

Community Consensus: Design Beyond Participation

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“Umuntu Ngumuntu Ngabantu” Zulu proverb, translated
“A person is a person through other persons”

Dilemmas in Participation

The importance of user involvement in design activities has been widely recognized in efforts to design more usable and acceptable systems. Tools and methods used in some approaches, such as user-centered, interaction, and Participatory Design, shifted the focus to the user; nevertheless, “user involvement” remains a vague concept and a highly varied practice. Value-based approaches have heightened awareness of the need to explicitly redefine who is making the design decisions and to explicate what design processes say about users.¹ However, to date, design discourse has merely scratched the surface in unpacking meanings about participation and the ways these meanings affect design outcomes. We rarely discuss the assumptions inherent in concepts related to being human, whether as an individual or a community member (i.e., participating with others within a community), nor do we articulate how participation and design activities together define the identity of the user/community member as “the designer from within” and “the technologist/researcher/designer” as the “designer from outside” not originating from the community in which the design takes place. In this article, we propose that grappling with meanings about participation is critical to design, and in particular, to cross-cultural design. Societies and groups based on other value systems conceptualize “participation” differently, and this understanding directly affects the intercultural design process.²

Thus, we explore the concept of participation in design from a different viewpoint. We draw on an African philosophy of humanness—“Ubuntu,” as lived through African rural community practices—to re-frame Participatory Design paradigms and methods. We reflect on our own Participatory Design interventions in Southern African communities as we explore the theoretical grounds to draw methodological conclusions for design. We then

1 Steve Harrison, Deborah Tatar, and Phoebe Sengers, “The Three Paradigms of HCI,” in *Proceedings of ACM CHI 2007 Conference on Human Factors in Computing Systems*, New York, USA, 1-21.

2 Heike Winschiers-Theophilus, “Cultural Appropriation of Software Design and Evaluation” in *Handbook of Research on Socio-Technical Design and Social Networking Systems*, B Whitworth and A de Moor, eds., (Hershey, PA: IGI Global, 2009), 699-711.

propose guidelines that might enable technologists/researchers to respond more effectively in developing contextually appropriate and consensual methods in design with communities.

Localizing Design

Many attempts have been made to adapt participatory and user-centered design methods to specific regions by localizing usability measures or incorporating cultural models of people's interpersonal interactions and communicative habits into analytic tools.³ However, our failure to successfully apply user-centered methods, evaluations, or benchmarks in developing regions,⁴ or to assess the efficacy of cross-cultural projects according to "universally valid" *a priori* measures calls for the reframing of relationships between cultural contexts and meaning in design. Various critiques and approaches, emerging over the past 20 years, have motivated a reconsideration of the ways that design activities accommodate the social situation in establishing criteria of success, making decisions, and evaluating.⁵ Harrison et al. applied the term "situated-paradigm" to perspectives that respond to the social context of interactions and the varied non-technological factors that affect design and use.⁶ Situated paradigms, such as, value-sensitive, user-experience, critical, and Participatory Design, treat interactions of all types as a form of meaning-making in which activities, artifacts, and their context—at all levels—are mutually defining. Accounting for the many differences in approaches to participation found in designing health information systems in South Africa, Mozambique, and India, Puri et al. conclude: "There is no single algorithmic best practice regarding participatory design in information systems which is applicable to all situations."⁷

Situated paradigms favor multiple interpretations over single, objective descriptions and are thus amenable to the varying "cultural logics" that designers, users, and other stakeholders apply in undertaking and making sense of design activities.⁸ Tacchi and Watkins propose that local participation must involve local interpretation to respond to the socio-economic, cultural, and political context that shapes users' behavior and actions.⁹ However, identifying and applying methods that ensure local interpretations of participation and enable participants to appropriate the design process poses challenges.¹⁰ Winschiers demonstrated that common Participatory Design methods based on Western communication structures (e.g., future workshops and brainstorming) were incompatible with Namibian user groups' social habits.¹¹ More compatible methods involve respecting the implicit and explicit rules that govern local practices of participation; however, designers from outside, are often unaware of these rules, or they find that the rules conflict with fundamental tenants in the development agenda. Consider, for example, that lower ranking members in

- 3 Elisa Del Galdo and Jacob Nielsen, *International User Interfaces* (New York: John Wiley & Sons, 1996).
- 4 Garry Marsden, "Toward Empowered Design," *Computer* 41, no. 6 (2008): 42-46.
- 5 Batya Friedman, ed., *Human Values and the Design of Computer Technology* (New York: Cambridge University Press, 1997).
- 6 Harrison et al., "The Three Paradigms of HCI" (2007), 1-21.
- 7 Satish Puri, Elaine Byrne, Jose Nhampossa and Zubeeda Quraishi, "Contextuality of Participation in IS Design: A Developing Country Perspective" (Participatory Design Conference, 2004), 42-52.
- 8 Nicola Bidwell, Thomas Reitmaier, Garry Marsden, and Susan Hansen, "Designing with Mobile Digital Storytelling in Rural Africa" (CHI, 2010) 1593-1602.
- 9 Jerry Tacchi and Jo Ann Watkins, "Participatory Research and Creative Engagement with ICTs" (ACM Sensys, 2007).
- 10 Heike Winschiers-Theophilus, "Cultural Appropriation" (2009), 699-711.
- 11 Heike Winschiers-Theophilus, "The Challenges of Participatory Design in an Intercultural Context: Designing for Usability in Namibia" (Participatory Design Conference, 2006).

hierarchical societies are not expected to express opinions publicly or to non-peers, even though they are not formally prohibited from doing so. Such expectations seem unjust to those of us acculturated in egalitarian systems; indeed, we usually associate democracy with the protocols and methods required for local uptake, ownership, and domestication of information communication technologies (ICTs). Paradoxically, approaches that authorize particular stances on democracy are counter to genuine participation, as an all-inclusive paradigm, whereby all participants contribute toward a decision.

To localize participation, we must develop “sensitivity toward new types of network relations among people, the diverse motivations of people to participate, the subtle balance of values and benefits involved in collaborative endeavors, and the inherent power relations between participants.”¹²

Grounding Community Consensus Theoretically

We start by describing elements of a theoretical framework that serves to ground a different way of thinking about participation. We focus on how dialogue shapes meanings of community and personhood, how practices of information exchange establish understandings about the relationship between people and information, and how through learning people can “make and remake themselves.”¹³

Ubuntu and Dialogue

Indigenist paradigms,¹⁴ which recognize relationships between the nature of participation and knowledge practices, motivate us to draw on local epistemologies in negotiating conflicts between culturally specific systems of participation.¹⁵ Sensitivity to epistemologies in sub-Saharan Africa means appreciating that the way of life in rural communities associates with the paradigm that “a person is a person through other people.” This sense of connectedness is encompassed in the concept of “Ubuntu,” which variously means “humanity,” “humanness,” or “humaneness.” It is related to words, aphorisms, and proverbs in many other African languages. Mbiti, one of the first writers in English on African philosophy, never used the term Ubuntu but explains that a cardinal point in the African view of humanity involves understanding that “I am, because we are; and since we are, therefore I am.”¹⁶ By including all participants’ voices in building consensus, Ubuntu reflects a critical discourse. It introduces dimensions that Western discourses do not often associate with community—including a temporality beyond an individual’s own life and accountability to ancestors and descendants. As Mbiti explains: “In traditional life, the individual does not and cannot exist alone except corporately. He owes his existence to other people, including those of past generations

12 Margot Brereton and Jacob Buur, “New Challenges for Design Participation in the Era of Ubiquitous Computing,” *Co Design* 4, no. 2 (2008): 101-13.

13 Paulo Freire, *Pedagogy of Indignation* (Boulder, CO: Paradigm, 2004).

14 Karen Martin summarizes Indigenist research as research that is culturally safe and respectful and that emphasizes the emancipatory imperative of resistance to support political integrity and privilege Indigenous voices. In her thesis, Martin extends earlier principles for Indigenist research by 1) recognizing that Indigenous people’s worldviews, knowledge and realities are distinctive and vital to their existence and survival; 2) honoring the social mores of Indigenous people as essential processes through which they live, learn and situate themselves as Aboriginal people “in their own lands and when in the lands of other Aboriginal people;” 3) emphasizing social, historical and political contexts which shape Indigenous people’s experiences, lives, positions and futures; 4) privileging the voices, experiences and lives of Aboriginal people and Aboriginal lands. Martin, K. (2003). *Ways of Knowing, Ways of Being and Ways of Doing: A Theoretical Framework and Methods for Indigenous and Indigenist Research*, 4-5.

15 Karen Martin, “Ways of Knowing, Ways of Being and Ways of Doing: A Theoretical Framework and Methods for Indigenous Research and Indigenist Research: Voicing Dissent,” *New Talents 21C: Next Generation Journal of Australian Studies* 76 (2003): 203-13.

16 John S. Mbiti, *African Religions and Philosophy* 2nd ed. Harlow (UK: Heinemann, 1990): 141.

and his contemporaries. He is simply part of the whole. The community must therefore make, create, or produce the individual; for the individual depends on the corporate group."¹⁷

Inclusive decision-making and participatory meetings are key traditions in rural African communities. Francophone Africans use the term *palaver* to describe how such traditions efficiently institutionalize "communicative action."¹⁸ For instance, Congolese theologian Bénézet Bujo explains: "In seeking a solution for a problem, they share experiences, refer to the entire history of the clan community, and consider the interests of both the living and the dead. The procedure can be time-consuming as it is carried on until consensus is achieved."¹⁹

To illustrate the implications of Ubuntu for design, we now explore the relative identities of the community members and the designers from outside participating in design and introduce some methodological consequences. Despite the misuse and overuse of this powerful and loaded concept,²⁰ time and again we encounter people in rural African communities explicating the need to act together "as one person" generally and in relation to ICT projects; and time and again, we observe local expectations about "participation" in daily life.²¹ To respond effectively, we must re-focus methods formalized in Participatory Design so that we emphasize facilitation of groups that have already established their existence as a whole to create a design output, rather than focusing on bringing individuals together for the purpose of undertaking a joint design activity. This approach, of course, re-ignites questions about the appropriate role of the designer from outside, in relation to already established communities during the joint design activities. To follow the Ubuntu principle, we need to identify ourselves (as designers from outside) as part of a wider community that encompasses designers from inside and outside who together derive a communal existence, and we need to acknowledge that it is within this communal existence that "I am" a designer.

A promising avenue for refining participatory approaches and enabling designers to perform identities within a communal existence distinguishes "dialogue" from "discussion." Bohm proposes that dialogue does not aim to convince others about an opinion, assert that particular concepts or solutions are the sole truth, or sum up or merge prior ideas, but is a means to create jointly new concepts and solutions by suspending judgment and respecting all contributions.²² Such "conversations" absorb multiple perspectives and diverse aspects of settings beyond the spoken; that is, *indexicality* gives salience to actions and utterances and, reflexively, shares and augments context in creating shared meaning.²³ To generate new meanings about participation together, community outsiders must enter a lengthy process of social grounding.²⁴

17 Ibid., 106.

18 Bénézet Bujo, "Is There a Specific African Ethic?" in *African Ethics: An Anthology of Comparative and Applied Ethics*, Munyaradzi Felix Murove, ed., (Scottsville, South Africa: University of Kwazulu-Natal Press, 2009), 122.

19 Ibid., 122.

20 Mluleki Munyaka and Mokgethi Motlhabi, "Ubuntu and Its Socio-Moral Significance" in *African Ethics: An Anthology of Comparative and Applied Ethics*, Munyaradzi Felix Murove, ed., (Scottsville, South Africa: University of Kwazulu-Natal Press, 1990), 64.

21 Nicola J Bidwell, "Ubuntu in the Network: Humanness in Social Capital in Rural Africa," *Interactions* 17, no. 2 (2010): 68-71.

22 David Bohm, *On Dialogue* (London, Great Britain: Routledge, 2007).

23 Nicola J. Bidwell, "Anchoring Design to Rural Ways of Doing and Saying," *Interact* 1, T. Gross et al., eds., LNCS 5726 (2009): 686-99.

24 Cecilia Merkel, Lu Xiao, Umer Farooq, Craig Ganoë, Roderick Lee, John Carroll and Mary Rosson, "Participatory Design in Community Computing Contexts: Tales from the Field," (Participatory Design Conference, 2004), 1-10.

Disregarding the importance, underestimating the complexity of these encounters, and curtailing the process of redefining the respective identities of designers form outside and inside contributes substantially to design failures. Generating new meanings about participation through dialogue diffracts the logics about participation that we gained in our own communities of practice. Indeed, such dialogue sensitizes us to our value-laden assumptions about participant roles and acts in participating. Because such assumptions arbitrate how we align our understandings of design with those of the community, we consider reflexive accounts about our own and community members' modes of participation to be integral to the evolving design product.

Values and Logics about Personhood in Information Transfer

Bidwell uses the lens of *Ubuntu* to illuminate the values and logics that shape participation in social networks in Africa and their link to concepts about personhood and identity.²⁵ Practices of information exchange reproduce values about personhood, as well as implicit theories about the relationship between people and information. The values embedded in Western modes of information exchange, such as "efficiency" and individuals' freedom to express (including expression of information) are shaped by media traditions, including writing systems and "secondary orality." In contrast, African rural communities often preserve strong oral traditions, which intertwine with certain values and logics in their local knowledge systems. For instance, speakers frequently personalize and control access to information according to their knowledge about the listener, and this approach contributes to constructing both the speaker's and listener's identities.²⁶

Recognizing how power relations between systems of information exchange can undermine certain values and logics can be extremely difficult. For instance, attributing the cognitive abilities of detachment and objectivity to written literacy arises within particular perspectives on modernity, "progress," and writing systems.²⁷ Often we adopt a "deficit approach" to differences and, by using methods to compensate for "illiteracies" of some sort, unwittingly deemphasize those logics and skills in which we ourselves are illiterate. Consider how accounts about cognitive abilities tune designing for oral users;²⁸ simultaneously, they neglect relations between verbal explanations, specific literacy, or schooling practices and disregard the acute linguistic awareness of multilingual people, who are many in Africa.²⁹ They thus marginalize the work people do in face-to-face communication. Imposing systems that neglect core features of information transmission can undermine the literacies people apply in participation and consequently can displace local knowledge traditions in developing ICTs.

- 25 Nicola J. Bidwell, *Ubuntu*, See note 21, 68-71.
- 26 Nicola J. Bidwell, Heike Winschiers-Theophilus, Gereon Koch Kapuire, and Matthias Rehm, "Pushing Personhood into Place: Situating Media in the Transfer of Rural Knowledge in Africa," *International Journal of Human-Computer Studies* (Special Issue on Locative Media) 69, no. 10 (2011): 618-31, K. Cheverst and K. Willis, eds.
- 27 See Sylvia Scribner and Michael Cole, *The Psychology of Literacy* (Cambridge, MA: Harvard University Press, 1981), and Russell Kaschula, ed., *African Oral Literature: Functions in Contemporary Contexts* (South Africa: New Africa Books, 2001).
- 28 Jahanzeb Sherwani, Nosheen Ali, Carolyn Penstein Rose, and Roni Rosenfeld, "Orality-Grounded HCID: Understanding the Oral User," *Information Technologies and Development* 5, no. 4 (2009): 37-49.
- 29 See Glynda Hull and Katherine Schultz, "Literacy and Learning Out of School: A Review of Theory and Research," *Review of Educational Research* 71 (2001): 575-611 and Ruth Finnegan, *The Oral and Beyond: Doing Things with Words in Africa* (Oxford/Chicago: James Currey/University of Chicago Press, 2007).

Scholarship of African orality includes linguistic and “extralinguistic” acts, such as gesture, movement, crafts, and performance.³⁰ Rather than eventuating in print or a technological artifact, information is continuously recreated, accreted, and distributed across groups. As Sherwani et al. remark, when a community emphasizes oral transfer, all information “is traceable to a person.”³¹ The design implications of local values associated with and expressed by the personal pedigree attached to information are nicely illustrated by our experience in evaluating a sophisticated decision support system, based on ecological models about southern African farming. The system neglected the way that farmers draw on their lived familiarity with people in assessing the relevance and integrity of information; the farmers participating in the evaluation were uninterested in the system’s logical reasoning or the decision paths displayed by our initial interface and instead wanted information about people they knew who had followed the proposed decision.³² Sometimes we try to reconcile different approaches to information exchange by emphasizing similarities at the expense of noticing differences. Consider storytelling, for example: Many African oral traditions use stories to transfer information, whether in everyday speech (e.g., the idioms and proverbs that inundate rural vernaculars of isiXhosa) or in bounded activities (e.g., story-telling around the evening fire). We widely accept the importance of storytelling to design practice, and telling stories are core to many Participatory Design methods and user-centered design tools.³³ Such approaches reproduce particular customs of storytelling, conceptions about stories, and narrative conventions (e.g., chronology and linearity), which are shaped by Western media traditions. However, African storytelling traditions have their own narrative forms and aural, visual, and kinaesthetic qualities.³⁴ Further, our views of where a story “comes from” and who is permitted to voice it are cultural; for instance, a Western constructivist view—that authors control narrative and listeners determine meaning—is in stark contrast to cultures where stories are “owned” by ancestors or the land or where deep familiarity between speakers and listeners and their respective social relations can limit multiple meanings.³⁵

Mutual Learning in Dialogue

A commitment to generate new meanings about participation through dialogue, and to revise norms about participants’ roles involve envisioning and realizing an environment conducive to mutual learning among designers from outside and local community members. Freire concedes that dismantling the dichotomy between the people who know and those who do not (yet) know requires the marginalized to be active in their own emancipation.³⁶

30 Finnegan, *The Oral and Beyond*.

31 Sherwani et al., “Orality-Grounded HCID,” 37-49.

32 Heike Winschiers-Theophilus, Jens Fendler, Dave Joubert, Ibo Zimmermann, Colin Stanley, and Sebastian Mukumbira, “A Bush Encroachment Decision Support System’s Metamorphosis,” (OZCHI, 2008): 287-90.

33 Nicola Bidwell et al., “Designing with Mobile Digital Storytelling,” 1593-1602.

34 For narrative forms, see Finnegan, *The Oral and Beyond*; For aural, visual, and kinesthetic qualities, see Kaschula, *African Oral Literature*.

35 Nicola Bidwell et al., “Pushing Personhood into Place,” 618-27.

36 Paulo Freire, *Pedagogy of Indignation*.

The literature reports different approaches to alleviating conceptual and practical gulfs between designers from outside and users in Africa. For example, Walker et al. suggest this approach: “[T]rain local people to take on design roles and self-report their progress with the technology as participant ethnography.”³⁷ Explicitly acknowledging local knowledge by recognizing community members as fellow researchers reveals insights into local understandings about, and use of, technology that would not otherwise emerge. Co-generating techniques for gathering data is particularly enriching because local appropriations of methods, which established disciplines would regard as lacking rigor, reveal how communities construct the objects and relations of enquiry.³⁸

On the other hand, literacy on ICTs is a prerequisite for involvement in design.³⁹ Designers often simultaneously assume the roles of both facilitators and change agents, which is inherently problematic. To create common understandings about ICT that are compatible with a community’s priorities, activities must permit stakeholders to explore options safely and to make choices about adopting outside knowledge or altering current practices gradually.⁴⁰ Many design disciplines widely accept that people understand issues and options by creating and testing possible solutions and reflecting on outcomes.⁴¹ In addition, prototypes have proven particularly useful in catalyzing discussions, eliciting observations of use, and envisioning future use.⁴² Blake and Tucker suggest adapting methods from agile and evolutionary software engineering under the umbrella of action research, as a paradigm rather than a methodology.⁴³ Action research encompasses cycles of intervention and reflection. Each design iteration reveals to user groups both the possibilities and the malleability of ICTs, as well as to designers the many factors that situate their use.⁴⁴ Designers are technology interventionists who materialize their understanding of aspects of local context in prototypes, and user groups are respondents who materialize their ideas about the possibilities for ICT by using, or not using, prototypes. Throughout, the phases of action and critical reflection on action lead to a shared understanding of design itself and a continuous transformation of the environment for participation.⁴⁵

From Expert to Apprentice

To illustrate and elaborate on some of the challenges and nuances of the theoretical considerations outlined in the previous section, we draw upon our experiences with one particular African rural community project in Namibia. In 2008, we established a research agenda to appropriately translate an African indigenous knowledge system into technology. We sought to support the knowledge that rural communities have produced, over generations, despite

- 37 Kevin Walker, Joshua Underwood, Tim Waema, Lynne Dunckley, Jose Abdelnour-Nocera, Rosemary Luckin, Cecilia Oyugi, and Souleymane Camara, “A Resource Kit for Participatory Socio-Technical Design in Rural Africa,” (CHI, 2008): 2709-14.
- 38 Nicola Bidwell et al., “Pushing Personhood into Place,” 618-27.
- 39 Andre Maunder, Garry Marsden, Dominic Gruijters, and Edwin Blake, “Designing Interactive Systems for the Developing World: Reflection on User-Centred Design,” in *Proceedings IEEE/ACM International Conference on Information and Communication Technologies and Development (ICTD, 2007)*: 321-28.
- 40 Walker et al., “A Resource Kit,” 2709-14.
- 41 Geraldine Fitzpatrick, *The Locales Framework: Understanding and Designing for the Wicked Problems*, Computer Supported Cooperative Work 1, 17 [2-3]: 91-96 (Dordrecht, The Netherlands: Kluwer Academic Publishers, 2003).
- 42 Margot Brereton and Jacob Buur, “New Challenges for Design Participation,” 101-13.
- 43 Edwin Blake and William Tucker, “Socially Aware Software Engineering for the Developing World,” (IST Africa, 2006).
- 44 Edwin Blake, “Software Engineering in Developing Communities,” in *CHASE’10: Proceedings of the 33rd International Conference Software Engineering Workshop on Cooperative and Human Aspects of Software Engineering*, New York ACM, (2010) 1-4.
- 45 Edwin Blake, “How to Provide Useful ICT When Called Upon,” *Interactions* 13, no. 5 (2006): 20-21.

ongoing interruptions to information transfer caused by urban-rural migration and modernization. Our major design challenge is to reconcile data structures, retrieval mechanisms, and user interfaces with local African orality. The full involvement of rural community members is indispensable because outsiders to these communities of practice can never fully comprehend the knowledge system. However, such involvement poses numerous hurdles, including linguistic gulfs, differing agendas and roles of individual participants, the dynamics of managing and controlling design processes, trust and acceptance, and the type of interactions. To start to address these hurdles, we sought a common framework that might be embodied in the principle of Ubuntu.⁴⁶

Participant Identities

Our design team consisted of about 20 community members of the Herero tribe at two sites in eastern Namibia and eight designers of different ages and genders: four who were based in Namibia's capital, two who were based elsewhere in southern Africa, and two based in Europe. One team member, both a designer and a member of one of the rural communities, had well-established, trusting, and respectful relationships with wise elders who reside in the villages. Our team's composition meant we performed and embodied distinct identities, situated in different research contexts.

In the capital, the senior designers were the main actors in the project's planning, processes and reporting. The Namibian-based designers triggered the original goal of generating an indigenous knowledge management system and invited other senior and student designers to join them. We, the senior designers, readily admitted that, in our entrapment within our own conceptualization of knowledge and ICT solutions, we could not design for the community, but instead acted as enablers. Thus, the designer who originated from the village served as the main actor - assuming a distinct third role in interactions by translating conversations with and between community members - all of which were conducted in Otji Herero. He thus performed two identities in the context of our research and the rural community. Being young, relative to the village elders, he was expected to listen actively but not to interrogate or initiate actions. At the same time, he provided the necessary linguistic and cultural translations, such that translation did not disturb the flow of interactions but delicately balanced the design activities. Younger and/or female designers, regardless of their experience, adopted the host communities' customarily passive roles in interactions; and this demeanor reinforced the influence of the designer from the village in interactions with community members.

46 Heike Winschiers-Theophilus, Nicola J Bidwell, Edwin Blake, Shilumbe Chivuno-Kuria, and Gereon Koch Kapuire, "Being Participated: A Community Approach," in *Proceedings of the Participatory Design Conference 2010. Participation: The Challenge*, (Sydney, Australia: ACM, 2010): 1-10.

Our behavior in the villages thus reinforced the performance of customary identities. For example, to engage with and abide by local protocol, we consulted with and properly informed the elder, who was familiar with leading dialogue and consensus-decisions, about proposed participatory sessions before informing other community members. We remain uncertain about whether community members recognized their ownership and active role in designing the system. Before this project began, many had not used a cell phone or computer, and their initial comments suggested that they did not relate their traditional knowledge to economic benefit. Rather, they felt flattered by our consultation, emphasized the importance of their knowledge to their identity, and expressed hopes that recordings of daily life and practices might raise wider awareness of their need for basic services (e.g., water and electricity) and ICT. We compensated community members—with food hampers—for their availability and participation in the research activities and conversations, hoping to express in a locally meaningful way how we valued their participation and knowledge. However, we did so fully aware that such behaviors express power relations and might inherently privilege certain concepts about intellectual property over a local logic of communal knowledge.

Oscillation in Design Processes Control

Throughout our repeated stays in the villages, community members accommodated project activities within their busy daily schedules. Initially, we found ourselves anxiously wondering whether our intended activities, which needed to happen primarily in daylight, would happen. Over time, we learned to accept that events rarely happened according to our plans but that adjusting to the community's rhythms was essential for activities to absorb vital local values about dialogue. That is, we learned to appreciate that the social focus of villagers' unhurried activities are a purposeful part of community practice.

During each visit, we oscillated through different modes of participation. The designers from outside sometimes participated in community-initiated activities, which either occurred routinely or were intended to guide us; at other times, community members participated in our activities, including contextual interviews, technology probes, prototype evaluations, and reflections.⁴⁷ The non-planned, community-driven activities were deemed equally important in the overall design exercise, complementing our ethnography.⁴⁸ Experiencing community practices led us to better assess the adequacy of design methods and decisions, and participating in community-driven activities contributed to a framework within which to build consensus. As designers, we recognized that such an approach starts to address the power relations that can

47 Heike Winschiers-Theophilus et al., "Being Participated," 1-10.

48 Nicola Bidwell, Heike Winschiers-Theophilus, Gereon Koch Kapuire, and Shilumbe Chivuno-Kuria, "Situated Interactions Between Audiovisual Media and African Herbal Lore," *Personal and Ubiquitous Computing* 15, no. 6 (2011): 609-27.

intimidate and inhibit participants.⁴⁹ However, this approach also suggests the need to balance expectations about processes and outcomes. The slow production of concrete outcomes can frustrate both designers and community members. Designers do not always recognize the role of community-initiated activities on design outcomes and, especially if they are unfamiliar with rural Africa, may feel they waste valuable time in the field. In addition, our deliberate suspension of ideas, intended to avoid pre-empting local design suggestions, can confuse community members who expect a finalized system.

Guidelines for Community Design

Our lived experience in this project, together with our ongoing situated research elsewhere in rural Africa, yields various issues that require further research and discourse in striving for a more consensual approach to design.

Being Participated

Designing with rural communities built on intricate kin relations and established over many generations differs radically from designing for organizations or individuals. Any interaction takes place within a network of people whose links are not necessarily transparent to outsiders. We conduct all usability evaluations and design sessions in rural communities with group members who have been assigned by those communities. This approach has proven very effective in eliciting spontaneous and informative discussions about design, which would not have occurred in an individual setting. By drawing on the concepts of Ubuntu, we place the people's interactions and interrelations at the heart of each encounter. We devote significantly more time to speaking and listening and undertake many activities, intended to establish and sustain collaboration that would be branded irrelevant by classical design strategists. When community members outnumber designers from outside and are in their own familiar environment, they often lead the participatory interactions. Their continuous deviation from the schedules, processes, and aims of the activities we plan contributes to our sense of "*being participated*." Initially, this sensation of losing design process control is uncomfortable; however, as we have reflected on the interactions, we feel a sense of release about the community's empowerment in controlling the process.⁵⁰

Situated Redefinition

We have referred to differences in the values and logics of Western and African societies that influence concepts of participation in design. In most sub-Saharan rural communities, "participation" is well-established, and collaboration incorporated in everyday

49 Sherwani et al., "Orality-Grounded HCID."

50 Heike Winschiers-Theophilus et al., "Being Participated," 9.

activities.⁵¹ Thus, facilitating participation is not about cultivating a composite of disparate individuals but about contributing to an environment where interactions can influence design. To make appropriate participation possible, we need to observe, reflect on, and respond to local values because every design situation presents unique flavors of participants' identities, viewpoints, agendas, and roles within their community. Thus, mutual learning informs the design *processso* that common concepts, such as "participation," are defined within the design context.

Changing Roles

Participation in influencing the design process means that both designers and community members influence the design outcome. However, the former risk, consciously or unconsciously monopolizing the process, and subverting local norms in their choice of methods and modelling techniques. To locate the design process in the community, designers must develop a particular sensitivity to their own bias and embrace a change of role from meta-participants (e.g., facilitator) to a participant; they must adjust to appropriate joint interactions and translate these adjustments into implementations. In such contexts, designing by consensus redefines the nature of the common roles in Participatory Design, requiring oscillation between roles as facilitators, interventionists, observers and interpreters.

Conclusion

We have illustrated how local values and logics shape participation in design within a specific rural community context and have drawn upon the philosophy of Ubuntu to explicate a new meaning for participation. Local practices in many sub-Saharan African regions express the values and logics of Ubuntu, which suggests we can generalize some lessons for other projects in rural African communities. Further, we propose that embracing Ubuntu into design thinking enhances more meaningful participation in contexts in which the socio-economic access to technological innovations and the epistemological circumstances of designers and user groups differ acutely.

Our position here is a partial answer to colleagues working with indigenous groups or across cultures who assert that "Participatory Design does not work!" A key aspect of our role as designers lies in acknowledging that, as part of a community of participants, we must embrace the experience of "being participated." Working in rural Africa is replete with opportunities for such experiences—opportunities that enable us to revise our concepts about participation and contribute our revisions to our share of final products. Rather than actively facilitating participation according to our own definitions of participation, we are

51 Nicola J. Bidwell et al., "Pushing Personhood into Place," 618-31.

responsible for integrating the communities' participatory practices so that participants are able to appropriate the design process. This perspective assumes a commitment to mutual learning. On the one hand, we need to acquire sufficient local knowledge to contribute methods that respect communication protocols, and, on the other hand, communities need sufficient exposure to technology to contribute actively to detailed design decisions. Continuous reflection on actions and technology interventions by all participants throughout the design process helps to re-align methods and decisions and shape the design process itself, such that together we transform the environment and resituate participation.

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