
Exploring, Defining, & Advancing Community-Driven Design for Social Impact

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Abstract

As the DIS community increasingly seeks to address social impact issues, it becomes important to examine the assumptions behind our methods to increase the likelihood of positive effects and reduce negative unintended consequences. *The purpose of this workshop is to engage the design community in exploring, defining, and, if deemed valuable, advancing community-driven design.* We invite DIS members to submit 1-page responses to this concept of community-driven design. Our hope is that a research agenda can emerge from this workshop for the DIS community.

Author Keywords

Community-driven design; participatory design; human-centered-design; participant-led design; co-design; citizen-led innovation; lead user innovation.

CSS Concepts

- Human-centered computing~HCI design and evaluation methods

Introduction

The DIS community is increasingly extending its reach into social impact issues such as diabetes management

[1], environmental sustainability [2], women's health [3], and homelessness [4]. The community has also been exploring a wide range of alternative perspectives on design, such as rethinking participatory design [5] beyond professional-led design. There are many explorations on how design can be used by and for individuals and communities themselves under labels such as co-design [6], co-creation, participant-led design, value-sensitive design [7], co-operative design, citizen-led science [8], end-user programming, DIY, maker- and hacker-space [9], community-based participatory research [10], community-led design, lead user innovation [11], social platforms, need-solution pairing, self-experimentation [12], etc.

There is value for the DIS community to engage in a discussion exploring the boundaries and synergies of these efforts and to explore where there may be gaps/opportunities for new work. This discussion could support identifying partial pathways for defining the DIS community's role in impacting positive societal change that minimizes the likelihood of negative unintended consequences. For example, it is becoming increasingly apparent that creators of tools such as user interfaces, algorithms, or social media platforms can often have a large and, unfortunately, negative impact on others in both intended (e.g., use my system longer) and unintended (e.g., increase political division) ways.

In an effort to contribute to this conversation, we are tentatively using the term "community-driven design." By *community*, we mean a group of individuals who are bound by a common purpose or need or who share common resources [13]. These communities can be formed both geographically and digitally as long as

there is a purpose or common resource (e.g., food, land, code, wisdom) that bring people together in ways that, ideally, both strengthens and supports each individual while, simultaneously, strengthens the community. We are explicitly not talking about "communities" that are defined via statistical clustering, such as demographics or "special interest groups." By *driven*, we mean the work is being conducted *by and for* the community itself. This work is explicitly NOT top-down, but rather one where the leadership, direction, ownership, and movement emerge from the community, with professional support provided when requested. By *design*, we mean a future-oriented act to improve the communities doing the work.

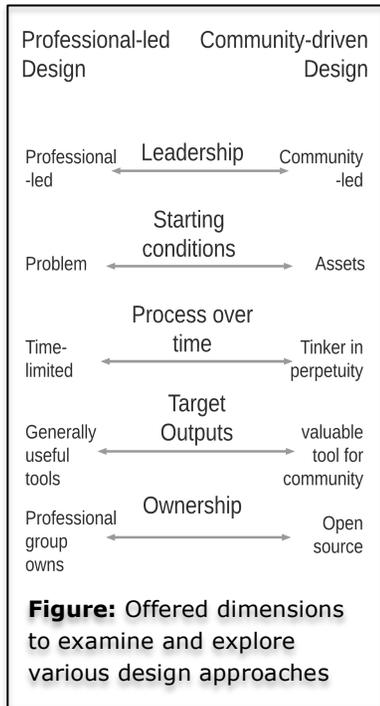
The purpose of this workshop is to engage the DIS community in exploring, defining, and, if deemed a valuable concept, advancing community-driven design. We seek to explore synergies and differences between the various efforts listed and our preliminary formulation of community-driven design, offered next. Our goal is to glean insights on strengths and contributions across each approach and potential differing purposes and contexts of use. This could then lead to a working definition of community-driven design (or other term, including use of an established term) that can be used to facilitate action towards societal change with minimal unintended consequences.

Framing Community-Driven Design

As highlighted in the DIS workshop call, there is active debate on design processes (e.g., [5]), including extensions of design into a much wider range of approaches than professional-led human-centered design. To facilitate exploration and organization of approaches and to then place community-driven design

in context with other approaches, we propose five dimensions:

- notions of leadership, expertise and power dynamics
- starting conditions for the design process
- how the process unfolds over time
- targeted outputs of the work
- perceptions of "ownership"



Leadership, expertise, and power With professional-led design, the person who leads is often a top-down organization or the designer working to understand and *build for* communities. Within community-driven design, the lead would not be a professional expert external to a community (though, professionals in a community do, of course, matter). Community-driven design seeks to extend from partnership with professionals (e.g., participatory design, co-design), and from individuals solving their own problems alone (e.g., lead user innovation), to communities working collaboratively to advance new possibilities for themselves, drawing from professional expertise when appropriate. Central to this is to ensure the power to act or not, including rejection of professional expertise, resides in the community over professionals, with appropriate safe guards, quality assurance, and other processes embedded within the community itself.

Starting conditions Professional-led design commonly starts from a problem formulation. Inspired by Block and others [13,14], community-driven design starts with assets. An assets frame starts with identification of what is available in context as opposed to what is lacking. It also starts from desire for advancing possibilities (e.g., better mobility for all), over reducing problems (e.g., new bike lane needed).

How the process unfolds over time Professional-led design is largely time-limited as, at present, it is linked with product life cycles. Community-driven design extends iteration into the realm of continuous tinkering and iterative improvement in perpetuity as the process is being advanced by and for communities themselves.

Targeted outputs Professional-led design, particularly in the HCI community, targets technological innovation as the output, with outputs that are, ideally, generalizable and generally useful. Within community-driven design, the output would be tools that build up assets towards realizing new possibilities for the community (e.g., better health, sustainability, communal support). This could include addressing unmet needs via digital artifacts or platforms. It could also involve cultivating people, processes and other assets within a community. Central to this is that there are explicitly *no requirements for generalizable tools*. If a tool is valuable for the community, then it is of value, regardless of if any other community could benefit from it.

Ownership In professional-led design, it is common for the top-down organization to ultimately "own" any insights or artifacts derived from the design (e.g., the Swiffer WetJet). In community-driven design, the concept of ownership would be better aligned with the philosophy of open source, in that resources developed by and for the community are not necessarily "owned;" instead resources are shared across the community to support individual and collective betterment.

Topics of Interest from Participants

We invite members of the DIS community to explore, define, challenge, or advance community-driven design

with us. What are the right dimensions for organizing various design efforts (e.g., the five offered or others)? What, if anything, is unique and valuable to community-driven design? If this is a valuable concept, what is the right label for it? What are the guiding principles of community-driven design vs. other approaches? What are the boundaries between community-driven design and human-centered design? What is the role of professionals in community-driven design? What might be the unintended consequences of professional designers taking part? How might we mitigate the risks of those unintended consequences? How might we facilitate improving circumstances to help individuals and communities help themselves? How might we facilitate equitable participation, contribution, and benefit from design?

We invite DIS community members to submit one-page position pieces. We are explicitly interested in inviting a wide range of perspectives to explore if community-driven design or is a valuable concept and, if so, when, and where it could be of value. Some possibilities include: responding to the questions above, critiquing our formulation, challenging implicit assumptions we may be making, responding to the dimensions, placing a design approach within the dimensions, sharing case studies of community-driven design, or sharing resources on effective community partnerships. Our hope is that a research agenda can emerge from this workshop for the DIS communities' role in this effort and, by extension, extend DIS's positive impact on major societal issues.

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