Civically Engaged HCI: Tensions Between Novelty and Social Impact

Mara Balestrini
Intel ICRI Cities
University College London, UK
m.balestrini@cs.ucl.ac.uk

Yvonne Rogers
UCL Interaction Centre
University College London, UK
y.rogers@ucl.ac.uk

Paul Marshall
UCL Interaction Centre
University College London, UK
paul.marshall@ucl.ac.uk

ABSTRACT
HCI researchers are increasingly conducting civically engaged research in the wild to design technologies for social action that aim to empower communities at the grassroots level. However, there are very few descriptions of HCI interventions that have achieved sustained community engagement and social impact. We discuss three tensions that are hindering HCI's capacity to produce both research and social contributions and suggest how to overcome them.

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Technologies for social action; civically engaged research; activism; grassroots

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H.5.2 [Information Interfaces and Presentation]: User Interfaces - Interaction styles.

General Terms
Human Factors; Design

INTRODUCTION

In recent years, Human-Computer Interaction (HCI) has increasingly explored new research domains outside the laboratory, collaborating with communities in the wild to design technologies to augment their everyday experiences or address issues of concern [7, 9]. This "turn to the wild" in HCI is partly due to both the acknowledgement that theories derived from lab studies often do not map well onto the unpredictable ways in which humans interact with computers in the real world [9], and a growing interest among researchers in civically engaged projects [7].

Although the discussion of research in the wild is reasonably recent in HCI, one area that can be reinterpreted as inherently "wild" is that of technologies for social action; a term we have coined to describe the subset of technology interventions aimed at supporting social structures: from HCI4D to community memories, citizen science and participatory sensing, community informatics, urban informatics and public displays. Researchers in these domains often share the view that technology should be participative and transfer power to the wider community rather than creating technical elites [6], and that enabling community empowerment requires that users take ownership of and appropriate the resulting tools and practices for their own situated purposes [2, 10, 11].

We trust that civically engaged HCI has great potential to produce contributions that bring value both to society and to science. Nevertheless, we recognise three key tensions that often hinder such outcomes: i. a natural predisposition in the field to prioritise technological novelty over an understanding of the factors that enable sustained engagement with technology; ii. a tendency to run short term evaluations with little discussion of the processes involved in community technology hand-overs and grassroots appropriation; and iii. a lack of methods to assess the social impact of the resulting technologies and emerged practices. In this paper we describe these tensions in the hope that they will contribute to discussions of how HCI might better enable community empowerment through ICT and positive social impact.

RESEARCH CHALLENGES

A key motivation to doing civically engaged research in HCI is that the tools and practices resulting from the interventions will be harnessed by people to effect sustainable change [7]. However, apart from notable examples such as the Blacksburg Electronic Village [3], there are very few descriptions of projects that demonstrate long-term community participation and social impact [2, 7, 8, 11]. This translates into a lack of understanding of the technological, social and individual factors enabling community technology uptake and appropriation. Next, we describe three tensions in HCI that need to be considered if we aim to support work that produces both scientific and social contributions.

Novelty and sustainability

While most HCI contributions report on novel technology prototypes, we already know that interventions using broadly accessible off-the shelf technologies have higher chances of being appropriated by communities who usually

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lack technological skills [2, 11]. Recent discussions have revealed the difficulties that can emerge after community technology projects finish and researchers leave, possibly ceasing maintenance of the prototypes and support to the project [1, 11]. Adams et al. have stressed these issues using a fashion metaphor that illustrates how communities often expect ready-to-wear technologies while researchers aim to design innovative prototypes, not necessarily built for the purpose of scalability and sustainability [1]. More work needs to be done in order to understand how novel prototypes can be turned into useful technologies that will empower communities in the long run, rather than sit idle in research labs.

Short-term evaluations and hand overs

It is not uncommon for HCI contributions to report on two-week long evaluations in the wild. However, previous findings have suggested that communities who have a sense of ownership over technology interventions are more likely to remain engaged and become empowered. This can be achieved by involving the community in the research project from the outset providing opportunities for users to acquire the skills to operate and maintain the technologies [2, 6, 7]; processes that are unlikely to occur over a period of two weeks. The social and research benefits of sustained (years, not just a few weeks) large-scale engagement with whole communities have also been reported by Carroll and Rosson [3].

Methods and assessment

A recent TOCHI special issue on "The Turn to The Wild in HCI" has discussed the methodological challenges of working with communities in situ [4] and Heyer & Brereton have recognised the need to embrace *"an approach to designing social technologies that can both support and evaluate emergent use over time"* [8, p.283]. In order to suggest that our HCI efforts can be appropriated at the grassroots level and lead to the empowerment of communities, methods for impact assessment need to be better integrated within the field. One possibly is that these will come from fields like sociology, economics, and development studies that are not core to current HCI research practice.

CONCLUSION

HCI researchers are increasingly shifting towards a "rhetoric of engagement" aiming at promoting empowerment through technology by *"…demonstrating, and eventually handing over to people our tool-kits, know how, and technologies so they can decide what to do with them in their own contexts"* [10, p49]. Nevertheless, the priority for novelty above scalable technologies, the practice of short-term assessments and a lack of methods to evaluate long-term participation and measure social impact weaken our chances of producing empowerment through research. We propose that the way forward is for the HCI community to stop being so novelty obsessed and short-termist and dare to venture into the wild rather that create "toothbrush theory": *"fine for you to use but no one else is very interested in using it"* [5].

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