**Researching the Design Innovation Process in a Multinational: An Empathic Approach to the Application of Delphi Technique**

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**Introduction**

*“In great organisations the competence, commitment, innovation, and respect with which people carry out their work are unmistakable to any observer – and a way of living to its members. In lesser organisations, distrust and dysfunction are equally pervasive.”* Hesselbein (1999).

The notion of respect and trust are the basis of establishing any relationship, not least for organizations trying to align different functions like business, technology, design and marketing. When organizations are aiming for innovation breakthrough, they need to combine new technological innovations and new business models (Townsend, 2013), making it imperative for them to base these new connections on respect and trust.

This chapter discusses the case study of a multinational, which was aiming to connect all different functions in its innovation agenda, and establish the function of design as a leading functional discipline. As one of the leading consumer goods brand based in The Netherlands; this multinational celebrates a wide product portfolio with lighting, electronics, and healthcare, as its main focus. In 2009, this multinational initiated their Functional Leadership Programme, which aimed at integrating all recognized functions namely design, futures, technology, and strategy under a single strategic level innovation process. This involved establishing design as a leading discipline and improving the relationship between design and other functions; consequently, shifting the application of Functional Leadership theory from war and business towards a more human-centred-approach.

The lead author was appointed as a participatory observer within the multinationals Research Development and Innovation team (RD&I) to explicate an innovation process called the Value Proposition and Development process (VPD), which otherwise was embedded deep within the practices of the design practitioners.

The chapter examines the research approach, which was applied to establish effective social interactions within the team in order to make the management of the design innovation practice more efficient. Whilst this research approach was primarily seen to enable the RD&I team to visualise and streamline their innovation process, the evidence also demonstrates that it enabled the authors to identify an optimal approach to conduct such research with a multinational.

The chapter has five sections as follows;

* the first section highlights the role of functional leadership as a unique human-centred way to align functions to enable an effective management of innovation practices in an organisation,
* the second section, highlights the changing role of the designer in the context of organisational transformation, and the role-played by empathy in this transformation,
* the third section, discusses the application of Delphi technique and action research as unique research methodologies for this case study,
* the fourth section, demonstrates the evidence, which points towards the inclusion of empathy within the research approach, and highlights cognitive empathy as the single strongest influence in the establishment of social interactions within the RD&I team, and
* the fifth section concludes the argument by highlighting the nature of the social interaction’s, which were established through the empathic research approach; and articulating the implications of it for revealing the essential features to support interactions within teams to ensure effective management of design innovation practices.

**Aligning Functions: A Human-Centred Innovation**

The alignment of cutting edge innovation with business is a mammoth task as this entails connecting all functions working towards innovation in harmony. According to New & Kimbell (2013) and Weick & Roberts (1993) integration of functions requires organizations to change their culture, and create a ‘collective mind’. Also, creation of a ‘collective mind’ is a consequence of clear considerations of mechanisms available for the (shared) cognitive processes of communication and memory (New & Kimbell, ibid.). Stickdorn & Schneider (2012), Curedale (2013), Brown & Katz (2009) and Jones (1970) provide several design approaches that help in creating this collective cognition within design. Nevertheless, in an organizational context these approaches must be accompanied with social interactions based on trust and empathy. Handy (1978) evidenced empathy, trust and communication as the governing features for interactions within teams to ensure effective management.

Additionally, Junginger (2008) confirms the application of design and its human centred approach in effectively leading, transforming and implementing organizational culture change. The changing emphasis of design’s role from giving ‘form’ to objects to designing behaviours, techniques and customs that individuals use to interact with each other and their environment is key to understanding a new role design is playing within organizational change.

Until now the integration of functions within organizations has been the remit of strategic management and management scholars evidencing a number of strategies, and structures that help in the alignment of all functions within an organization (Schwalbe, 2011; Daft et al., 2010; Vyuptakesh, 2011; Thompson & Martin, 2010). These alignments are based on two main considerations:

* strategic leaders envisioning a clear future for the organization and translating this vision to the functions and functional managers; and,
* existence of a robust structure and human-centric communication channel that ensures resonance of planning and decision-making throughout the internal and external environment of the organization.

*Alignment Through the Functional Leadership of Design*

A strategy chosen for this research is of ‘Functional Leadership’, which allows all functions to design their social interactions based on three ‘common needs’ i.e. task needs, teams needs and individual needs (Adair, 1990). The theory of Functional Leadership was believed to have the ability to unite all functions with a single goal, and also provides support by establishing an appropriate structure and communication channel. The initial theory of Functional Leadership, commonly called action-centred leadership promoted leadership as an action, rather than a ‘position’ (ibid.). Functional Leadership regarded all leadership actions to be multi-functional i.e. an action that delivers on all three areas of need.

The first application of action centred leadership/functional leadership was evidenced by the royal military academy (United Kingdom) to improve officers’ leadership skills (cited in air training corporation, 2010). Functional Leadership was later increasingly adopted and implemented from a pragmatic business perspective to bring value to strategic management for organizations (Zaccaro & Klimoski, 2001).

The case study presented in this chapter indicates that Functional Leadership helps establish human-centred design approach into strategic management, which in return helps design become an agent of change within the multinational.

**Designers as an Agent for Culture Change**

Several scholars have examined the changing role of design in organizations. For instance, Brown (2009) provides the evidence for the changing role of design through the use of creative thinking and Julier (2008), in a similar tradition, concludes that design thinking paves the way for designers to move away from the activity of giving shape and form into being agents of culture change. Other scholars (e.g.: David Kelly, cited in IDEO, 2001; TED, 2009; Brown & Wyatt, 2009) have argued that design thinking is a non-linear, human-centred approach that can convert problems into opportunities. There are different ways of conceptualising the role of designers and design thinking in organizations. Brown (2009) adopted Iansiti’s (1993) concept of ‘T’ shaped individuals as design thinkers as the sole interpreters of the users’ needs. Contrarily, Martin (1992) provided a more systems thinking approach to design thinking where he concluded, that organizations need to find a balance between exploration and exploitation. Whilst exploitation adheres to incremental innovation, exploration focuses more on breakthrough innovation (O’Reilly & Tushman, 2004). March (1991) concluded that processes, which focus on exploitation rather than exploration, are good for short term, but in the long run prove self-destructive. This can be seen in the cases of Xerox and Boing, both organisations found hard to adapt new technological innovation because of their one sided strategy, which supported exploitation. O'Reilly & Tushman (2013) and Mattes & Ohr (no date) conclude that organisations need to be ‘ambidextrous’, and balance exploitation and exploration, in order to maintain a consistent innovation portfolio. Martin (2009) claimed that this balance could be brought about by the effective integration of abductive, inductive and deductive reasoning of design thinking within business practices. Most of these studies on design thinking conclude with designers and non-designers using design thinking as an agent for change; change not merely in their product proposals but also change in their ‘collective thinking’, change in their ‘process’ of innovation, and change in their organizational culture.

In the more recent context of service design, design is one approach that is regarded as a driver for radical innovation and a potential catalyst for transformational change in organizations (Burns, et al., 2005; Sangiorgi, 2011; Manzini, 2011). Service design literature identifies a shift in the discipline from focusing on service innovation for businesses, to encouraging social change in public contexts. Sangiorgi observed that service designers were being asked to consider not just single interactions, but systems of engagement: from one-to-one to many-to-many interactions; from sequential to open-ended interactions; from within to amongst organizations (ibid, 2011). This can also be seen in the role of service design as a catalyst for change (Tan, 2012) in design programmes such as Dott 07 (Thackara, 2007) and Restarting Britain 2: Designing Public Services (The Design Commission, 2013).

Kimbell (2011, pp. 49) proposed that in the context of social innovation through service design, the design profession should no longer consider themselves ‘service designers’, but instead talks about ‘designing for services’, as the term recognizes that what is being designed is not an end result, but rather a platform for action with which diverse actors will engage over time. In this view, services are platforms for wider societal transformation, and are discussed increasingly in terms of inciting transformations on personal, organizational and societal levels (Burns, et al., 2005; Manzini, 2011).

**Organizational Transformation and Design**

An outcome of transformational design is of course, some type of transformation, and the literature debates what constitutes a ‘transformational change’. In organizational change discourse, Golembiewski (1979) suggested that there were three categories of change, conceptually described as alpha, beta and gamma change. Alpha change referred to an alteration in stakeholder activities and beta depicted a difference in the standard of behaviours, but both changes occurred within existing system boundaries in an organization. Gamma described a fundamental shift in the way that an organization’s work and purpose was understood (Golembiewski, 1979).

Levy & Uri’s (1986) model of organizational change, based on Watzlawick et al.’s (1974) earlier depiction, showed two levels of change; first-order change indicated incremental adjustments to the existing systems, while second-order involved changes to the systems themselves. It is the latter that is now commonly accepted as transformational change (Chapman, 2002).

Sangiorgi used Levy & Uri’s (1986) model of second-order change, to argue that for design to be used in a transformational way; a design team cannot just undertake design interventions, but must seek to challenge fundamentals of an organization’s behaviour (Sangiorgi, 2011). A designer must therefore uncover and question core assumptions and organizational standpoints to action fundamental change (Junginger & Sangiorgi, 2009). Wetter-Edman’s (2011, pp. 69) summary also makes the distinction between service-level and strategic-level change in her framework categories of ‘Value Creation’ and ‘Transformation’.

Business and government leaders have become increasingly interested in absorbing lessons from the world of design about the ways in which it deals with the two way relationship between people and the organizational context in which they operate. Design’s creative and innovative approaches have increasingly been incorporated into economic systems and public projects, but the question remains, what explicit values can design bring to bear? And, how does design as a discipline and designers as actors in an organizational context, manage to achieve the required permission to act as agents for transformational (strategic/cultural) change at an organizational level.

In his article, ‘Designerly Ways of Knowing’, Nigel Cross made the following distinctions about the phenomenon of study in design culture, the methods in the culture, and its values compared to the sciences and humanities:

– The phenomenon of study in design is the artificial world,

– Its methods are modelling, pattern-forming, synthesis, and

– Its values are: practicality, ingenuity, empathy, and a concern for ‘appropriateness’ (Cross, 1982). One of the key values indicated by him i.e. empathy has appropriateness in most organisational change related investigations, which is discussed in detail in the section below.

**The relationship of designing and empathy**

The role of empathy in co-design is one of the most topical and intriguing issues in the evolution of co-design practices at present in support of social innovation within communities. If we look more closely at what we mean by empathy in a designing context, we can make certain distinctions. The first of these is to understand what we mean when we say that designers have traditionally exhibited an empathic approach to their work because of; ‘the extent to which they are pre-disposed and make systematic efforts to try to get under the skin of clients and users and see and feel the world as they see and feel it’ (Nussbaum, 2005). De Lille et al. (2012, pp. 3) say:

*“The design thinkers’ ability to empathize with multiple kinds of people and the skill to co-create enables collaboration to develop products and services. Empathic understanding goes beyond knowledge: when empathizing you do not judge, you ‘relate’ to (the user) and understand the situations and why certain experiences are meaningful to these people, a relation that involves an emotional connection.”*

What we are actually remarking on here seems to be more in keeping with the definition of sympathy rather than empathy. Sennett, (2012) refers to Adam Smith’s Theory of Moral Sentiments, and sees sympathy as identification with the ways of life, and particularly the suffering of another. Whereas, empathy he took to be a different kind of regard: curiosity about lives the observer cannot pretend to understand. Sympathy is when you identify with the other, and want to help. Empathy is when you use wonder. Sympathy is close to condescension and pity: the emphasis is on my understanding and me.

*Empathic Exchanges in Social Interactions*

Sennett’s study makes some further distinctions when he talks about dialectic versus dialogic and declarative versus subjunctive exchanges in cooperative situations (Ibid). He points out that dialectic is: more adversarial, whereas dialogic is enquiring and interrogative, involving the skill of seeking another’s intent rather than just reading the face value of their words. In this sense it’s about problem finding rather than problem solving and is open rather than closed. Sennett (ibid.) draws an analogy with craftsmanship (in keeping with Design’s intuitive approach), in that craft looks at situations in a problem-finding manner. He proposes that dialogic, subjunctive, and empathetic exchanges, rather than dialectic, declarative, and sympathetic ones, which rely on effective communication, better serves difficult situations of cooperation.

New & Kimbell (2013) draw on other distinctions of empathy in their article; ‘Chimps, Designers, Consultants and Empathy: A “Theory of Mind” for Service Design’ (New and Kimbell, 2013). Young (2014) categorized their work as defining two approaches and four types of empathy:

• Rationalist empathy – is an investigative approach to another’s experience, carefully teasing out details with great skill to know what they feel, but not to imagine what it feels like. It’s a type of empathy, but one, which is exercised by the deployment of some reductionist procedure or programme of inquiry best suited to the traditional role of a consultant such as a medical clinician or business consultant.

• Aesthetic empathy - is based on an intuitive approach and response, to understand what it feels like to be someone else in a holistic rather than reductionist sense. The focus is on the interpretation and representation of another’s situation, which describes the typical role of the designer.

• Cognitive empathy – relates to your ability to work out what is going on in another's mind, to put yourself inside someone else’s shoes, to understand their world. This type of empathy is about recognizing otherness through imagination (design approach), or research (traditional consultant approach).

• Affective empathy – refers to a shared emotional response, actually feeling another’s emotions. This type of empathy is more than just using your imagination to get a fuller picture of another's experience; it requires emotional toil so that the understanding is not just descriptive, but embodied (i.e. method acting or some design work).

• Performative empathy – is where people who may or may not have empathetic capacities present themselves as operating them. It’s the kind of empathy in design when someone commissioning a project states that the end result must be user-centred, and the process must be participative but they disagree with the outcomes if it does not fit the solution they have already decided upon.

• Anti-empathy – psychologist Simon Baron-Cohen (2011) believes we owe much by way of scientific progress and technology to individuals who operate with less than normal empathy. That a lack of empathy can lead to evil, but it can also be associated with a propensity for systematization and quantification. He also makes a connection between mathematics, engineering and Asperger's syndrome!

Young correlates these types of empathy and the values and practices of designers, agreeing with New and Kimbell (2013) that; aesthetic empathic representations allow design practitioners to focus on their full sensory awareness. An approach, which aims to develop the designers’ multi-sensory, and non-verbal understandings from an otherwise inaccessible perspective towards a richer comprehension of, needs and desires of community members (ibid). Designers can exploit their ability to imagine and describe user experience in a speculative sense but this really needs to link with the cognitive domain of curiosity (Sennett, 2012). Young (ibid) used Sennett’s distinction between empathy and sympathy to point out that an overly sympathetic aesthetic approach does not lend credibility to the role of design, unless it can combine affective with cognitive empathy effectively to deliver creative and research balance. This is about design creating a true holistic and explicit understanding of human experience and relationship in the context of community change or innovation and that effective communication is a key capability for empathic co-creation and collaboration.

*Communication and Transformational Change*

Communication creates relationships between machines or between people, and relationships create our entire web of life. Wherever you look, in business, science or society, it’s all about relationships. Therefore, what we really need to design is communication itself and communication is about language. This infers that designing language and conversations is the most efficient way to impact social issues and change behaviour. Looking deeper into the design of communication to promote facilitation of human relationships, we can ask what competences are needed by designers to work in the community context? Platts (2002) promotes higher levels of thought in professional competence. He argues that certain skills underlie the higher level processes and these are developed in particular ways. What is essential is guidance in reflective practice from someone who already has the skills and is able to impart them to others. It takes time and involves empathy and trust. The skills include:

• Empathic listening (personal noticing)

• Unfreezing frozen emotions (group noticing)

• Transcendent thinking (personal creativity)

• Achieving insightful consensus (group creativity).

Warwick (2015) in her doctoral study has systematically investigated the question; how does design as a discipline and designers as actors in an organizational context, manage to achieve the required permission to act as agents for transformational (strategic/cultural) change at an organizational level in the community sector, and has arrived at the conclusion that the first steps in this process are indeed being able to establish trust through empathic action. Her work extends that of New and Kimbell (ibid) and Young (ibid) concerning the nature and practice of empathy in design and identifies the features of transformational culture change within organizations as a shared vision for an innovative future. She proposes a tool to test the receptivity of organizations for engaging in a co-design process, for creating the necessary communication channels and relationships to support the process of transformational change. Aftab’s (2013) research applies another such tool called Delphi in combination with action research, not so much to test the openness of the organization towards cultural transformation, but to design new communication channels to facilitate creation, and management of human relationships that ultimately pave the way for a transformation within the multinational. The section below outlines the evidence that demonstrates the application of empathy in the administration of Delphi and Action Research in the current research approach.

**The Relevance of Delphi Technique in this Research**

The relevance of Delphi technique in this research was seen in its ability to achieve consensus amongst individuals and groups in the multinational. Nevertheless, in order to achieve consensus and promote higher levels of thinking to support transformation, a reflection on the practice of the research shows evidence of the use of empathy in the application and administration of Delphi technique. Application of Delphi technique in investigations in the field of psychology (Jacobs, N. C. L. et al., 2014; Warren, J. J., Hogard, E., & Ellis, R., 2013) and healthcare (Irvine, F., 2005; Charon, R., 2010) provided sufficient ground to suggest that Delphi technique could lead to an empathic approach of collecting data from the experts, and explicating what is going on in their minds; although a few alterations in the design and administration of the technique had to be made to ensure a more human-centred approach to using Delphi. Tapio (2000) supported redesigning of all new processes of Delphi depending on the context in which it was being applied. For example, in the current investigation the Functional Leadership Programme at the multinational challenged the traditional approach for culture change, and initiated the need for a more human-centred perspective, making way for the inclusion of empathy in all administrative decisions of Delphi. The iterative nature of Delphi automatically ensured anonymity of experts, and validity of the collected data (McKenna, H. P., 1994), but it did not guarantee confidentiality and transparency of the shared information. Also, even though the cyclical flow of information between the iterations, and regular feedback allowed experts to change their past opinions, and improve communication, the Delphi process did not allow experts to record implicit design knowledge and tacit skills that were essential for the value proposition and development process (VPD), suggesting a need to alter Delphi by supporting the technique with other tools and methods such as action research (Bridget, 2005).

*Delphi Technique –Administration and Application*

The researcher had to use an approach that would focus on extracting ‘what’ the individual was thinking (implicit knowledge) and doing (tacit skills) while working in the different stages of the organization’s VPD process. Hence, the development of ‘aesthetic empathy’ leading to the application of ‘cognitive empathy’ (New, S. & Kimbell, L., 2013) in generating a perspective on ‘what was going on inside the practitioners and thinkers minds’, seemed apparent for a robust research-design. In total 16 Delphi iterations were conducted with 11 experts who comprised the thinkers, practitioners and stakeholders at the multinational. The initial goal of the study was to identify and explicitly visualize the implicit design activities, skills and outputs residing within the practitioners of the VPD process and comparing them with the theoretical understanding of the process defined by the thinkers, in order to formulate a unified process. The thinkers provided a more theoretical description of the process, whereas the practitioners provided a description, which was more pragmatic. The stakeholders were the control group that certified if the outcomes from the Delphi iterations fit the requirements of the audit committee[[1]](#footnote-1), and the Functional Leadership Programme.

Reflection on the research design confirmed Group Feedback Analysis (Heller, 1969) and Delphi technique as the two main contending methods for this investigation. Nevertheless, the reasoning behind the selection of Delphi technique to meet the research aim was due to the ability of Delphi to achieve consensus in a design context (Dalkey & Helmer, 1963), in the field of education (Yousuf, 2007; Thach and Murphy, 1995, cited in Grisham, T., 2009); healthcare (Whitman, 1990, cited in Grisham, T., 2009); and journalism (Smith, 1997, cited in Grisham, T., 2009). These references assured the researchers about Delphi’s ability to bring together the thinkers and practitioners of the RD&I team and achieve consensus, specifically in terms of agreement between the actors in the organization about the nature of the context in which they worked, rather than necessarily agreement about how to develop or act on the context. This might be reduced to, agreement to disagree versus agreement to agree.

In addition to achieving consensus the thinkers and practitioners also needed to re-establish their communication channels in the RD&I team, and with stakeholders from other sectors and functions of the multinational. The need to re-structure communication, re-build social interactions based on the notion of trust and respect, and create a collective purpose among the thinkers, practitioners and stakeholders of the RD&I team made it imperative to redesign Delphi’s administration. Delphi had to be administered and applied in such a way that it ensured flexibility, transparency and confidentiality for all experts. The application of Delphi had to confirm that on consensus the team will not remain disjointed, and will have a new social structure in place, including an ideal non-disjointed VPD process. This requirement of Delphi is thought to be representative of design working as an inter-discipline (Seidel & Kimbell, 2009) and (Barry et al., 2008). Evidence by Linstone & Turoff (2002, pp.3) on Delphi’s ability to successfully restructure the communication processes of groups, and as a result effectively enable the individuals of the group to work collectively to solve complex problems, supported the appropriateness of Delphi for the case study.

The research also realized that due to the close relationship between practitioners and their practice, there was a necessity of including cycles of ‘reflection’ to enable the practitioners to envisage their own journey through the annual cycle of VPD. This led to the requirement of a tool that would ensure not just consensus, but also reflection from each individual expert. Theoretical studies indicate that Delphi as a group facilitation technique, carries out a series of iterations to reach consensus (Hsu & Sandford, 2007; Hasson et al., 2000), with each stage building on the results obtained from the preceding stages, and getting experts closer to consensus. It was this very sequence of the technique, and also Delphi’s focus on the complexities of human activities that led Hasson et al. (2000) to believe that in essence, Delphi had the uniqueness of an ‘action research’ cycle. Although, the critical difference between Delphi iterations, and an action research cycle would be that for Delphi to be effective, it is necessary to identify a point of ‘consensus’, which when reached the iterations will have to stop, on the other hand an action research cycle could go on forever. This made the decision on the number of iterations that Delphi would have for the case study very important and challenging. It was not just the issue of reaching consensus that dictated the number of iterations a Delphi process would have, but the decision about the number of iterations was also influenced by the nature of the topic being investigated, the number of participating experts, and the total number of drop-outs in experts during the iterations (Hsu & Sandford, 2007), making it very important for all chosen experts to be accountable until the process had stopped, all reflections had been completed, and consensus had been achieved.

The most contentious matter in the process of Delphi for the case study was the selection of experts. McKenna (1994) highlights this as the biggest challenge for Delphi technique. He believes that selecting experts from the same school of thought made the outcome of any Delphi technique invalid and inaccurate. Tapio (2000) supported this critique and suggested that experts in Delphi must be chosen from various perspectives and experiences, so that consensus can be effectively achieved on a given subject. Hasson et al. (2000) suggested that the panel of experts selected should be impartial, and should participate in all the iterations, so that the information obtained reflected the current state of knowledge and perceptions. To ensure that all perspectives were considered in the adoption of the Functional Leadership Programme within the RD&I team, the expert panel had to be comprised of the three main representatives from the team i.e. the thinkers, the practitioners and the stakeholders.

**An Empathic Approach to Delphi and Action Research**

A posteriori rationalisation, and a deeper theoretical reflection on what took place, evidenced ‘empathy’ to have been the central construct in the design, administration, and application of the Delphi process in the case study. Reflection-in-action evidenced elements of ‘empathy’ were applied in three distinct levels,

level 1 Pre-Delphi decision-making,

level 2 During Delphi iterations, and

level 3 Post-Delphi.

These three levels of empathic intervention coincided with the ‘three need analysis’ of the Functional Leadership Programme i.e. project need, team need and individual need (Adair, 1990), indicating that theoretically, correlations existed between the Functional Leadership Programme and the empathic approach to designing Delphi iterations (Table 1).

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*Table 1: Instances of empathy and its correlation to needs analysis of Functional Leadership theory.*

Empathy was seen to be playing an important role in the initial decisions taken with regards to the Delphi administration i.e. the decisions aligning with the project needs of the Functional Leadership Programme. Reflection-on-action indicated that the lead researcher used ‘cognitive empathy’ in interpreting the interviews and observational data from the early stages of the investigation, which led to the identification of essential needs of the RD&I team members, and helped in putting procedures in place that sowed the seed of trust within the experts.

Several instances of creative and cognitive empathy were seen during the application of Delphi technique, which enabled the team to get involved in the phenomenon of ‘super cooperation’ as a prerequisite of improving trust and respect for collaborative working (Nowak & Highfield, 2011). The Delphi iterations aimed at identifying Sinek’s (2009) elements for golden circle i.e. Why, How and What for the VPD process. The application of Delphi for the RD&I team inherently led to the reinforcement of a culture of common reflection, and evaluation from both the thinkers and practitioners for the continuous future refinements to the design innovation process. This was later perceived to be a transformation within the RD&I team in fulfilling the ‘team’s needs’ of the Functional Leadership Programme, as a consequence of the use of empathy. The initiation for this transformation was made during the Delphi iterations.

Evidence collected post-Delphi and during Action Research indicate the use of ‘creative empathy’ in enabling practitioners to think deeply about their own practice, and as a result create a common understanding amongst all experts. In the initiation of individual professional development (as part of the Functional Leadership Programme) evidence leans towards the use of empathy in understanding the needs of the experts in order to enable the practitioners to ‘think deeply about their practice’, and then create a ‘common understanding’ amongst all experts.

The above-mentioned categorization of empathy within the ‘Functional Leadership Programme Framework of Needs’ was the first step towards post-rationalization of the case study. Further, reflection on the administration and application of Delphi technique led to the identification of evidence, which helped in naming and framing the case study as an empathic action.

*Evidence for Creative and Cognitive Empathy*

As stated before, the function of design within the multinational had undergone a significant evolution in its role from being a contract entity into being included as one of the chosen functions for the Functional Leadership Programme. This inclusion did not come without its challenges. The function of design was riddled with structural, political and hierarchical pressure to perform. Observational data inferred that the function of design was under immense pressure to ensure full transparency of their VPD process to other stakeholders within the multinational. These pressures were seen to pose a severe threat to all the experts involved and did little to assure the accuracy, validity and unbiased collection of data.

Early on in the investigation open-ended interviews, statements and questions from practitioners such as ‘If I state something now I will have to produce it in that way all the time, and my process doesn’t work like that!’ ‘Why do I have to audit my activities?’, ‘Who will see my responses?’, ‘Who else is involved?’ etc. indicated that members of the team were unsure of the scope of the investigation and were concerned about their integrity and anonymity. Additionally, responses such as ‘Why should I share my area of expertise?’, ‘Who has sanctioned this research?’, ‘Who will all this be shared with?’ etc. clearly indicated a lack of trust of the team members not just with the researcher, but also with other members of the team. These early indications made apparent the need to ensure complete anonymity for the experts, and confidentiality of the data shared by them.

The act of interpreting insights, information and data from the interviews and observations before the Delphi iterations began helped in incorporating procedures that instilled participants with confidence and trust in the later stages of the case study. It was the inclusion of such parameters that addressed the challenges within the administration of Delphi, which were the pre-requisition of a human-centred approach towards change. Also, it was these considerations in the pre-Delphi stages that later helped the lead researcher to gain the trust and support of the RD&I team. Being stationed as a participatory observer within the RD&I team helped the cause, but the inclusion of a more empathic approach was seen to have impacted the presence of an outsider (the researcher) into the team in a positive way. These decisions were also seen imperative to the alignment of all participants under a unified, achievable goal of formulating a single version of the VPD process for the Functional Leadership Programme.

As suggested by Platts (2002), inclusion of any form of deep thinking for greater professional understanding takes time, but the first step of introducing this in the case study was to instil confidence among all practitioners. The decisions taken as a result of the initial empathic reasoning of the interviews and observational data were to inculcate confidence in the experts, ensure transparency of shared information, and introduce flexibility in attendance to all participants for Delphi sessions. The first step towards ensuring complete anonymity of all participants, and infusing confidence was done by placing Delphi experts in three distinct groups i.e. thinkers, practitioners and stakeholders, instead of a combination of these individuals as experts for the Delphi iterations. This enabled practitioners representing a similar school of thought to share opinions on the pragmatic needs of the VPD process without being confronted by differences in opinion from the thinkers. This led the practitioners to unfreeze frozen emotions (group noticing)(Platts, 2002), and clearly strengthened their morale as a team. Similar outcomes were achieved from the expert groups of thinkers and stakeholder’s separately. Additionally, initial interviews also confirmed the gap in knowledge and way of working between the thinkers and practitioners of the RD&I team, making it impossible to create and communicate a unanimous vision of the function of design, indicating that the investigation was of value to all the experts and stakeholders, and their involvement initially would not be a problem. This was then supported by observation, which confirmed the immense workload on all team members, indicating that not all experts would be able to commit to attend Delphi iterations and workshops, and a second consideration had to be made to provide flexibility of attendance to all experts.

The third empathic consideration towards visualizations of implicit design activities and knowledge from individuals was to support Delphi sessions with one-on-one interviews for the practitioners and thinkers. These interviews were meant to help practitioners to ‘think deeply’ about their practice, and perceive any changes. The premise of these sessions was to accurately identify the activities that each practitioner deemed useful for the VPD process. As a result, this helped in the validation of the process description as well as enabled the practitioners to reflect-in-action, and achieve a level of transcendent thinking (personal creativity)(Platts, 2002). Evidence indicate the use of ‘creative empathy’ in structuring interviews, which allowed participants to have a deeper understanding of their action, and the researcher to have a deeper knowledge of what was going on inside the participant’s mind. Also, evidence shows that the questions were framed to help the practitioners think differently and more deeply about their practice. Questions started with ‘What do you think?’, ‘What would you like to change?’, ‘Why would you collaborate?’ etc. giving practitioners a sense of ownership and decision making power, and as a result empowering them to make changes to the existing way of doing things within the RD&I team. Another consideration of the reflection-on-action cycle was that it helped the practitioners identify supporting evidence for all their claims to practice, and made it easier to implement changes in the VPD process. On the other hand, these one-on-one interviews and reflection-on-action made the thinkers use empathic listening (personal noticing), and be conscious of the implication of their decisions. Additionally, the cycle of reflection for the thinkers focused on them taking a considerate, ‘empathic’, approach to understanding the value of the changes proposed by the practitioners based on Sinek’s (2009) golden circles. Post-rationalization of this indicates that enabling the thinkers to base all their reasoning on the golden circles changed their perspective and put their focus on the requirements of the Functional Leadership Programme rather than any other agenda on their minds. This inevitably enabled the thinkers to become more aware of the needs of the practitioners. The ability of practitioners taking ownership of the RD&I process and thinkers being considerate of the practitioners needs were not common practices within the RD&I team, but were adopted readily by the team as a result of the research.

The fourth consideration was to ensure transparency of shared information between all team members, which was solved by introducing ‘workshops’. This posed a challenge of upholding anonymity of participants while ensuring the team gets to discuss the information being generated through the Delphi iterations. The iterative nature of Delphi and inclusion of one-on-one interviews enabled collation of data in the form of anonymous narratives. Therefore, all Delphi iterations and interviews concluded in narratives that described the experts thinking and doing aspects of the VPD process. These narratives resulted in adding a new skill for a better interpretation of data, and allowed a better understanding of the practices within the process. Evidence for the use of narratives exists in medicine, and theory confirms that narratives enable patients to reflect, and as a result bridge the divide between them, physicians, other health professionals and society, leading to nourishing medical care (Charon, 2010). Similarly, the application of narratives in the case study also created opportunities for open discourse based on respect and empathy, and consequently bridged the gap between the thinkers, practitioners and stakeholders within the multinational. This act of discussion amongst the larger team, which included thinkers, practitioners and stakeholders, led the RD&I team to use empathic listening (personal noticing), and achieve insightful consensus (group creativity), while upholding confidentiality of all experts.

Evidence collected during the Delphi iterations confirmed the lack of communication of design value contributions to stakeholders, as the stakeholders were surprised to see the magnanimous work the function of design was involved in doing. This indicated that there was a need to identify and include new channels of collaboration and communication between the function of design, and the sectors within the multinational, and also a format of disseminating design’s contribution to the multinational.

*Disruptive Thinking - Combining Abductive and Inductive Logic*

Implementation of a more human-centred administration of Delphi required an approach that would not only find logic in the data collected through the Delphi iterations, but also relate the logic with information from all the past premises. Reviewing the past premises of the research concerning the function of design, its historical evolution within the multinational, and the role of each individual involved within the process was a challenging task. Additionally, the complexity of the multinational at hand, and the proximity of the investigation to the thinking and practice of individuals further challenged the researchers to have a disruptive approach to finding logical inferences for the investigation. As a result, an approach combining two thinking styles, namely, abduction and induction, were adopted to ensure that the investigation considered the context within which the RD&I team was placed, as well as the historical evolution of design within the multinational, and the influence of other recognized functions and individuals on the function of design.

As Hume (1988, cited in Vickers, 2014) suggests, that ‘induction’ seeks

“*instances which we have had no experience of, which resemble those that we have had experience of*”,

and this gives the conclusion a reasonable validity, which in the case of abduction is not possible (Campbell & Franklin, 2004). On the other hand abduction provides the data set with an insight or a ‘what if’ notion, and pushes the logic beyond known premises, and towards unrelated instances (Newton-Smith, 2000). The inductive reasoning generated ‘conclusions’ based on the existing premises, and abductive reasoning introduced a new idea in form of ‘insights’ to the generated conclusions. It was this interplay of evidence-based explanations of the occurrences combined with new insightful insurgences that made this approach disruptive, and fit for an investigation where both management and design thinking were conjoined. This combination of abduction and induction was applied in six-stages, which led to the collection of evidence for the elements that later concluded as the VPD process for the RD&I team (Figure 1).

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*Figure 1: Combined abductive and Inductive Logic (Source: Aftab, M. (2013)).*

Within these six stages Delphi technique and Action Research were administered in stages 3A and 3B, focusing around collecting the bottom up (practitioners perspective), and top-down (thinkers perspective) of the VPD process at the multinational. It was in these two stages that aesthetic and cognitive empathy seemed to have made Delphi and Action Research and its administration more human-centred, and resulted in creating a common understanding of the value for the VPD process amongst the thinkers and practitioners.

**Conclusion**

This study shows that Action Research facilitated by the application of Delphi technique, helped practitioners and thinkers to undertake a reflection-on-action, and identify their own activities that comprise the VPD process that they follow in the multinational that they work in. The study enabled the researcher to classify several stages within their design innovation or VPD process and the essential features for interactions within teams to ensure effective management.

The reflection on the reflective practice of the Action Research study also demonstrates that the Delphi sessions created a platform for individuals to have an open discourse and arrive at a consensus on the stages of the innovation process, and the activities within the process. Post rationalization of what actually occurred here is that the researchers managed to inculcate an empathic condition between the design thinkers and practitioners, which was not the usual condition in their day-to-day behaviour. Additionally, the combination of methods as a single Action Research methodology helped to improve communication, integrate competence, commitment, and mutual respect in the way thinkers and practitioners carry out their work. It paved the way for a transformation in the culture of the organization without dysfunction and distrust, ready for breakthrough innovations.

*Implication and Future Research*

There is now a need for further studies to explore the capacity of an empathic construct for Delphi to result in organizational culture change towards collaborative innovation practices within multinational companies. It is anticipated that this work has the prospect of establishing the role of design as the critical functional ‘inter-discipline’ to effect disruptive innovation practices in these organizations.

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1. Audit Committee – In order for any of the functions to be a part of the Functional Leadership programme at the multinational, the function had to be audited. As part of the audit readiness, the design function was asked to make all its processes auditable, which entailed making design activities and outputs explicit. [↑](#footnote-ref-1)