Mapping Empathy and Ethics in the Design Process

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Abstract

There is no doubt that the role of product designers has changed considerably, not least with the rise of human-centred design. While Papanek's 1971 "Design for the Real World: Human Ecology and Social Change" seemed radical at the time, his ideas seem entirely at home in the 21st century, including his call to adopt more social responsibility in design. These views are echoed in the contemporary findings of professionals and researchers associated with ICSID, the International Council of Societies of Industrial Design. The focus has shifted, from the designer as the expert to the user, or community, as the expert in their own environment; and Co-design, Participatory design, and Universal Design are but a few examples of such people-focussed design approaches. And, as design is increasingly used as a tool for social development, the exposure of designers to vulnerable individuals and communities has increased. While research fields such as the social sciences have a long history of developing a code of ethics that is explicit, younger fields such as human-centred design and design research do not. While design and design research have adopted many social sciences methodologies (such as ethnography), the issue of ethics and accountability in design remains largely undiscussed.

The increasing importance of understanding the user in the design process is a key feature of human-centred design. Empathy is often described as "stepping into someone's shoes", however the full value of this process is described in Empathic Design. This deep understanding of the user's circumstances is temporary, and the designer then steps back out, with an enriched understanding of the user, enabling better design solutions. However, the interactions with the user - in order to gain this deep understanding - can also raise ethical concerns at stages during the design process.

The aim of this position paper is to explore the interaction moments, between designer and user, or designer and community within the design process. The Double Diamond design process will be analysed with a view to looking at characteristic tools in each stage, in order to reveal activities that require empathetic considerations. The contribution of this research will be an empathy map of the double diamond design process, with ethical implications. The significance of the analysis will be to highlight ethical concerns for individual designers, design researchers as well as those in Design Education.

***Keywords**: Double diamond, design ethics; design process; empathy*

Introduction

The Industrial Revolution resulted in a democratisation of access to products, with far more previously unattainable goods becoming available to the public. Thus consumerism was born, or simply – an unsustainable product-orientated culture (Manzini in Sotamaa, Salmi & Anusionwu, 2006:10). UNESCO granting ICSID (the International Council of Societies of Industrial Design) special consultative status in 1963, in order "to engage design on numerous development projects for the betterment of the human condition" (Smithsonian Institute 2013, p. 12), could be viewed as the beginning of an awareness of the ethical role of the designer. Papanek's call for an increase in social

responsibility among those in the design profession in "Design for the Real World: Human Ecology and Social Change" followed soon after in 1971. More recently, advocates have called for designers to evaluate their role in consumerism, but also highlighted the capacity of designers to make changes in their practice - that would benefit their immediate community and society at large. User-Centred Design1 (UCD), Universal design, co-design, design for social innovation, empathic design and participatory design (among others) have all called for a change in focus from the designer as the expert, to the user. While UCD has been criticised for being exploited for commercial gain (Keinonen 2010, p. 17), the main principles of involving the user in the identification, analysis, and iterative development of solutions to their own issues are key, and form the basis of many other collaborative forms of design.

Any collaboration presents an opportunity for exploitation of one or more parties. In order to address this, there has been a growing focus on the role of ethics within the field of design. Ethics, as defined by the UNESCO Office of Ethics are:

> At the simplest, ethics is a system of moral principles. It affects how people make decisions and lead their lives. It refers to well-founded standards of right and wrong that prescribe what humans ought to do, usually in terms of rights, obligations, benefits to society, fairness, or specific virtues.
> Ethics is also concerned with what is good for individuals and society. It should help us to know how to live a respectful life, making use of the language of right and wrong, to define our rights and responsibilities. (UNESCO 2011, p. 8)

Although ethics are related to an individual/ community's moral code, countless codes of ethical conduct exist. These are to provide an outline or guide as to how to make decisions within a specific context. ICSID (2013) has a Code of Ethics for Designers, but it focuses largely on the ethics of design as a business, as well as decisions related to manufacturing and development. Because of the focus of ICSID on the changing role of design – towards more human-centred activities – the underdeveloped nature of the ICSID Code of Ethics, as it relates to human interactions and social innovation, is surprising.

Despite being aware of global trends such as design for social innovation, the pace of curriculum change within industrial design education institutions may be much slower than desired. While there are pockets of best practice, logistical constraints (such as budgets, transport, time management, channels of communication, or community access) within organisations may hamper efforts to engage the community in collaborative design projects.

> "Designing products, processes and systems within a framework of sustainable principles and outcomes is difficult; particularly when and where students have been raised in a world where unsustainable practices have been their life. As international agreements are created and globally responsible practices expected, students are challenged to design within complex social, ethical and environmental contexts." (Fleming & Lynch cited in Sotamaa et al. 2006, p. 72)

Mindful of the trend towards collaborative design, and with community engagement being an area of focus in many South African Universities, vulnerable individuals or communities are now far more likely to face exposure to students. And while research fields such as the social sciences have a long history of developing a code of ethics that is explicit, younger fields such as human-centred design and design research do not. While design researchers have adopted many social sciences methodologies (such as ethnography and observation), the issue of ethics remains unresolved. University ethics forms may be generic and/or vague, and ethics review committees may be similarly unaware as to the requirements of design researchers. In fact, the "dearth of accepted standards and

[1] The term was first used in 1986, by Norman and Draper.

ethical guidelines" has been identified as a worldwide obstacle to designing for social impact[2] (Smithsonian Institute, 2013, p. 6). Within higher education, the student experience is also mediated by the ethics policies of an institution. And thus, in many respects, the experience of the student is not individual, but mediated by the educators.

The increasingly fluid identity of the designer leans further towards people-centred activities, which impacts the need for ethical considerations. This paper aims to describe empathy and empathic design, the Double diamond design process, and where they intersect. The intersections are the points of ethical concern as they involve people interactions, and may have far reaching implications for design students, educators and design industries that aim for a human-centred design approach.

Empathy

Empathy is a contentious topic within several fields, including science, medicine, psychology and ethical theory. Oxley, in her exploration of empathy, *The Moral dimensions of Empathy: Limits and Applications in Ethical Theory and Practice*, describes empathy as

> "…feeling a congruent emotion with another person, in virtue of perceiving her emotion with some mental process such as imitation, simulation, projection or imagination" (Oxley 2011, p. 32).

Coplan describes empathy as a unique means for us to understand and thus experience what it is like to be another person, but identifies the affective matching, other-orientated perspective-taking and the ability to view oneself as separate as three key features of empathy (Coplan 2011, p. 6).

Empathic Design

Functional and emotional needs are both important for the design process, and the idea of empathic design was proposed to best meet the *real* needs, as opposed to *perceived* needs, of the user (Wang & Hwang 2010, p.2). For that reason, Leonard and Rayport (who first coined the phrase empathic design) suggest that using empathic design techniques would "require unusual collaborative skills" (1997, p. 104).

Thomas and McDonagh describe empathic research strategies as including the following:

- shared language (finding a means for designer and user to understand each other, especially when coming from differing contexts)
- collaboration (co-operation between persons of different skills and abilities)
- ethnography
- empathy (the designer will be able to gain a deep and real understanding of the user/s' context and issues, a critical feature of human-centred design)

(Thomas & McDonagh 2013, p. 3)

The Process of Design

The design process has become a specific area of focus for a number of disciplines. This interest is aligned to the creative and non-linear characteristic of thinking associated with the design process – referred to as *design thinking*. Brown (2008, p. 85) defines design thinking as a 'discipline', which draws from the methods and responsiveness of design as a process. In this way design thinking allows for the context-appropriate analysis of users, their needs and a resilient way of addressing these - through physical and technological products, systems, services, interactions and environments. The methods often referenced in discussion and practical workshop sessions, aim to help designers, or facilitators, mediate interactions and guide the thought processes of user (or

[2] At the *Social Impact for Design* summit, in New York, 2012, international representatives from academic programmes, nonprofit and for-profit organisations, non-governmental organisations (NGOs) and government structures were invited to discuss the challenging issues and opportunities in the field globally.

communities in the case of more socially driven projects) towards understanding and solution development. The process of design has been mapped by various sources and professional agencies, and generally refers to a series of steps grouped in three main phases: the analysis and exploration phases, the understanding and generation phase, followed by the sense-making and reflection phase. These phases often occur in iterative cycles.

During the analysis and exploration phase, the main goal is to gain an understanding of the user or community. Their contexts, aspirations and culture are considered to gain a better understanding of their needs and possible parameters, which any proposed intervention must acknowledge. During the next phase, the designer and user work towards a shared understanding of the problem context and collaboratively imagine and capture (document) possible solutions. In the final phase, a common solution, or direction, is negotiated and the selected solution can be implemented and tested. Once the solution has been evaluated, the suitability can be established – should the solution not speak to the original expectations, changes are made, or another solution is developed for testing. Once a design is finalised, Schön (1987) encourages reflection-on-action within design fields and beyond, during which the process is evaluated as a whole and information on how to improve future projects is collected.

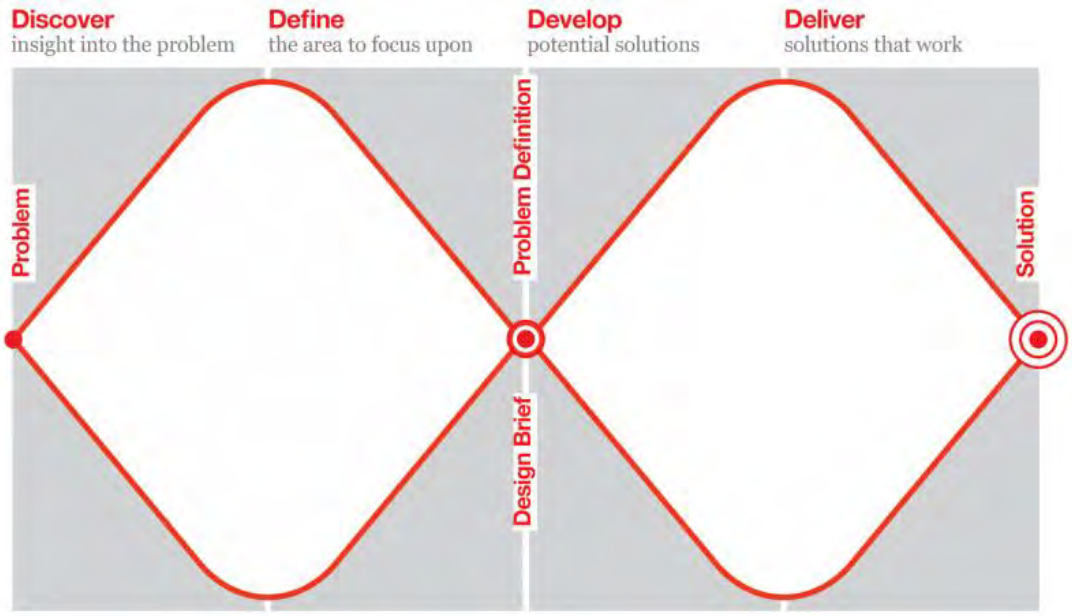

Figure 1: Double Diamond Design Process (Design Council 2015)

The Design Councils' Double Diamond model is an example of the design process: "Divided into four distinct phases – Discover, Define, Develop and Deliver – the Double Diamond (DD) is a simple visual map of the design process (figure 1). In all creative processes a number of possible ideas are created ('divergent thinking') before refining and narrowing down to the best idea ('convergent thinking'), and a diamond shape can represent this. But the Double Diamond indicates that this happens twice – "once to confirm the problem definition and once to create the solution" (Design Council 2015). The concept of moving from abstract thought to concrete actualisation is mirrored in IDEO's (2011) Human Centered Design Toolkit model (figure 2).

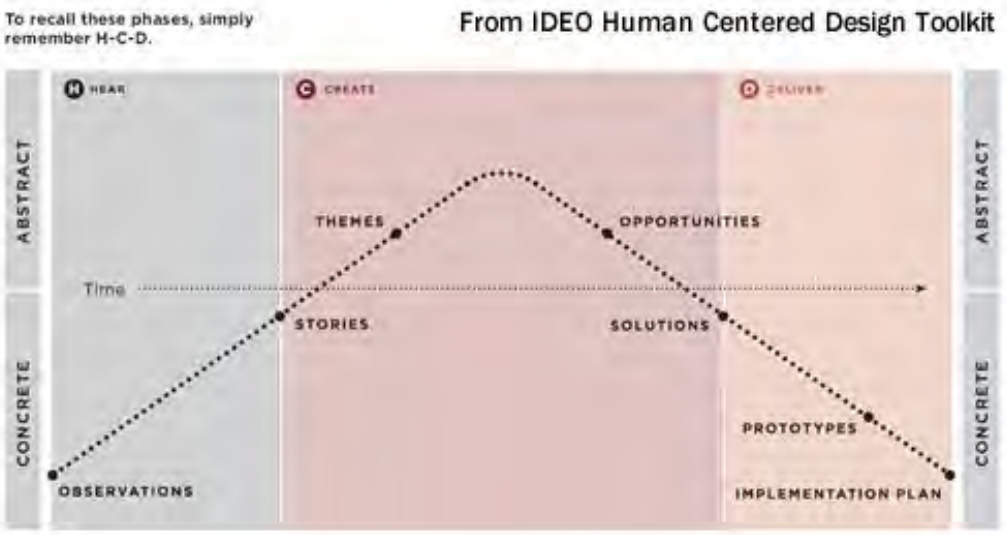

Figure 2: IDEO Human Centred Design Model (IDEO, 2011)

The DD process takes participants through four stages, divided into two main sections. The stages are: *Discover* (during which insights gathered in the various contexts are explored freely), *Define* (during which sense is made of the information found in the first stage, by creating a clear design brief that frames and describes the design challenge), *Develop* (during which many possible solutions are conceptualised, created, prototyped, tested in an iterative manner) and *Delivery* (during which the most appropriate solution is produced, implemented and launched). The focus on understanding the contexts of participants (and end users of the design) requires from facilitators and designers the ability to empathise throughout the design process (Ojasalo, Koskelo & Nousiainen 2015, p. 203). The DD process is, when evaluated, similar to many other design process models, including IDEO's Human Centred Design process model (2015), Kimbell and Julier's (2012) Social Design model and Moritz's (2005, p. 62) six-stage Service Design (SD) model. Many of the tools identified and described by these authors rely on interaction with, understanding of, and compassion for participants' context and needs. "In order to get to new solutions, you have to get to know different people, different scenarios, different places" (Kolawole quoted in IDEO 2015, p. 22).

The changing role of the future designer

The need for greater user interaction and collaborative creative practice has reshaped the definition of a 'designer'. The 'Designs of the Time' project (Dott07), by the Design Council, yielded an in-depth overview of roles fulfilled by professional designers. Besides the traditional skills and roles associated with a product designer, the project found that designers were active within various roles that required empathetic interaction, including, as Tan (2009) notes:

- Co-creator: co-designing *with* people, rather than for them.
- Capability builder: building design-led skills among people to address challenges themselves.
- Researcher: using design research to bring people-centred perspectives to product and service development.
- Facilitator: Bringing together communities using design-led tools to act upon issues.

The roles described by Tan (2009) and Dott07 reflect a shift, not only in design as a practice, but as a profession. A more holistic view of the role of users and communities *before* and *during* the design process has yielded multiple design approaches including (but not limited to): user-centered design, participatory design, human-centered design, universal design, design for social innovation, and community-driven co-design. The shift in design, from frequently artifact- or spatially-driven design, to that of process-driven design for addressing complex societal and environmental problems, echoes the increased need of designers to master (or at least have competent) collaboration and

interpersonal skills.

> …design offers problem solvers of any stripe a chance to design with communities, to deeply understand the people they're looking to serve, to dream up scores of ideas, and to create innovative new solutions rooted in people's actual needs. (IDEO 2015, p. 9)

In order to explore the depth of empathic practice required within current (and future) product and service design practice, a selection of tools and methods were interrogated. To select these tools and methods from the myriad of those available, the ones common to all of the three reviewed authors' design process models, were collated in table 1.

<table>
<tr><th>Moritz's Service Design Model</th><th>IDEO Human Centred Field Guide</th><th>Kimbell and Julier's Social Design[3]</th><th>Shared Tools/ Methods</th></tr>
<tr><td>1. SD Understanding: Finding out and learning</td><td>1. Inspiration</td><td>1. Exploring (Iterative)</td><td>• Immersed Fieldwork, exploration, shadowing
• Ethnography
• Context mapping/ analysis
• Interviews/ Conversations
• Observation</td></tr>
<tr><td>2. SD Thinking: Giving strategic direction</td><td rowspan="3">2. Ideation</td><td>2. Making Sense (Iterative)</td><td rowspan="2">• Affinity diagrams
• Brainstorming
• Co-creation
• Role Playing (Bodystorming)</td></tr>
<tr><td>3. SD Generating: Developing concepts</td><td rowspan="2">3. Proposing (Iterative)</td></tr>
<tr><td>4. SD Filtering: Selecting the best</td></tr>
<tr><td>5. SD Explaining: Enabling understanding</td><td rowspan="2">3. Implementation</td><td rowspan="2"></td><td>• Personas
• Scenarios
• Live prototyping (experience)
• Empathy tools[4]</td></tr>
<tr><td>6. SD Realising: Making it happen</td><td>• Monitor and evaluate
• Scenario testing</td></tr>
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Table 1: Phases of design processes and shared model and tools (Moritz 2005; Kimbell and Julier 2012; IDEO 2015)

Empathy and design tools

Krznaric (2014) identifies ways in which one can cultivate personal empathy by focusing on various personal habits, including:

- The development of personal curiosity about strangers, which allows one to listen and gain the ability to understand another person.
- Challenge personal assumptions, prejudices and be open to discover commonalities.
- Immersing oneself in another's life to gain a fuller, more complete understanding of another person.
- Listen actively and communicate openly without any personal agenda.
- Aim to inspire action at a societal level and encourage social change.
- Develop your imagination to gain an understanding of individuals from all walks of life.

While empathic design aims to mine a deep understanding by activating empathy for the user, in

[3] In Kimbell and Julier's Social Design framework *Iteration* is placed as a fourth phase, but is described as an action that permeates the other phases. Their model acknowledges the non-linear implementation of the design process.

[4] Empathy tools can be described as physical products/ experiences of products or services being used, to allow designers to experience a sense of what users (including differently-abled users) would experience in a particular context.

order to best design to meet their real needs, this approach has been seen as most worthwhile in the first phases of design research (Postma, Zwartkruis-Pelgrim, Daemen & Du, 2012, p. 59). In their article, Challenges of Doing Empathic Design: Experiences from Industry, Postma et al describe case studies in their analysis of empathic design in practice. Their overall view was that while it is an extremely valuable human-centred approach, the gap exists between the theory and application of empathic design principles in an industry context (2012, p. 69). In addition, Wang and Hwang assert that empathic design can vary in different global contexts (2010, p. 4). For this reason, we have chosen to evaluate our design activities in the DD with the more general habits of empathy (as described by Krznaric) in order to allow for the broadest range of analytical possibilities.

The habits identified by Krznaric could be viewed as a basic set of points that evaluate the need for empathy (or not) in the design tools and methods identified as shared within design process models explored (table 2). The evaluation is not meant as a definitive analysis, but merely an indication of the possible empathy requirements that can be found within prominent design tools and methods.

Empathetic Habit	**Design Activity**	Immersed Fieldwork, exploration, shadowing	Ethnography	Context mapping/	Interviews/	Observation	Affinity diagrams	Brainstorming	Co-creation	Role Playing	Personas	Scenarios	Live prototyping	Empathy tools	Monitor and evaluate	Scenario testing
Curiosity	Wanting to know more about people and understand their lives.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Challenge assumptions	Listen and participate openly, without preconceived ideas to establish the user's real needs and context.	X	X	X	X	X	X	X	X	X	X	X		X		
Immersion	Experience another person's life to establish the user's real needs and context.	X	X	X					X	X	X	X		X		X
Listen actively, communicate openly	Listen openly, without preconceived ideas to establish the user's real needs and context.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Inspire action	Gain understanding, conceptualise solutions within a group and global perspective.	X	X	X	X	X	X	X	X	X		X		X	X	X
Imagination	Think creatively and imagine multiple solutions.						X	X	X	X	X	X	X	X		X

Table 2: Tools and methods compared to Krznaric's empathetic habits

It has to be noted that possibly not all design methods and tools require the level of empathy as those indicated above. The case to be made is merely that varying levels of empathy permeate many activities and methods within the design process.

The designer-user interaction

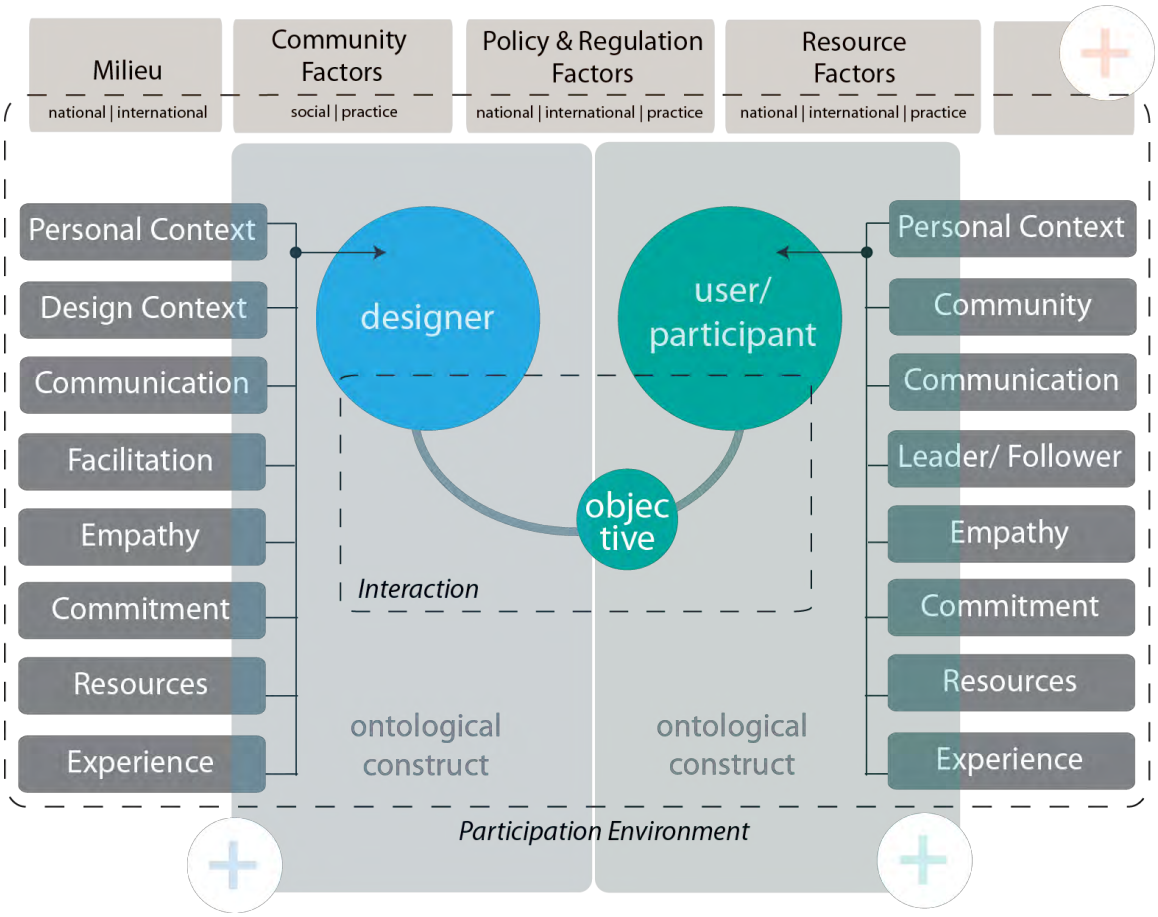

Figure 3: The complex realm of designer/user interaction (Du Preez 2014)

The interaction between designer and user (or community participant) is complex and dependent on a number of factors (figure 3). Some of these may be controllable, or adaptable, but others are imbedded in the context, experiences, values and behaviour of the individual. This means that personal bias, assumptions, negative impressions (or overwhelmingly positive impressions), as well as other factors can affect both designer and participant. Adding to the complexity of these interactions could be the nature of the engagement (and the level of friction or disagreement among participants or community members) and the space in which it happens. Therefore, simply focusing on the process and tools of design may not be enough.

Instead, the process of design, as outlined in the Double Diamond for example, can be mapped from two different perspectives: the one is focused on reframing purely *process-driven phases* (and tasks), the other to more *empathic and inclusive tools*. The goal is still to creatively explore the problem context, and through active collaboration with users, to define and develop what solutions may look like. However, the shift is from a *process that includes users* to *inclusive exploration, facilitated by the process*. The focus is then not only on the process but the impact, experience and growth of all participants in the process – designer *and* user (or community) alike. When the Double Diamond is viewed through this lens, one is able to map the design phases in terms of Krznaric's empathy-cultivating habits, over the process to yield a human-focused design process.

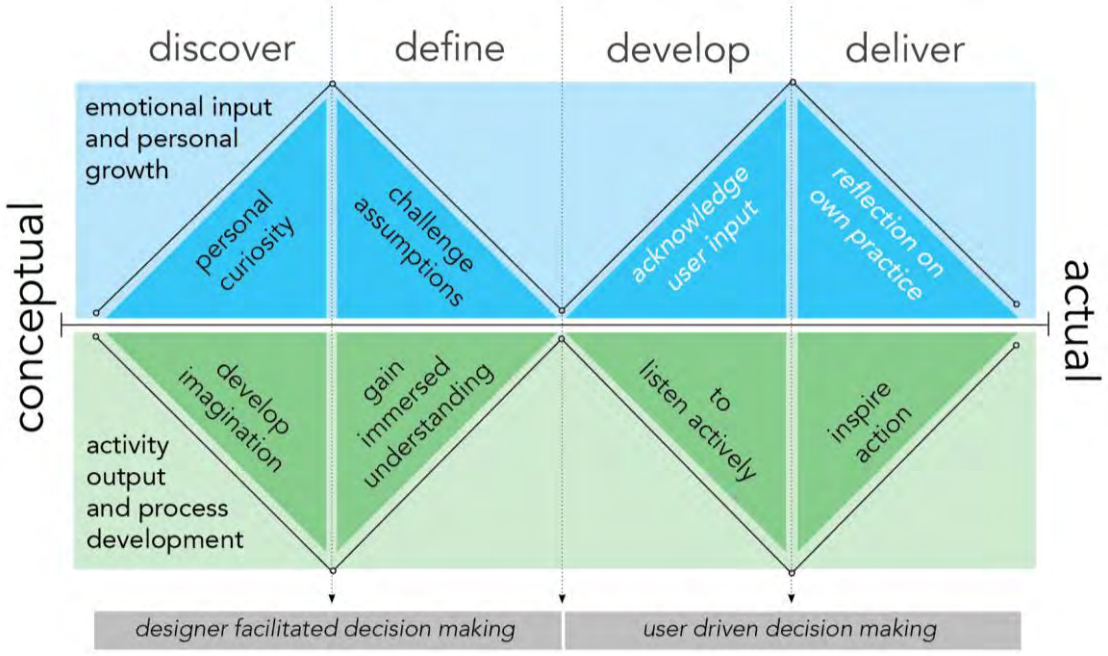

Figure 4: Double Diamond adapted with focus on empathy development

The result is a process, which places the focus not on what users and community members can add to the design process (and resulting design), but rather an indication of activities and behaviours that support the creative exploration of a problem context. This perspective is linked specifically to design projects and processes where a continued and intense user and community input is required, such as participatory design, co-design, user centered design, human centered design and design for social innovation. The adapted process (figure 4) model is split into two streams of development; the first includes activities, which drive the exploration of the design problem context, while the second speaks directly to the emotional, behavioural and personal growth that should occur through the process. As the designer (and participants) move through the phases the development of personal curiosity and the ability to challenge personal assumption to identify commonality becomes the preface for honestly being able to acknowledge the input of participants. This acknowledgment of users and the need for personal reflection are additions to the original list proposed by Krznaric (2014). Schön (1987) encourages *reflection-on-action,* during which the design process is evaluated as a whole, and information on how to improve future projects is collected. This can also be linked to 'feedback loops', often used in economics, management and systems theory, where, upon reflection on the process and final result, adjustments are made to achieve a more effective result. It is, however, important that the development of the *self* in the process is considered. In order to answer, "how has this project influenced me?" requires personal reflection. Reflection-on-action in this sense, moves from an evaluation of the process and project (as it is often practiced), to include reflection on one's own methods, behaviour, beliefs and development.

Conclusion

Given the possible future roles of designers, the growing complexity of developing heterogeneous communities worldwide, and their associated issues, the importance of authentic user input cannot be understated. Currently, design processes are the focus of design education and professional practice, and the emphasis is on ethical behaviour within a reasonably traditional design approach and process. This, however, can be viewed as a "tick box" approach – once forms are signed and approved by ethics committees or communities representatives - there is no change to the design process followed. Processes may be user-focused, but not necessarily user-driven.

Essentially, without a concentrated development of personal empathy, or an expansion of a designer's personal empathy horizons, the principles of ethics and accountability will be meaningless. Ethics becomes an operational/ logistical hurdle in the planning process of a design project, and accountability is not with the users/community, but rather with the educators (or client) in terms of design success. Whether or not this trait of empathy is nurtured, or even acknowledged, within higher education institutions is unclear, but would need attention for the projected growth of collaboration-focused design projects in the future. Reflecting back upon ICSID's Code of Ethics (2013), referring to the benefits to the user:

> Designers recognise their contributions to the social, individual and material well-being of the general public, particularly with regards to health and safety, and will not consciously act in a manner harmful or contradictory to this well-being. Industrial designers shall advocate and thoughtfully consider the needs of all potential users, including those with different abilities such as the elderly and the physically challenged. In this respect, designers will think of the whole value chain, from production to sales and use of the product. Designers realise that the humanisation of technology, the idea, usability and even the enjoyment of the product are part of their responsibility (ICSID, 2013).

The code clearly defines the role of a designer as one that does not harm or contradict the wellbeing of a user, however, without a deep understanding of the user this is impossible. To understand what 'harm' or 'benefit' means, one has to understand the person, thus, without empathy, any code of ethics may remain dependent upon designers' superficial assumptions.

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