Emerging Spaces in Community-based Participatory Design: Reflections from Two Case Studies

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ABSTRACT

This paper engages with issues of universality and locality in the context of community-based participatory design (PD), and focuses on the challenges and opportunities associated with incorporating local views and forms of participation in the design process. The notion of ‘designing for participation’ is advanced as a quintessential perspective for approaches in which design practices are re-configured from a community-centric standpoint. Building on insights from PD and community development studies, as well as on empirical evidence from two community design studies, we argue that designing for participation appears to be located in a space between the designer’s and local views of participation, which are at times both ambiguous and conflicting. To overcome these tensions, we argue for the importance of engaging critically and reflectively with PD in community contexts, and in this process capitalising on disciplinary dialogues that can expand the viewpoint from which PD projects are negotiated and evaluated.

Author Keywords

Community-based design, third space participatory design, design for participation, interdisciplinarity

ACM Classification Keywords

D.2.10 Design, Methodologies, Human Factors.

INTRODUCTION

More than a decade ago, Muller described participatory design (PD) as the third space in human-computer interaction, located between the “world of technology developers/researchers, and the world of the end-users” (2002:15). The underlying idea, further embraced by other PD theorists, is that PD may be conceived as a bridge between two worlds and two ways of knowing (Muller, 2002). Some of the significant conceptual and methodological developments in PD build on this notion of bridging, whether taken as a space of encounter, of meeting halfway, or of exchanging knowledge and expertise.

With the entry of PD in new territories, such as local communities and developing contexts, new opportunities and challenges arise in enacting third space participatory design. Community-based PD appears to be one of the most challenging in this respect, due to knowledge gaps between designers and community members, binding local socio-cultural protocols (Sabiescu and Memarovic, 2013), and tensions between the designers’ and local epistemological frames (Bidwell and Hardy, 2009). Recent literature on PD in community contexts suggests that incorporating local understandings and patterns of participation in the design process is paramount for the success of such initiatives (Rodil et al., 2012; Winschiers-Teophilus et al., 2010; Bidwell and Hardy, 2009). On these grounds, community-centric PD questions the universality of the original Scandinavian PD approach and its array of associated design tools, methods and techniques (Elovaara et al., 2006; Puri et al., 2004). This opens the perspective towards “emergent and situated” (Verran and Christie, 2007: 215) design practices, in which the local community becomes the central reference point (Van der Velden, 2010).

This paper engages with issues of universality and locality in the context of third space participatory design in community settings, and focuses on the challenges and opportunities associated with incorporating local views and forms of participation in the design process. The notion of ‘designing for participation’ is advanced as a quintessential perspective for approaches in which design practices and methods are re-configured from a community-centric perspective. To examine the limits and challenges associated with designing for participation in community-based PD, the paper introduces two community design studies in different socio-cultural settings, located in Mozambique and Romania. Building on insights from PD, community-based design and community development studies, as well as empirical evidence from the two cases, we argue that designing for participation cannot be reduced to mere local views of participation. Designers carry with them their own views, whether implicit or explicit, and these have a fundamental bearing on how PD projects progress. Designing for participation appears to be located, rather, in a space...
between the designer’s and local views of participation, which are at times both ambiguous and conflicting. Its translation in participatory design techniques, tools and processes fit for a local context is a challenging task, which needs to account for differences and tensions rooted in different ontological and epistemological frames. To overcome these tensions, we elaborate on the concept of ‘connectedness’ from two standpoints. Firstly, we discuss the benefits of advancing community-based PD as a reflective endeavour on part of the designer, in full recognition of how PD both cultivates and is influenced by the interconnectedness, or intersubjectivity, of people. Thus, participation is always individual and always collective, and is always embedded in a broader ‘web of significance’ (Geertz, 1973). Secondly, we argue for the need to cultivate inter- and transdisciplinary dialogues beyond conventional boundaries, to help address complex societal problems. Community-based PD is approached as an illustrative example where disciplinary dialogues can enrich PD experiences by incorporating insights from community development studies. Ultimately, the goal of engaging in these dialogues is not to limit PD fluidity, but rather to stimulate critical reflection.

**BACKGROUND**

Participatory design with communities, in particular communities in rural and developing contexts, questions the universality of the original Scandinavian PD approach (Puri et al., 2004) and established notions about the role and nature of participation in design (Winschiers-Theophilus et al., 2010; Braa, 1996). This section presents an overview of PD studies in community contexts, singling out current debates around PD universality and locality, and changing notions of participation.

**Community-centric Participatory Design**

It has been argued that PD with communities, in particular indigenous or minority groups, does not rely on the application of the right method. Rather, it implies defining and negotiating design tools, methods and processes around the needs of a specific locality, including a contextual definition of local forms of participation (Winschiers-Theophilus et al., 2010). Successful collaborative design with communities entails design in the here and now, with designers and communities co-creating their own relevant tools and techniques, and agreeing on those processes that provide adequate responses and solutions to the situation at hand.

A notable feature of community-centric PD is the re-configuration of the design space, tools, and workflows by taking the local as central point of reference (Sabiescu, 2013). Maja van der Velden (2010) describes it as “design for the contact zone”. The concept is borrowed from the work of Mary Louise Pratt (1991), who defines it as a social space of encounter between different cultural groups, characterised by exchange, but also clashes and conflict. Contact zones currently and historically characterise those contexts marked by colonialism and un-balanced power relations, which may produce unique practices and representations. For Van der Velden (2010:12), design for the contact zone has no pre-defined articulations and rigid determinants, such as the fixed roles of ‘designer’ and ‘user’. It is a localized practice in which joint actions and interactions contribute to shaping site-specific roles, tools, workflows and design concepts in a dynamic and evolving way. For example, Rodil and colleagues (2012:89-90) describe the process of co-designing a 3D visualisation space for indigenous knowledge in Namibia: "...it was all a big melting pot: Where designer, the artefact and the space melt together within the design process, where the object of design becomes the tool for participation and where the designer becomes a part of the community and the community becomes designers.”

This process of local re-configuration can forge novel or re-interpret existing tools and techniques. For instance, Verran and Christie (2007:226) argue that video, a representational technology in the Western tradition, can be re-configured in indigenous contexts as performative act. A video-recorded testimonial can be enacted as a traditional Aboriginal performance, in which the storyteller draws live connections to tribe histories and geographies. This enables video as “technology of representation” to be appropriated and re-configured as “video as technologies of witness” (p. 221). This re-configuration marks a transition from a Western view of knowledge as representation, to the indigenous view embraced by the Yolngu aboriginal group, where knowledge is a re-enactment, a performative act circumscribed to a specific place and time (p. 219).

**Local Notions of Participation**

The different social and cultural values that communities espouse come to shape different views of participation that cannot be neglected in community-based PD projects. For instance, Puri and colleagues (2004) argue that there are no universal models of participation, giving examples of different if not opposed patterns of participation in South Africa and India. In a context such as the Xhosa-speaking rural communities of South Africa, decisions over activities that affect the entire community require consensus. This differs from certain rural contexts in India, where hierarchical models of communication and decision-making are predominant. On these grounds, it has been argued that forms and practices of participation in design should not be pre-defined, but rather configured dynamically through interaction with local communities, and shaped by local understandings, customs and practices (Winschiers-Theophilus et al., 2010). In some initiatives, interaction and participation patterns are modelled around local rites and practices. In their project with the Yolngu Aboriginals in Australia to build an indigenous knowledge system, Verran et al. (2006) have modelled activities on the local Garma ceremony, and positioned their approach to collaborative research and design as “performative knowledge-making”.

**Local Participation in a Community Development Optic**

When working with communities, it is critical to question not only the forms of participation, but also how participation serves long-term community goals, such as development and empowerment (Braa, 1996). There is by
now an established body of work in development and community development studies that can provide insights in these matters. The concept of ‘development’ itself has evolved, from a Western-based vision focusing on economic growth and colonisation (cf. Escobar, 1992), to a focus on agency and proactive engagement of beneficiary groups in pursuing their own, self-designed development goals. This latter position is well represented by Amartya Sen’s definition of development as the “process of expanding the real freedoms that people enjoy”, including agency (or process freedom) and capabilities (or opportunity freedoms) (Sen, 1999). This approach places people rather than material progress at the centre of development efforts. Concepts such as ‘self-determination’, ‘voice’, and ‘empowerment’ have acquired renewed meanings in a developmental optic, and all call for an active role of beneficiary groups as the main agents and crafters of the better future they envisage for themselves. In this context, participation emerged in developmental actions as a viable way to design initiatives responsive to local needs, and allow the poor and disadvantaged to partake in decision-making on matters that affect them (Kanji and Greenwood, 2001).

Participatory approaches for development fall broadly in two categories: 1) the instrumental approach, where people’s engagement is seen as a means for gaining local support for a programme, to ensure acceptance and adoption, and hence to make it more effective; and 2) the transformative approach, where participation is associated with building capacity, local ownership and empowerment (Cleaver, 1999). These two approaches are associated with diverse tools and techniques (Kanji and Greenwood, 2001), and measure the performance of initiatives on different grounds. While the instrumental approach appears to be closer to the role of participation in traditional PD, the transformative approach compels us to broaden the perspective, and to question the reasons for involving communities in PD projects, and how they may benefit from this in the long term.

This paper focuses on those cases when PD is adopted in a community development perspective, and aims to shed light on how this perspective affects the creation of participatory spaces and the location of the designer and community members within. For this purpose, two PD studies in different socio-cultural settings, located in Mozambique and Romania, are introduced.

**CASE DESCRIPTIONS**

**Romani Voices: PD for Cultural Representation**

*Romani Voices* was a participatory project that aimed to explore the potential of digital technologies in giving voice to minority groups. ‘Voice’ was treated as a multidimensional concept that embodied ideas of empowerment and expansion of agency for pursuing self-designed goals for knowledge production and communication (drawing on Sen, 1999; Tacchi, 2008). The project involved the members of two Roma minority communities in rural Romania, who co-designed and co-developed digital communication artefacts that reflected their collective goals for knowledge production, representation, and communication. Hereafter, we focus on one of these cases, involving the Kalderash Roma community in the village of Munteni, South-Eastern Romania.

**Context**

The Roma in Munteni are part of the Kalderash (or Coppersmiths) group, whose denomination comes from their traditional profession: the production of metal objects, such as spirits-brewing cauldrons, buckets, and pans. The Kalderash in Munteni used to be nomadic until the end of the 1950s, when Communist authorities forcefully settled them (Achim, 2004). Most Roma in Munteni continue to travel from spring to fall, moving further north and west searching for customers for their metal products, even if they have built homes in the village. Metal work is not only a traditional profession, but also the chief source of income for the Roma. Virtually all families in Munteni have at least one coppersmith among their members, whose income is used to support the entire family. It is a profession inherited and transferred for centuries, still alive, despite the professional restructuring caused by modernisation (Sabiescu, 2013). Other sources of income apart from metal work are scrap metal deals, roof painting services, soap making, and other small businesses. The uncertain and fluctuating revenue-making activities reinforce a life pattern based on immediate satisfaction of basic needs (Idem). With respect to its socio-cultural profile, the Roma community can be described as a pure type of Gemeinschaft/Community (Tönnies, 2002): a society characterised by a strong ‘collective self’, where collective goals have primacy over individual ones, and traditional customs and values are binding and unquestioned. Choices in an individual’s life are done to serve one’s family and one’s community. The Roma child is raised in respect of the tradition, and compelled to stand by it from a very early age. The family takes important decisions for their junior members, for instance the choice of profession or of bride/groom. The customs by which all members abide have been transferred and enacted for centuries, and are as strong at present as they were historically. Customs also regulate conduct and appearance according to age and social status. Orality is the predominant means of communication, and many members, especially women, are illiterate or semi-literate (Sabiescu, 2013).

The Roma have traditional leaders referred to as bulibașa. At the time the project was conducted (2010-2012), the bulibașa inherited this role from his father, the elderly bulibașa. In recent years, when the local expert for the Roma was introduced in Romanian administration, the bulibașa in Munteni assumed this role as well. In this role, the bulibașa-mediator represents the Roma interests in the City Hall, and intercedes communication with the Roma (Sabiescu, 2013).

**Methodology**

The project employed a methodological framework based on ethnography and PD. The study lasted for 23 months, and was designed around intensive 1- or 2-week fieldwork and design activities, paced so that a gradual awareness of technology potentials and consequences could be developed in the local community. The first part of the project was exploratory, in which several activities
were devised to create a knowledge pool on three dimensions: 1) the local context, 2) available communication technology options, and 3) possible communication solutions relevant for the community goals. The local context was explored through ethnographic techniques, including interviews, focus groups and observations. Available technological options have been presented to local people through informative sessions and demonstrations. Communication solutions applied to the local context have been explored through content production demos, and the gathering and examination of cultural probes (Sabiescu, 2013). Several intermediary communication solutions (e.g. a community video blog) have been designed and produced to allow people to understand the potential of digital communication, and the consequences of using such solutions, especially for public outreach products. In this phase, it was agreed to build a community website. It took several months for people to develop a collective vision of their own website, which was lastly aimed to “mirror people’s traditional lifestyle, difficult life conditions, and showcase their traditional metal work professions, through authentic testimonials of its members.” (Sabiescu, 2013). The website was to be built through a participatory design approach involving local people, and populated with content produced by members.

Following a family-based content production approach, seven extended local families were subsequently involved in the participatory production of audio-visual content. The local leader recommended six of these families, while one joined later at the behest of the family chief. People used video and photo cameras to produce and gather stories and testimonials on themes ranging from cultural traditions to values, collective concerns and aspirations. Collective screening sessions were organised periodically in which recordings were visualised and commented upon. In this process, the most important community themes were tracked and validated based on collective consensus. Recordings were selected and edited to produce short movies for website publication.

In the last phase, a community website was designed and developed. Open card sorting was used to open the website design sessions. Participants grouped content samples and community themes to define the information architecture. In two subsequent design sessions, participants selected the content to be published, decided on content formats (e.g. stories, testimonials) and mapped it on the information architecture. The main outcome of the project was the community website (www.romanivoices.com). Due to low digital literacy, local people did not manifest an interest to manage the website, and an agreement has been set to keep the website online for three years after project completion.

**RE-ACT: PD for Touristic Communication**

This section describes a PD initiative carried out within the project RE-ACT (Social Representations and Actions for Improvement). RE-ACT was a collaboration project run by the Università della Svizzera italiana (USI Lugano, Switzerland) and the Universidade Eduardo Mondlane (UEM, Mozambique), aiming to investigate how Community Multimedia Centres (CMCs) in Mozambique are perceived by different stakeholders, and consequently to devise activities for improving the range of services offered by CMCs to local communities (Rega et al., 2011). Overall, the RE-ACT project oversaw the development of nine initiatives to improve CMC services, involving CMCs and local communities in different Mozambican provinces (David et al., 2013). The co-design initiative described herein was carried out in the Island of Mozambique, and involved the affiliated CMC and members of the local community.

**Context**

The Island of Mozambique is located in the northeast of Mozambique in the Nampula province, which at present has 42,407 inhabitants, 14,889 of them living on the island (INE, 2007). The island is a well-known tourist destination, and has a rich history, as it was the former capital of Mozambique. A number of NGOs and associations are based on the island, some of which offer basic computer courses to local communities. The CMC involved in the RE-ACT study was founded in 2007, and offers photocopying, typing and scanner facilities, as well as access to multimedia services. While it was initially intended to offer broader computer access, there was no working computer available at the beginning of the RE-ACT project (2011), and typing and email services were done from the laptop of the coordinator (Rega et al., 2011). The CMC also oversees a Community Radio, which broadcasts content in Portuguese and Emakhuwa, the local language (Ibid.). CMC users are mainly local inhabitants and students who need photocopies and email or typing services. At the time of conducting the fieldwork (2011), there were 16 volunteers working for the CMC.

In 1996, UNESCO declared the Island of Mozambique a World Heritage Site (WHS) due to its outstanding cultural value. As ratified by the World Heritage Convention, this called for increased attention to the WHS conservation, protection, as well as to its presentation, communication and creation of public awareness within the local community and the world at large (UNESCO, 1972). In this context, using the CMC resources and the RE-ACT project support, a set of actions were taken to conserve, protect and promote cultural and tourist activities in the Island of Mozambique. The forthcoming sections examine the steps taken for involving local stakeholders in the process of co-designing an ICT solution to promote tourism and cultural activities.

**Methodology**

The activities devised within the RE-ACT project had as general purpose to design and develop ICT solutions with inherent value for the communities where the CMCs were established (David et al., 2013). In the Island of Mozambique, the RE-ACT project provided an opportunity to improve relations between the CMC and the local community, hence contributing to the provision of novel and relevant CMC services. Two main goals were settled: 1) Co-design an ICT solution to communicate the social, cultural, and touristic value of the Island of Mozambique to national and international
tourists and travel agents; and 2) Enable the local CMC to provide a novel range of services, which would create a link between the CMC and the community.

The CMC was entrusted with leading the design activities, overseeing the implementation of the ICT solution, and managing relations with the other local and international stakeholders. The CMC selected key figures to represent each social group of the local community (i.e. housewives, teachers, local business entrepreneurs, local government entities) and mediate relations between the community and the RE-ACT team.

The design of the ICT solution was conducted by means of two co-design workshops. The first workshop was devised to create initial concepts for ICT solutions for each of the nine CMCs and affiliated communities involved in the RE-ACT project. The workshop sessions were programmed to support a co-design process, and included spaces for information sharing, brainstorming, debate, and decision-making. The workshop had 32 participants, including the CMC directors, the RE-ACT team, and a network of people related to the establishment and administration of CMCs in Mozambique. Participants shared ideas and drafted proposals for ICT-supported products and services that could benefit local communities, and capitalise on the social and technical infrastructure of each CMC. In this workshop, it was decided that the Island of Mozambique would benefit from the creation of a website for promoting the social and cultural value of the island to touristic audiences.

The second co-design workshop was held on the island itself. It lasted three days, and had 12 participants, including the CMC staff, representatives of the community (housewives, local entrepreneurs connected to tourism activities, the representative of the island association for tourism and the representative of the fishermen association), local government entities, and the RE-ACT team. This workshop had as goal to present to the local community the improvement action conceived in the first workshop, negotiate its relevance and feasibility, and on this basis proceed to the design of the ICT solution. The community representatives had the power to reject or accept the concept, and further shape it to better fit their needs.

The workshop was divided in three parts. During the first part, the CMC director presented the idea of building a website for promoting the island as a WHS. The local stakeholders brought changes to this concept, arguing that the website should promote only local touristic actors, and exclude international touristic operators. During the second part of the workshop, community representatives suggested that content gathering should be managed by the community and later revised by the RE-ACT team. The RE-ACT team was also asked to mitigate the gap in technology skills by providing staff training to the CMC (online and face-to-face). Initial training in website management was provided to eight of the CMC staff members during the workshop. The third part was dedicated to gathering requirements, drafting a provisional information architecture for the website, and planning the collection of materials for content production. Roles and responsibilities were distributed among stakeholders. The CMC staff was the leading figure, responsible with overseeing the design and implementation of the website. Representatives of the community were to remain in constant contact with the CMC staff and be consulted at key stages during the website implementation. The RE-ACT team was in charge with the website technical implementation and providing technical consultancy.

The website (www.ilhademocambique.org) was received well by the local community and the CMC. The CMC was entrusted with the responsibility to maintain and update the website, while the RE-ACT team remained available for consultancy on technical issues.

DATA ANALYSIS
To understand how the notions of participation embraced in each project shaped the PD approaches adopted, the data available from each case was assessed against reflections from designers involved in each community project. In Romani Voices, data was available from multiple sources including the designer’s observations, interviews, focus groups, and cultural probes gathered at different moments during the project course. In the RE-ACT case, the analysis was done on a data corpus drawn from observations during the design sessions, three-monthly reports submitted by local stakeholders, and interviews with CMC staff and local community members after the website was launched.

Designers involved in each case study were asked to reflect on how they viewed participation before entering the field, and how their views evolved as the project progressed. They identified landmark events and issues that challenged or changed their views, as well as challenging moments in the project, which they associated with different understandings of participation.

DESIGNING FOR PARTICIPATION
The two projects were characterised by genuine commitments to incorporate local forms of participation, and infuse them in the design course. At the same time, designers did not approach communities with no prior expectations. They had embarked in the initiatives with their own views on the role of participation for meeting design objectives. This section highlights how hybrid visions of participation, lying at the convergence between an external and a local point of view, were gradually instantiated in context-specific design approaches. Despite the efforts to “go local”, these spaces were not deprived of antagonism and cultural conflict, and challenged the grounds for a participatory approach.

Designers’ Visions of Participation
From the accounts shared by the designers, local participation was expected to contribute towards either project effectiveness or the empowerment of local stakeholders. In the case of the former, participation was seen as an instrument for designing an artefact that met fully the project goals and the views of the local stakeholders. In the case of the latter, participation was thought to enhance varied attributes or qualities of local
stakeholders, such as knowledge, skills, self-confidence, technical abilities, etc.

A pronounced orientation towards participation as a means for ensuring project effectiveness was evident in the Romani Voices study. Local participation was meant to contribute to building a culturally representative artefact, referring to the quality of an artefact to reflect local ways of knowing and being (Manovich, 2001). At the same time, it was acknowledged that effectiveness was closely connected with empowerment. To participate effectively in the project, people needed to enhance their levels of knowledge, understanding, proactivity, and confidence in providing inputs. At the same time, a key project goal was to cultivate capacity for voice and expression that could potentially manifest in the participants’ future beyond project completion. The Romani Voices designer therefore employed a dual optic, wherefrom participation for effectiveness could not be separated from participation for empowerment, and both depended on developing people’s skills, awareness and confidence.

In the RE-ACT case, participation was seen as a means to empower the local CMC to continue to manage the website and propose other ICT-supported activities for the local community after the project had ended. Building the website was not only a one-time design and development exercise, but also a venture in which the CMC needed to garner the necessary expertise and nurture the required community relations towards creating a long-lasting link.

Local Visions of Participation

The two localities present different, almost opposed ideas of participation: hierarchical models and bounding rules of conduct in the Kalderash Roma community, and democratic ideals of participation in the Island of Mozambique.

The Kalderash Roma, as many other traditional Romani groups, present patriarchal and hierarchic forms of social organisation. Strict rules of conduct define intra-community interaction and communication, with well-defined patterns and taboos based on gender, age and social status. For example, the young do not speak against the elderly in group contexts, and the same goes for women when men are present. These rules also guide communications with people from the outside, especially in cases where interactions have a formal nature, such as the Romani Voices project. The community leader, the bulibașa, acts as mediator and representative of community interests in interactions with outsiders. Some of these rules and patterns were obvious from the first community meetings, while others emerged gradually as the project progressed, fundamentally shaping local participation in the project.

The Mozambican case depicts very different visions of participation, characterised by ideals of equality and shared decision-making. These views are rooted in democratic and participatory values espoused by the culture of the island. They are embraced by island inhabitants, and permeate relations between members as well as relations with ‘outsiders’. In working as a mediator for the community, the CMC confirmed its commitment to these values, and was expected to act transparently and be open to community inputs.

Instantiation in Participatory Design Approaches

The perspectives on participation embraced by designers and local people converged in the creation of distinct patterns of local participation in each case study.

In Romani Voices, designers’ beliefs about the purpose of participation influenced the project macro-structure, tools and techniques, and landmarks in the way the project progressed. This was underpinned in the belief that, in order for participation to be effective, people had to be empowered to contribute, decide, and act in confidence. To meet this goal, the project dedicated significant time to build knowledge and skills before embarking on the actual website design, which was done only in the 16th month of the project. The activities before that time were devised to support knowledge building and familiarise people with the language of digital media and the Internet. The tools and techniques used were adapted to members’ low digital literacy, and favoured hands-on activities, demonstrations, and critical analysis of the digital media artefacts produced.

Local understandings of participation shaped, by contrast, the format of activities, micro-moments in the project course, as well as inclusion and exclusion scenarios. First, they enacted a pattern for decision-making that reflected a hierarchical model. The community leader and representative, the bulibașa, was the most important figure in this respect. In his position of community representative and mediator, he was invested with the power to take decisions over matters of collective concern. Second, local customs regulated who could intervene, speak, and debate in collective sessions. For example, when the bulibașa was present, people would refrain from uttering views that contradicted his position, or would tend to comply. When men were present, women generally kept a low profile, and could become much more proactive when men or elderly people were not around. It should be underlined, however, that these taboos were not impediments to engaging different genders and age groups, but rather required sensitivity to interacting with local people in different group compositions. At times, women may shy away from intervention or training. For example one young woman refused to touch the video camera motivating that she was not able to do this. At the same time, one other local woman became one of the most important, imaginative and hard-working content producers of her own initiative, after learning to use the camera initially entrusted to her husband. Third, local patterns of relatedness and alliances fashioned inclusion and exclusion scenarios, and defined who could be involved in the project and how. The leader generally mediated project meetings and introduced the designer to social circles and extended family clans. Contact with most of these circles continued for the project duration.

In the RE-ACT case, designers viewed participation as a means for empowering the CMC and enhancing its capacity to act as representative of the local community.
through online media in the long term. The participatory strategy was structured along two elements. First, the CMC was entrusted with the role of leader, manager and mediator in all issues that involved the local community. In this process, the RE-ACT team assumed the role of advisor and consultant. Second, special activities were devised to transfer expertise to the CMC for website management. This was done by incorporating training sessions during the second design workshop, and organising further training sessions during the more advanced stages of website development.

Local ideas of participation, valuing democratic decision-making, marked the format of the design sessions. These were characterised by open sharing of information and equal opportunities to give input and make decisions. For instance, during the second co-design workshop, local community representatives had the power to accept, refuse or modify the idea of creating a promotional website. Based on their inputs, the website concept was modified to promote only local businesses, excluding international touristic chains operating on the island.

Challenges in the Local Appropriation of the Design Space
Despite the openness to embrace local notions of participation, both projects were marked by challenges and contestations, some of which indicate tensions between local and external views of participation.

In Romani Voices, the designer deemed people’s participation essential for building a website that they would consider their own. Hierarchical models of decision-making, communication and relatedness at times obstructed this. For instance, people were shy interveners and refrained from putting forward determinate views, driven by lack of confidence in the importance of their inputs, and beliefs that the leader or people higher in social status should be involved. The local leader could decide and intervene in matters where the designer thought broader participation was needed. This aspect was most evident when discussing ethical issues. Since its inception, the project embraced notions of ethics based on full prior informed consent, and devised tools for meeting ethical measures at collective and individual level. Collective research agreements as well as individual consent forms were drafted. However, the leader specified that by signing the collective agreement he implicitly decided on behalf of all the members, therefore there was no need for delivering individual consent forms. Implicit rules also determined who could communicate and give input in specific situations. It took time for the designer to understand that interventions from people were conditioned by who was present in a group meeting.

There were instances, in Romani Voices, when it became apparent that clashes were not only due to ill familiarity with local customs, but were underpinned by fundamentally different visions and epistemologies. One incident betraying such difference occurred during the first website design session. During this session, participants were asked to group content samples (printed on paper and playable as video) to create website categories and tags. After initial difficulty, the designer made some examples, grouping content according to what he considered logical; for instance grouping two local customs videos in the category ‘Traditions’. After two such examples, the local leader grouped five pieces of content, dealing respectively with child education problems, life in the tent, lack of work places, living on the road, and poverty and everyday life. They were all connected, he mentioned, as they were all outcomes and effects of poverty. His vision, rooted in a core community concern, was embraced by the others and was adopted when the final information architecture was defined.

In RE-ACT, the designers’ ideal of participation for empowerment, in which leadership was vested with the CMC, was against democratic notions of inclusion as espoused by the local community. The leading role of the CMC was challenged on several grounds. The number of business entrepreneurs involved, initially 28, was reduced to six. While there were many factors determining this decrease, certain entrepreneurs indicated that their exclusion was a political act. Certain people also felt that the project would have been run more effectively if RE-ACT had managed it, leaving a marginal, mediatory role for the CMC staff. The CMC staff was not initially confident in their ability to maintain the website. Early during the second workshop, one CMC member commented: “Although the CMC staff director and the community want to implement a website we are not sure that we can manage such a platform. Because we don’t have training in website management, only in radio and teaching computers.” Despite training provision, the lack of long-term familiarity with website management platforms undermined the confidence of CMC staff in their ability to oversee the technical aspects of maintenance without the support of the RE-ACT team.

DISCUSSION AND CONCLUSIONS
This paper examines the foundations that underpin ‘designing for participation’ in community contexts. The analysis of both studies brings forth a series of aspects around the promises and limits of this perspective, and points to further directions in developing such an approach. These are discussed below along four lines of argument, namely (i) enacting local notions of participation, (ii) contested spaces of encounter and the reflective designer, (iii) autonomous local actors and power differentials, and (iv) inter- and transdisciplinary dialogues.

Enacting Local Notions of Participation
The analysis of the two cases indicates that the views on participation held by designers and local communities were not only different in substance, but were also focused on different aspects. Designers were primarily concerned with the purpose or role that participation served in the frame of the project or for longer-term community development. Local customs and values, on the other hand, dictated the forms that participation could take: who could be involved and how, how were decisions taken, how was collective consensus achieved. The two perspectives appeared to shape different facets in the creation of participatory spaces. Considerations on the purpose of participation determined the macro-structure
of the projects, and were more influential in dictating the flow and activities. Local customs, on the other hand, shaped the format of participatory sessions, micro-moments in these sessions, and inclusion and exclusion scenarios. While the two studies are not necessarily emblematic for the variety of approaches in community-based PD, we argue that notions of localisation in community-based PD studies should include precise considerations of both the limits and the articulations of the spaces, tools, and processes that are contextualised. In this respect, some important questions can be asked: At what level does/should PD incorporate local views? Can we speak of incorporating local views when local forms of participation are integrated in a design process framed by an external logic? Or should the entire design apparatus be deconstructed and reconstructed around an indigenous logic and a local reference point? These questions reflect debates in anthropology and community-based participatory research, around the tensions between emic (inward) and etic (outsider) perspectives (Guba and Lincoln, 1994). If project activities emulate local customs and ways of being at superficial levels, it is likely that disparities and distortive interpretations will thrive. Bidwell and Hardy (2009) have argued that even when participation is rooted in local ways of expression (e.g. through drama, performance, storytelling), important articulations of the design process, such as the elicitation of requirements, are still being done from a Western-centric perspective, which acts as a distortive interpretive lens.

Working in an indigenous logic is, on the other hand, a challenging task. Theories that support this approach in design have been adopted from several social sciences disciplines. For instance, the notion of placing “an ethnic group at the centre of the inquiry” (Tillman, 2002: 4), or Smith’s concept of “reconstructed sociology”, which positions the sociological inquiry from the standpoint of a group or consciousness situated in a particular time and space (Smith, 1999: 74). Yet, few empirical studies to date have stories, strategies, and ideas to share from the field. Some of these suggest that long-term immersion in the field, enduring partnerships with communities, and effective reciprocal knowledge exchange are essential elements for this purpose (Bidwell et al., 2013; Winschiers-Theophilus et al., 2010). These strategies give the community time and opportunities to develop design thinking by long-term and cyclical design exercises that probe and analyse design ideas coming from both sides (Winschiers-Theophilus et al., 2010, 2013). This long-term engagement is also a means to overcome power differentials and increase the confidence of local community members to engage proactively in the creation or critical assessment of design spaces.

Contested spaces of encounter and the reflective designer
The two cases presented suggest that, despite efforts to embrace local notions of participation, the actual design of participatory spaces is the product of an encounter. The articulation of participatory spaces is therefore often fragmented and limited, in its emergence as a unique outcome of dual visions. While these visions could ideally converge in a meta-space of encounter and dialogue, the two cases and others in the community-based PD literature point to important challenges arising from their design and implementation. Some issues are contingent on the premises of externally initiated projects. Having been proposed from outside the community, these projects raise issues and open questions with respect to local benefits, building local ownership, cultivating agency and considering long-term community development goals. For instance, whose empowerment goals are actually considered in projects that seek specifically to cultivate empowerment, as was the case for the two studies described? Whenever the balance of power inclines towards the external team, paternalistic attitudes can be developed despite good intentions, leading to a reinforcement of patterns of dependency (Freire, 2006). The Romani Voices study is an interesting example of tensions between external visions of empowerment and local customs that valued hierarchy and maintained strict taboos for social interaction and decision-making. Ultimately, the case raises the question as to whether empowerment goals can be actuated in hierarchical settings without affecting local dynamics and traditional ethos. The case does not provide a solution to dealing with such issues, but rather points to the need for increased sensitivity and self-reflection on part of the designer, so that even ideal standards are not taken for granted and proposed as unique solutions.

Other factors of contention in the articulation of participatory spaces reside in deep differences between designers and local people, ranging from epistemologies, meaning and value attribution, to gaps in knowledge and skills, especially technological skills. The meaning of technology itself is likely to be framed from very different visions, fashioned by peculiar patterns of interaction with different kinds of technology. Specific activities can be devised to bridge some of these gaps, for instance hands-on training, informative sessions and demonstrations. Yet, others are deep-seated and may continue to affect the pace and flow of the design continuum, leading to tensions, fragmented understandings and missed steps whose actual roots are not immediately obvious. Time (Winschiers-Theophilus et al., 2010) and dialogue (Sabiescu, 2013) are some of the aspects mentioned in the literature for dealing with such issues. We argue, moreover for the need to cultivate an awareness of intersubjectivity and interconnectedness as the larger canvas for conceiving participation patterns. The community’s shared culture, languages, past traditions and contemporary expressions all affect understandings and forms of participation. At the same time, designers are not neutral figures and bring their own understandings and experiential luggage, which are seldom explicitly dealt with. We therefore argue that for a thorough understanding of the underpinnings of participation, and for skilfully deploying means for designing participatory spaces, there is a need to engage in community-based PD as reflective practitioners (Schön, 1991). The premises for the reflective practitioner/designer have been sketched in some of the most influential writings about the participatory inquiry
paradigm. As argued by Heron and Reason (1997), any conceptual construct is validated by consensus of specific communities and set in a wider experiential context. Critical subjectivity, attending to action with a “critical consciousness” and “self-reflexive attention” (Idem: 282), is necessary for the designer to act while fully aware of the experiential roots and determinants of their own thinking. At the same time, critical subjectivity is to be cultivated in exchanges, shared spaces and dialogues, in which the designer is simultaneously a facilitator and convener. Critical subjectivity thus extends to critical intersubjectivity, using shared experience, dialogue and feedback to engage in action with a critical consciousness of its underlying experiential determinants and limits (Idem: 283).

Autonomous Local Actors and Power Differentials
The Mozambican case is a peculiar instance of PD, as full autonomy was vested with local actors, while the design team served as advisors over management and technical issues. The expectation was that the CMC would assume responsibility and build capacity in the long term. This approach was rooted in a developmental optic, by which local ownership of a project is thought to be positively related with empowerment (Cleaver, 1999) and project sustainability. Design initiatives in which local members are vested with leadership roles have the potential to contribute to community-driven design, where members grow and manage their own information systems and infrastructures without relying on external support (Karasti and Baker, 2008). Successful participatory design initiatives of this kind have been reported in the literature (e.g. Merkel et al., 2004).

Yet, in our study, despite well-intentioned activities for transferring expertise, and the availability of the design team throughout the project, the empowerment goals did not appear to be fully met. The analysis offered some surprising insights in this respect. Several community members were not pleased with how the process was managed, and preferred for the RE-ACT team to direct the project. This indicates that vesting project ownership in the hands of local stakeholders is not necessarily a sure way to success. And as our study indicates, the aspects that should be better managed are not related to transfer of skills and expertise, but rather to power, responsibility, and human relations. Despite good intentions, the RE-ACT project appeared to affect the balance of power between the community and the CMC, and introduce an external power differential that marked their relations. These insights confirm, as suggested by previous studies (e.g. Bidwell and Hardy, 2009), the importance of considering early in the advancement of a PD project how a design intervention is positioned within and may potentially affect local power structures.

Inter- and Transdisciplinary Dialogues
Community-based PD can be said to be fundamentally different from traditional workplace PD in at least two respects: it deals with culture and it deals with development. In community contexts, PD engages a group of people with a common history and an imaginable collective future. The PD project is bound to be affected by how local people think, act, communicate and relate to each other. At the same time, the PD project will also affect some aspects of the local relations and power structures, marginally or fundamentally. In short, PD does not work in a vacuum, and needs to both consider and be accountable for its role along the cultural and developmental continuum within the community. We argue that, just as PD does not work in a vacuum in real community-based projects, there is a need for locating PD practices in inter- and transdisciplinary discourses about culture and development. In the present cases, designers adopted a community development approach and, as evident in their self-reflections, this had an observable effect on how they viewed participatory design practices. Our contention is that community-based PD can use insights, discourses, and even frames from other community-focused disciplines. This may help to address tensions in the early stages of PD, or to explore the implications of PD in its evaluation stages. While some studies in the PD literature actively engage with these disciplines (e.g. Braa, 1996; Puri, 2004), we propose that inter- and transdisciplinary dialogues could become more common and infuse design thinking throughout PD projects.

To contribute to the inter- and transdisciplinary undertakings of PD, and to help transcend its multimodal existence, we may envisage a series of “actionable strategies” as research agendas for (community-based) PD (adapted from Hassan, 2011:456): (1) agree on the intellectual ideals of PD, lending credence to emerging spaces; (2) conceptualise the primary directives (e.g. time, learning, power) in participatory endeavours; (3) construct and develop new theories (e.g. emic/etic and third space design; design for participation); (4) establish disciplinary properties and seek unified solutions to complex design issues; and thus (5) contribute to a discourse for creating new domains of PD, which may offer a unique disciplinary subject matter. It is hoped that these agendas contribute to the transdisciplinary emergence of participatory design, as such deeming it an increasingly influential field. These dialogues and an expanding knowledge base do not preclude advancing a PD initiative that is open, context-responsive, and flexible. They serve, rather, to articulate designers’ position in the field, in the process becoming facilitators for local people to render explicit their own position.

REFERENCES


