

The way of understanding the relational in a complex manner also determines Co-Ability

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ABSTRACT

My earlier design research explored philosophical and strategic possibilities to understand the concept of co-Ability and generate critical and new insights into our value system in human-centered societal challenges. Started from a prosthesis development as a tangible pragmatic procedure to understand the user experience the experimental approach of Research through Design led me to describe the politics of roles and ethics in a situation characterized by 'design for care' inspirations. I used reflection on co-design practice to understand embodied thoughts concerning relationships and the ways of doing. In parallel, I emulated the experiences with literature review in critical disability studies and with analyzing traditional design strategies. I introduced the term 'co-Ability' that is rooted in the critical approach of posthuman disability studies outlined by scholars such as Rosi Braidotti. It serves as a broad 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-centered norms.

Author Keywords

Co-Ability; RtD; Posthuman studies; Critical Disability Studies; Prosthetic development.

INTRODUCTION

The objective of the research was to raise crucial issues of which designers should be aware of at a time of great challenges of anthropocentric societies. The novel research approach was supported by social science and an engagement in a form of implicit conceptual work that distributed important points in 'design for care'. By questioning human-centered normative visions of our world, the main discussion suggested the dominant normative vision manifesting in societal challenges is in relational matter with multiple body representations. The outline of this research is not only meant to shift in how we understand the human but also rethinking our

relationships with our environment, our world, human and non-human inhabitants of our planet through our ability. By examining a complex comprehension of the human body linked to the roles of culture and politics my questions arise: How do our human body and the reciprocal relation with the surroundings lead us to a primary understanding of the world? Would the comprehension of insights in mental representation of the body during design practice lead to address the possible parallel existence of the dominant human normative convention and the posthuman transformations? The understanding of both the scientific and phenomenological details of embodiment and cooperation with the material world also means exploring how different modes of somatic consciousness can be related and collaboratively deployed to improve our comprehension in epoch of Grand Challenges.

REPOSITIONING DESIGN CONCERN

With the initial idea of creating inclusive design with a transitive practice for caring attitude the focus was on the area of the internal operation of the prosthesis with human interactions – such as comfort and function, mechanical needs and cost efficiency for production. Soon by cooperating with a person who has a congenital disability the initial selection of questions in the design method repositioned at another point in the framework. New questions raised considering the normative symbol of the material object. Under the influence of critical disability studies literature review, my dominant role of a designer in the 'design for care' situation shifted towards being an interpreter of messages of a dominant subject. Semantic and rhetorical functioning expressed by visual appearance lead to the question: How does design help to improve the experience of being human, and not necessarily the user experience of a disabled person? Instead of being valued as an individual designer who create objects for the healthcare industry, the purpose turned to seek to discover convincing arguments by means of a new synthesis of technology, objects, humans and words. "To discover new relationships among signs, things, actions, and thoughts is one indication that design is not merely a technical specialization but a new liberal art." [4] Meanwhile the literature review of critical disability studies reflected well on design culture that has developed in association with disability politics. The contrasting accounts of universal design and rehabilitation engineering understood better by analyzing the pathological approach and a political

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view of disability. The translational symmetry in the comparison suggested that the normative attitude of traditional design strategies are not compatible with the prosthesis design research I experienced. Rooted in the analysis I explored the aspirational theory of co-Ability grounded in critical disability studies and posthumanism. The output of the novel method in the research process helps us to explore further the way we use bodily information and also determines the way the brain encodes our greater shared understandings based on our own body recognitions. The output of the research leads me to explore further the way we use bodily information that also determines the way the biotechné encodes our greater shared understandings in human life. The reflections on the results allow the designer/researcher a range of topical, procedural, pragmatic and conceptual insights to be articulated. [9] My present research investigations focusing on directly questioning how contemporary technologies contribute to the powerful social or philosophical repercussions of Human Factors in Computing Systems. My interest is to understand what could happen if cultural artefacts were produced by those no longer invested in maintaining human superiority in culture and politics. With the methodological approach of RtD in a somaesthetic framework, I point to the junctures where technology, bodies, and cultural theory intersect. Instead of focusing on potential or already visible problems of digital technologies impacting human psychology, the goal is to understand possible answers to the age-old quest of what it means to be human.

PROSTHETIC DESIGN RESEARCH

In 2016 I met Luca Szabados, whose left lower arm is missing due to congenital disability. (Figure1) Luca is a visual artist in her 20s, who primarily creates puppets. “Disabled people are often outstanding problem solvers because they simply have to be creative. Life for disabled people is a continuous series of challenges to be overcome.” [19] ‘As it was very soon revealed, Luca has an unusually high creative independence and can solve most of her daily routines without any aid. There were very few occasions where she would definitely need a prosthesis for her daily routine. It was easier for her to recall situations where she could act on her own and an artificial aid could make it only more complicated. Both the aesthetic value for people around her and the somaesthetic experience in her freedom in movements were limited with classical prosthetics. We also had to establish with Luca what we mean by prosthesis because it has a rich visual, political and material vocabulary in present time. Traditionally, prosthetics is a range of detachable, wearable, implanted, or integrated body parts that mostly has a functional or cosmetic purpose.’[7]



Figure 1. Luca Szabados during RtD session

The focus of the development was on improving Luca’s ability to work instead of pushing traditional bodily aesthetics to the fore. As a key situation for Luca, we defined the problems of using a cutter while working, because this work exercise requires that she use two hands – when Luca is holding the cutter in her intact hand, the support she provides on a single point of the paper with her elbow stump is insufficient. If the surface to be cut is not supported properly, the cutting will be imprecise while the supporting elbow stump might be wounded too, which is more prone to injuries already. Involving the user at the designing stage was highly important, thus need have been defined based on Luca’s personal experiences. Instead of the grabbing function of the hand, the key function here became the ability to support precisely. It is a mechanical need, which would not require electronic control, i.e. a bionic hand. I intended to focus on Luca’s experience and the design culture even if it is a very interesting argument, I didn’t want to enter the discourse of cyborgs linked to the work of Donna Haraway’s “Cyborg Manifesto” this time [13,21] which offers a feminist critique by analyzing the integration of the cybernetic and the organic. While working with the cutter is a short-term usage, it is also a key aspect, differing from the classical long-term use of a prosthesis. The price range of a prosthesis might be between €5,000 and even millions. It was a criterion to craft a tool at a lower price. I used the desktop 3D printing technology to reduce the cost of the prosthesis designed to €20-50. Cost-efficient desktop 3D printers work with PLA materials that are creating a rigid object but could be made flexible via shaping.

MATTER OF AESTHETICS

How a prosthesis should or should not look like? Is it a usability question or is it a matter of aesthetics? What kind of message is transmitted by a new kind of

aesthetic in a prosthesis? “The very distinction between aesthetics and usability can be questioned, as people’s point of view is relevant to assess the aesthetics of an artefact (a book, a picture, or a building): aesthetics just is usability of an admittedly special kind.” [14]



Figure 2. Luca Szabados with temporary prosthetic

Experiment questions: Considering the pattern to change the society’s stigma can be found in a changing set of placements defined by shape, actions, and thoughts.

- Do I care more about social inclusion, or is it more important to sensitize the society?
- How should I eliminate the influence of stigma and divergence of the negative perceptions of difference (deviance) and their evocation of adverse responses (stigma)?
- Based on Richard Buchanan’s ‘conceptual repositioning’ theory, if I am changing the usual and expected shape of the lower arm prosthesis will it communicate a new status?
- If the shape of the prosthesis does not follow the anatomy of the lower arm and the hand, and even differs from it significantly can it emphasize the stigmatizing expectations of the bystander?

The important point in this context is that the expertise I was focusing on is a kind of knowledge that is practical and centered on Luca’s experiences as the first person as a matter of principle. (Figure 2) In this case, Luca’s tacit knowledge guided the design, whereas I was in charge of transforming it into explicit knowledge so that it could be implemented. Her experience could also be called ‘embodied knowledge’ to emphasize the role of bodily abilities and capacities.

Title and Authors

The research I processed can be understood as a social activity, something done by more than just one investigator. We worked in a discursive evaluation done by the embodied knowledge holder and myself the academic researcher. [3,6,8,24] It was a novel process to the way of doing RtD that offered a repositioned outcome. During the prosthetics design process with Luca Szabados, co-design was as a tangible pragmatic approach represented our co-Ability in understanding the implicit and explicit outcomes of the research. We started with Luca’s declaration, which states that she has no need for a prosthesis. Her experience with this kind of objects is not entirely positive, and she can solve almost all problems she is facing on a regular basis. After a certain amount of trial and error to untangle possible solutions, we built our knowledge collaboratively on what an ideal prosthesis means for her. For a successful collaboration, it is necessary to capitalizing the different strengths to develop shared knowledge and practices to deal with the complexity of problems. With common understanding of the fundamental knowledge of a foreign discipline or a person’s individual experience. The embodied knowledge of the disabled participant brought forward the process as much as the designer’s knowledge of using a desktop 3D printer. However, while the co-design process assembles a multi-componential model with a design goal, it also represents a formally unstructured attitude that is instead managed by a shared philosophical understanding. Co-Ability is a new concept and new productive ethical relation that is not a definition of how people work together with others towards a shared goal – instead it offers an interpretation of how do we, biological/artificial, human/nonhuman, elements/networks become relational in a complex manner that connects us to the multiple. In this condition, shared competence is a distributed phenomenon rather than an individualized trait. Our understanding of the actors involved in design practice will deepen if a normative power is not exercised. The understanding of co-Ability is grounded in the posthumanist philosophy and critical disability outlined by scholars such as Rosi Braidotti [1,2]; McRuer [17]; Goodley [11,12]; Goodley & Lawthorn [10]; Campbell [5]; Wolfe [25]; Meekosha and Shuttleworth [18]; Shildrick [22,23]; Liddiard [15]; Mallett & Runswick-Cole [16]; Ranisch & Sorgner [20]. The term co-Ability is not the opposite of the term “disability” nor the contradiction of ability. This term applies to the relation matter of our world. Many posthuman transformations are already occurring everyday across the globe since our life is technologically mediated every day. Our physical spaces and the social spaces liaise by networked computational media.).

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