



In pursuit of rigour and accountability in participatory design[☆]



Christopher Frauenberger^{a,*}, Judith Good^b, Geraldine Fitzpatrick^a, Ole Sejer Iversen^c

^a Human Computer Interaction Group, Vienna University of Technology, Vienna, Austria

^b Human Centred Technology Group, University of Sussex, Brighton, UK

^c Participatory IT Center, Aarhus University, Aarhus, Denmark

ARTICLE INFO

Article history:

Received 5 September 2013

Received in revised form

3 September 2014

Accepted 15 September 2014

Available online 22 September 2014

Keywords:

Participatory design

Reflective design

Rigour

Accountability

ABSTRACT

The field of Participatory Design (PD) has greatly diversified and we see a broad spectrum of approaches and methodologies emerging. However, to foster its role in designing future interactive technologies, a discussion about accountability and rigour across this spectrum is needed. Rejecting the traditional, positivistic framework, we take inspiration from related fields such as Design Research and Action Research to develop interpretations of these concepts that are rooted in PD's own belief system. We argue that unlike in other fields, accountability and rigour are nuanced concepts that are delivered through debate, critique and reflection. A key prerequisite for having such debates is the availability of a language that allows designers, researchers and practitioners to construct solid arguments about the appropriateness of their stances, choices and judgements.

To this end, we propose a “tool-to-think-with” that provides such a language by guiding designers, researchers and practitioners through a process of systematic reflection and critical analysis. The tool proposes four lenses to critically reflect on the nature of a PD effort: *epistemology*, *values*, *stakeholders* and *outcomes*. In a subsequent step, the *coherence* between the revealed features is analysed and shows whether they pull the project in the same direction or work against each other. Regardless of the flavour of PD, we argue that this *coherence* of features indicates the level of internal rigour of PD work and that the process of reflection and analysis provides the language to argue for it. We envision our tool to be useful at all stages of PD work: in the planning phase, as part of a reflective practice during the work, and as a means to construct knowledge and advance the field after the fact. We ground our theoretical discussions in a specific PD experience, the ECHOES project, to motivate the tool and to illustrate its workings.

© 2014 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/3.0/>).

1. Introduction

As approaches to designing interactive technology evolve, we continue to see a paradigm shift from the historical engineering mindset, with its focus on requirements, tasks and efficiency, to a holistic, social, situated and human-centred view (Harrison et al., 2011). And with it, a broad consensus in human–computer interaction (HCI) is emerging that recognises that more relevant and meaningful technology can be created by giving people who are affected by it some role in its design. As a result, User-Centred Design and Participatory Design (UCD and PD) approaches have seen significant uptake in recent years. Participatory Design has been re-interpreted and adapted for different design contexts and purposes and we nowadays see a wide spectrum of philosophies

driving PD processes, possibly best described as ranging from pragmatic to idealistic (Kensing, 2003). While the historical traits of PD, rooted in the political struggle of labour movements in Scandinavia (Bødker et al., 1987), are more visible on the idealistic end of the spectrum, pragmatic interpretations have focused increasingly on effective design and participation as a means for matching user needs with the affordances of new technologies.

Whatever the flavour of PD, the participation of people in the design process means that researchers, designers and practitioners impart some control over outcomes and processes to their participants. This, in combination with the systematically inherent complexities of contextual dependencies in PD, leads to what is often described as “messy” processes. This makes it difficult to reconcile the practice of PD with traditional science paradigms or epistemological frameworks, which has hampered the field in multiple ways. Firstly, it has made it problematic to communicate the merits of PD to other scientific fields, clients or the public at large. Questions like “*Has participation made a difference and by how much?*” rest uneasily with the nature of the PD approach, as do queries for the “*hard evidence*” for design decisions. Secondly,

[☆]This paper has been recommended for acceptance by E. Motta.

* Corresponding author.

E-mail addresses: christopher.frauenberger@tuwien.ac.at (C. Frauenberger), j.good@sussex.ac.uk (J. Good), geraldine.fitzpatrick@tuwien.ac.at (G. Fitzpatrick), oiversen@cavi.au.dk (O.S. Iversen).

it has impeded progress within the field of Participatory Design in that the knowledge that is generated is not sufficiently generalisable or accessible to the extent that it can be re-used or built on. Consequently, many wheels are re-invented and much insight lost.

To tackle these issues one might be tempted to “scientise” PD (compare discussion with respect to design in Gaver, 2012). However, PD takes a fundamentally different metaphysical stance, which distinctively sets it apart from the engineering tradition of building interactive technology. Any attempt to retrofit PD with a (post-)positivistic perspective would necessarily make it look scientifically weak, supported by fuzzy data and arbitrary in terms of its conclusions. Instead of seeing the practitioner as an objective observer who inquires about an absolute reality and the best possible solution, PD sees knowledge generation as a dialogic process that is mediated by values and strongly situated. The philosophy that underpins the ideas and concepts of PD are deeply rooted in the postmodern tradition, including phenomenology and Marxism (Ehn, 1989), and demand a different epistemological position as well as methodological approach. So, instead of imposing a positivistic philosophy, we propose that PD needs to build on its own philosophical groundings to argue for its qualities and contributions. The key to constructing these arguments lies with finding a language that reflects the belief system within which PD operates and that enables us to describe the qualities of the diverse work that came to be called PD.

1.1. Accountability and rigour

We turn to two inter-related qualities as cornerstones around which we propose to develop such a language: accountability and rigour. By “*accountability*” we mean the ability to link the collaborative work in PD with decisions and outcomes¹ in a transparent way. The notion of “*rigour*” is commonly associated with a strict positivistic view on science, emphasising universal truths validated by deductive reasoning or measured evidence. In the context of PD we interpret rigour as internal validity, in other words, that a well structured argument can be made for the way a PD process has been conducted. It becomes clear that both terms centre around the quality of PD work, the appropriateness of its methodology and the solidity of its theoretical grounding. Like two sides of a coin, the main difference lies in the intended direction: while accountability emphasises the communication of this quality to others, rigour is mainly concerned with the internal processes relating to decision making and implementation.

Within the positivistic realm, being held accountable and demonstrating rigour are governed by statistics, logic, deduction and proof. The post-modern scientific paradigm on which PD builds, however, does not allow for a similar certainty and there is no quantitative scale or even binary label for the quality of work; too complex are the contextual interdependencies and too important is the role of the researchers, designers or practitioners whose impact is an integrative and desired aspect of the enquiry. Related fields have faced similar challenges and have started to respond in a variety of ways. Fallman and Stolterman (2010) for example, have discussed rigour and relevance in Design Research along the same lines. They too argue for a shift away from the positivistic tradition in assessing rigour in this field and advocate a nuanced notion of rigour that originates from a deep understanding of the particular purpose of design activities. Wolf et al. (2006) introduce the notion of Design Rigour and, delineating it carefully from the traditional notion of scientific rigour, discuss the professional qualities of design praxis that can appropriately describe good design culture. They also make the point

that by highlighting the qualities of such design culture, they dispel the notion of design being perceived as the “black art” in HCI—a challenge not unfamiliar to PD. Action Research (AR) is another example from the social sciences which continues to make the argument for alternative notions of rigour for their work (Greenwood and Levin, 2007, p. 55). There are obvious parallels between PD and AR (Foth and Axup, 2006), unsurprisingly given their shared ideological heritage, but it seems that AR’s epistemological underpinning is even more radically opposed to positivism as it fully embraces relativism and constructionism (see Guba and Lincoln, 1994, for a useful overview of science paradigms).

From the above discussions, it becomes apparent that accountability and rigour in a post-modern scientific context is delivered through debate, critique and reflection. For example, Wolf et al. (2006) highlight the ‘design crit’ as one of the qualities of design practice that contributes to its rigour. They define it as “... a designer’s reflective, evaluative and communicative explanation of her design judgments and the activities in which she has engaged.” However, for PD to take part in such a debate about rigour and accountability, we must develop a language that allows us to communicate such an explanation and to construct solid arguments for the quality of the work. Since many of the features of PD are tacitly embedded in its practice, critical reflection is the key to becoming aware of its qualities and thus to developing a language for arguing rigour and accountability. It is here that this article aims to make its main contribution: we propose a conceptual framework to support designers, researchers and practitioners conducting Participatory Design work to engage in a process of critical reflection and, as such, give them the language needed to convey the rigour and accountability of their work.

1.2. A tool for whom to do what?

The conceptual framework we propose is a “tool-to-think-with” that we argue should become an integral part of a reflective practice in Participatory Design. It guides designers, researchers and practitioners in incorporating phases of critical reflection with the goal of giving them the means to reify the rigour inherent in their practice. The awareness and the language this guidance affords, also offers appropriate means to explain decisions and judgements to the outside world and thus allows designers to increase their accountability.

We argue that such a “tool-to-think-with” can benefit PD practice at all stages. Firstly, when planning and setting up PD work, underlying assumptions and tacit forces can be brought to the fore, allowing, designers, researchers and practitioners to make more considered decisions on methodology and organising involvement. Secondly, during the design work proper, the tool supports designers in responding to new situations and in steering the process, guided by an increased awareness of what are the drivers. It also aids in explaining PD to involved stakeholders in this phase, be they participants, clients or co-researchers. And thirdly, once the project is finished, it allows designers to critically reflect on their work and describe the knowledge, the contributions and the lessons learnt, which is crucial in allowing PD to evolve as a field. This tool aims to provide a language that enables us to have a debate about what works when and why. As such, work can be scrutinised more effectively and transparently, and avoids PD being judged against positivistic standards it was not designed to meet.

Our “tool-to-think-with” consists of four lenses, *epistemology*, *values*, *stakeholders* and *outcomes*. These lenses guide the inquirer in taking different perspectives to critically reflect on their work and thereby discover qualities that otherwise might remain tacit. Furthermore, we examine the *coherence* between those lenses, i.e., the extent to which the fundamental qualities of a PD effort are attuned to each other. We argue that this *coherence* is a prime

¹ Note: outcomes in this context is not restricted to technological artefacts, but refers more broadly to a desired alternative future.

Download English Version:

<https://daneshyari.com/en/article/6861100>

Download Persian Version:

<https://daneshyari.com/article/6861100>

[Daneshyari.com](https://daneshyari.com)