



co-Ability

Aligned arguments for the dissolution of a human “centre”

Research Through Design Case Study

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Year of completion:	2022
Discipline/field:	Industrial Design
Type of Doctorate (e.g. PhD, DDes, ArtD)	DLA, Doctor of Liberal Art
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Abstract

To generate critical and new insights into our value system in human-centred societal challenges the experimental approach of Research through Design and the power of critical disability studies explore philosophical and strategic possibilities to understand the concept of co-Ability. I introduce the term ‘co-Ability’ rooted in the critical approach of posthuman disability studies outlined by scholars such as Rosi Braidotti (2013). It serves as a broad an umbrella term under which we can reconsider the potentials of various entities (biological and artificial) enhancing the shared competence rather than dwelling on the oppressive nature of human-centred norms.

By analysing the literature review, this thesis addresses the reflective symmetry in key elements between disability studies and design approaches, questions the validity of a homogenous human need and reflects instead on how co-design can become a driving fuel for generating possibilities.



Identifying how design helps to improve the experience of being human, and not necessarily the user experience of a disabled person in prosthesis design development highlights the constraints of seeing a prosthesis as a process instead of a product. To investigate through personal values and

situated concerns, the research settled on a case study of prosthesis development with a discursive and self-reflective process. It actively contributed to a better understanding of embodied thoughts on relationships. With the methodological approach of the co-design framework, I point to the junctures where technology, bodies, and cultural theory intersect in a decentralised soft assembly in which disability, technology, and design act as equal partners in determining co-abled formations.

Summary of research through design activity

To study the trajectories between Disability studies and Design culture perspectives, the research applied design experimentation 'through' a single case study of prosthesis design with a situated discursive co-design method. This knowledge-finding approach is not merely artisan as it attempts to relink academic theory and everyday real-life actions; it also wants to discover communicable scientific knowledge linked to the epistemology of the practice. It was hypothesised that digital craft combined with the unused disability potential specifically scrutinized with the argumentative RtD lens can lead to a better understanding of human-centred normative visions of our world. I presented a single in-depth prosthetic case study in which the research settled. The research introduced Luca Szabados as one of the key characters in settling the social situation and investigating her personal experiences within real-life context. In the prosthesis design process, the various entities (3D printing technology, person with disability, designer, artefact) analysed as key players are essential to the subject. The prosthesis prototypes weren't following past and recent tendencies of interpreting a corresponding anatomical body part. The material conditions were considered to be a process instead of a product. The manifestation of 'head' and 'hand' + 'materials' + 'tools' in the context, critically addresses the transversal form of non-synthetic understanding of the relational



bond that connects us. Information embedded in the artefacts was part of the activity of the inquiry, including implicit and tacit knowledge-based data that are rarely verbally articulated. Prosthesis prototyping provides the possibility of creating a set of 'boundary objects' within design discussions which include latent perspectives carried out. In particular, the in-depth single case study was chosen because of personal interest in an individual with a contextual situation. The embedded part of the investigation, the design tool of a prosthesis leads to theory building of co-Ability in social innovation.

Underpinning research, context and summary of methodology

This includes experimental research based on a case study that contains a careful theoretical inquiry into the relationship between design and prosthetics, leading to new knowledge. It also includes a detailed analysis to transform a practice project into research with the intention to explore research questions and demonstrate original research in this thesis that contributes to the knowledge of the design research field.

The locus of the investigation was built up by a single design case initiated in 2016 to create a prosthetic design for Luca Szabados as 'an empirical inquiry that investigates a contemporary phenomenon within its real-life context'. Luca's left lower arm is missing due to a congenital disability. We started to discuss what kind of prosthesis she needs and how she manages her daily routines. At this early exploratory stage of the case, the initial theories (she needs a prosthesis) and the initial questions (what does she really need?) were challenged by her representation of independence and creativity and her responses to my questions. By repositioning the initial task (conceptual repositioning in design, (Buchanan, 1992) of problem-solving and placing the situational nature into the focal point, the aim was to generate new knowledge and to explore Research through Design (RtD) for a shared understanding.

The rarity of this case study submerged in moving from the classical linear supplier/ consumer model, research for design innovation with variables situated in this design research with open research questions avoiding hypothesis predictions. Luca's response to my initial idea and further works functioned as a 'Part of a 'critique from within' posed by a person with a disability with personal (implicit and explicit) knowledge of the situation, the prosthesis prototypes as 'object for discourse' were positioned as a basis for reflection in and upon the design. Ideas may be central, such 'objects that talk back' require the use, reflection, and action, through their very physical presence, materiality, and craft' (Mazé, 2007).

Co-design was not a pre-selected, desired method at the beginning of the research. It only appeared by considering a specific design territory that combines



craftsmanship and digital technologies driven by disability studies, but as it turned out, co-processes could initiate a new epoch with immense effects on the everyday life of the 'common person'. The co-design case study process served as a construction for understanding the personal identity of a disabled person and group identities of disability in society negotiated in social and political interactions. The search for essence as the primary goal draws the research to theory development in exploring the phenomena instead of creating a market-ready product design.

To construct the narrative of the studied phenomenon co-Ability, I gathered new data while developing testable prototypes. I kept meeting Luca to test the prototypes, discuss our point of view, and teach at the university while collaborating with different stakeholders on disability studies. co-Ability evolved as a self-evident reality after I dived into posthuman studies within disability studies and reflected on the co-design process.

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Online access





This Case Study is an outcome of the D.Doc Project, funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

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