
Towards Critical Co-Reflection

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ABSTRACT

The paper explores the idea of a critical co-reflection of designers and users in third-wave HCI, based on philosophical assumptions about perception and (critical) reflection.

KEYWORDS

Design, critical reflection, perception.

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INTRODUCTION

The notion of user and the complementary notion of designer have been employed in human-computer interaction (HCI) to legitimate itself as a research field [3] and to continually question and redefine the role of HCI in the production and consumption processes of digital technology. The changing understanding of the user from an operator to a task-performing individual to collaborating actors in specific working environments to consumers of technology in everyday life is described by the HCI paradigms in [8] and by the three HCI waves in [2]. It is supported by a discussion of underlying philosophical assumptions such as the dualism of mind and body (cognitive paradigm) and ideas from phenomenology (situated perspective) [4] and greatly affected the relationship between designers and users. Users are not seen anymore as subjects to be studied but as active participants in design processes, and correspondingly, design methods have been adapted.

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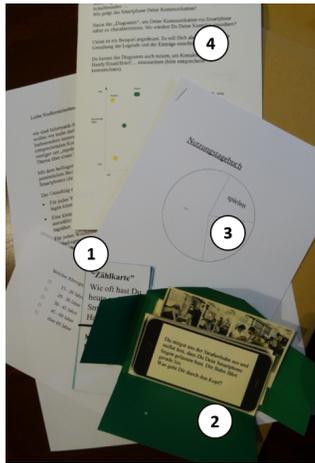


Figure 1: Probe package:

- (1) Daily ‘counting cards’: mark the number of times the phone was used.
- (2) ‘Day cards’: select one to reflect on it throughout the day.
- (3) Diary for daily notes.
- (4) ‘Contact map’: characterize communication with other people.

¹Baumer et al. [1] indicate the conceptual potential of the notion of non-use, but refer to the limitations of current non-use studies typically resulting in classifications of non-users and descriptions of individual non-use strategies.

In this workshop paper, I suggest that current conceptions of designer-user relationships such as co-design need to be complemented by a critical co-reflection of appropriation processes to better understand implications of technology for people in third-wave HCI. Now, “digital materials pervade almost every corner of our society” [9] and significantly shape our individual and social lives. It has been criticized earlier that HCI design is predominantly orientated at use and technical progress [3], but more recent approaches such as technology undesign [13] and the study of technology non-use [1] reflect an increasing questioning of the existing ‘digital imperative’. In this context, Karlström [11] criticizes the ‘selective’ use of concepts of existential phenomenology to justify ideas from second HCI wave (e.g., the ‘present-at-hand’ and ‘ready-at-hand’ concepts) and the ignorance of the critical stance towards technology that is expressed there as well. The theoretical framework that has been recently proposed in [10] is based on ideas from existential philosophy and emphasizes the impact of technology on how humans make meaning of their lives.

The paper focuses on the role of reflection in appropriating new technology in a meaningful way. The suggested critical co-reflection by designers and users is inspired by a cultural probe on selected use of technology, which we describe in detail elsewhere, and by philosophical ideas of perception and (critical) reflection. I start with a brief summary of the probe study.

INSPIRATION: CULTURAL PROBE ON SMARTPHONE (NON-)USE

The probe study followed the original approach of Gaver et al. [7] and aimed at stimulating our thinking about ‘non-use’ and its potential role in design and appropriation processes¹. We focused on active smartphone non-use which can be understood as a form of selected use. Smartphones are meanwhile ubiquitous in everyday life and integrate mobile phones with various other features which are also provided on other devices. We had 40 responses from two groups of participants: 1) 10 participants (of different ages) without a smartphone but with various other devices such as mobile phone and laptop, 2) 30 smartphone owners (14 of them foreign students). The probe packages (Figure 1) were basically the same for both groups, only four of the ten day cards were different.

What was particularly striking in the smartphone non-users’ and users’ responses were the differences in their themes and the different forms in which they responded to the probe packages. While some aspects of smartphone use were discussed by both groups (e.g., use of WhatsApp), others were only considered by one of the groups (e.g., perception of time, non-users). Smartphone users rather tended to jot down notes and non-users tended to write much longer texts with more free-flowing thoughts on the subject. Smartphone users frequently used terms like ‘we’, ‘us’, ‘you’, or ‘people’; non-users often described more complex situations of smartphone use they experienced and tended to consider more viewpoints. Phrases such as ‘in my perception’, ‘I’m inclined to doubt’, ‘I aim at’

Table 1: Examples of language use.**Smartphone users:**

- *You are always available and you need self-control not always to be available.*
- *We are always up to date, wanted or unwanted.*
- *You prefer to ask the phone. Once you have a smartphone, you do NOT want to have back your old phone.*
- *I feel happy when I take pictures of natural beauty and collect those in my smartphone.*

Smartphone non-users:

- *I also would question at least partially some facilitations. For instance, it's usually fine for me to know that there will be a subway in some minutes, without knowing the exact minute. I believe that, with smartphone, you tend to impose even tighter time constraints on you everyday life although it may depend on the type of person.*
- *A smartphone with its really impressive capabilities would certainly change my daily habits to some extent... But from my point of view, all these possibilities rather result in more shallow contacts, not in intensive relationships.*
- *...Our thoughts are permanently interrupted, we can't finish a thought. From my point of view, it has an impact on our thinking and the ability to think.*

²In HCI, Svanæs [16] goes back to Merleau-Ponty's ideas of perception to explain the nature of interactivity and interactive user experience.

show that they tried to position themselves (Table 1). Smartphone non-users perceived themselves in a minority and so they were perceived by smartphone users.

The probe responses suggest that people who use a 'mainstream' artifact and those who do not actively use it encounter the world in different ways, and hence they perceive and reflect on situations of use differently. If you are (like a participant in the study) the only person expecting a conversation with colleagues during lunch breaks while the others stare at their smartphone you may critically reflect on this situation while the others may not reflect on it at all. The responses also show the value of the different perspectives. In HCI design (and in many other professional domains), the understanding of reflection is strongly influenced by Schön's [14] notion of reflective practice. We talk about the 'reflective' or 'thoughtful' (interaction) designer [12]. Interestingly, we talk less about the 'reflective' user. Another strand of research concerns critical reflection, but again with a focus on the 'critical' designer (see below).

PERCEPTION AND REFLECTION

Critique on the vagueness of Schön's concepts (e.g., reflection-in-action) mainly comes from outside the field of HCI. Erlandson [5] comments: "Everything tends to be reflection in one way or another... reflection-in-action becomes a conceptual veil that hides differences of different kinds". Based on Merleau-Ponty's work, the author distinguishes between perception and reflection and understands perception as an unconscious, culturally and socially dependent process, "an act of mediation by which the world takes shape in such a way that we can categorize it, understand it, talk about it, mediate over it, argue over it and act in it" [5]². It is their trained and disciplined perception (not the thinking or reflection) that allows skillful practitioners to "respond with the appropriate action to the demands and possibilities offered in a particular situation" [5]. The distinction between perception and reflection takes into account that reflection is always to some extent critical. It is a tool to create new perspectives on and changes of a practice by restructuring the resources that mediate perception of this practice [5]. In critical reflection, (hidden) power relations are analyzed and majority positions are questioned to unearth, examine and change deeply held or fundamental assumptions [6]. Critical reflection makes possible choice and it is crucial to individual freedom and our quality of life in society as a whole [15]. Fook points out that the notion of reflective practice is often focused on professional contexts but "effective critical reflection will apply to many important aspects of living... beyond the terrain of professional practice" [6].

CRITICAL CO-REFLECTION

What we are currently experiencing is a massive introduction of new digital artifacts in ever shorter cycles. Effects of technology can never be fully predicted, but it is even more difficult to cope with unintended or negative effects if an artifact is already massively used because a majority of the people

then tend to see its use as unavoidable. Critical co-reflection not only requires the exploration of design proposals in a design space but also a deliberate creation and exploration of what I may call an 'experience and value space'. Such spaces systematically facilitate different ways of artifact appropriation, with different degrees of 'use' and 'non-use'. Designers investigate the different 'experience proposals' in these spaces and prepare material for the consideration of alternative appropriation processes of an artifact in public critical co-reflection.

Sengers et al. [15] are among the first authors who call for "a systematic approach to folding critical reflection in into the practice of technology design" and to identify "unconscious assumptions in HCI that may result in negative impacts on our quality of life". The authors point out that design practices should support both designers and users in ongoing critical reflection, but like in most other critical approaches to HCI design, the focus is on the 'critical' designer who creates thought-provoking artifacts for the user. Little explanation is provided about how the designer reveals existing patterns of domination. One could also criticize that the user is mainly seen as passive consumer who is in need of the critical designer to become critical too.

Critical co-reflection puts more emphasis on the designers' responsibility to facilitate rich experience spaces and to actively support alternative ways of using an artifact. The sources of critical reflection are the individuals' existing (critical) reflections of experienced situations of technology use. We may assume, that with the massive use of an artifact, more often 'non-users' (the minority) than users of that artifact reflect, even critically, on everyday use situations because their attitudes and values are more often challenged.

CONCLUSIONS

Ideas for a revised understanding of the notions of user and designer have been developed through an engagement with philosophy (in combination with an inspirational design method). The paper focused on general ideas of critical co-reflection and did not consider in detail the actual implementation of co-reflection processes. Philosophical thinking, the familiarity with different philosophical approaches helps us (in our various roles of designer and user) to question existing forms of technology use by better understanding what we find important in our lives.

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Biography

Anke Dittmar is an Associate Professor at the Department of Computer Science at the University of Rostock, Germany. Her research interests include studying digital artifact use and the use of design representations in design processes.