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## Exploring the Use of Mobile Technology in Qualitative Inquiry in Africa

### Abstract

In this article I explore how mobile phones may facilitate greater access to participants and higher participation rates in qualitative inquiry in Africa. Qualitative researchers face a number of ethical and procedural challenges when collecting data in the field. But with the explosion of mobile phone usage, many of these obstacles to data collection may be ameliorated, facilitating greater access to participants, to data, and to important findings. I use the example of a research study on the connection between development and higher education at two public universities in Kenya to illustrate how mobile phones played an unexpected role in data collection. Finally, I discuss preliminary recommendations for using the mobile phone to contend with the myriad challenges to rigorous qualitative research in Africa.

### Keywords

Mobile Technology, Qualitative Research, Africa

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## Exploring the Use of Mobile Technology in Qualitative Inquiry in Africa

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*In this article I explore how mobile phones may facilitate greater access to participants and higher participation rates in qualitative inquiry in Africa. Qualitative researchers face a number of ethical and procedural challenges when collecting data in the field. But with the explosion of mobile phone usage, many of these obstacles to data collection may be ameliorated, facilitating greater access to participants, to data, and to important findings. I use the example of a research study on the connection between development and higher education at two public universities in Kenya to illustrate how mobile phones played an unexpected role in data collection. Finally, I discuss preliminary recommendations for using the mobile phone to contend with the myriad challenges to rigorous qualitative research in Africa. Keywords: Mobile Technology, Qualitative Research, Africa*

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Qualitative researchers are frequently turning to technology to conduct, analyze, and disseminate inquiry. Note taking, observation, voice recording, video capture, and mind mapping applications have become *de rigueur* in fieldwork. Indeed, the ubiquitous presence, use, and acceptability of mobile phones in many societies have facilitated this and may have important implications for how we conduct qualitative research. However, discussions of these new technologies are researcher-user centered and do not take into consideration the use of technology by the participant, nor how this use can be exploited during the inquiry process. According to Geser (2004), “cell phones can be instrumentalized for preserving diffuse, pervasive roles which demand that the incumbent is available almost all the time, because such encompassing availability can be upheld even at times individuals are highly mobile and involved in other social or private activities” (p. 15). Frequently, these “activities” entail political, social, and cultural conditions that make data collection difficult, and sometimes dangerous – for researchers and our participants. Mobile technology may alleviate this jeopardy by mediating between participant and researcher and afford entrée into participants’ complex experiences and insights.

Nowhere has mobile technology become so embedded as in Africa; where, despite a persistent lack of infrastructure, political and economic instability, and other maladies, the mobile phone, in terms of access and use, has experienced unparalleled growth. “Over the past five years the continent’s mobile phone use has increased at an annual rate of 65 percent - twice the global average” (Massachusetts Institute of Technology [MIT], 2009, ¶ 1). This development has significant implications for the qualitative fieldwork process, which “locates the observer in the world” (Denzin & Lincoln, 2005, p. 3) and is often fraught with challenges, particularly in developing nations. Qualitative researchers often describe these obstacles as problems of participant attrition (due to health issues, migration, displacement, etc.; Crossley, 2008), participant literacy (Vuillaimy, 1990), language (Coe, 2001), access (Stephens, 1990), cross-cultural misunderstandings (Buzzard, 1990; Chilisa, 2005; Coe, 2001), bias (Womersley, Maw, & Swartz, 2011), and concerns with safety and prolonged field experience (Fife, 1997; Lewin, 1990), among others. Yet, with the explosion of mobile phone usage, many of these impediments to data collection may be ameliorated, facilitating greater access to participants, to data, and to important findings.

This article explores how mobile phones facilitate qualitative inquiry in Africa, using examples drawn from a qualitative case study I conducted in Kenya (Johnson & Hirt, 2011). To guide this exploration, I ask, how can we, as researchers, make use of mobile phone technology and its social integration to reach participants and to involve them in research in order to fully engage in inquiry in Africa? In order to address this, I briefly review the use of qualitative methods in research and elucidate some of the challenges researchers face in the field in Africa. Next, I highlight the social, political, and cultural change attributed to mobile phones in Sub-Saharan Africa in order to demonstrate the potential of this technology. Using examples from my own research study in Kenya to illustrate how mobile phones played an unexpected role in sampling, I then suggest ways in which mobile phone use may extend beyond sampling to contend with procedural and ethical challenges inherent to the qualitative research process.

### **Methodological Challenges to Qualitative Research in Africa**

In the effort to illuminate the participant meanings around phenomena, qualitative researchers continue to face many methodological obstacles when conducting projects in developing countries. Below I will review recent literature on conducting qualitative research in the applied sciences in Sub-Saharan Africa.<sup>1</sup> With this brief review, I hope to generate common themes across fields that are engaged in qualitative research in Africa and to underscore the need for innovation. These thematic challenges most commonly emerge as ethical considerations and research procedures.

### **Ethical Considerations**

Research is unavoidably rife with dialectics: the researcher/researched; emic/etic; and subjectivity/objectivity. These oppositions may be further exacerbated when doing research in developing contexts, as power relations are inherent to the process, and a certain *other*-ing of the research participant occurs. Consequently, the most nascent methodological concern in the literature on qualitative research in Africa tends to emerge as ethical considerations.

Moletsane, Mitchell, de Lange, Stuart, Buthelezi, and Taylor (2009), in their use of visual methodologies for understanding poverty and violence in KwaZulu-Natal, uncover methodological and ethical concerns about how participants may be stigmatized by their participation in the research. In a community-based research project, the researchers had women engage in collaborative video-making on HIV. Moletsane et al. note that the women's participation in the researcher process may be construed as dissent in their patriarchal community, or viewed as contrary to taboos governing relationships. Gotschi, Delve, and Freyer (2009), in their work on social capital with farmer groups in Mozambique, demonstrated that the use of technology as a technique in data collection might breed concerns regarding social capital and gender power relations. When working with farmers in Mozambique, the researchers found themselves challenged by the lack of women's involvement in participatory photography due predominantly to gender relations in the community. In both studies, concerns regarding the use of visual methods of data collection and its impact on gender relations emerge as salient ethical concerns, as the female gaze is lost or challenged and power imbalances further exacerbated.

The language that researchers use in both data collection and the reporting of results has ethical inferences. Hinson Shope (2006) attest that researchers, when working in cross-culture contexts, neglect to realize that language is "not a neutral research tool" (p. 167) and

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<sup>1</sup> This is not to suggest, however, that Africa is monolithic; qualitative research, by its very nature, is context specific – the unit of analysis spans the individual, a group, a village, a policy/set of policies, or a nation/state.

that working in English has implications for power relations between researchers and participants, as it does in their research in South Africa. “[T]here are more than 1000 languages spoken on the African continent and...very little scholarly work gets published in local languages” (Britz, Lor, Coetzee, & Bester, 2006, p. 34). This has the effect of linguistically privileging the academic discourse of the West.

Qualitative researchers are trained to appreciate the value-laden nature of inquiry, meaning that the researcher is aware of and influenced by his or her values and cultural context but must take steps to mitigate the effect of these values on the research (Whitt, 1991). Yet Preston (1997) stresses that research imbued with particular paradigmatic assertions, such as participatory action research, which naturally denotes constructs such as disadvantage, empowerment, and well-being, are ideas “usually externally derived” (p. 50). Therefore action that stems from these understandings of the purpose of research must involve participants in the construction and evaluation in order to be relevant to the context of the research.

Moreover, there are paradigmatic concerns regarding research that is consistently situated in the researcher’s own narrative, particularly when viewing findings through a theoretical lens such as feminism.

Those things that had been understandable in theoretical terms back home lost their clarity when I began to listen to rural women’s standpoint; their myriad experiences could not be squeezed into a procrustean bed of Western concepts without distorting the complexity of their lives. (Hinson Shope, 2006, p. 171)

These constructs infringe upon the narrative of the participant; yet as researchers we are trained to use theory to shape the way we construct our data collection protocols and the lens through which we analyze our data.

## **Research Procedures**

Challenges in methods frequently revolve around data collection procedures. Burrell (2009) highlights the fact that our understanding of what constitutes a field site has challenged many researchers. Fieldwork, and the identification of field site, may be confronted by geography, heterogeneity in culture, limits on time and money, and fleeting encounters with participants. In their work on participatory photography, Gotschi et al. (2009) found their research efforts were challenged by participant unfamiliarity with technology (i.e., the use of disposable cameras). Additionally, they discovered that their participants were not comfortable with certain elicitation methods used in the data collection process, such as requests for reflection or to talk about certain concepts in interviews (i.e., social capital or group membership; p. 292). Moletsane et al. (2009) identify limited English ability as a challenge to the research process – however, in their study, participants readily agreed to translate for one another and the researchers.

Further, misunderstandings on the part of the researcher present as major methodological and epistemological challenges to the research process, particularly assertions that participant values and beliefs act as barriers to research (Chilisa, 2005). Hinson Shope (2006) adds that researchers often misunderstand the unit of analysis when doing research in Africa. From a Eurocentric perspective, researchers may essentialize the individual, when group membership is of more importance in the research context.

Others stress that researchers should view the data collection methods as collaborative. In their recommendation for mobile (moving) interviews, Brown and Durrheim (2009) emphasize that researchers fail to treat the interview process as interactive; instead it tends to

be directional and anti-dialogical. Literature suggests that when collecting data it is important that participants be included in the process of negotiating concepts like race, class, and gender (Saville Young, 2011), as these issues are frequently central to qualitative research. Yet, Kombo (2009) discovers, in her research on Rwandan women and their experiences with genocide, that participants often suffer from “research fatigue” by having to repeatedly discuss their perceptions with researchers from outside of their context.

It is with these issues in mind – qualitative ethical considerations and the procedural challenges of data collection – that I consider the growth of mobile phone technology in Africa; my experience with mobile phones in Kenya; and, lastly, the potential of mobile phones for transforming qualitative research.

### **Mobile Technology in Africa**

Mobile technology has swept the continent of Africa like wildfire, growing in acquisition, subscription, and technological advancement over the past decade. The International Telecommunications Union (ITU) reports that mobile phone subscriptions increased from 12.4 per 100 people in 2005 to 45.2 per 100 in 2010 (ITU, 2010). Consequently, access to and use of mobile phone technology has had considerable implications for cultural, social, and economic development. “It has been speculated that this tool for communication is not only changing society’s ability to access information, but also changing how society lives” (Fortunati, 2002, as cited in La Rue, Mitchell, Terhorst, & Karimi, 2008, p. 364). A 2010 Gallup survey reports that countries like South Africa show mobile phone ownership as high as 84% among adults (Tortora & Rheault, 2011). Mobile phone usage has become a significant and embedded aspect of personal, professional, and political life in many parts of Africa.

Over the past decade, researchers have uncovered a variety of ways in which mobile phone usage has impacted social interaction in Africa. Research has illuminated the use of “beeping” in Rwandan culture where the users call and hang up after a set of rings in which a relational or pre-negotiated code is communicated (Donner, 2008). Fieldwork in Tanzania uncovered the integration of mobile technology into business culture and the development of trust among users (Molony, 2006). In Malawi, HIV/AIDS patients can receive daily text messages reminding them to take their retroviral medication (Aker & Mbiti, 2010). Fishermen in Ghana have used the mobile phone to gain information on buyers and markets, as well as for locating shoals of fish nearby (Salia, Nsowah-Nuamuh, & Steel, 2011). These studies demonstrate that mobile technology is being employed to improve the quality of users’ lives.

Moreover, during elections, many Africans used their phones to document election fraud and intimidation at the polls (Auletta, 2011). Researchers have found mobile users in Nigeria participating politically by turning off their handsets to protest perceived exploitation by the telecom companies (Obadare, 2006). Kenyans used their phones to document civil unrest. When the country erupted into violence in 2007, “a handful of Nairobi code writers created Ushahidi (meaning testimony in Swahili), a data-mapping platform to collate and locate reports of unrest sent in by the public via text message, email and social media” (Perry, 2011, ¶ 5). As the complexity of the social problem increases, so does the sophistication with which African users exploit the mobile phone and its capabilities.

There has been a growing connection between education and mobile usage on the continent, particularly in Kenya. Development projects have supported teacher use of SMS in Kenya (Farrell & Isaacs, 2007) and connecting teachers to online curriculum through mobile phones in Mali (Davis, 2010). The World Bank, in a 2007 report on ICT and education in Africa, highlighted major areas in which ICT has implications for higher education (Farrell & Isaacs, 2007). According to the report, 61 different ICT-related teacher training and

professional development programs, projects, and courses have been identified in Africa (Farrell & Isaacs, 2007, p. 20). No doubt that number has grown considerably since 2007.

### **Mobile Phones in Kenya**

Kenya, an East African nation, is an exemplar of mobile phone use on the continent. Telecom policy reform and the liberalization of the telecommunications sector in Kenya have led to a boom in the availability of mobile technology. The government, in conjunction with development partners, such as China and Europe, and private industry, is quickly laying fiber optic cable to support Internet and other communications technologies (ITU, 2011). Competition among mobile providers has increased, causing tariffs to reduce and subsequently leading to increased market capture of new subscribers in previously under-penetrated markets in Kenya (such as in rural areas; ITU, 2011).

Kenyans are the fastest growing group of mobile technology users on the continent. The World Bank (2011) reports that mobile phone subscriptions have increased from 20 (per 100 people) in 2006 to 49 (per 100 people) by 2009 in Kenya. In Kenya, 56% of adults have a mobile phone (Tortora & Rheault, 2011). According to the MIT's Program for Developmental Entrepreneurship:

In June of 1999, Kenya had 15,000 mobile phone subscribers. By the end of 2004 the country had 3.4 million subscribers, and in the last 18 months this number has grown to over 5.6 million, despite the fact that only 200,000 Kenyan households have electricity. (2009, ¶ 1)

Moreover, 92% of Kenyans use their mobile phone to go online (Perry, 2011). In fact, the ITU named Kenya one of the most dynamic countries due to significant progress in ICT diffusion and uptake, as well as citing Kenya as Africa's fastest growing Internet market (ITU, 2011).

Postsecondary institutions are playing an important role in this technological revolution. A recent BBC report states that the University of Nairobi in Kenya is an incubator for mobile software applications development for the mobile money movement (transfer funds, pay bills, and receive money through mobile phones (Cossou, 2011). Universities have engaged in public-private partnerships with Safaricom and Vodaphone, the Kenyan government, and development agencies to develop mobile technologies that would extend financial services to those without access to banking (Hughes & Lonie, 2007). These developments have led to Kenya being referred to as the "Silicone Savannah" (Perry, 2011).

The inexorable trajectory of mobile phone technology in Kenya provides the backdrop for my own study. In the following section I engage in a discussion of my own qualitative research in Kenya, briefly touching upon the nature of that research endeavor. The focus will be on my use of mobile phones in the sampling process, how I observed my participants using phones, and how they spoke about mobile technology in our interviews.

### **Qualitative Inquiry in Kenya**

The research that inspired this current article was designed to explore how university stakeholders at public universities in Kenya perceived the intersection between higher education and development. I was interested in my participants' understanding of development and how they saw their institutions' role in that process. This entailed eliciting their perspectives, feelings, definitions, and ways of knowing about the university, their country, and the development process. I employed qualitative strategies of inquiry because, as

Harriss (2002) notes, and I discovered, they are complementary to cross-disciplinary research in education and international development. Specifically, I conducted a case study of two large, preeminent public universities in Kenya – Kenya National University (KNU) and University of Kenya (UK), which are pseudonyms for the actual institutions (Johnson & Hirt, 2011).

Data were generated through fieldwork undertaken in October of 2008. I employed open-ended interviewing as the primary data collection technique, supplemented by the collection of documents and field notes. I traveled to Kenya and conducted semi-structured, in-depth interviews with individual faculty and staff members at KNU and UK. The documents we collected from participants included policy documents and institutional reports, as well as media accounts of KNU and UK programs and activities. These materials were used to complement data elicited from interviews. Supplementary materials included field notes, a journal about my experiences in the data collection process, analytic memos/insights, and an audit trail of decisions made in the field. Data gathered during this study have been used to inform the current piece.

### **Process, People, & Participation: On Mobile Phones in the Qualitative Research Process**

Beyond the standard data collection processes described above, yet another tool emerged as vital to conducting this study: the mobile phone. In the following section, I will illustrate how using the phone increased participation in the Kenya study. I use excerpts from the data collected to describe the process of participant selection and to underscore the effectiveness of this technique. The description of the participants in this study will illuminate some of the characteristics that may have consequences for mobile use in research endeavors in Africa.

#### **Process: Sampling Participants**

The research conducted in Kenya was the result of a previous project undertaken in Accra, Ghana, at the Association of African Universities (AAU; Johnson, Hirt, & Hoba, 2011). In that project, I collected material culture, such as meeting minutes and conference programs, which contained participant names and institutional affiliations. This occasionally included contact information such as email addresses. During this previous project, I discovered that AAU Secretariat staff and institutional members were heavily involved in spearheading information and communication technology initiatives on the continent, often through policy entrepreneurship (Johnson et al., 2011). Therefore, I concluded that potential participants, particularly at institutions involved in AAU activities, would use email and other information technologies.

Working from this assumption, I identified a limited number of respondents to interview initially. I contacted them via email (a week to two weeks prior to my trip to Nairobi) and traded correspondence, providing an overview of my study and an informed consent document. Five ( $n=5$ ) participants responded positively (however, only three participated in the study) and provided their phone numbers, with the request that I call them once in Kenya. Upon my arrival, I purchased a cell phone in Nairobi and contacted these participants to set up interviews, at locations of their choosing.

Because this study focused on higher education and development, it was important to identify participants positioned within the higher education context in Kenya and knowledgeable about university mission. Therefore, the major criterion for participant selection was employment at one of the two public institutions identified for this study. On the ground in Kenya, I employed snowball sampling to identify additional participants. This



sampling technique, figuratively, entails rolling a small snowball and, as it picks up speed, it picks up more snow, subsequently growing in size (Patton, 1991). Typically, a researcher will start with a small sample, as I did, and then seek more participants through interactions with that initial group (Patton, 2002).

In total, 18 interviews took place with faculty, staff and administrators, each interview lasting 30 minutes to one hour. Each respondent had some college education, and 12 held a masters or more advanced degree. Seventeen respondents were Kenyan. Eight participants were men and 10 were women.

### **People: Answering the Phone**

I quickly realized that I was onto something extraordinary; specifically, when I began making phone calls. Each and every time I called a participant or a potential participant to discuss my study and to set up a meeting the phone was answered. On average, the phone rang four times before an individual answered (recorded in the research journal). Upon answering, I would greet the participant, explain that I was referred to them by their friend/colleague, and then explain the purpose of my call. I would ask if they were willing to meet, then inquire about a date/time/location that was most convenient for them. Participants preferred to be met in their offices or homes, with one agreeing to meet me at my hotel. Furthermore, every individual I called agreed to participate. A total of 18 individuals participated in the study. While many participants were late (sometimes an hour or more), there was no attrition.

I noted in my research journal that I was “shocked” by this turn of events. In the United States, phone calls often go unanswered. In fact, I would argue, it is a culturally norm in my own context to ignore a phone call, particularly if you are unfamiliar with the incoming phone number. Research in the US shows that caller ID is a major influencing factor in call handling decisions; individuals tend to ignore calls that are of unknown content (Grandhi, Schuler, & Jones, 2009). This is the lens through which I observed and interpreted my experiences in Kenya. I anticipated that I would be leaving messages and playing phone tag. I often worried that I had not scheduled enough time for my fieldwork and fretted over the resources I had expended to make this research project happen. Consequently, I experienced a degree of dissonance to have participants so readily answer the phone, particularly an incoming number with which they lacked familiarity.

I observed that participants gave priority to phone calls during the face-to-face interview process, chiefly the men. Of the nine male participants in my study, only two participants did not receive a phone call during our interview. The remaining seven male participants took at least one phone call during our interview (either land line or cell phone). Only one of the women received a phone call during our interview, but the remaining women experienced other types of interruptions, such as students, secretaries, or research associates coming in during the interview process. It is not the purpose of this article to make generalizations about gender and cell phone usage; however, the marked difference in use during face-to-face interactions does seem to align with recent survey data that suggests mobile users in Africa are urban, educated men (Tortora & Rheault, 2011).

### **Participation: Talking about Phones**

Participants also talked *about* mobile phones. Twelve out of the 18 participants mentioned information and communication technology (ICT), and seven mentioned mobile phones in particular. One participant discussed at length the role that ICT played in exacerbating the political crisis in Kenya, focusing on radio stations and mobile phones in the

spread of misinformation. He opined, “Cell phones have made it so that... within three minutes, information can go across the whole continent to every corner.” Another participant discussed university projects in local communities that exploited mobile phones:

The settlement is an informal settlement. So they don't have the infrastructure and the people are poor. And even the market—there is an open-air market—so it's not structured. So those kinds of people are trapped in a vicious cycle. So we wanted to kind of take to them and introduce to them the use of Information Communication Technology [e.g., mobile phones] so they can tap into better paying markets and they can actually make their work easier, including advertisement, to include both the volume of business but also the profit margins.

Yet another mentioned how mobile technology was increasing connectedness among people, transforming the way space was conceived of. He stated, “Every other person has a cell phone in the village. If not more than two. I wonder this place should not be called a village anymore, it should be called a town.” These data were elicited without direct questioning regarding technology. Instead data associated with mobile phones emerged when discussing development, demonstrating that conceivably the participants acknowledged an entrenched connection between the two.

My participants not only used their phones in ways unfamiliar to me, but also spoke about phones and other ICTs. They noted the important role that mobile phones would have in development; with one participant stating that mobile phones are “powerful instruments of change.” Another participant spoke of how ICT was transforming the university, driving programs in entrepreneurial activities and appropriate technologies.

Yet, a young participant in my study cautioned:

It's just that I really love to be careful sometimes, because maybe we may end up being dustbins or recycle bins for the technologies because sometimes I look at what we have as technology, I look at what we have on the internet or maybe really what's on the ground on the Western side. It looks the way ahead that we are getting technology that is really outdated or something.

Alzouma (2005) expands upon this concern with the assertion that,

[si]nce the end of colonialism, nearly every decade has been marked by the celebration of a new technology as a means for overcoming the long-lasting problems faced by developing countries. The era of tractors was replaced by the era of broadcasting and television, and the latter by the era of new information and communication technologies (ICTs). (p. 340)

Despite the growth in usage of mobile phones and its impact on societies, Africa is still far from bridging the digital divide, as “it is not only a gap between countries, it is also a gap inside countries, with disparities existing between rural and urban settings, men and women, and the educated and uneducated” (p. 343). My own research provides only limited insight into this as I interviewed only educated individuals in an urban setting. From this perspective, mobile technology, and other ICTs, may not be the development panacea it is often made out to be.

In each case, the participant noted that mobile phones are changing the social, political, and economic landscape of Kenya, and of Africa. Therefore, it would behoove us, as

researchers, to consider the role mobile phones may play in the research process, potentially addressing the procedural and ethical challenges outlined earlier.

### **Mobile Phones and Qualitative Inquiry in Africa**

As access continues to grow, mobile phones will have profound implications for the way that we conduct research on the continent and contend with the challenges of conducting qualitative research. While my own research demonstrated that the mobile phone had a practical application in sampling, I would like to extend the analysis to include some preliminary thoughts on how researchers may use mobile technology to address research challenges.

#### **Ethical Considerations**

Amina Mama (2007), South African scholar and professor of gender studies, maintains that, as researchers interested in Africa, we must preserve a professional agency and integrity “by making choices that are not just technical or rational, but also moral and political” (p. 6). To this end, we must consider the impact of the decisions we make in the research process and those epistemologies and assumptions that guide us on the topic, the context, and the individual.

As noted by Moletsane et al. (2009) stigmatization emerges as a concern in the research process in Africa, as individuals may be exposed to threats, isolation, and assault due to their participation in qualitative research studies. This may be alleviated as mobile communication allows for a degree of anonymity, both to the researcher and the researched. The researcher and the participant need not be in proximity to one another for data collection to occur. Telephone and email interviewing are increasingly accepted, participant-centered practices in qualitative research that do not require direct face to face interaction with the participant (James, 2007; Trier-Bieniek, 2012). Using cloud computing, such as software-as-a-service platforms like Gmail, researchers could engage participants in email interviews that allow participants time to control and reflect upon their own narratives. James and Busher (2006) warn though that email may obfuscate some of the non-verbal aspects of the interview process as well as inhibit the process of trust-building. There is also no way to ensure that the individual with whom the researcher is engaging is the intended individual (2006). However in instances of stigmatization the anonymity of the participant in a mobile exchange may increase trust in the researcher and research process. This may encourage increased participation in qualitative studies that require interviewing and that address sensitive social, cultural, or political problems.

Literacy and language become less of a concern when researchers ask participants to respond using pre-determined codes, such as emoticons or beeping, allowing for increased participation among often marginalized populations. Mehdi et al. (2011), in a recent study on semi-literate and non-literate mobile phone users in Kenya, South Africa, and India, explore the use of non-text interfaces in improving mobile phone use. In a study in South Africa, researchers discovered the use of SMS video streaming as an effective way to communicate with the hearing impaired (who also tend to be functionally illiterate, beyond the use of sign language; Hoorn & Venter, 2011). As these applications and design recommendations take hold, researchers may be able to include individuals and communities heretofore overlooked by the inquiry process due to communication difficulties.

Researchers, when using the mobile phone as a data collection instrument, may also have greater access to women and to those with low socio-economic status (SES). As research shows, ownership of, access to, and/or use of mobile technology is increasing among women

and the poor (Scott, McKemyey, & Batchelor, 2004). “It is important to consider constraints facing women in access to and use of mobile phones, but preliminary evidence indicates that the phone appears to be a gender neutral tool (Scott et al., 2004, p. 1). Moreover, Western assumptions regarding ownership may be upset through the use of mobile technology. James and Versteeg (2007) report:

[In] the African context, the Western idea that only those who own a phone can use one is not at all accurate, since the phenomenon of “sharing” is of particular importance. Many phone owners in poor communities share their mobile phones. In Botswana for instance, household surveys reveal that 62.1% of the phone owners share their phones with their family, 43.8% with their friends and 20% share their phone also with their neighbours. (p. 120)

The neutrality and the nature of possession of such a device may attend, to a degree, to ethical considerations a researcher may have regarding SES and gender in the qualitative research process in Africa. This phenomenon could also assist in procedural concerns, such as increased sample size, as participants share the phone with potential participants.

## Procedures

Ethical considerations and procedural problems tend to overlap in qualitative research, as my discussion above elucidates. For example, the sharing phenomenon has implications for sample size as noted, but it may also address concerns regarding the essentialization of the individual in the research context. When the phone is seen as community property, a researcher using it as a data collection tool may be able to develop qualitative group activities with the phone, such as organizing focus group discussions using the speaker function, group photos with the phone, or have group text messaging to a researcher prompt. Sharing may sublimate the individual focus and elevate the group; where data is descriptive of group values, beliefs, and stories, commensurate with cultural norms.

Due to the ubiquity of mobile phones in Africa, participants may be more accustomed to this technology versus other apparatuses. Gotschi et al. (2009) discovered that the success of their research with rural farmers in Mozambique was challenged by their participants’ lack of familiarity with cameras. But a study of South African secondary students in a predominantly Black, urban township reported that 97% of respondents used a mobile phone (Kruetzer, 2009). The students used the phone to communicate, for entertainment purposes, to view websites, and to send text messages, demonstrating knowledge of the phone’s capabilities. Additionally, “[r]espondents without a personally owned handset were found to be equally active cell phone users” (Kruetzer, 2009, p. 54). These findings indicate that researchers may find employing the mobile phone effortless with Africa’s youth.

Burrell (2009) discusses the challenges in locating and bounding the field in the research process in Africa. She asks an important question, “[i]f sociocultural processes are taking place across vast terrain, how do we, as researchers, cope with the inevitable limits in time and funding” (p. 187)? The use of mobile technology as a data collection tool may alleviate the more base concerns of time and resources...items in short scholarly supply. This is not to say that researchers don’t need to be *on the ground*, so to speak, nor that the technology should take the place of researcher experience with the research context. Mabweazara (2010), in his research on ICT use by Zimbabwean journalists, concedes that “the inability to make independent observations leaves researchers confined to analysing content availed to them by their research subjects, thus making it difficult for them to make

independent analytic deductions as the research process unfolds” (p. 662). This may relegate the researcher to a covert observer and lead to misinterpretations (Mabweazara, 2010).

Yet it may also allow researchers to appreciate the complexity of the field, engendering a more nuanced view as more individuals in Africa share phones, requiring movement between homes, towns, and other social spaces. Jones, Drury, and McBeath (2011) use GPS coordinates generated by hand-held devices, using simple user interfaces, to explore the fear of crime and “studentification” in two case studies. In each case GPS logs were examined in tandem with qualitative interview data to construct a more complete picture of the participants’ experiences with the phenomena. As the sophistication of mobile devices grow in Africa, the situatedness of both the researcher and participants may be redefined as phone use evolves and transforms social and cultural interactions.

### Conclusion

While cloud computing and mobile applications may help the tech savvy researcher, access to and use of the mobile phone may have even greater importance for the participants of qualitative research, engendering trust, access, and voice. In my own research in Kenya, the mobile phone enabled fluid interaction with participants, increased sample size, and inspired new ways of thinking about how phones may be used to manage both the ethical and procedural concerns inherent to research on the continent. However, this is not to say that my experience with the mobile phone in Kenya may be the same for a researcher in rural Mozambique. Issues of infrastructure, government policies on ICT, and affordability (among others) will no doubt shape the use of mobile technology in other parts of the continent. Africa is not a monolith and conditions change from town to town, city to city, nation to nation, region to region. It is this complexity and vastness that in fact encourages qualitative inquiry.

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