

## **South African Perspectives on Mobile Phones: Challenging the Optimistic Narrative of Mobiles for Development**

CHENXING HAN

Graduate Theological Union  
Institute of Buddhist Studies

South Africa, with its high mobile phone penetration rate and persistent social inequalities, is the target of many “mobiles for development” (M4D) initiatives. By comparing South Africans’ stories about mobile phones with the optimistic narrative presented by mobile enthusiasts, this study offers a counterbalance to M4D’s claims that mobile phones incontrovertibly enhance economic situations, improve health outcomes, and guarantee safety. Drawing upon a diverse collection of 79 interviews with NGO employees and beneficiaries in Cape Town, this study problematizes the mobile phone success story espoused by M4D enthusiasts and advocates for a reimagining and retelling of the mobiles for development story that fully considers the negative and neutral aspects of technology for development projects.

### **The Bright Face of Mobile Phones for Development (M4D)**

In the late 1990s, the Internet was touted as ICT4D’s (information and communication technologies for development) solution to bridging the digital divide.<sup>1</sup> Unfortunately, Internet initiatives in developing countries were largely unsustainable, and Web access remained far from universal, leading critics to lament that “the so-called ‘digital divide’ between rich and poor countries remained unchanged between 2002 and 2007” (“World’s Poor,” 2009). In spite of these setbacks, the concept of digital technologies for developmental goals has not lost its cachet, though ICT4D now has a new media darling:

---

Chenxing Han: chan@ses.gtu.edu

Date submitted: 2011–10–28

<sup>1</sup> The term “digital divide” was first coined by Lloyd Morrisett, former president at the Markel Foundation, to describe the gap between those with ready access to ICT technologies and the knowledge they provide access to and those without such access or skills (Hoffman & Novak, 2000, p. 246). This divide can be witnessed within a country due to socioeconomic, geographical, educational, attitudinal, and generational factors, but in international development discourse it typically refers to the gap between the developed and underdeveloped world in the uptake of ICTs (Cullen, 2001, p. 311).

M4D mobile phones. As the title of a 2008 *Economist* article about the potential for mobile phones to “leapfrog” the Internet in developing countries puts it, “the meek shall inherit the Web.”

Project Masiluleke, a 2008 initiative to disseminate HIV/AIDS information to South Africans through SMS text messaging, is one such M4D project.<sup>2</sup> The project’s website advertises a “path-breaking effort that harnesses the power of mobile technology to address one of the world’s gravest public health crises,” an “initiative [that] will leverage the ubiquity of mobile devices in South Africa to help fight the country’s crippling HIV/AIDS and TB epidemics.”<sup>3</sup> The project received widespread acclaim from mainstream media sources, including BBC, CNN, *National Geographic* magazine, and PBS.<sup>4</sup> The astounding proliferation of cell phones in recent years, especially in developing countries, makes M4D a topic of study that holds interest for academics and significance for people’s lives. South Africa offers a particularly intriguing and relevant case study, as the country of 47.9 million boasts the highest mobile penetration on the African continent—84.3% in 2007, comparable to the United States’ 86.2% in the same year.<sup>5,6</sup> At the same time, high levels of poverty, inequality, and HIV/AIDS mark South Africa as a developing country.<sup>7</sup>

“Mobile enthusiasts” present the cell phone as a driver of development, particularly for disadvantaged populations: “The ubiquitous mobile phone in the hands of millions of Africans working as the primary tool for communication is fast becoming the core technology for supporting social change and the empowerment of citizens” (Ekine, 2009, para. 1). Others have gone as far as to claim that “mobiles

---

<sup>2</sup> SMS, or short message system, is the communications protocol that allows short text messages, typically up to 160 characters, to be sent between mobile phones.

<sup>3</sup> [http://www.poptech.org/project\\_m](http://www.poptech.org/project_m)

<sup>4</sup> One commentator on the project heralded the mobile phone as “a new weapon [to] fight against HIV/AIDS” and summarily dismissed concern that these SMS messages might be regarded as “health spam” (Bhatia, 2008).

<sup>5</sup> South Africa population estimate from <http://www.southafrica.info/about/people/population.htm>. The 84.3% figure, from the Africa Mobile Factbook 2008, represents 39.5 million subscribers. Only Nigeria has a higher total number of subscribers in Africa, though this represents a lower percentage of the total population. One should note that the term “subscribers” may be a problematic one, as the bulk of South African users are pay-as-you-go users rather than contract subscribers. Cell phone statistics vary by source: Statistics South Africa estimated the penetration rate at 72.9% for 2007, while the International Telecommunication Union put it at 83.3% for the same year. Research and Markets put 2008 mobile penetration rates at 98.1%, projecting 113.1% penetration by 2010. These statistics are, unfortunately, tricky to interpret and may obscure more than they reveal. For instance, wealthy South Africans who own multiple cell phones may skew the numbers; on the other hand, if statistics consider the number of active SIM cards rather than handsets, it is possible that poorer individuals may skew the statistics, as they often use a number of different SIM cards to take advantage of promotions by different providers. Shared phone use also remains unaccounted for in the numbers.

<sup>6</sup> U.S. statistics are from the Heartland Institute, a national nonprofit research and education organization. I offer a comparison to the United States to reflect the primary audience of this article, not to use U.S. mobile phone penetration rates as a benchmark.

<sup>7</sup> Marais, Esser, Godwin, Rabie and Cotton (2008) discuss poverty and HIV in South Africa, while Demombynes and Özler (2005) examine crime and local inequality, to cite just two examples.

phones constitute the basis for one of the greatest expansions of human capabilities in known history, and in a remarkably short timeframe" (Smith, Spence, & Rashid, 2011, p. 77). Much of the interdisciplinary scholarly literature related to M4D echoes this technocentric focus and "mobile impact" logic. This optimistic and largely monolithic discourse views the mobile phone as an autonomous technology acting upon disempowered people to improve their lives and provide them with an "enhanced sense of wellbeing" (Scott, Batchelor, Ridley, & Jorgensen, 2004, p. 1). As a recent assessment of mobile communications in the Global South puts it, "There is often a line of thought suggesting that adoption of new technologies will only have positive effects. The mobile phone is no exception" (Ling & Horst, 2011, p. 367). The voices of people who purportedly benefit from M4D projects are often absent from this discussion of mobile phones for development. Furthermore, M4D studies tend to focus on the positive impacts of mobile phones, evading the question of potential negative consequences of their use.

While some recent scholarship offers a degree of nuance in their assessments of mobile phones,<sup>8</sup> most studies continue to serve a M4D agenda.<sup>9</sup> A review of 43 studies on mobile phones and financial services in developing countries found that research assessing needs or requirements at the micro level of individual users is rare—yet the same study is explicitly aimed toward "contributing towards the mobiles-in-development research agenda" (Duncombe & Boateng, 2009, p. 1237). This agenda constrains critical voices, precluding the possibility that mobile phones may not be the best intervention. An article entitled "The Mobile 'Revolution' in Africa: Rhetoric or Reality?" illustrates the limiting effects of this agenda. The authors note that "superlatives" and "unrestrained terms" are used to describe the mobile phone revolution in Africa (Etzo & Collender, 2010, p. 659). However, the potentially radical implications of this rhetoric are, disappointingly, curtailed in their conclusion:

We have argued that, in addition to more research, a close collaboration between different interests (including state, mobile companies, banks, and donors) is necessary to improve the socio-economic potential of mobile telephony. New models, such as the public-private partnership which kickstarted [*sic*] M-Pesa, should be further developed. When imagination, technology, and efficient regulation combine they can be harnessed effectively to ensure mobile telephony makes even more significant advances in Africa. (p. 668)

Here, the benefits of mobile phones are a foregone conclusion, bolstering the very pro-M4D agenda that the authors at first appear to critique. The current study challenges the rhetoric of mobile enthusiasts by engaging the voices of people who purportedly benefit from the M4D agenda.

---

<sup>8</sup> For example, Porter et al. (2012) note the possibilities for mobile phones to facilitate crime and underage sex, and Alozie, Akpan-Obong, and Foster (2011) warn that cell phones are neither certifiably revolutionary, nor a panacea for political development.

<sup>9</sup> For example, Goodman (2005) compares mobile phone use in rural Tanzania and South Africa, concluding that the phones strengthen social capital. Though apparently sociological in focus, the report was written for Vodafone and uncritically utilizes "mobile impact" logic.

### Methodology

My research method is inspired by a number of anthropologists who call for more anthropological research in NGOs and anthropologically informed ethnographic studies of science and technology.<sup>10</sup> This present study is grounded in ethnographic data collected over a six-week period in the summer of 2008. During this time, I conducted 79 semistructured one-on-one interviews at 15 NGOs in Cape Town, South Africa, and surrounding areas. All interviews were audio-recorded with the consent of my informants. The number of interviews conducted at each NGO ranged from 1 to 13.<sup>11</sup> I also conducted informal one-on-one and small group interviews at three additional NGOs in Cape Town suburbs.

The semi-structured interview questions were designed to elicit open-ended responses regarding three broad, sometimes overlapping categories:<sup>12</sup>

1. Descriptions of personal cell phone use patterns and preferences
2. Perceptions about the societal use of cell phones
3. Opinions on potential ways for cell phones to benefit NGOs and community members.

The first category of questions focused on the individual level, the second category of questions addressed the community/societal level, and the third category of questions looked for broader concepts applicable beyond the first two levels—for example, ideas about cell phones that extended their relevancy to NGOs and disadvantaged communities throughout South Africa, or even on a global scale. Informants were encouraged to draw upon their personal experiences to answer questions and to ask for clarification when needed. Research questions focused primarily on what Gitau, Marsden, and Donner (2010) call first- and second-wave M4D (that is, basic voice calls and SMS); a growing body of literature examines the emerging third wave of mobile Internet.<sup>13</sup> Nonetheless, the perspectives presented in this study continue to be relevant, as “voice and SMS remain king in Africa” (Donovan & Donner, 2010). Though each informant was asked the same set of questions, interview lengths varied greatly: some were as short as

---

<sup>10</sup> See Fischer (2007) and Markowitz (2001). As one anthropologist puts it,

[Technology] is a mystifying force of the first order, and it is rivaled only by language in its potential (to paraphrase Geertz) for suspending us in webs of significance that we ourselves create. That is why it is an appropriate—indeed crucial—subject for anthropological study. (Pfaffenberger, 1988, p. 250)

<sup>11</sup> This wide range was unevenly distributed: At nine of the 15 NGOs, I conducted only one to three interviews; at the other six NGOs, I conducted seven to 13 interviews. The number of visits to each NGO ranged from one to four. The amount of time I spent at each NGO varied greatly. On one extreme, I was able to visit three NGOs three or four times each and visit for 2 days with an NGO located about 100 km from Cape Town. On the other extreme, I was able to interview only one staff member for an hour at two of the NGOs I visited.

<sup>12</sup> See Appendix A for a detailed outline of interview questions.

<sup>13</sup> See, for example, Donner and Gitau (2009).

20 minutes, others as long as 1.5 hours.<sup>14</sup> I interviewed men and women in a variety of job positions—NGO directors, community health workers, cleaners, and others—from a multitude of racial/ethnic backgrounds, including Xhosa, Zulu, Colored, British, Zimbabwean, and Congolese. All of my informants were affiliated with—that is, working for or served by—the NGOs that generously granted me access, not only to informants but also to spaces where interviews could be conducted.

My informants came from extremely diverse backgrounds, making it difficult to make generalized statements characterizing the entire group.<sup>15</sup> Though it is possible to parse my data into categories—such as age, gender, race/ethnicity, job description—I find it more compelling to read the body of interviews as a whole. A few observations on the specificity of this research sample are helpful in sketching the contours of this whole. Over 75% were women, of which three-quarters were also mothers of at least one child. Besides being disproportionately female, my informants were also predominantly middle-aged: More than 60% of my informants were in their 20s and 30s, with most of the rest falling in their 40s and 50s. Of course, “middle-aged” holds different connotations in the United States, where the average life expectancy is 78 years, than in South Africa, where the average life expectancy is 52 years, largely due to the AIDS epidemic.<sup>16</sup> The oldest of my interviewees was a group of grandmothers, most of whom were in their 50s or 60s. I interviewed roughly the same number of individuals from Afrikaans- and Xhosa-speaking households, who altogether comprised three-quarters of all interviews; the remaining quarter of my informants were native English speakers or hailed from neighboring African countries.

Besides semistructured interviews, I also conducted some informal interviews at NGOs that could not offer the time and/or space for recorded interviews. Additionally, I gathered participant observation data from two community workshops held by Cell-Life, a not-for-profit that provides technology-based solutions for managing HIV/AIDS and other infectious diseases.<sup>17</sup> Though I gathered information from a large number of informants, my research sample is not meant to represent all South Africans. Cape Town, like other South African cities, is demographically heterogeneous and culturally complex. Due to limited time and funding, the NGOs with which I chose to conduct interviews represented a convenience sample. I contacted most NGOs through e-mail using Prodder, South Africa’s most comprehensive directory of NGOs and development organizations, from which I initially selected approximately 100 NGOs to contact.<sup>18</sup> I called a few other NGOs whose phone numbers I received through personal contacts. This created an

---

<sup>14</sup> All interviews were conducted in English, though Xhosa or Afrikaans was the first language for nearly all of my informants, who predominantly identified as black or Colored. Ideally, all interviews would have been conducted in the informants’ first language. The range of informants’ fluency in the English language explains, in part, the wide range of interview lengths.

<sup>15</sup> See Appendix B for background information about NGOs and informants.

<sup>16</sup> Statistics from the World Bank.

<sup>17</sup> More information about Cell-Life is available on its website: <http://www.cell-life.org/about-us>

<sup>18</sup> Established in 1987 and currently run by the South African NGO Network, Prodder contains only 2,120 organizations, as registration is voluntary. Registered organizations tend to be larger, more formal organizations rather than smaller, community-based organizations. See [http://www.prodder.org.za/about\\_prodder](http://www.prodder.org.za/about_prodder)

obvious sampling bias in favor of NGOs with greater technology resources. All my informants were associated with NGOs that already had relatively well-established communication structures—phone lines at minimum and often Internet connections as well. This latter qualification may have omitted smaller NGOs without an online presence or without the staff capacity to manage these technologies.

I transcribed all 79 interviews with the assistance of an online transcription service. These transcripts were based on 46 hours of digital recordings. Interview transcripts, handwritten field notes, and typed journal entries constitute the original data of this study. I chose to analyze transcripts using a summary coding system by hand rather than using computer-assisted, qualitative data analysis software to highlight recurrent themes throughout my informants' responses without fixating on quantification. By placing South African narratives and interpretations about mobile phones in conversation with the stories and theories presented by mobile enthusiasts, this study reveals the unadvertised "darker sides" of M4D discourses. Specifically, it addresses the M4D claims that mobile phones enhance economic situations, improve health outcomes (especially for HIV/AIDS), and guarantee safety.

### **Optimistic Narratives within M4D Literature**

A 2008 literature review by Cape Town-based researcher Jonathan Donner examined over 200 scholarly studies of mobile phone use in developing countries. His article underscores the multidisciplinary, but unintegrated nature of the current literature. A recent cell phone study by Hong Kong-based ICT researcher Jack Qiu (2007) provides a useful framework for apprehending this voluminous, but seemingly scattered literature. Qiu notes two common strands of thought in the literature: (a) techno-determinist studies that emphasize the revolutionary potential of mobiles; and (b) strong social-shaping studies that see mobile phones fitting into existing social structures. Much of the academic and popular literature on cell phones employs techno-determinist language in explaining the impacts that mobile phones have on people and societies. These impacts are overwhelmingly perceived to be positive—not negative or neutral—fitting the cheerful tenor of M4D discourse. Thus, M4D fits the "myth of infinite benefit" discourse that Daniel Sarewitz (1996) argues has been misleadingly ascribed to science and technology more generally.

M4D studies tend to draw a direct causal relationship between mobile phones and economic empowerment, reinforcing the powerful-technology-powerless-people model. For instance, an oft-cited macroeconomics study shows a 0.59% increase in per capita GDP for every 10% increase in mobile penetration (Waverman, Meschi, & Fuss, 2005). The African continent and South Africa in particular are popular geographic foci in the literature on cell phones in developing countries. Indeed, there is a "particularly strong literature about mobile use in South Africa, much of it about those previously without access to telecommunications" (Donner, 2008a, p. 142).

Besides economic growth, the mobile impact literature also recognizes political and social modes of development. "M-," for "mobile," is a popular prefix in these articles, which provide favorable reviews about mobile phones delivering desirable outcomes. M-health is an especially popular topic for South Africa with its high HIV rates, and several scholarly articles positively evaluate initiatives for HIV information dissemination. Also specific to the South African context is the marketing of the cell phone as

"a safeguard for people in emergency situations like crime" (Ottermann, 2008). Overall, M4D literature tends to promote a simplistic analysis biased toward promoting the proliferation of mobile phones for the sake of "development," a term which is often vaguely defined. As one study notes, "the rhetoric of 'ICTs for poverty reduction' is driven, to an extent, by uncritical assumptions concerning the benefits of ICT diffusion extrapolated from Northern ICT-dense contexts" (Skuse & Cousins, 2008, p. 10). This highlights the need for "grounded and critical socio-cultural analysis of how ICTs such as . . . cellular telecommunications are accessed and used within poor communities in the South" (ibid., p. 10). In the following three sections, this study takes this recommendation in applying a grounded critique to three target categories for the purported positive, revolutionary impact of mobile phones: (a) economics, (b) health, and (c) security.

**South African Voices on Mobiles for Development**  
***Economics: The Disjuncture Between Ubiquity and Affordability***

Mobile enthusiasts link the rapid increase in mobile phones to "increased affordability" due to prepaid contracts and telecommunications liberalization and deregulation (Qiu, 2007; Rashid & Elder, 2009). This affordability is credited for the increasing "ubiquity" of cell phones. Affordability is also lauded as a way to benefit the poor, a group collectively referred to as the "bottom of the pyramid" (BOP).<sup>19</sup> In this conception, everyone wins: Mobile phone companies reap large profits, BOP customers pay an affordable price for owning cell phones, and governments spend less on development efforts as this market-driven diffusion of mobile phones presumably creates positive externalities. Accessibility, "mobility and security" are acknowledged as just some of many social benefits that cell phones confer (Rashid & Elder, 2009).

There is virtually no mention of negative externalities in the M4D literature. That most of my South African informants had cell phones ostensibly supports the observation of mobile phones' "ubiquity." However, many respondents' comments cast doubt about the "affordability" assessment. When asked, "What is your opinion about the cost of cell phones in South Africa," over three-quarters of my interviewees characterized cell phones ownership as expensive, particularly due to the costs of keeping enough airtime on their phones.<sup>20</sup> According to a South Africa statistical source, South Africans spend 3% of their incomes on cell phones, an amount that, according to my rough calculations, is nearly 5 times more than what Americans spend on cell phones.<sup>21</sup> Melanie, founder of an NGO for street children, complained, "It's too expensive. It's extortion. It's disgusting because . . . they're just exploiting people."

---

<sup>19</sup> Many authors comment on the potential for treating these people as low-income consumers; see, for example, Hammond, Kramer, Katz, Tran, and Walker (2007). Karnani (2009) offers a valuable critique of the romanticization of the poor.

<sup>20</sup> As such, it may be more precise to consider cell phone upkeep expensive, rather than cell phone ownership. As several respondents pointed out, and as I discovered from personal experience, it is possible to acquire a relatively inexpensive handset.

<sup>21</sup> The 3% figure comes from Market Tree (Cell Phone Usage, n.d.). Assuming a \$22,000 annual income, which is close to the poverty line threshold for a family of four in the United States— according to the Institute for Research on Poverty—cell phone spending would account for \$660 annually, or \$55 a month.

Others were less vituperative in their opinions as they matter-of-factly discussed the hardships that high cell phone costs posed for them. For instance, Lucille, a community home-based care worker for an HIV/AIDS NGO, exclaimed,

The cost of cell phones, yo, it's now very expensive . . . we can't afford it now with the rates and things that goes [*sic*] on and you see, in the community as home-based carers, we don't get paid much . . . Thus, for me—I'm speaking for myself now—it's a problem to afford a cell phone.<sup>22</sup>

Lucille elaborated:

And the airtime, I don't know what's happening, especially when you buy a 5-rand airtime, it's almost just for hello and goodbye. You can't even have a proper conversation with 5 rand.<sup>23</sup>

Parameters of "affordability" varied from person to person. Some informants, several of whom were NGO directors, could spend several hundred rand a month on their cell phones. Many others bought airtime in the lowest denomination possible: 5 rand.<sup>24</sup> The vast majority of informants used prepaid billing rather than a contract plan for airtime, a pattern consistent with statistical observations.<sup>25</sup> Prepaid billing was one of several ways in which informants discussed strategizing to deal with the high cost. Other tactics included calling during off-peak hours, using Cell C's "Talk-Free-on-Weekends" special, and attempting to amass or win free SMSes. When all else failed, informants could simply wait for others to contact them, since receiving calls and SMS messages is free.<sup>26</sup>

The founder of one NGO noted, "I'm quite surprised to see how many people, people who can't even really afford dinner, have a cell phone." One online source suggests that households have given up food to pay for cell phone costs (Verclas, 2009). Alarming, none of these observations are followed up

---

U.S. statistics for cell phone spending average \$524 a year, or about \$44 a month (McIntyre, 2007). Clearly, this is a rough estimate with less than standardized measurements, but note that South Africans pay 25% more—and this is assuming equal income. However, note that U.S. GDP per capita is \$46,859, which is 4.63 times greater than that of South Africa's, which is \$10,119. By this estimate, South Africans are paying 488% more on cell phones than Americans are.

<sup>22</sup> All names of people interviewed by the author have been changed. Informants' pseudonyms were developed using an online random name generator with common American names.

<sup>23</sup> About \$0.63 based on the exchange rates at the time.

<sup>24</sup> Five rand is enough for five text messages. Based on MTN (Mobile Telephone Networks) rates, it would allow for less than 2 minutes of conversation between cell phones during peak hours and less than 4 minutes of talk time during off-peak hours. Landline to cell phone (and vice versa) rates are even higher. Thus, it is not surprising that many informants complained that cell phone airtime did not go far.

<sup>25</sup> Prepaid billing may account for up to 95% of all South African users (Jha, 2008).

<sup>26</sup> Several studies mention the phenomenon of beeping and missed calls (Donner, 2008b; Etzo & Collender, 2010; Porter et al., 2012).



with a discussion of the ethical quandaries such a situation proposes. Nicholas, a long-term Canadian volunteer at a faith-based organization, speculated that young women engaged in transactional sex with older men to obtain money for cell phones.<sup>27</sup>

These comments underscored the ways in which high cell phones costs were more constraining than they were enabling for users. Celebrating cell phones as a technology that no longer divides “haves” and “have-nots”—because most South Africans now have cell phones—is an overly simplistic analysis. The divisions are now less obvious. Divides exist between the “have-mores” and the “have-lesser,” so to speak. As a detailed report on mobile Internet use among South African youth points out, “South Africa’s ‘digital divides’ follow shifting and complex lines” (Kreutzer, 2009, p. 4). Scholars must explore the possibility that cell phones are potentially reinforcing existing inequalities, albeit in more subtle ways.

### ***Health: A Tool for HIV Prevention—or Proliferation?***

In winter 2008, Stanford University hosted a conference called “Texting 4 Health” to explore the potential of cell phones to address broad social needs.<sup>28</sup> The conference theme—using SMS to improve health behavior—explored a range of topics from smoking to weight loss to HIV awareness. In South Africa, many mobile phone initiatives tout the cell phones as an innovative new tool for improving health outcomes, particularly for HIV/AIDS.<sup>29</sup>

One challenge to this line of reasoning is the aforementioned possibility that women may chose to engage in transactional sex to afford cell phones, a risky practice that contributes to the spread of HIV. An e-mail communication from a representative of the Centre for AIDS Development, Research, and Evaluation (CADRE) corroborates this point:

[Cell phones are] markedly contributing to the problem of HIV infections in this country by virtue of compressing time/space and complexity of human interaction. We find, for example, that cell phones contribute to the problem of people having multiple and concurrent partners as cell phones facilitate sexual contact between people, help to coordinate sexual liaisons, etc. This occurs in ways that would not have been possible without cell phones.

---

<sup>27</sup> For an article on the phenomenon of so-called “sugar daddies” in South Africa, see “South Africa: Sugar Daddies Find Plenty of Sweet Teeth” (2007). For a broad overview of this trend in East and Southern Africa, see (Hope, 2007).

<sup>28</sup> The conference was organized by Stanford’s Persuasive Technology Lab in partnership with the Center for Disease Control (CDC). Unfortunately, the website no longer contains detailed information about the conference itself.

<sup>29</sup> See, for example, Project Masiluleke, as mentioned in the introduction. SocialTxt, a product of the Praekelt Foundation, delivered “social marketing” messages to encourage HIV testing; another SocialTxt project linked South Africans to the National AIDS Helpline. Cell Life, a Cape Town-based nonprofit whose name puns on the biological and technological meanings of “cell,” managed patients’ treatment histories using SMS.

Several of my female informants spoke about a double standard where men refused to show the contents of their cell phone messages to their wives and girlfriends while a woman in a relationship was expected to allow her spouse or boyfriend open access to her cell phone.<sup>30</sup> These women implied that men were hiding evidence of extramarital or extra-relational sexual liaisons.

Many of my informants, particularly mothers of teenage children, expressed concern about MXit, a chatroom service on mobile phones that is popular with youth. As with AOL chatrooms in the early 2000s, MXit has raised concerns about sexual predation. Holly, a coworker of Lucille's, remarked,

It's too dangerous because you know we MXit with people and sometimes those people, they convinced us that they are young and they call us to certain places. Sometimes, we go there and then you don't come back. Like a friend of mine who never came back. And the last time they found her, it was three months ago and she was dead.

Other stories were less dramatic, but all of them suggested the potential for MXit to cause harm. As Martha, a beneficiary of an NGO for abused women, remarked, "MXit is something good for certain people, but then some people abuse it to the sense of going into drug abuse and sex abuse . . . I won't use it." Other authors have also noted that mobile Internet has created "moral panics about pornography, illicit chats, and unsupervised youths" (Donner & Gitau, 2009). Of course, the views expressed by my informants do not fully capture the complex array of attitudes towards the use of MXit. Indeed, one study of MXit among African adolescents offers a contrasting view to the "moral panic" account: a young South African living in a dangerous Cape Town neighborhood details how MXit enhances safety, as there is no need to worry about the dangers of traveling to meet friends face-to-face (Napolitano, 2009, p. 109). Nonetheless, the concern and ambivalence expressed by my informants regarding MXit offers an important counternarrative to the optimistic perspective of "positive youth development and positive technological development [that] view African adolescent mobile phone use as a transformative strength" and a force for social change (ibid., p. 111).

Most of my informants expressed confusion when I introduced the idea of "cell phones for fighting HIV." Upon clarification about M4D projects that envisioned the cell phone as a tool to prevent HIV, a number of informants raised concerns about the efficacy or feasibility of these projects. Some worried that initiatives proposing a question and answer service via SMS would not be accessible to people who were illiterate and would not be accessible in terms of cost unless it was free. Several community health workers who directly served HIV-positive people predicted that misunderstandings could arise through this medium of communication, particularly since text messages are limited to 160 characters. Though using

---

<sup>30</sup> An article on women and mobile phones notes that cell phones

. . . provide a new focal point for social conflict between spouses and can reinforce traditional gender power differences. This happens as some husbands determine how wives use their cell phones and even whether or not they are allowed to continue owning a mobile. (Ramey, 2008)

SMS to text questions about HIV/AIDS ostensibly preserves a person's privacy and protects the person from stigma, another informant suggested that a family member or friend might find incriminating messages about HIV on one's cell phone.

This latter observation suggests that privately owned cell phones in South Africa are open to "public" access, at least by friends and family, even without the explicit permission of the cell phone owner. Indeed, many informants spoke of examples of children "stealing" their cell phones to play games—another demonstration of the "public access" of cell phones. Mobile enthusiasts rarely describe the complexities that are sure to arise when implementing projects. Fazila Farouk (2008), executive director of the South African Civil Society Information Service, criticizes this trend. She observes that "[p]eople who work in the digital divide world, routinely overemphasize the value of information communication technology (ICT) for the poor" (para. 1), adding that "problems emerge when we start overpromising on what technology can deliver, misrepresent who stands to gain the most and divert already limited resources away from more pressing priorities" (para. 4).

Promoting the mobile phone as a solution to HIV/AIDS risks presenting the phone as a panacea. This may shift valuable attention and resources from other approaches to addressing the epidemic.

### ***Security: The Promise of Safety and the Reality of Crime***

My informants told anecdotes about children "stealing" phones (mentioned in the previous section) with a mix of humor and light-hearted exasperation. Interviewees also spoke of a much more disturbing trend: becoming targets of violent crimes because of carrying a cell phone.

Mobile enthusiasts advertise the cell phone as tool of personal empowerment to use "in case of emergencies" and as a safeguard of personal security. Mobile phone companies have clearly capitalized on fear of crime in the South African context, as epitomized by MTN's 2MyAid panic button and WhereRU services offering "peace of mind to consumers" (MTN personal safety). Yet the numerous examples I heard of cell phone theft contradicted these promises of protection by underscoring ways in which cell phone ownership could reduce, rather than enhance, peace of mind and personal safety. My first interviewee, Megan, the director of an HIV/AIDS NGO in the black township of Khayelitsha, set the tone for the subsequent interviews. "[There is a] big problem because cell phones can attract muggings and thugs . . . people get mugged every day."

Paula, a co-worker of Lucille and Holly, highlighted the dual—and dueling—potentials of cell phones to ensure safety and invoke harm. On the one hand,

[y]our phone can also save your life . . . if you see some shady people, then you see a crime happening, then you can phone the police easily. Now I've got this emergency number, which is not always working, but in any case.

Though she passed off the fact that the emergency number was not always working, Paula's comment brings to attention deficiencies in South Africa's services infrastructure that another informant complained

about.<sup>31</sup> On the other hand, "If you staying with your phone open at the bus stop—you know that they are riding bicycles now pass [*sic*] you and grab your phones."

Paula's examples appear to describe hypothetical situations. Several other informants related real-life accounts of violent cell phone theft. Regina, a volunteer field worker at a woman's empowerment NGO, recalled: "I was one of those victims. I was robbed and my phone was taken from me where somebody almost stabbed me. I was traumatized very badly over the cell phone." Christy, an employee at the HIV/AIDS NGO directed by Megan, recounted a story about her older daughter, who was out with friends. "So there was those boys and they just take out that gun and say, 'Give me the phone.' Yeah, 'Give me the phone' and they just gave, and my grandchildren, the same has happened to my grandson [who was 15]." Many of the mothers I spoke to worried about giving cell phones to young children lest they make their children targets of crime. At the same time, these mothers wanted their children to be immediately contactable. The mobile phone became a source of ambivalence in their parenting decisions, since it paradoxically represented both a tool to check on children and a commodity liable to being stolen.

Like tactics for lowering high cell phone costs, my informants described ways to avoid cell phone theft. Marlene, a co-worker of Paula's, suggested: "The cellphone, we must hide it . . . You got it very expensive but you have to hide it." Like many of my informants, Paula lived in a poor community marked by a high crime rate. Many informants chose to confine mobile phone use to their homes, as they felt it unsafe to use their mobiles in public spaces, thereby losing all the benefits of their mobile phone's "mobility." Others suggested that it was possible to take the phone out in public if it was kept on silent. A few informants deliberately chose inexpensive phones that would not be worth stealing. However, even this did not guarantee that one would be free from harm. As Stephanie, a co-worker of Regina's, described to me:

If I've got an old phone, say an old Motorola or a Nokia, and I've got an old phone and somebody wants to rob you and especially come to rob your cell and you have that old one, they beat you. Because they can't sell that old one.

Marlene corroborated Regina's story:

They beat you up. You must never buy this cheap phone. You must buy the better one.

These stories present a catch-22: there is pressure to buy expensive phones, yet these very phones put the owners at risk, "so you can't walk around flashing the technology around because people will take it from you by force," noted Greg, an employee at the NGO for street children. He warned, "If you don't want to give it, you'll get stabbed." One of the most sobering stories about the potential for cell phones to perpetuate social harm came from Melanie.

---

<sup>31</sup> This informant, who lived in a township, noted that even if cell phones now enabled them to call an ambulance, it most likely would not arrive for hours, if at all. This example illustrates a case where mobile phones do not counteract social inequalities; if anything, the mobile phone only painfully underscores the differences in service delivery between wealthy and poor neighborhoods.

The worst part for me, having worked for 10 years with the children living on the streets, is that it's a commodity [they steal] and that commodity buys them drugs . . . so they know that if your cellphone, if it's a Nokia, whatever, it's gonna get them that many rocks . . . They use the cellphone as a mechanism to become addicted. And that, for me, is the saddest thing that I have seen with cell phones. Right now, cell phones are causing more drug addicts in our country than anything else.

These stories about cell phone theft are almost completely absent from M4D literature. I found one brief mention that "in South Africa mobile phone and computer theft is reality," but little more elaboration was offered (Shackleton, 2007, p. 14). Overall, the mobile enthusiasm rhetoric is devoid of any insinuation of negative effects that cell phones may have in the developing world. Indeed, the rhetoric is carefully crafted to inoculate against any insinuations that could undermine the assumption that mobile phones invariably acts as forces for social good.

#### **Mobile Phones and Development: From Missionary Zeal to a More Complex Narrative**

If a grassroots policy suggestion were to come out of the medley of voices I listened to in South Africa, it would be to reduce cell phone costs. As Doris, the director of the women's empowerment NGO, asserted,

I think it's ridiculously expensive. If it's such a necessity to have, I think it's ridiculously expensive. In terms of cell phones, one would think that the government in terms of partnering with the big cell phone companies could look at the organization and actually get them to either reduce prices or just kind of give the cell phones to people. I think there is a need for government to look at organizations like ourselves or NGOs to also, you know, give us cell phones and a certain amount of airtime so that we can actually do our work.

A 2012 report on public access ICT in South Africa remarks that "[w]hile mobile phones are in use by over 70% of the population, the costs to the users have not dropped by any significant amount despite the presence of three service providers" (James, Finlay, Jensen, Neville, & Pillay, 2012, p. 430). In 2006, the South African weekly newspaper *Mail & Guardian* observed, "South African operators Vodacom—jointly owned by Telkom and Vodafone—and rival MTN make serious money" (Harrison, 2006). Just how serious? The Economist Intelligence United (EIU) estimated \$2.4 billion in revenues in 2004. Having tripled its customer base since 2004, South Africa's mobile operators have undoubtedly enjoyed skyrocketing revenues over the past five years.<sup>32</sup>

---

<sup>32</sup> Industry data are not easy to come by; many market reports are expensive to purchase. One news article refers to the South Africa cell phone industry as a "massive, multi-billion rand business" without specifying the amount (Ottermann, 2008). Hodge (2003) details how license obligations, pricing regulation, and other factors have contributed to the explosion in the number of South Africa's cell phones and the decline in the number of landlines.

If the M4D rhetoric about cell phone's positive impacts are true, then this subsidy suggestion seems to be a logical extension of providing more of a good thing to as many people as possible. However, a few informants indicted mobile phone providers for keeping costs high, implying that these companies put their own self-interests above those of the citizens they serve. Wanda, an employee at an NGO that supports grieving children, remarked, "[The cell phone companies] have a monopoly. You know, I think it is a bit unfair and I actually think it prohibits communication, because I think more people would actually use the cell phone if the costs were cheaper." Nicholas bluntly opined, "It's obviously benefiting the cell phone providers more than the people." He added, "I think airtime here is high, and I think that's one of the things that's holding back the kind of development you might see in other countries."

These comments suggest that the optimistic story espoused by M4D proponents can be more transparent about the role of cell phone companies as a powerful stakeholder in the diffusion of mobile phones to BOP customers. The many stories about crime also suggest that there is a need to reimagine and retell the M4D story. Instead of fixating on the positive influences of mobile phones with "missionary zeal," mobile enthusiasts must consider negative or neutral outcomes.<sup>33</sup> Future academic research must consider more critical and skeptical perspectives to address the "epistemological shortcomings" of the current literature, which one scholar criticizes as "overly optimistic, highly Western . . . and atheoretical" (Raiti, 2006, p. 1).<sup>34</sup> The issue is, in part, a discursive one. As anthropologist Bryan Pfaffenberger (1992, p. 506) reminds us that, "like texts, the technological processes and artifacts generated by technological regularization are subject to multiple interpretations, in which the dominant discourse may be challenged tacitly or openly." This article presents one such challenge to the dominant M4D discourse that prevails today.

Unlike much of the mobile enthusiasm literature, this study is not intended to design an intervention or assess a mobile phone pilot project. Nor does it intend to disparage these efforts, arguing instead for an examination of the limitations of M4D discourses. The current literature on mobile phones tends to describe mobile impacts or mobile interrelationships. However, these studies are no longer sufficient in understanding the mobile phone. There is a need to "disaggregate the artifact" (Donner, 2008a, p. 151). Disaggregating the mobile phone requires, counterintuitively, looking beyond the artifact itself and understanding that people "place the artifacts [technologies] within a discursive and symbolic framework" (Gjøen & Hård, 2002, p. 269). Thus, disaggregation requires telling the story of mobile technology as a focal point in a power-laden political drama—a drama that involves the personal, pedestrian, and panopticon.<sup>35</sup> At the same time, it requires understanding people as more than "users,"

---

<sup>33</sup> I take the expression "missionary zeal" from Gili S. Drori's (2005) observation that "the global digital divide is accompanied by missionary zeal promoting the proliferation of Internet and cellular technology as modern-day salvation, namely, progress and justice" (p. 76).

<sup>34</sup> Raiti (2006) expresses concern that the rapid dissemination of the mobile phone results in skipping over of critical junctures of development such as literacy and education. Alzouma (2005) shares Raiti's sentiments: "Those who are poor and illiterate remain so. ICTs cannot leapfrog beyond the ordinary development problems Africans are faced with" (p. 351).

<sup>35</sup> I borrow this phrasing from communications scholar Jack Qiu (2007), who suggests that cell phones can be seen as "personal, pedestrian, [and] panopticon." Qiu invites us to look beyond the individual and

cell phones as more than technological "artifacts," and the "drama" as an unrehearsed, constantly unfolding collection of stories that continue to be told on both highly visible and relatively invisible stages.<sup>36</sup> In their analysis of cell phone use among resource-constrained communities in Cape Town, Donner, Gitau, and Marsden (2009) argue that there is "no fixed thing called a cell phone" but rather a process by which technologies and communities influence one another (Dean, Anderson, & Lovink, p. 578). Rather than presuming developmental impacts, the article explores the "symbolic and instrumental complexity of the medium" of mobile phones (ibid., p. 578).

It behooves us to remember the early history of ICT4D:

Among the early prophetic statements about the new technologies, many concerned their wondrous possibilities for abolishing poverty and addressing the underdevelopment of the [Global] South. These statements came from the new ICT-fascinated technocrats, as well as from the more informed social and political thinkers. (Gurumurthy & Singh, 2005, p. 7)

As a UN ICT task report, as cited in Gurumurthy and Singh, notes,

[Rather] than taking the approach to systematically "problematize" development policy and programs, there has been a tendency among practitioners to depict ICT almost as a "black-box" solution, a solution situation within a "win-win" world of common interests between developed and developing countries. (p. 9)<sup>37</sup>

This black-box approach leaves a Pandora's Box of other voices trapped and unheard, leading to an oversimplified understanding of mobiles for development. This article hopes to depolarize the discourses around M4D and create a space for critical voices and marginalized perspectives to fully inform the story of mobile phones for development.

---

banal uses of mobile phones to their broader political implications, especially with regards to surveillance and control. Ling and Horst (2011) note the panopticon potential of mobile phones in citing research that shows how mobile phones "can be used to control users and encourage them to do the bidding of others" (p. 368).

<sup>36</sup> The impossibility of fixing stable meanings to cell phones is evident in the statement that "technologies themselves evince unstable meanings as they migrate among contexts and get assembled and reassembled into diverse formations" (Dean, Anderson, & Lovink, 2006, p. vii).

<sup>37</sup> The social process of blackboxing is, to cite Bruno Latour (1999),

. . . the way scientific and technical work is made invisible by its own success. When a machine runs efficiently, when a matter of fact is settled, one need focus only on its inputs and outputs and not on its internal complexity. Thus, paradoxically, the more science and technology succeed, the more opaque and obscure they become. (p. 304)

### References

- Africa Mobile Factbook 2008. (2008, February 1). Aylesbury, UK: Blycroft Publishing. Retrieved from [http://www.w3.org/2008/MW4D/wiki/images/9/9c/FrontPage\\$Africa\\_Mobile\\_Fact\\_Book\\_2008.pdf](http://www.w3.org/2008/MW4D/wiki/images/9/9c/FrontPage$Africa_Mobile_Fact_Book_2008.pdf)
- Alozie, N. O., Akpan-Obong, P., & Foster, W. A. (2011). Sizing up information and communication technologies as agents of political development in sub-Saharan Africa. *Telecommunications Policy, 35*, 752–763.
- Alzouma, G. (2005). Myths of digital technology in leapfrogging development? *Global Media and Communication, 1*, 339–356.
- Bhatia, J. (2008, November 2). South Africa: Using cell phones to combat AIDS. *Global Voices*. Retrieved from <http://globalvoicesonline.org/2008/11/02/south-africa-using-cell-phones-to-combat-aids>
- Cell Phone Usage in South Africa. (n.d.) Market Tree. Retrieved from [http://www.markettree.co.za/fact\\_desc.html?fact\\_det:acode=13](http://www.markettree.co.za/fact_desc.html?fact_det:acode=13)
- Cullen, R. (2001). Addressing the digital divide. *Online Information Review, 25*, 311–320.
- Dean, J., Anderson, J. W., & Lovink, G. (2006). *Reformatting politics: Information technology and global civil society*. London: Routledge.
- Demombynes, G., & Özler, B. (2005). Crime and local inequality in South Africa. *Journal of Development Economics, 76*, 265–292.
- Donner, J. (2008a). Research approaches to mobile use in the developing world: A review of the literature. *The Information Society, 24*, 140–159.
- Donner, J. (2008b). The rules of beeping: Exchanging messages via intentional “missed calls” on mobile phones. *Journal of Computer-Mediated Communication, 13*, 1–22.
- Donner, J., & Gitau, S. (2009). New paths: Exploring mobile-centric Internet use in South Africa. Paper presented at Mobile 2.0: Beyond Voice? Preconference workshop of the 2009 International Communication Association (ICA) Conference. Retrieved from [http://mobileactive.org/files/file\\_uploads/final-paper\\_donner\\_et\\_al.pdf](http://mobileactive.org/files/file_uploads/final-paper_donner_et_al.pdf)
- Donner, J., Gitau, S., & Marsden, G. (2011). Exploring mobile-only Internet use: Results of a training study in urban South Africa. *International Journal of Communication, 5*, 574–597.
- Donovan, K., & Donner, J. (2010). A note on the availability of (and importance) of prepaid mobile data in Africa. Retrieved from [www.jonathandonner.com/prepaydata\\_M4D.pdf](http://www.jonathandonner.com/prepaydata_M4D.pdf)
- Drori, G. S. (2005). *Global e-litism: Digital technology, social inequality and transnationality*. New York: Worth Publishers.



- Duncombe, R., & Boateng, R. (2009). Mobile phones and financial services in developing countries: A review of concepts, methods, issues, evidence and further research directions. *Third World Quarterly*, 30, 1237–1258.
- Ekine, S. (2009, March 19). Mobile activism in African elections. *Pambazuka News*. Retrieved from <http://pambazuka.org/en/category/books/54969>
- Etzo, S., & Collender, G. (2010). The mobile revolution in Africa: Rhetoric or reality? *African Affairs*, 109(439), 659–668.
- Farouk, F. (2008, July 1). Facebook for the masses: Perhaps not for Africa. South African Civil Society Information Service. Retrieved from <http://sacsis-org-za.win24.wadns.net/site/article/133.1>
- Fischer, M. M. (2007). Four genealogies for a recombinant anthropology of science and technology. *Cultural Anthropology*, 22, 539–615.
- Gitau, S., Marsden, G., & Donner, J. (2010, April 10-15). After access – Challenges facing mobile-only Internet users in the developing world. Paper presented at the CHI 2010 Proceedings of the 28<sup>th</sup> International Conference on Human Factors in Computing Systems, Atlanta, GA. Retrieved from <http://dmrussell.net/CHI2010/docs/p2603.pdf>
- Gjøen, H., & Hård, M. (2002). Cultural politics in action: Developing user scripts in relation to the electric vehicle. *Science, Technology and Human Values*, 27, 262–281.
- Goodman, D. (2005, October). Linking mobile phone ownership and use to social capital in rural South Africa and Tanzania. *Intermedia*, 33, 26–42.
- Gurumurthy, A., & Singh, P. J. (2005, December). Political economy of the information society: A southern view. Instituto del Tercer Mundo, Montevideo, Uruguay.
- Hammond, A. L., Kramer, W., Katz, R. S., Tran, J. T., & Walker, C. (2007). The next 4 billion: Market size and business strategy at the base of the pyramid. Washington DC: World Resources Institute and International Finance Corporation.
- Harrison, R. (2006, October 4). Rural Africa new frontier for cell phone boom. *Mail & Guardian Online*. Retrieved from <http://mg.co.za/article/2006-10-04-rural-africa-new-frontier-for-cellphone-boom>
- Hodge, J. (2003). Extending telecoms ownership in South Africa: Policy, performance and future options. University of Cape Town Working Paper, 1–49.
- Hoffman, D. L., & Novak, T. P. (2000). The growing digital divide: Implications for an open research agenda. In B. Kahin & E. Brynjolffson (Eds.), *Understanding the digital economy: Data, tools and research* (pp. 245–260). Cambridge, MA: MIT Press.
- Hope, R. (2007). Gender equality and sugar daddies. MIDEGO (Millenium Development Goals): Gender Equality Series Paper, 1–6.

- International Telecommunication Union. (2007). Telecommunication/ICT markets and trends in Africa. Retrieved from [http://www.itu.int/ITU-D/ict/statistics/material/af\\_report07.pdf](http://www.itu.int/ITU-D/ict/statistics/material/af_report07.pdf)
- James, T., Finlay, A., Jensen, M., Neville, M., & Pillay, R. Public access ICT in South Africa. ICI Global. Retrieved from [www.igi-global.com/viewtitlesample.aspx?id=55852](http://www.igi-global.com/viewtitlesample.aspx?id=55852)
- Jha, S. (2008, October 28). SMS tackle HIV in South Africa. NowPublic. Retrieved from <http://www.nowpublic.com/tech-biz/sms-tackle-hiv-south-africa>
- Karnani, A. (2009, Winter). Romanticizing the poor. *Stanford Social Innovation Review*, 38–43.
- Kreutzer, T. (2009, May 20–21). Internet and online media usage on mobile phones among low-income urban youth in Cape Town. Paper presented at Mobile 2.0: Beyond voice? Preconference Workshop of the 2009 International Communication Association (ICA) Conference. Retrieved from <http://www.tinokreutzer.org/mobile/InternetOnlineMediaUsage%28ICA%29.pdf>
- Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies*. Cambridge, MA: Harvard University Press.
- Ling, R., & Horst, H. A. (2011). Mobile communication in the global south. *New Media Society*, 13, 363–374.
- Marais, B. J., Esser, M., Godwin, S., Rabie, H., & Cotton, M. F. (2008). Poverty and Human Immunodeficiency Virus in children: A view from the Western Cape, South Africa. *Annals of the New York Academy of Sciences*, 1136, 21–27.
- Markowitz, L. (2001). Finding the field: Notes on the ethnography of NGOs. *Human Organization*, 60, 40–46.
- McIntyre, D. A. (2007, December 18). US cell phone spending passes landlines. BloggingStocks. Retrieved from <http://www.bloggingstocks.com/2007/12/18/us-cellphone-spending-passes-landlines>
- MTN personal safety. (2008). Retrieved from <http://www.mtn.co.za/mtnservices/mtnpersonalsafety/pages/default.aspx>
- Napolitano, C. M. (2010, Winter). MXiting it up: How African adolescents may affect social change through mobile phone use. *New Directions for Youth Development*, 128, 105–113.
- Ottermann, B. (2008, July 29). Drive and chat at your own risk. News24. Retrieved from <http://www.news24.com/SciTech/News/Drive-and-chat-at-your-own-risk-20080728>
- Pfaffenberger, B. (1988, June). Fetishized objects and humanized nature: Towards an anthropology of technology. *Man, New Series* 23(2), 236–252.
- Pfaffenberger, B. (1992). Social anthropology of technology. *Annual Review of Anthropology*, 21, 491–516.

- Porter, G., Hampshire, K., Abane, A., Munthali, A., Robson, E., Mashiri, M., et al. (2012). Youth, mobile and mobile phones in Africa: Findings from a three-country study. *Information Technology for Development, 18*(2), 1–18.
- Qiu, J. L. (2007). The wireless leash: Mobile messaging service as a means of control. *International Journal of Communication, 1*, 74–91.
- Raiti, G. C. (2006, Summer). The lost sheep of ICTD research. *Information Technologies and International Development, 3*(4), 1–7.
- Ramey, C. (2008, April 1). Woman and mobile phones: And who will join this standing up. MobileActive. Retrieved from <http://mobileactive.org/woman-and-mobiles-possibilities-and-challenges-developing-world>
- Rashid, A. T., & Elder, L. (2009). Mobile phones and development: An analysis of IDRC-supported projects. *The Electronic Journal of Information Systems in Developing Countries, 36*, 1–16.
- Research and Markets. (2008). 2Q08 South Africa mobile forecast, 2008–2010. Retrieved from [http://findarticles.com/p/articles/mi\\_m0EIN/is\\_2008\\_May\\_23/ai\\_n25452738](http://findarticles.com/p/articles/mi_m0EIN/is_2008_May_23/ai_n25452738)
- Sarewitz, D. (1996). *Frontiers of illusion*. Philadelphia: Temple University Press.
- Scott, N., Batchelor, S., Ridley, J., & Jorgensen, B. (2004, November 19). The impact of mobiles in Africa. Commission for Africa.
- Shackleton, S.-J. (2007, May). Rapid assessment of cell phones for development. *UNICEF*, 1–64.
- Skuse, A., & Cousins, T. (2008). Getting connected: The social dynamics of urban telecommunications access and use in Khayelitsha, Cape Town. *New Media Society, 10*, 9–26.
- Smith, M. L., Spence, R., & Rashid, A.T. (2011). Mobile phones and expanding human capabilities. *Mobile Telephony Special Issue, 7*, 77–88.
- South Africa: Sugar Daddies find plenty of sweet teeth. (2007, October 22). IRIN. Retrieved from <http://www.plusnews.org/PrintReport.aspx?ReportID=74910>
- Statistics South Africa. (2007). Community survey: Statistical release P0301. Retrieved from [http://www.statssa.gov.za/community\\_new/content.asp](http://www.statssa.gov.za/community_new/content.asp)
- Verclas, K. (2009, March 9). International Women's Day: Women in mobile and mobile for women. Mobile Active. Retrieved from <http://mobileactive.org/international-womens-day-women-mobile-and-mobile-women>
- Waverman, L., Meschi, M., & Fuss, M. (2005). The impact of telecoms on economic growth in developing countries. London Business School, 1–23.

World's poor drive growth of mobile phone use. (2009, March 6.) *Gulf News*. Retrieved from <http://gulfnews.com/business/technology/world-s-poor-drive-growth-of-mobile-phone-use-1.56355>

### **Appendix A: Outline of Interview Questions for Community Members and NGO Staff**

1. Demographic information
  - a. Age
  - b. Neighborhood
  - c. Primary language
  - d. Relationship to NGO
  - e. Job description
2. Cell phone basics
  - a. Model
  - b. Carrier/network (why do you use this network?)
  - c. History of phone ownership (when did you get your first phone?)
  - d. What functions do you use on your cell phone?
    - i. Calls, SMS, voicemail, please call me, photos, videos, games, Internet, music, MXit
    - ii. Nonexclusive categories of use: personal leisure/entertainment, social (family/friends), practical (banking, checking weather) work
  - e. Do you have a landline at home?
  - f. Do you prefer SMS or phone calls? Why?
3. Cell phone opinions
  - a. What is your opinion about the cost of cell phones and airtime in South Africa?
  - b. What is your opinion about MXit?
  - c. Do you think cell phones are easy to use?
  - d. What do you think are some of the benefits (positive/good/helpful aspects) of cell phone use in South Africa?
  - e. What do you think are some of the drawbacks (negative effects, limitations, harmful aspects) of cell phone use in South Africa?
  - f. Do you think most people in South Africa own cell phones?
    - i. Young and old? From what age? Is there a difference between how young people and old people use cell phones?
  - g. Is there a difference between how men and women use cell phones?
  - h. What do you think is the overall impact/effect/influence of cell phones on South African society?
4. Cell phones and community needs
  - a. What are the most important needs of your community?
  - b. Is there any way that cell phones can help address these needs?
5. Cell phones and NGO needs
  - a. What are the most important needs of this NGO?
  - b. Is there any way that cell phones can help address these needs?

6. Cell phone potential projects (discussion)
7. Right now there are several new projects that are hoping to use cell phones for social benefit to help NGOs and community members. I am going to give some examples. Please let me know your opinions about the project after each example.
  - a. One example is: Maybe I don't know where my nearest health clinic is, so I can send an SMS to a phone number and they will respond back and tell me, "The nearest health clinic is here and these are the directions to your health clinic." What do you think about this idea?
    - i. Is it helpful?
    - ii. Do you think people would use it?
  - b. Another idea has to do with increasing communication and coordination within an NGO, both for the staff members and community members. For example, you can push one button send an SMS message to all of your community health workers at once reminding them about the next meeting. What do you think about this idea?
    - i. Is it helpful?
    - ii. Do you think people would use it?
  - c. A similar idea is to use the cell phone to gather survey information. For example, you can send a survey question out to many people, and they will input their responses through their cell phones. Their answers will be automatically compiled for you on a computer so you will have all the information gathered in one place. What do you think about this idea?
    - i. Is it helpful?
    - ii. Do you think people would use it?
  - d. One more idea is to use the cell phone as a tool to get health information. For example, maybe I have a question about HIV. I don't want to walk to the clinic, and I do not have much airtime so I don't want to make a phone call. But I can send an SMS with my personal question to a number and will receive an SMS or a voice mail with my answer. What do you think about this idea?
    - i. Is it helpful?
    - ii. Do you think people would use it?
8. Conclusion
  - a. Do you have any other creative ideas about how cell phones can be used to help your community or NGO?
  - b. Do you have any questions or comments before we end?

**Appendix B: NGO and Interviewee Information**

<b>NGO</b>	<b>NGO Full Name</b>	<b>Founded</b>	<b>NGO Focus Area</b> (information from websites, brochures, and interviews)
ABF	Amy Biehl Foundation	1997	ABF's programs are designed to develop and empower youth in the townships and contribute to community building efforts.
ARESTA	Agency for Refugee Education, Skills Training & Advocacy	1996	ARESTA's mission is to contribute to the successful integration as a solution for asylum seekers and refugees through advocacy, training, skills development, education, and research.
CDRA	Community Development Resource Association	1987	CDRA aims to support authentic and coherent development practices among people and organizations working toward social transformation that most benefits the poor and marginalized.
CWD	Catholic Welfare and Development	1972	Driven by the gospel values of the Catholic Church and our passion and love for humanity, CWD strives to eradicate poverty through service, caring, and accountability.
ERBD	Eerste Rivier Blue Downs HIV/AIDS Action Group	1999	ERBD is a faith-based charity organization that brings hope and support to those suffering from and affected by HIV/AIDS.
GAPA	Grandmothers Against Poverty and AIDS	2001	GAPA is a voluntary organization managed by a committee of grandmothers who represent different areas of Khayelitsha. Programs include educational workshops and support groups.
HRT	Hermanus Rainbow Trust	1999	HRT aims to uplift, in all possible respects, the present and future community of Zwelihle Township, Hermanus, to alleviate homelessness, unemployment, and poverty.
Khululeka	Khululeka ("To Be Free")	2005	Khululeka aims to educate parents and teachers, social workers and nurses, health workers and pastors, and anyone else in South Africa as to the needs of grieving children.
Kidzpositive	Kidzpositive Family Fund	2001	The Kidzpositive Family Fund is dedicated to improving the health of HIV-positive children in Southern Africa.
LH	Living Hope Community Centre	1999	LH is a faith-based organization in the Southern Peninsula region of the Western Cape whose Ministry focuses on the care and treatment of HIV and AIDS patients and HIV prevention.
Mylife	Mylife	2002	Mylife facilitates social change through the empowerment of children by giving marginalized youth hope, developing their skills, and empowering them to be the caregivers of the future.
Nazareth	Nazareth House Cape Town	Est. 1881	Nazareth House takes care of disadvantaged, vulnerable people who have no close family or anyone else able to provide the care required.
POH	Place of Hope	2001	Place of Hope is a residential facility for abused women and their children.
WE CAN	Women Empowered Committed Against Negativity	2007	WE CAN focuses on empowering women within families to become community leaders.
YU	Youth Unlimited	2001	YU's partnership program works with at-risk youth and helps them rise

above adversity through the transfer of practical skills. YU's objective is to reduce impoverishing conditions and alienating lifestyles among urban and rural youth through access to supportive opportunities.

#	Pseudonym	Gender	Age	NGO	Relationship to NGO	# Children	Language
1	Megan	F	40 ?	GAPA	Executive director	Yes	Xhosa
2	Martha	F	38	POH	Beneficiary	3	Afrikaans
3	Laurie	F	39	POH	Beneficiary	2	Afrikaans
4	Jeff	M	22	MylifE	Beneficiary	0	Afrikaans
5	Shawn	M	24	MylifE	Beneficiary	0	Afrikaans
6	Greg	M	27	MylifE	Youth coordinator, projects director	0 ?	Xhosa
7	Lawrence	M	27	GAPA	Data capturer, administration	0	Xhosa
8	Joanna	F	55	GAPA	Group leader	1+	Xhosa
9	Sonia	F	68	GAPA	Employee	8	Xhosa
10	Christy	F	64	GAPA	Liaison officer	5	Xhosa
11	Bonnie	F	61	GAPA	Employee	Yes	Xhosa
12	Marlene	F	60	GAPA	Coordinator	5	Xhosa
13	Debra	F	33	POH	Ex-resident	5	Afrikaans
14	Mabel	F	56	POH	Volunteer house mother	3	Afrikaans
15	Elaine	F	23	POH	Beneficiary	1	Afrikaans
16	Angie	F	25	POH	Volunteer, crèche	1	Afrikaans
17	Christina	F	48	GAPA	Group leader	Yes ?	Xhosa
18	Sally	F	54	GAPA	Group leader	Yes ?	Xhosa
19	Veronica	F	50 ?	GAPA	Founder	Yes ?	English
20	Colleen	F	61	GAPA	Group leader, cook	5	Xhosa
21	Gloria	F	30	HRT	Education dept. administrative asst.	0 ?	Xhosa
22	Cheryl	F	23	HRT	Administrative asst.	1	Afrikaans
23	Belinda	F	39	HRT	Administrative asst, financial mgr.	1	Xhosa
24	Adam	M	13	HRT	Volunteer, Pamela's son	0	English
25	Emma	F	61	HRT	Counselor	5	Xhosa
26	Raymond	M	42	HRT	Manager, HIV/AIDS program director	2	Afrikaans
27	Marian	F	30	HRT	Cleaner	2	Zulu
28	Olivia	F	40	HRT	Social carer (caregiver)	2	Xhosa
29	Michelle	F	29	HRT	Social carer	2	Xhosa
30	Sue	F	26	HRT	Social carer	0	Xhosa
31	Wendy	F	32	HRT	Child minder, cook	Yes	Sotho
#	Pseudonym	Gender	Age	NGO	Relationship to NGO	# Children	Language
32	Fred	M	37	HRT	Coordinator, education program mgr.	?	Xhosa
33	Vicky	F	?	ARESTA	Beneficiary	?	Congo
34	Diane	F	34	ARESTA	Beneficiary	Yes	Zimbabwe

35	Monica	F	29	ARESTA	Beneficiary	?	DRC
36	Cassandra	F	?	ARESTA	Beneficiary	?	Congo
37	Roger	M	25	ARESTA	Beneficiary	0 ?	Congo
38	Daniel	M	28	ARESTA	Beneficiary	0 ?	DRC
39	Helen	F	34	ARESTA	Beneficiary	?	DRC
40	Sylvia	F	20	ARESTA	Beneficiary	0 ?	DRC
41	Irma	F	35	ARESTA	Junior trainer/educator	0 ?	Zimbabwe
42	Josh	M	24	ARESTA	Beneficiary	0	Malawi
43	Peter	M	28	ARESTA	Self-reliance programs officer	0 ?	Rwanda
44	Rebecca	F	35	POH	Volunteer, ex-resident	3	Afrikaans
45	Wanda	F	50	Khululeka	Part-time volunteer	3	Afrikaans
46	Stephanie	F	45	WE CAN	Volunteer	4	Afrikaans
47	Regina	F	40	WE CAN	Volunteer field worker	2	Afrikaans
48	Yvonne	F	58	POH	Director	4	Afrikaans
49	Linda	F	58	CWD	Fundraiser, mainly overseas	Yes	English
50	Phillip	M	38	CWD	Operations mgr.	2	Xhosa?
51	Claire	F	25	MylifE	Volunteer	1	Xhosa
52	Jack	M	28 ?	MylifE	Beneficiary	0 ?	Xhosa?
53	Jonathan	M	25	MylifE	Beneficiary	1 ?	Xhosa
54	Yolanda	F	22	ABF	HIV/AIDS program mgr.	0	Xhosa
55	Theresa	F	21 ?	LH	Intern	0	English
56	Lori	F	25	YU	Administrator	1	Xhosa
57	Brian	M	33	YU	Director	2	English
58	Melanie	F	43	MylifE	Founder, director	1	English
59	Isabel	F	44	LH	Coordinator/manager	1	Afrikaans
60	Nicholas	M	40s ?	LH	Volunteer, monitoring and evaluation	Yes ?	English
61	Lydia	F	18	ABF	Peer educator/facilitator	0	Xhosa
62	Erica	F	58	Nazareth	Director	2	England
63	Jason	M	?50s	Kidzpositive	Director	1	English
<b>#</b>	<b>Pseudonym</b>	<b>Gender</b>	<b>Age</b>	<b>NGO</b>	<b>Relationship to NGO</b>	<b># Children</b>	<b>Language</b>
64	Doris	F	43	WE CAN	Director	2	Afrikaans
65	Lucille	F	35	ERBD	Home-based carer	3	Afrikaans
66	Nathan	M	20	ERBD	IT technician, Judy's son	0	Afrikaans
67	Holly	F	22	ERBD	Home-based carer	0	Sotho
68	Peggy	F	30	ERBD	Home-based carer	2	Afrikaans
69	Esther	F	22	ERBD	Home-based carer	0	Afrikaans
70	Paula	F	49	ERBD	Home-based carer	4	Afrikaans
71	Faye	F	46	ERBD	Home-based carer	1	Afrikaans
72	Alison	F	27	ERBD	Home-based carer	0	Afrikaans
73	Florence	F	22	ERBD	Home-based carer	0	Afrikaans



74	Pearl	F	50	ERBD	Counselor	4	Afrikaans
75	Bianca	F	49	ERBD	Founder, coordinator	2	Afrikaans
76	Miriam	F	31	ERBD	Secretary	3	Afrikaans
77	Tony	M	39	CDRA	Development practitioner	2	Xhosa
78	Craig	M	29	ABF	Training facilitator, dance instructor	0?	Xhosa?
79	Pamela	F	37	HRT	Administrator	2?	English