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Scaling up co-design

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Scaling Up Co-Design:
Research Projects as Design Things

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ABSTRACT

In this paper we reflect on our experiences in a project where academic researchers and social change organizations are working together to explore how participatory and co-design practices can be disseminated and spread within the 'third sector'. The research project is itself co-designed and co-produced, but within various constraints arising from research funding models. We explore both our immediate outputs and our learning about successful co-research models for this challenge.

Author Keywords

Social change, scaling, participatory research, design Thing

ACM Classification Keywords

Social and professional topics → Project management techniques.

INTRODUCTION

This paper reviews our experiences in developing participatory research, bringing together social change organisations and design researchers to explore how participatory design (PD) practice can support social change. This work has been developed across multiple projects over more than a decade, with successful practices being transferred between successive projects. The concepts are illustrated through a co-research project called "Scaling up co-design ..." (henceforth, *Scaling-up*), which we use as the primary subject matter for this paper.

PD, particularly within the Scandinavian tradition, is rooted in critical and emancipatory traditions. Hence, alliances between PD researchers and (certain types of) social change organisation, including voluntary and community groups, should be a natural fit (Dearden, Walker & Watts, 2005). However, whilst there is often shared orientation, a recent study in the UK revealed that the day-to-day usage of PD methods by voluntary

organisations is still the exception rather than the rule (Lam et al., 2012). This presents both a challenge and an opportunity. How should we create a collaboration model, or a design Thing in the sense of Ehn (2008) and Björgvinsson, Ehn &Hillgren (2012), to stimulate and enable the wider spread and uptake of PD in this sector?

In the UK, the global financial crash of 2008 has been followed by a period of public sector 'austerity', with a policy narrative emphasising voluntary and community groups and social enterprises delivering services. Austerity compounds the challenges arising from an 'ageing society', and there is growing interest from policy makers in the potential of co-production models (Leadbeater, 2008; Boyle, 2013), where organisations and individuals collaborate to configure and deliver services, tailored to individuals. Participatory and co- design approaches are gaining prominence in policy debates.

Scaling up is one of nine projects funded by the Arts & Humanities Research Council (AHRC) in an initiative to support community-academic co-produced research. To allow communities to engage, the programme was funded in two phases. In Phase 1, academics and community organisations were funded to co-create a research agenda. If a viable research programme was jointly agreed, phase 2 was separately funded (after a rapid and 'light touch' peer-review) to co-deliver that research. An important principle was that community co-researchers should be financially compensated for time on the research project.

A DESIGN THING PERSPECTIVE

Björgvinsson et al. (2012) draw on the Nordic and Germanic etymology of the term *Thing*, to discuss the role of PD and meta-design as means for underpinning the democratic shaping of possible futures. Historically, a *Thing* refers to a form of public assembly for decision making, such as the Icelandic parliament or Althing. Björgvinsson et al. explain that this use of the word *Thing* connotes not only a particular social arrangement, but also material elements. A *Thing* is thus a socio-material assemblage. PD is concerned with staging such *Things*, to allow for democratic and inclusive exploration of contentious issues during designing. Staging *Things*, involves attention to both the social roles and practices of participants and the roles and the form of material

artefacts, enabling designers and stakeholders together to explore use-before-use. PD explicitly seeks to stage *Things* in ways that empower people who might otherwise be marginalized. Meta-design where new artefacts are designed with openness built in, allowing users to reshape the tools during use, can also be interpreted as creating new Things (i.e. socio-material assemblages) to enable design-after-design (Ehn 2008). In both cases, the Thing perspective considers not only the form of material assemblage, nor simply the structure of social processes, but the interplay between the two.

ABOUT THE PROJECT

The overarching objective of *Scaling-up* is to unleash and build upon the intrinsic capacities of academic and social change organizations, who already share commitments to user engagement, to identify processes and conditions to promote the spread and reach of their co-design practices.

The project is multi-disciplinary with academic researchers from architecture, psychology, HCI, design management and PD. The social change groups are also diverse, including: a social enterprise applying (open source) information technology in the voluntary sector (Fossbox); a network of women promoting open-source software for social innovation (Flossie); a charity supporting communities in planning and design of the built environment (The Glass House); a foundation (The Blackwood Foundation) supporting a distributed network of people with disabilities exploring design for independent living (www.bespoken.me); and a social enterprise developing creative engagements using digital media so that people who are isolated and disadvantaged can flourish (Silent Cities). During phase 2, a further member joined the team from an organization providing support to small voluntary groups (One Westminster).

PHASE 1

During phase 1, the negotiation and development of the research plan was conducted in two, full day face-to-face workshops, a series of on-line video conferences (via Skype and Google Hangouts) and through interactions on a prototype on-line collaboration platform called *cohere*.

The first workshop adapted a technique called "Design by Consensus" that was developed by The Glass House. This process begins with a role-playing exercise where stakeholders explore a fictional[1] development project (or site), adopting the role of stakeholders different from their own. Participants explore aims and aspirations in the project from their allocated stakeholder's standpoint, and then classify the objectives as 'individual', 'shared' between stakeholders, or 'conflicting'. Typically, the exercise is conducted with at least 2 breakout groups so that diverse outcomes, visions, potential alignments and possible controversies are identified. Using an unnamed site and adopting unfamiliar roles helps stakeholders to release their personal emotional investments, whilst role-playing helps participants develop some empathic understanding of other stakeholders. Multiple groups demonstrate that outcomes are not predetermined and can

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[1] Of course such fictions are often informed by the previous experiences of the facilitators

vary substantially. Stakeholders are then better able to engage in open dialogues around their own project. In *Scaling-up*, we adapted the technique, using a collaborative research project as the problem, and adopting stakeholder personas created by the facilitator.

Following this orientation, we worked to develop an understanding and shared vision of what it would mean to 'scale-up' co-design, and how research activities could support this aim. This examination had two components: a theoretical discussion and a practical enquiry.

The theoretical discussion identified multiple conceptions of what 'scaling-up' might mean, namely:

- *extending out* (reaching more people);
- *extending up* (reaching policy makers);
- *spreading out* (cascading co-design practices); and
- *connecting* (connecting people and practices) to improve effectiveness.

The pragmatic discussion examined the organisations' goals for scaling up, and produced a second set of conceptions, only loosely mapped to the first. The result was an understanding of scaling-up as a means by which these organisations might:

1) Address issues that could not be addressed before (or address issues more holistically);
2) Deliver the same or more outputs with less resource;
3) Reach more people and communities;
4) Cascade co-design practice to wider society;
5) Diversify their offering to communities.

These objectives underpinned the design of phase 2.

Writing a collaborative research plan

One challenging aspect of the project was the need to reaffirm funding after 4 months with a collaboratively-produced research question. Light & Luckin (2008) discuss the 'benign imposition' possible when applicants responding to funding calls are required to give a detailed plan at submission, in advance of establishing conditions on the ground or engaging key stakeholders in project design. The funding model for these co-design projects sought to overcome this tendency. However, the fixed timeframe imposed its own constraints: instead of allowing for gradual evolution toward a common vision, the timescale demanded rapid resolution of decisions.

A further funding rule allowed community partners to be paid for time spent in novel activities, but not for their existing core actions. Noting this, the steering group (involving all partners) chose to seed the next stage of collaboration with pairings of organisations, rather than exploring each organisation's activity independently. The group sketched arcs between partners and wrote a plan around spaces, links and learning *between*, rather than *within*, groups (see fig 1), loosely identifying some possible themes to focus on. This slightly arbitrary, exploratory way of setting up relations was a response to funding constraints but proved a fertile starting point.

Our perspective implied that the research project, and the new activities it supported, should explicitly align with activities that the community partners were already considering. Emphasis was therefore placed on the community organisations as hubs within a network of co-
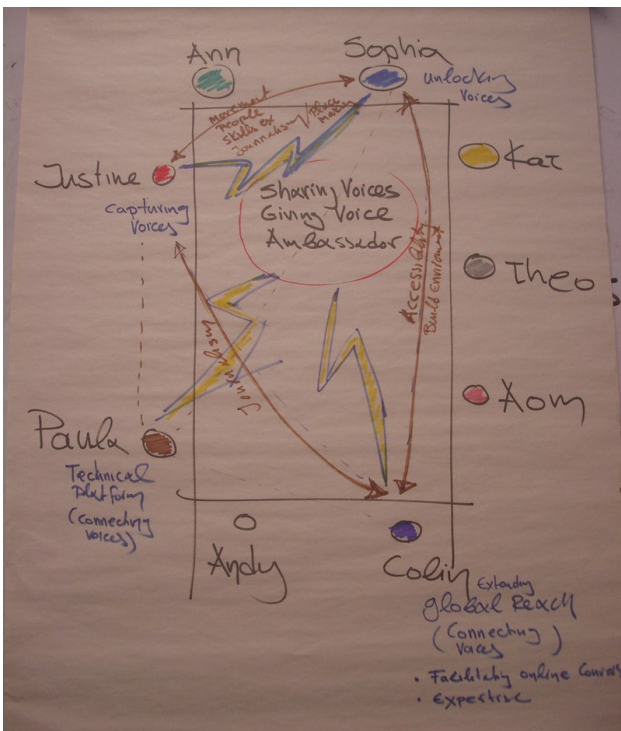
Figure 1: Project connections map

design practices. Enriching connections between the hubs through cross-pollination activities, and cascading their practices to new partners via 'ambassadors' suggested two primary interventions to drive scaling up.

In what follows, we describe some of the collaborations and consider how the interactions promoted 'scaling-up', reflecting or modifying the understandings above.

Scaling up by spreading
Our first example is perhaps the simplest. As part of their annual conference, Flossie was planning a hacklab aiming to diversify perspectives in the discourse around the Internet of Things (IoT). Given the opportunity to link with the bespoken network, Flossie decided to focus the hacklab on IoT and disability. Sadly, due to technical problems, the planned video chats between hacklab participants and bespoken members never took place. However, the theme of disability led the group to explore aspects of their own lives where they experienced their capabilities as constrained, addressing concepts to enhance security for women in public places. The hacklab was so successful that one participant chose to organise a similar event around IoT technology for families, with mentoring provided by the research project. The event organisers are also preparing a video about the activity as a way of prompting others to consider this approach.

This illustrates perhaps the simplest conception of scaling up, in which a practice is spread by the enthusiasm of individuals who copy materials, then cascade and modify practices for their own context of use.

Scaling up by connecting
The second example involved an exchange between The Glass House and Silent Cities. Silent Cities were already planning a series of workshops and training exercises for people who were socially isolated or excluded, to develop skills as 'community journalists'. Representatives from The Glass House helped deliver one of these workshops, supporting the trainee journalists to develop sensitivities to built environment themes. The exchange was reciprocated with staff and trainees from Silent Cities conducting two workshops to train school pupils in community journalism in a district where major urban re-development is being planned. This enabled the young people to become community researchers and explore themes, meanings and priorities for themselves and for other community members. They were then able to inform debates and discussions with the commercial developers, architects and local authorities.

In the opinion of the facilitators at The Glass House, this approach allowed insights to be brought to the discussion that would otherwise have remained hidden using their previous methods. The work also revealed that the term 'journalist', even when qualified by 'community', raised fears for the land developer and local authority stakeholders. 'Community researcher' was easier to present to these stakeholders.

Here scaling-up went beyond the value of this one project by enabling The Glass House to extend its repertoire: appropriating and adapting new practices. The charity is now able to promote and sell new facilitation and co-design services in other locations. Silent Cities also extended its offering, giving participants the opportunity to lead media skills training for the first time.

Scaling up by extending
In our third example, the material components of the design Thing are more apparent. Initially, a cross-pollination workshop between Fossbox and One Westminster delivered training on using on-line collaborative tools to prepare funding applications. The first workshop explored distributed document editing. The workshop simulated developing a bid in a distributed organisation by placing the participants in separate rooms and asking them to collaborate on-line and communicate via Skype. A third tool, briefly introduced was the agile project management platform *Trello* (www.trello.com). Although participants were positive about the tools, there was no evidence of the groups adopting them.

Following this disappointment, the representative from One Westminster devised a novel way of using *Trello* to support bidding. A *Trello* account allows the user to access a series of boards. One board is used per project and can be shared with other users. Within a board, a project is made up of cards. Cards are arranged in three (or more) columns: *To do*, *doing* and *done*; and are moved between columns as the project progresses. Cards can have deadlines and can be assigned to one or more individuals. Within a card, tasks can be described, checklists can be added and documents can be attached. Finally, any of these levels (board, card or part of a card) can be copied if required. The innovation was to define the steps that are needed in preparing a funding application as a board of *Trello* cards (see fig 2). This can then be copied and shared as a template with a partner group.
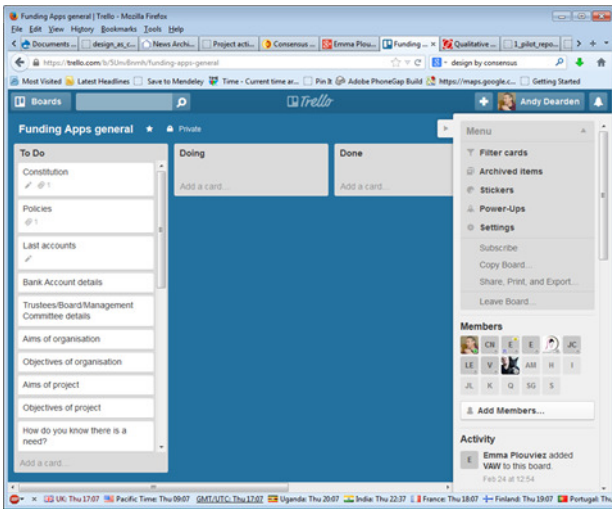
applications

Checklists of stages for developing a bid are common in this domain, but by embedding the checklist into a collaborative platform, it becomes possible to provide a co-production service where One Westminster can monitor work and provide guidance. After a single workshop demonstrating the tool to five organisations, two have already adopted the platform to develop a bid, and a third is considering it.

This example shows the possibility of scaling-up co-design by providing a socio-material infrastructure that is tailored to a specific need. This particular solution is being offered to groups that are already in contact with One Westminster, but radically enriches the quality of their offering, and perhaps enables one person to offer effective support to a larger number of partners.

SCALING-UP DESIGN THINGS

Recognising that each example involves a design Thing, questions arise about how these Things are propagated and what factors affect their scaling-up. Accounts of the diffusion of innovations (Rogers, 1983) highlight issues of perceived benefit, compatibility, complexity, trialability and observability. The *Trello*-supported tool provides an easily perceived benefit for the community groups, is compatible with existing practice, and can be trialled directly in a training session related to their immediate concerns (making a funding application). The benefit is provided as a service from a socio-material assemblage of both the on-line artefact and the interactions with the advisor mediated through the artefact. In contrast, the generic platforms (GoogleDocs, Skype) in the original workshop provided less direct benefit, and did not directly address an immediate goal.

In the case of engaging pupils as community reporters or researchers, this Thing was compatible with an exercise that The Glass House had already planned, and was made trialable when the project donated skills and equipment as an exchange. Mentoring from Silent Cities helped to manage complexities, and the educational setting offered openness for trials. As the CEO of The Glass House explained, labelling activities as 'research' rather than 'consultancy' permits experimentation.

Finally, the example of cascading the hacklab practice via an 'ambassador' demonstrates that sometimes a Thing may have sufficient perceived benefit that it can be scaled-up via direct efforts at replication, despite involving significant costs and effort for the adopter.

In each of these cases, however, the co-design practice being demonstrated was not only perceived as delivering a large benefit with limited barriers to adoption. The practice was open to appropriation and adaption in use which helps to achieve compatibility. Thus the *Trello* template is easily copied and adapted; the community journalists became community researchers; and the hacklab was re-interpreted for a new topic.

These principles also apply in our experiences of co-research collaboration between community organisations and academic researchers. Throughout our work in multiple projects, it has been important to find ways of aligning activities with immediate goals of organisations that are very resource limited. Using fluid representations (e.g. fig 1) and aligning activities with the partners' existing priorities has allowed us to create Things within projects that permit adaptation and appropriation to support compatibility. We then use research funding to enable trialability and observability in the context of co-research, thus identifying perceivable benefits for other resource-limited organisations and furnishing evidence.

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REFERENCES

Dearden, A., Walker, S. & Watts, L. (2005). Choosing friends carefully: allies for critical computing. In *Procs. of Critical computing: between sense and sensibility* (pp. 133-136). ACM Press.

Björgvinsson, E., Ehn, P., & Hillgren, P.-A. (2012). Design Things and Design Thinking: Contemporary Participatory Design Challenges. *Design Issues*, *28*(3), 101–116.

Boyle, D. (2013). *The Barriers to Choice Review*. UK Cabinet Office.

Ehn, P. Participation in design things, *Procs. PDC 2008*: 92-101.

Lam, B., Dearden, A., William-Powlett, K. & Brodie, E. (2012). *Exploring co-design in the voluntary sector.* Presented at: VSSN / NCVO Annual Conference, University of Birmingham, 10/09/2012 - 11/09/2012. Available at: http://shura.shu.ac.uk/7811/

Leadbeater, C. (2008) *We Think*. Profile Books.

Light and Luckin (2008) Social Justice and User-Centred Design for Technology-Enhanced Learning. Bristol: Futurelab.

Rogers, Everett M. (1983). *Diffusion of Innovations*. New York: Free Press