Beyond Research in the Wild: Citizen-Led Research as a Model for Innovation in the Digital Economy

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ABSTRACT
Catalyst (Citizens Transforming Society: Tools for Change) is a multidisciplinary research project on digital social innovation where the research agenda is jointly set and carried out by academics and non-academics. In this paper, we describe the Catalyst model for innovation research partnerships with non-academic communities, and reflect on academic experiences and lessons learned from the first year of Catalyst.

Categories and Subject Descriptors
K.4.2 [Computers and Society]: Social Issues. H.5.3 [Information Interfaces and Presentation]: Group and Organization Interfaces – computer supported collaborative work

General Terms
Management, Design, Human Factors.

Keywords

1. INTRODUCTION
A recent trend in Human-Computer Interaction (HCI) is to take researchers away from the safety of their labs and ask them to carry out development embedded within a community. This so-called ‘research in the wild’ [1-3] is seen as a paradigm shift in HCI but ‘in the field’ research is already commonplace in the social sciences. In this paper, we report on an attempt to go beyond RIW: RIW places control firmly in the hands of researchers since they decide the research agenda; in the Catalyst project [4], however, we draw upon methods from co-inquiry [5] and set up partnerships where academics and non-academics have equal status in defining and carrying out the research agenda.

Catalyst (Citizens Transforming Society: Tools for Change) brings together academics from social science, computing, design and management science to carry out research on citizen-led digital social innovation. It is a framework of sub-projects, each including multiple academic disciplines and non-academic communities, working in partnership with mutually beneficial goals to address a social need through novel digital technologies.

In this paper, we describe the Catalyst model and reflect upon some of the academic challenges in applying this model. Later work will report on how non-academics experience Catalyst.

2. THE CATALYST MODEL
Catalyst is organised as a series of short-term research intensive multidisciplinary sub-projects that each develops new digital technologies to address a social need:

Research Sprints last 6-9 months and must contribute to one of the Catalyst research themes. Each sprint is a ‘collaboratory’ in which academics and non-academics immerse themselves in each other’s activities. Each sprint receives a grant to support the research as well as three full-time research associates, each from a different discipline (computer science, sociology, management).

Launchpads are smaller in size and are more speculative. Launchpads work as a pilot for ideas for future sprints or allow promising ideas that come out of a sprint to be continued.

Serendipity Cafes are events hosted every two months by community organisations to bring people together to explore ideas and help foster connections between communities and academics.

In addition, we run research relays (two day events) once a year to share learning across Catalyst sub-projects. To reflect upon the ways of working, we apply PROTEE [6], a management process designed to ensure that projects learn from failure as well as success. PROTEE involves a series of dialogues with Sprint and Launchpad project teams to articulate insights to support innovation, project management and multidisciplinarity.

Catalyst has formed a network of academics and non-academics (or Catalystus) interested in citizen-led innovation. To date, Catalyst has involved over 10 academic departments and over 20 community organisations.

Selection of Catalyst sub-projects is via an application process, mediated by procedures to match-make academics and non-academics. All projects must satisfy the Catalyst criteria: (i) the project must be genuinely citizen-led and address a problem identified by specific community group(s); (ii) the project must involve academics from multiple disciplines; (iii) the project must result in a digital innovation which addresses a real citizen need.
3. CURRENT PROJECTS
We briefly describe current Catalyst projects, to give a flavour of the research. #patchworks involves Lancaster’s School of Health and Medicine, Lancaster Environment Centre, Signposts (a community resource centre in Morecambe), and MadLab, a Manchester-based not-for-profit community of hackers and innovators. In the project, Signpost volunteers are co-designing a prototype tool using cheap, open source technology that can help to improve support services for the homeless. See Figures 1-2.

Success in Activist Tweets aims to provide an online platform that will predict in real-time the likely influence of activists’ tweets based on their language. It brings together linguistics researchers with activist groups including Manchester Friends of the Earth.

Local Trade is creating a system which tracks trading patterns to reward and encourage locally beneficial trading behaviour. It is a partnership led by the Small Green Consultancy and Lancaster’s School of Computing and Communications and involves several social enterprises in Lancaster.

Finally, Access ASD (Autistic Spectrum Disorder) brings together academics from computer science, psychology and sociology with people with ASD to design digital solutions that support people with ASD’s abilities to connect socially.

4. LESSONS LEARNED
4.1 Citizen-Led Research
The motivation for going beyond RIW to citizen-led research is that non-academics often know where the real problems lie and have a vested interest in solving them. However, achieving true citizen-led research is a challenge. Brown et al. [2] identify two shortcomings of RIW: (i) “a reliance […] on a small atypical subset of users” that may dominate, and (ii) over-dependency on method, where “the way in which a particular trial is run […] interacts to narrow results and behaviour”. These limitations also apply to citizen-led research. With regards to (i), for example, there is a need to rely on intermediaries to represent (e.g.) vulnerable groups. The intermediaries provide a pathway to understand the real issues, but care must be taken not to overspecialize the research by assuming that one particular intermediary is the same as all others.

With regards to (ii), methods of groups involved in a project can be quite different. Some groups may, for example, suggest artefacts as ‘examples and possibilities’ to open up the discourse, but others may interpret each suggestion as a move to narrow down a prototype. Although academics within a discipline have developed standard methods, methods can vary enormously when different disciplines and non-academic groups are involved.

Constant attention must be taken to ensure that citizen-led principles apply throughout a project; otherwise, there may be a danger that people default to their former roles and defer to those considered ‘expert’ on a particular issue.

4.2 Technology Innovation
A key Catalyst objective is to develop novel digital technologies. However, there is a tension since communities often need somewhat more mundane technological solutions, such as a new website. Although Catalyst spends a lot of effort on communicating the criteria for technological innovation – and what this means, including an acceptance that technology is often not the solution – this tension may never fully disappear. In particular, hard decisions often need to be taken between competing prototypes, one which may be more technologically innovative and one which may be of more immediate practical benefit. Whilst this challenge arises in any participatory approach, it may be magnified in citizen-led research because, by definition, the academic researchers have relinquished control.

4.3 Time
Catalyst was deliberately designed around short (6-9 month) research sprints to maximize the number of community groups and academic disciplines that could participate. It is clearly challenging, however, to carry out in-depth research in understanding social issues and to design prototype solutions within such a time frame. With Catalyst, there are three sources of tension related to time: (i) different disciplinary timescales, for example, a tendency towards agile, rapid prototyping in computer science versus the time needed for a thorough analysis in social science; (ii) the length of time required to make lasting, trusting relationships between academics and community groups; (iii) additional time needed to put in place procedures for working with partners external to an academic department with limited experience in engaging with community groups. With respect to the last point, when working with community organizations or social enterprises, it can never be fully said that the partnership with academics is an equal one. Catalyst started at a time of significant budget cuts for such groups. Although Catalyst does fund its community partners, the university is always going to have the upper hand financially which introduces issues in terms of the balance of power and authority.

In the process of solving such problems, Catalyst is developing new methods. In one project, for example, there is an emergent method based around making things together that combines technology development with ethnographic research, and provides a more in-depth understanding of a community’s needs, because we see how things work in practice as well as in the lab.

4.4 Importance of Values
An early realization in Catalyst was the need to embed values emphasizing that the research be mutually beneficial and achieves both academic and community impact. An explicit values statement can overcome many of the misunderstandings and confusion that arise in multidisciplinary, citizen-led projects but these values can often differ from standard University procedures.

5. RESEARCH WITH COMMUNITIES
The responsibility of UK Universities to engage widely with society is now well recognized, with many universities having signed up to the NCCPE’s Manifesto for public engagement [7]. Catalyst, like several other national and international community-university research partnership projects [8] goes beyond engagement per se into the territory of co-inquiry and co-production where both research and, in the case of Catalyst, novel technologies are co-produced with communities. This presents a number of social, ethical and logistical challenges when working in such partnerships that, whilst not always considered within the framework of RCUK funding, are documented elsewhere [9].
6. CONCLUSION
This paper has outlined some of the key academic lessons learned in Catalyst’s first year. We expect new lessons to be learned as the project evolves, including ways to explore how to embed values as part of the technical development; the value of reflecting on multidisciplinarity and exploring how digital technology might support capturing and sharing knowledge to widen its impact.

7. REFERENCES