

The politics of co-design in ICT for sustainable development

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The politics of co-design in ICT for Sustainable Development

In this paper we explore how designers can facilitate participatory Information and Communication Technology (ICT) projects to support sustainable development. We use experiences from a project in West Bengal, India to illustrate the intertwined challenges of evolving collaborative practices that contribute to sustainability, that can themselves be sustainable, and that produce sustainable results (Poderi and Dittrich, 2018). We argue that concerns for sustainability translate into politically oriented practices that seeks to facilitate critical encounters with ICT encouraging autonomy and resilience for those involved.

Our starting point is the recognition that any practice of co-design necessarily involves a richly interconnected web of relationships and communications between the various stakeholders. As Bratteteig and Wagner (2014) explain, co-designers are always enmeshed in these networks and cannot escape from enacting their own power and influence as they engage in design processes. Politics can be defined as “the total complex of relations between people living in society” (Politics, 2019). It follows that establishing and configuring a co-design project is a political act, and that co-design practitioners and researchers are themselves political actors.

Applying co-design to support socio-economic development, such as in ICT for Development (ICTD), brings political and ethical dimensions of the work into sharp relief through the large differences in background and in power between designers, who typically come from privileged positions and participants from marginalised communities within Low and Middle Income Countries (Dearden, 2013; Kendall and Dearden, 2018; Dearden and Kleine, 2019). We argue that these differences have often led to practices in ICTD that are unsustainable and that tend to limit the resilience and autonomy of those involved.

In a previous paper (Kendall and Dearden, 2018), we examined the detailed micro level politics of a participatory design (PD)¹ led ICTD project that works with a sustainable agriculture NGO. Here we contextualise these project-level political concerns by examining relationships to macro level concerns about the nature of sustainable ICTD. Before proceeding, however, it is important to understand sustainability in the context of development, and to recognise the tendencies towards unsustainability in ICTD.

Sustainability and development

Narrow understandings of development in terms of increasing Gross Domestic Product (GDP) are no longer credible in the face of global heating and biodiversity loss. The United Nations' Brundtland report (World Commission on Environment and Development, 1987) defined *sustainable development* as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. This is an objective that the global community is manifestly failing to achieve (IPCC, 2018; Dalberg, 2019; IPBES, 2019). Raworth (2017) suggests a doughnut shaped target as a safe and just space for humanity, lying between a minimum social foundation that meets everyone's human needs, and the ecological ceiling that our planet can support (see figure 1). From this perspective, (almost) all societies need ‘development’ to shift their social and economic systems into the space between these limits. Sustainable development is thus a shared objective where people in so-called ‘developed’ countries may have much to learn from some in the Global South.

¹ We prefer to use the term participatory design (PD) to describe our own work, although a discussion of the specific characteristics distinguishing PD from other co-design approaches is beyond the scope of this paper.

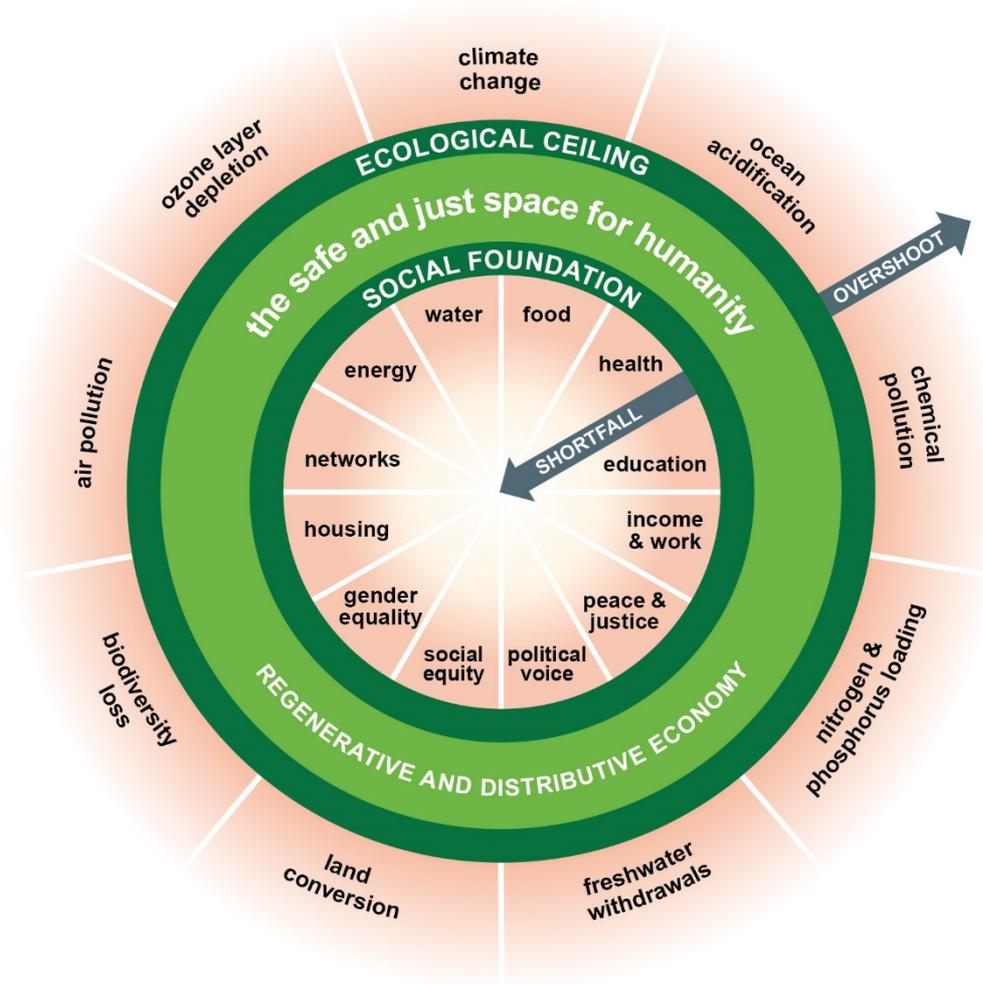


Figure 1: The viable space for human sustainability (Raworth, 2015, public domain)

In recent years, there has been much interest in framing development in terms of people and communities expanding their *capabilities* (Sen, 1999; Nussbaum, 2000) “to choose a life one has reason to value” (Sen, 1999. P74). This capabilities perspective highlights autonomy and the principle that ‘development’ should be defined and shaped by the people who are its supposed beneficiaries. These concerns align well to the commitments of participatory design (PD) to the agency of those affected by technology (e.g. Bannon, 1991), and with participatory approaches to development (Cornwall, 2003; Chambers, 1994). Deneulin and McGregor (2010) explain how, in practice,

wellbeing cannot be accounted properly through individualist liberal understandings of freedom alone, but must recognise how the evolution of life possibilities and conditions for individuals is inextricably linked with the specific social, historical and cultural conditions of the wider societies in which they live. Hence development must be concerned with systemic properties of these broader social arrangements.

Returning to questions of ‘sustainable development’, recognising that the social world and the natural world are ultimately indivisible – we are part of the natural world, not separate from it – sustainable socio-ecological systems must exhibit resilience (the ability to withstand shocks while still remaining stable) and adaptability (the ability to react and adjust according to changes in conditions). As Pelenc et al. (2015) and Walker et al (2004) argue, the resources that underlie such properties are at least partially collective, i.e. they are held by, and depend on participation in, a community. Authors such as Escobar (2018) hold autonomy – the ability of systems to “find their way into the next moment by acting appropriately out of their own resources” – as central to the sustainability of socio-ecological communities. Introducing new dependencies on external resources could weaken the ability of a local socio-ecological system, by itself and through its own resources, to accommodate shocks or respond to changes. There is a multitude of examples of information services that have been introduced and established through donor funding, only to be removed after the pilot stage (Dodson, Sterling and Bennett, 2013). While such external provision may expand opportunities in the short-term, it might risk leaving the broader system vulnerable to external changes over the longer term.

Concern with resilience, adaptability and autonomy also applies to the systems for food production and consumption that our partner NGO promotes with farmers, emphasising management of the organic health of the farm ecosystem and avoiding

excessive dependency on expensive external inputs such as chemical fertilisers and pesticides. They also emphasise the need for farmers' own shared and individual knowledge to be valued, and farmers' ability to autonomously develop their agriculture as crucial for the sustainability of the agricultural system (Holt-Giménez and Altieri, 2012).

Taken together, our goal is a PD practice in ICTD that contributes to sustainability by supporting the autonomy of both individuals and groups, as living socio-ecological systems, to expand their individual and collective capabilities in ways that are resilient and adaptable. As our work lies within ICTD in India, we situate this practice in that space, although learning and understanding about sustainable development must not be restricted to work in the Global South.

The current unsustainabilities of ICTD

A key problem with ICTD at present is a tendency towards forms of unsustainability. Firstly, there is the risk of direct pollution through introduction of ill-suited technologies and long-term unsafe disposal of e-waste (Vasudev and Parthasarathy, 2007). Secondly, as Kleine and Unwin (2009) argue, much of ICTD may be driven by goals of opening new markets for vendors of IT products and services, leading to significant flows of hard currency away from countries and communities in the Global South, strengthening dependency on powerful external actors. Irani et al. (2010) argues that technology design in ICTD is interlinked with postcolonial institutional relationships whereby strategic control of projects, and capital, flows towards actors in richer, so-called 'developed' countries. Thirdly, many ICTD projects have focused on improvements in key services such as healthcare, agricultural extension services or education, however successful pilots are seldom translated into benefits at scale (Toyoma, 2015), or are only maintained while they continue to receive external financial support from donors

(Heeks, 2011; Dodson, Sterling and Bennett, 2013). One issue is that projects commonly focus on priorities set by the donor agency and operate on timescales aligned with their needs (Heeks, 2002). These timescales may be insufficient to address the underlying needs of the community or build the necessary infrastructure for long-term and sustainable change. Finally, there has been limited work in ICTD to date that seeks to understand how ICTs can support socio-ecological sustainability (Heeks and Ospina, 2018), which can lead to projects supporting unsustainable forms of development.

Enacting sustainability in ICTD

To address the challenges discussed above, we report an approach to enacting sustainability in a co-designed ICTD project. Our approach takes a systemic perspective that sets the locus of control in the context where ‘development’ is supposed to be happening. People and organisations in the context are approached as operating in autonomous, self-organising systems, and their ways of being and doing are viewed as legitimately self-managed. Improvements should be achieved by localised self-organising processes of ICT adoption and appropriation addressing the needs and priorities of the people within the context. The role of external actors in this approach is one of encouraging and supporting new ways of being and thinking (Manzini, 2006).

Mutual learning (Robertson and Simonsen, 2012) forms a fundamental basis for external actors’ involvement. In processes of mutual learning, external actors can act as facilitators to support the expansion of capabilities for people and groups in the context. External actors may provide stimuli and support ideation and creativity, and offer advice about options, but control and ownership of change is firmly rooted in local structures. Using mutual learning as a criteria for external involvement helps ensure that the autonomy of the communities and actors involved is respected. Mutual learning

provides potential for development that does not consist of externally imposed change “to or onto” a community, but rather a process of change where new sustainable patterns of existing for all actors involved – including designers, facilitators and funders – can be discovered.

This approach leads to a specific way of configuring design engagements putting to the forefront infrastructuring (Karasti 2014, le Dantec and DiSalvo 2013) to support design activities owned, driven and maintained by stakeholders indigenous to the context. Design work, in this framing, is primarily relational (Light and Akama 2012, Dindler, and Iversen 2014) and builds on existing technologies, competencies and practices (Bødker, Dindler, and Iversen 2017). Thus, change is made sustainable as innovation is based on existing resources rather than external – in the case of ICTD often donor supported - inputs. It is also not dependent on continued analysis of problems and solutions by an external third party such as a designer. This ensures that the intervention of the designer does not compromise the resilience of the community, their ability to autonomously find solutions to problems in the future or respond to changes in the external context.

The data underlying the discussion is primarily based on field journals, pictures and recordings collected throughout our involvement in the project. The field journals were kept not only to document design activities and outcomes, but importantly also as a way of reflecting on the choices made throughout the project. These reflections were regularly debated between the two authors and notes from and recordings of such discussions were also used to inform this paper. In presenting the case, we follow authors such as Light and Akama (2012) to seek to shed light on design as a practice by focusing on the actions of the practitioner. Because of our intention to make visible the researcher in negotiating ICTD practice, and the relational nature of the practices we

advocate, we have henceforth adopted the first-person singular for the description of the case, referring to the first author who conducted the work in West Bengal.

Background

The project is being undertaken in collaboration with the Development Research Communication and Services Centre (DRCSC), an NGO based in West Bengal, India. DRCSC has been active across the region for three decades and focuses on “improving food and livelihood security of the rural poor through scientific management of natural resources and community based initiatives on the basis of principles and actions, that are environment friendly, economically appropriate, socially just and developed by mutual cooperation”². Their emphasis on ecologically sustainable agriculture means that they primarily support organic farming practice. They support small, marginal and resource poor farmers, through different forms of intervention including seed sharing, skills development and land shaping activities. These interventions are crucial to smallholders considering the impacts of the climate emergency in the region which is threatening agricultural livelihoods – especially among smallholder farmers (West Bengal Department of Planning, 2010).

Establishing relationships

The project in this case originates from a long-term engagement with DRCSC, which included my master thesis research project. In that project (in 2014), DRCSC and I began experimenting with design and use of technology to support the farmers they work with. In 2015, I secured a scholarship from a European university to continue research with DRCSC as part of my doctoral studies.

2 <http://drcsc.org/aboutus.html>

I originate from Sweden and I am of European descent. I have been living and working across India for many years, primarily in West Bengal. Through living in India, and establishing family in the region, I have acquired both language skills and a level of local cultural competence. I came to work with DRCSC through their development work, rather than through technology or design, but my background in computer science led me to engage with ICT design activities. While my master thesis project was DRCSC's first experience of PD, they employ participatory action research in their development work.

Understanding existing communications practices

This project began in late 2015, early 2016. Adopting a cyclic approach informed by ethnographic action research (Tacchi, Slater and Hearn, 2015) the first phase of research aimed to develop a shared understanding both of existing information and communication practices within DRCSC, and of DRCSC's values and priorities. Initial semi-structured interviews were held with senior members of DRCSC, to get an understanding of the organisation in its present form. It also served to deepen their familiarity with me, my interests and concerns - which were discussed as part of these interviews.

The action research orientation of the project meant that my intention was that the research project be done in close participation with DRCSC and its beneficiaries. This stemmed from my concern that any intervention undertaken should be sustainable and contribute to long-term capacity building. Accordingly, we sought to establish a platform for DRCSC to own, manage and maintain the project. This platform primarily consisted of an action learning set that was formed within the organisation, involving senior officers as well as team leaders and members from different parts of DRCSC.

The initial action learning meetings sought to map out DRCSC's activities, stakeholders, challenges and current practices surrounding communication, knowledge and information management. Considerable differences quickly emerged, both in what were considered the most important activities as well as what were the key challenges. This partially reflected people's different job roles but also hinted at deeper divisions.

I had proposed, and the action learning set agreed with, an initial phase of ethnographically oriented study both at the head office and at one of the field offices. I employed participant observation with field officers as well as head office staff, along with semi-structured and informal interviews as well as smaller group discussions and collaborative Rich Pictures (Monk and Howard, 1998). This also involved regular interaction with farmers and community members. To limit disruption and help to establish mutual trust in a short timeframe, I sited my study at a field office where I already knew the staff and members of the farmers' groups.

An important goal was to produce framings, articulations and translations that could contribute to the organisation's own understanding of itself, rather than extracted as recommendations for (externally driven) design. Outputs were primarily reported back to and discussed within the action learning set. Importantly, the action learning set could also become familiar with the methods I used and the kind of outputs they generated.

It quickly became clear to me that to understand their technology use and potential impacts of technology on the work, an inquiry into values was necessary. Together with the action learning set I drew on data gathered to explore how sustainability values were perceived by staff at head office and field office level. For example, close social relations, resilience, self-sufficiency, holistic and long-term engagement were all values reflected in how work was organised and in the way

agricultural sustainability was framed by leading members of DRCSC. We have reported elsewhere (Kendall and Dearden, 2017) how these values were articulated and their influence on project directions.

These values were not uncontested. For example, staff members discussed how DRCSC's work was changing because of a move from a single donor funding ongoing work towards multiple donors funding discrete projects each seeking specific outcomes. To some this was unsustainable, directly contradicting values of self-sufficiency and long-term engagement. For others, this reorientation was necessary to ensure financial sustainability in the face of a changing funding environment. One impact of this change was increasing professionalisation of work that some staff considered beneficial and others harmful.

Members of the learning set as well as the organisation at large were split about defending and promoting DRCSC's historically held values and commitments, or aligning with mainstream development practice, even if greater "efficiency" conflicted with other values. Having become a partial insider to DRCSC, as well as engaging in a design project, I found it necessary to locate myself in relation to this tension. Guided by my own standpoints, values and research interests, I explained to the action learning set that while I was willing to, for example, develop project management tools, my interests were better aligned with understanding how design might sustain long held values in the face of external pressures. It was through my familiarity with DRCSC, and extensive engagement, that I felt comfortable in taking this explicit stance.

During this initial stage, I decided, together with the action learning set, that our co-design should focus on how ICT supports the work of DRCSC and its staff, rather than working directly with farmers. While it was always a goal for me that the project and outcomes would be owned by the organisation, I had not initially ruled out working

directly with farmers. However, my choice followed from: an ethical commitment to avoid participants feeling coercive pressures to engage with research and design; the need to establish relational practices to support mutual learning; and my belief that such mutual learning and autonomous decision making would be difficult to achieve across the extreme economic, socio-cultural and linguistic divides between myself and the farmers. Even if a participatory process could have identified ICT interventions to address the challenges facing farmers and other community members, the scope for farmer groups to sustainably maintain any ICT intervention would have been limited, generating either ongoing dependency, or resulting in a pilot project that quickly disappeared when I left. Of course, the strategy of supporting sustainable changes in DRCSC's organisational capacity is only valid insofar as DRCSC, in turn, facilitates sustainable development in their interactions with the communities where they work.

Participatory design activities

In 2017 I began a more design-oriented engagement. Drawing on a model of technology stewardship (Wenger, White and Smith, 2009), we convened a small working group of more junior members of DRCSC to identify, experiment with and evaluate new ways to apply technology. Discussion focused on exploring innovations in information and communication *practices* that could be embedded in the organisation, rather than on designing novel technical tools (which would imply additional future resources for maintenance) (Kendall and Dearden, 2017). The group met five times to first plan an intervention, implement it, evaluate it and set-up further iterations. Engaging with this working group broadened my interactions with DRCSC and reflected the fact that the senior members in the action learning set lacked the time and close interaction with field staff that were needed to fully participate. The action learning set took on a supervisory

role where reports were delivered and learnings discussed.

As a first step, the working group discussed challenges in their work that we might want to address. The broad challenges identified through the ethnographic study were reviewed, and from this “monitoring & reporting” became a key focus. Monitoring and evaluation (M&E) is a central part of development praxis, and it is one where increasingly atomistic and quantified measurement practices have become dominant (Hayes, 2015). One of the observations during the ethnographic phase was that field workers’ work was richly intertwined with social and community relationships. They lived in or near their work areas and maintained relatively weak distinctions between social and work oriented interactions with farmers and other field workers. As one field worker described it, their purpose was not just supporting agricultural development but promoting “social cohesion”, bringing together farmers from different communities around common concerns and building networks of trust (Kendall and Dearden 2018b). Mainstream M&E practice contrasted starkly with these holistic, social and relational values.

I proposed that the working group begin by exploring and discussing WhatsApp. I had observed that the field officers and head office staff were already using WhatsApp extensively for a wide variety of purposes. Several staff had explained that they preferred it to tools they considered more structured or formal, such as e-mail. As a social tool, it fitted better with the informality of their day to day operations. While thus far it had mostly been used for one to one communication and for “faltu”³ groups, I suggested this project could explore broader uses. This was not entirely uncontroversial. In one interview a field officer confided how she had been instructed by her team leader to limit sharing in informal groups. The reasoning, she surmised, was that what was shared might contradict official reporting both internally and externally.

³Idle or ‘useless’ chatter.

The working group were enthusiastic about exploring this direction and proposed using regular voice, video clips and picture sharing through WhatsApp as a way for field staff to report activities to head office, and to share their experiences with peers. A WhatsApp group was established involving the members of the working group, their team leaders, and key members of the action learning set. Videos included both verbal reports from fieldworkers, but also statements and videos from farmers about their practices or details of challenges that fieldworkers or farmers were facing. In three months over three hundred messages were shared and eventually fifteen staff members across different teams and field offices were involved.

Evaluating the innovation

This “experiment” continued for several months and was well-received in both field offices and head office, continuing in use even when I was outside of India for 6 months teaching in Europe as linked to my PhD scholarship. This intervention – the technology stewardship group and the WhatsApp experiment they ran - was evaluated through two means. First, the technology stewards conducted an ongoing evaluation during the project period consisting of group discussions as well as individual conversations with participants. Secondly, two years after the intervention began, I conducted semi-structured interviews about the impact of the technology stewardship activities and of the WhatsApp experiment. In these interviews, the technology stewards identified that the design-oriented activities had allowed them to identify and develop new uses of technology in their work, in ways which were aligned to their work practices. All the stewards suggested that design activities needed to be made into a regular practice within DRCSC.

Most teams within DRCSC had adopted the approach developed by the stewards for their internal communication. This had improved relationships and transparency between different team members and allowed for richer descriptions of work than previous e-mail or hand-written text reports. Accountability had improved, as had the ability of head office staff to understand both technical challenges and improvements that could be made in the field. The new approach to reporting through WhatsApp emphasised the reality and needs of the field workers and catered to them.

However, even though the WhatsApp experiment had been successfully designed, implemented and scaled throughout DRCSC, staff lamented the double work it had introduced, i.e. using the WhatsApp groups to satisfy internal monitoring and learning based on a social and relational paradigm, but facing in parallel the continued need for written reports based on a management and metrics paradigm to satisfy funders.

Thus, while the experiment did introduce a different way of working, it could not overcome the power structures that created the challenge in the first place. The strategic control and dominance of outside funding agencies drives the organisation towards externally defined approaches to M&E as opposed to methods more aligned to their internal needs and values. However, it did introduce ways of using technology, and design, to cultivate an alternative mode of interaction that could be sustainably maintained and replicated throughout the organisation. The processes used for design and implementation also established conditions for ongoing critical technology design, including a group of people ready to undertake such work.

Discussion: The politics of sustainable PD practices in ICTD

We now turn to the question of the political choices embedded in the approach we have

taken in our case. Kuhn and Muller (1993) structure the configuration of PD projects around the question: “who participates with whom, in what”, to this we add “and why?” emphasising the intentionality of both designer and other stakeholders. We consider these questions as critical to define the politics of a PD practice for ICT in sustainable development.

Who participates with whom

Making the researcher and their position explicitly visible through the design process has been critical in this project. This is especially important considering the great differences in power, not only cultural differences but also histories of exploitation and dominance (Irani et al., 2010). A key reflection has been on what work can realistically be conducted and with whom a genuine mutual learning process is possible. Early in the project one of DRCSC’s beneficiaries asked: “How much is [the plane ticket] for you to come here?” When he heard the cost, he said: “Well, why don’t you just give this money to [the local chapter of DRCSC] instead?” The farmer is likely correct in his implied assessment that the greatest direct benefit at the field site would have been through contribution to their fund.

Any attempt to hide the vast differences in affluence would undermine open and honest mutual engagement. Collaborating as equals in PD across such divides requires levels of relationship building and long-term engagement outside of the scope of a single PhD project. This did not preclude me from discussing issues with farmers, but it did influence the framing. This does **not** mean running a design project where the organisation’s staff become representatives for their beneficiaries’ voices, which would produce further marginalisation. Rather it means taking an active decision to limit the scope of the work that we as external researchers attempt to conduct.

As should be clear from this discussion, it is insufficient to merely account for and report one's positionality when presenting research outputs or results. Rather positionality needs to be a continuous part of the interaction between stakeholders in the research process (Pihkala and Karasti, 2016). This means disclosing personal positions and, at times, taking and declaring our interests in the research context. We would argue that, regardless of whether it is made explicit, such negotiations and positioning of the work will always take place.

Who participates with whom is strongly influenced by the overall structure of development practice. Collaborations underpinned by large-scale development funding, routed through international researchers, can mean that significant funds are spent on external experts from the Global North, who then need to fly into the setting (with consequent contributions to the climate crisis). Such patterns raise further questions about how any value that is generated in typical practices in development is distributed between the various stakeholders (Crewe and Harrison, 1998).

In what?

When considering "what" this project would do, we focused on organisational development in DRCSC, as opposed to addressing directly the needs of DRCSC's beneficiaries. While this might make for a less exciting proposition when presenting to other researchers in the Global North, we argue that this a key contribution of our approach. For many researchers and designers, especially those operating out of the Global North it would be far preferable to recognise the limitations that our position produces and frame our work accordingly. Aligning with actors already present and active in the context, who are committed to remaining over the long term, can be a key strategy for sustainability of project outcomes and of PD practices.

On the other hand, we must also acknowledge that the decision to use WhatsApp as a core technology further strengthened an existing exposure to, and dependency on, forces of surveillance capitalism (Zuboff, 2015). Our decision to proceed on this basis, despite our awareness of the negative implications serves as a reminder that, as co-designers, we are constantly enmeshed within wider networks of power (Bratteteig and Wagner, 2015).

Thus, enabling participation in the design of any specific “temporally and fixed material artefact” (le Dantec and DiSalvo, 2012) is not the central concern, but rather stimulating and encouraging innovation processes that can be maintained and expanded without the researcher’s presence. This demands that control over framing the project, setting goals and evaluating outcomes is located in the research context itself. It also means embedding design within existing practices whether work, social, technology-related or organisational. To achieve this, we framed our work primarily as relational practice, where PD served to identify, make visible and continuously develop dynamic networks of relationships between different stakeholders (Light and Akama 2014, Dindler and Iversen 2014). Such networks become both the site for, and a sustainable outcome of, the encounter.

And why?

A critical element of a capability approach is the idea that it should be based in the development of freedoms that *people have reason to value*. The engagement with the question of intent behind both designs introduced and the actors who participate is therefore central. Articulation and translation of values into technology choices need to become part of the self-organising process of technology adoption and change to which we aspire (Irani et al. 2010, Borning and Muller, 2012). This is a challenging aspect of

enacting sustainability as there is, in most contexts, a background cultural tendency to view technology as a neutral tool. A situated understanding of technology as loaded with values and politics becomes something that needs to be developed over time in the context. Our approach thus contains echoes from the early foundations of participatory systems design in the Collective Resources Approach (Ehn and Kyng, 1987). For this to be relevant to interests and needs of those involved, it cannot be imposed by an external actor but a key contribution was facilitating DRCS to identify links between their values and technology use.

To make both shared values and differences visible, we emphasise the formation of, discussions within and activities conducted by the action learning set, the technology working group and by individuals throughout the organisation. For instance, continuously reporting back and collaboratively analysing findings was a way to ensure that articulations of values reflected mutual interpretations (Borning and Muller 2012). In the translation process of moving from identified values to designs the priority has been to a) highlight positive ways in which values could be enabled through technology and b) illustrate negative ways in which technology could inhibit, supplant or introduce contradictory values (Hayes, 2015).

Conclusion: Towards co-design for Sustainable development

Sustainable development requires a radical reshaping of economic, social and cultural conditions. A new set of conditions needs to be established emphasising the autonomy of groups of individuals, whether in the form of self-identified communities or formal organisations, to develop their capabilities to lead the lives that they value. As we and others have suggested (Kendall and Dearden, 2018; Manzini, 2006; Escobar, 2018) there is a role for design and designers to play in this transition. However, the way we

perceive our role and configure design projects in ICTD equally require re-shaping (Manzini, 2006).

In this paper, we contribute an approach to this re-shaping that interleaves concerns for sustainability on three distinct levels – contributing to sustainability directly by supporting the work of DRCSC, facilitating the emergence of a sustainable change of information and communication practices within DRCSC and finally cultivating PD practices that can be sustained in context (Poderi and Dittrich, 2018).

Our approach combines two things. Firstly, an orientation that states that the aim should not be to solve specific development problems through social surgery, but to encourage self-organising systems that can autonomously evaluate, adopt and appropriate technology to enable lives that those involved have reason to value. Secondly, a set of political choices and questions that relate to the configuration of relationships within the project. Rather than seeking to develop or implement specific interventions, we focus on relationships based in shared values. We carefully consider our own positionality and with whom we can reasonably engage in mutual learning, considering personal abilities, access to resources and the kind of commitment we are willing to make to the context and those involved. We then engage in a co-design process emphasising relational infrastructures that can become sites for critically engaging with technology. A necessary, but challenging, role for the designer becomes supporting the development of a local understanding of linkages between technology choice and desired freedoms or capabilities.

A crucial realisation here, however, is that we as researchers and co-designers are agents for unsustainable patterns of existence. We are commonly enmeshed institutionally, even if not geographically in the Global North, in a system that draws on Western neoliberal structures. It is increasingly clear that, in contrast to many

“underdeveloped” societies, these ways of being are fundamentally unsustainable. These structures are embedded in our values and our ways of working. Seeking a co-design practice that is sustainable thus requires not only individual commitments to participation and inclusion of other values, but also structural changes to our projects and our ways of working. This could include ways we handle funding, structures of organisation and control, as well as setting limitations for what we consider appropriate situations in which to engage and ways to intervene. We suggest that a design practice that emphasises mutual learning and autonomy holds a way forward. Through this design practice not only can we contribute positively to the resilience and adaptability of the people we work with, but we can also find ways towards the sustainable development of our own work, our institutions, ourselves and our societies.

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