea promotion and implementation, champions may also be involved in the first stage of the innovation process, idea generation [11]. Decisions about adopting new technology, such as advanced manufacturing approaches or redesigning processes, are influenced by numerous pressures from numerous sources. Notably, with the growing influence of social media, champions may deploy diverse influential tactics, including rational justification, repeated informal expression of enthusiasm and confidence about the innovation, and sharing of information with possible coalition members. To contribute to idea generation and promotion, champions must have a broad knowledge and vision of their role. Moreover, to motivate others to innovate and tailor their arguments to promote innovations effectively, champions may need to adopt multiple perspectives and work collaboratively with people, a concept referred to as 'perspective taking'. This involves seeing and understanding 'organisational and environmental events from multiple rather than single

perspectives'. Adopting other people's perspectives in this manner is considered an immersing event in design thinking [1,5], which enables all senses to engage in establishment of a deep understanding of people's poorly articulated, or even hidden, needs. Integrated understanding and flexible role orientation have been proposed as antecedents to perspective taking. In educational contexts, feedback loops are needed at a systematic level to enable innovation to go beyond the curriculum, course, and program layers [21,23,24]. Thus, capacities to implement innovation need to be strengthened, by increasing numbers of people with innovation competences through testing and refining their skills as part of a team integration and delivery process. Both integrated understanding (know-how about the work environment) and flexible role orientation (broad perceptions of people's roles in terms of ownership and accountability) have been found to be predictively associated with perspective taking, and perspective taking to be positively related to employees' contextual behaviour (cooperative and helpful behaviours towards others).

6   HOW MIGHT WE MANAGE CHANGE BY DESIGN THINKING?

Anchoring has allowed numerous innovative ideas to fail. Newness inevitably involves changes that for some reason may upset the traditional landscape. This is not surprising, as newness inevitably involves changes that for some reason may upset the traditional landscape. It is also a fundamental element of design thinking, thus there will always be some risk of failure, and there must be sufficient tolerance of failure. For instance, in an interdisciplinary master's-level design course focusing on elderly homes, innovative concepts were generated through multiple interviews with care users and personnel in nursing homes [25]. The early ideas originated from a view of nursing homes as flexible places where physical environments can be adjusted to facilitate different types of activities, where staff has the tools and possibilities to be creative and engage in production of diverse positive experiences for elderly persons. However, such awareness takes time to build up, and both the empathy and commitment needed is best acquired through immersion, allowing openness and acknowledgement of possibilities to lead discovery. Many care users found it highly exciting to talk about their past, places they visited and experiences. Therefore, the main objective became identification of a dual solution that stimulated both staff and care users. In terms of roles and functions, the dedication to work through design thinking made all course participants highly active, like champions, but less fluid and persistent.

Implementation of new pedagogical methods involves what scholars call anchoring processes by various people [26]. This is done primarily faculty staff in academia. To build momentum towards proposed solutions, anchoring ideas incrementally played a decisive role in the Pedagogical Developer's (PD) project [27]. In this project, motivated faculty members worked together with engaged teachers to create local change, but when organisations meet challenges that have not been previously considered it is not always easy to move away from existing practices. Experiences from the university that deployed the multifaceted pedagogical approach indicated that decisions were delayed by strategic decision-making obstacles rather than shortcomings in the team's internal efforts. The university's management has indicated acceptance of a new ideal that considers pedagogical issues more deeply than before, indicating empathy towards the project's objectives. However, due to the importance of timely and transparent managerial execution, team activity resides in a grey-zone where uncertainty about sustained efforts dissipates interest. Pre-planning is considered crucial for successful change or organisational newness, thus indecisiveness and/or failure to communicate objectives tends to marginalise any initiative that is fuelled by problem-finding beliefs or need-related proposals. Stating that something is "new", rather than something generated by an innovation process, indicates that radical thinking is not truly sought; an obstacle that greater attention to problem-finding and ideation could have potentially avoided. Realisation of ideas and implementation of stand-alone activities are therefore organisational navigation processes in themselves.

Organisational support for idea-surfing is the magnitude of internal openness to ideas, which is a determinant of potential growth in value, mediated by catching waves of opportunities and champions. Solution-fixation narrows potential value in the framing of arguments, both internally in teams' iterative processes and in the garnishing of external support. Redefining (and highlighting) value captures is crucial as project momentum, creative exploration and motivation will all implode if there are no supporting incentives to provide reassurance and guidance. Hence, organisational lack of awareness or inability to identify potential value streams is highly, and increasingly, damaging. Breaking pattern by espousing and implementing new ideas, with incentives to go beyond the "usual"

requires empathic governance, anchored through various levels of delivery check-points. In contrast, fixation and lack of flexibility lead to path dependency, resulting in low levels of 'hunting-for-a-better-solution' behaviour. The simple reason for this is that dominant successful behaviours that are consistent with current practices will not upset normal traditions, so strong internal momentum is needed to shift practices onto new trajectories. From a change perspective, the PD project has broken some of the internal silos by facilitating sharing of experience between members of different faculties concerning new pedagogical methods. However, the more radical the proposal the greater the barriers (and efforts needed to overcome them) are likely to be. Innovation is more than mere change. Who should guide and support such actions when organisations show little or no knowledge about how to benefit from methods of innovation? If creative people set out to pursue innovation and change, in accordance with design thinking principles, the greatest obstacle will still probably be the lack of a meaningful structure, which will impede viability, feasibility and desirability [1]. Acceptance and relevance are rooted in an organisation where the culture mirrors the decision-making processes, which tend to include aversion to risk-taking originality, and maintain a 'back-to-basics' mantra. However, innovation systems and procedures supporting any form of change efforts can be substantially improved if management pushes to identify value-creating possibilities that go beyond merely addressing weaknesses of existing practices. Shortcomings in addressing latent or existing flaws in systems and practices are almost as devastating as failure to allow initiated efforts to blossom. Time is crucial, but if there are intense demands for immediate results and no tolerance of failures, there will be no iterative design-driven innovation process. The degree of newness and change resides in the way intentions are anchored internally, since without proper support a factor such as time may hamper any ambition or desire to innovate. From past research [13,14,21], the success of an innovation is determined more by the extent of its adoption than by the people that originate it or the technological advances it incorporates.

7   WHAT HAVE WE LEARNED SO FAR?

It is premature to draw definitive conclusions about the structure and elements of a more comprehensive innovation framework. Our evidence and experiences are incomplete. However, we believe that some of the foundations for a new way of thinking about change by intention are emerging. We begin to see that problem and solution are a duality, mutually interdependent. One begets the other. Where best to begin?

Some potential understanding comes from realizing that 'silo-thinkers' inevitably shun change: the disruption will be damaging and the gains uncertain. We have experience that human-centric empathy can stimulate both the processes and acceptance of rethinking and redesigning. By using design thinking approaches to understand how organisations change, we are at an inflection point in the duality of design and organisation as an intertwined pair. We draw insights from exemplified change initiatives where faculty and master level students are tackling ambiguous design challenges from the real world of industry. Innovation literature with its emphasis on change has been well researched. By searching through existing domains of research our ambition is to combine innovation perspectives with support of change management literature. We seek to allow recognition (and advocacy) of a more empathic and insightful process. The optimal way to integrate the new paradigm into large multinational companies and top-ranked universities remains an open question. Based on the perspectives highlighted in this paper, the following three questions are stated for anyone who wishes to further investigate organisational boundaries with the support of the design thinking paradigm:

- How can people best be provided with overarching organisational purpose and guidance through adoption of the design thinking paradigm?
- What are the critical phases of the adoption process for different key roles involved in organisational change and redesign?
- How might we best promote a people-centric approach that harmonises empathic behaviours and sustainable organisation change?

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