

Evaluating Shared Access: Social equality and the circulation of mobile phones in rural Uganda

Jenna Burrell

School of Information, UC Berkeley, 102 South Hall, Berkeley, CA 94720

This article examines forms of shared access to technology where some privileges of ownership are retained. Sharing is defined as informal, non-remunerative resource distributing activities where multiple individuals have a relationship to a single device as purchaser, owner, possessor, operator and/or user. In the specific case of mobile phones in rural Uganda, dynamics of social policing and social obligation were mediated and concretized by these devices. Patterns of sharing mobile phones in rural Uganda led to preferential access for needy groups (such as those in ill health) while systematically and disproportionately excluding others (women in particular). The framework for sharing proposed in this article will be useful for structuring comparisons of technology adoption and access across cultural contexts.

Key words: shared access, inequality, Africa, Uganda, ethnography, mobile phones, communalism, culture, gender.

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Introduction: Inequality and Shared Access to Technology

Concerns over *equity in access* to communication technologies are often discussed in conjunction with the concept of *shared use*. The established approach to examining technology-based inequality is to distinguish between two groups—those with access to the technology in question and those without and to identify reasons for why such a division exists. Illiteracy, financial limitations, or various cultural prohibitions that hinder certain social groups are often cited as explanations. Shared access generally refers to an arrangement where a technological device is made available to multiple users, typically in a public space. Access is either free or a small, pay-per-use fee is charged that is affordable for the majority population. Equipment expenses are assumed by a business, government agency, or aid organization instead of by the individual. Telecenters, Internet cafes, and school-based computer centers are common instantiations of shared access. Shared access models generally come into the discussion of equity as a compromise between no access at all and the presumably

unattainable expense of personal equipment ownership in remote or resource-constrained communities (Salvador et al 2005, Kuriyan and Kirtner 2007, Patra et al. 2007). A major focus of evaluation is on financial sustainability demonstrating that by shifting around the burden of equipment costs a revenue stream is created that makes it possible for such projects to meet their own expenses (Best and Maclay 2002, Kumar 2004, Patra et al. 2007). However, it is worth extending the focus to the rich and varied ways that technologies are already being informally shared within populations of rural regions as they cope with conditions of scarcity. Such devices include bicycles, radios, televisions, and mobile phones. Sharing practices predominate for the class of technologies that are obtained by some but not all members of a community due to various constraints on ownership, especially the expenses involved. This article will consider, in particular, the non-commercial sharing of mobile phones in rural Uganda where such devices are rapidly becoming widely available.

This article will also examine the potential inequalities in access that occur *within* such emergent, informal patterns of sharing. The particular definition of sharing outlined here serves as an analytical lens drawing a finer-grained distinction between roles an individual may hold in relation to a shared device. One key finding is that shared access cannot be reduced to a single arrangement, but encompasses a range of possible configurations. Furthermore, sharers experience greater or lesser control over and benefit from the device via the roles they assume. This formulation draws from previous case studies in combination with sociological and anthropological theories of gifting and resource distribution, and interview and observational data about mobile phone acquisition and use in rural Uganda. In sum, this article attempts to look beyond access as a binary state to consider what specific *benefits* are realized through the phone (James and Versteeg 2007, DiMaggio et al. 2004). These benefits turn out to include not just what is gained from placing and receiving calls, but also in the way the physical phone itself becomes an object of gifting practices as well as a profit-generating business investment.

Ways of thinking about inequality, in a general sense, have been addressed by a number of competing theories. One particularly valuable review of this work is Amartya Sen's Inequality Reexamined (1992) in which he considers how the heterogeneity of human populations presents a challenge to the way we conceptualize equality. Each individual has different needs and different abilities to meet these needs, whether inherent or socially enabled. Equality could be defined as a guarantee to each individual of precisely the same share of an essential resource, such as food. Alternately shares might be matched to individual need or to individual worth (however that might be defined). Or equality could be defined as the *availability* of a resource for individuals to take advantage of (or not) in accordance with their own values and priorities (Sen 1999). In relation to access to communication technologies, the key question is how might we distinguish between patterns of use and forms of access that are merely different versus those that are patently unequal? Understanding the social processes that yield varying forms and patterns of access is important for drawing this distinction. Non-use may be a result of purely financial

or spatial inaccessibility, but it may also be a consequence of a reasoned refusal to use by some groups (Molony 2007; Horst 2006) or of one group forcing limits upon or intimidating another (Castells et al. 2006) or some combination thereof (Kuriyan and Kirtner 2007; Lenhart and Horrigan 2003).

Research making use of survey data in various African countries has drawn attention to the magnitude of difference in phone access and how it maps to demographic categories, specifically gender (Huyer et al 2005, Samuel et al 2005, Scott et al 2004). Yet, the explanation for how difference translates into inequality in such research has not always been explicit or consistent. This is exacerbated by the tendency to portray the mobile phone as an *end*, rather than a *means* to specific social improvements such that any lesser degree of access and use is registered as disadvantage. This tendency is something of a liability for survey techniques that lean towards measures such as 'frequency of use' that are straight-forwardly attainable and amenable to comparison between social groups (i.e. men and women) and cross-nationally. There is an opportunity for alternate methodological approaches that can take these measures of difference and begin to map out the conditions that generate such differences as well as their consequences. This article aims to provide this complementary role using ethnographic analysis to focus attention on phone users' perceptions of benefit and the fuller social context of their access to mobile phones. Observations of phone access, sharing, and use in rural Uganda offer evidence that issues of equality in access are far more complex than distinguishing 'haves' from 'have nots.' Further examination into the variation in forms of access will illuminate the range of benefits individuals are able to realize.

Methodology

The data used in this analysis was collected in rural Uganda over the course of two trips one from November to December 2007 and the second from July to August 2008 for a total of 9 weeks of intensive fieldwork. The data include observations and in-depth interviews and an ethnographic approach to data collection and analysis was employed. Fifty-two focused interviews were conducted in addition to many *in situ* conversations. The research was carried out in 4 villages including (1) a very remote, non-electrified fishing village on lake Kyoga, (2) a non-electrified farming village in Rakai district, (3) an electrified trading town with paved roads also in Rakai district, and (4) a medium-sized fishing village on Lake Victoria in Mukono district that produced for local and export markets. Each village was in the network shadow of at least one provider and had seen rapidly rising personal phone ownership in the past five years. This followed the Ugandan governments efforts to unbundle and privatize the government-owned PTT¹, consequent competition between multiple network service providers, and the energy of informal, small-scale entrepreneurs throughout the country who joined in to sell phones, SIM cards, air time, phone accessories, repair and phone charging services out into even the remote regions of the country.

The decisions made about what villages to visit and who to talk to within those villages were oriented towards maximizing the range and diversity of experiences with the mobile phone among rural Ugandans (Bauer and Aarts 2000). The selection approach was iterative. Distinctions pertaining to phone use that emerged in the course of observations or interviews were pursued in guiding the direction of the research (i.e. in terms of additional people to interview and questions to ask). We began by selecting sites and interviewees according to an *a priori* set of distinctions that seemed most likely to relate to different ways of using the mobile phone. The sites selected included remote as well as more accessible rural villages, villages with and without electricity, and villages where different livelihoods predominated (farming, fishing, trade), and with different majority ethnic groups. We sought a balance of men and women. We also pursued interviews with those who owned phones, those who used public phones, and those who informally shared the phone of a family member, friend, or neighbor.

Assuming the mobile phone would be significant in the way people in rural Uganda pursued their livelihoods, we identified four categories of livelihood strategies and recruited interviewees within each category. The livelihood categories included 1) agriculture and natural resource harvesting (i.e. fishing), 2) trade activities including perishables like plantains or fish as well as non-perishables like plastic goods, 3) small-scale manufacturing such as carpentry and 4) service work such as taxi driving. Strategies for recruiting interviewees included approaching people in markets, at boat landings, going door-to-door, and obtaining suggestions and introductions via interviewees. For each interviewee a demographic worksheet was filled out at the end to gather data on age, religion, ethnicity, educational attainment, etc. The diversity of people we encountered is borne out in the collected demographic data that shows a range in ages from 19 to 77, educational attainment ranging from formal education ending early in primary school to a completed University degree. The four major religious identifiers—Muslim, Anglican, Pentecostal/Evangelical, and Catholic were all represented among the interviewees as were six different tribal groups.

Interviews were conducted around mobile phone use in relation to broader livelihood strategies. One line of questioning in interviews dealt with whether individuals were willing to share other kinds of ICTs including television and radio as well as items such as bicycles or livelihood equipment like fishing nets and boats. This particular strategy of comparison helped to highlight the material aspects (i.e. degree of portability, screen size) and matters of utility that facilitated or inhibited sharing practices. Since patterns ranged from widely shared to totally unshared phones in this region there was an opportunity to compare a variety of forms of access and the local reasoning behind such arrangements.

The interviews were conducted in English by myself, a female, Caucasian, American sociologist with translation to and from Luganda provided by Julius Matovu, a Ugandan sociology PhD student attending Makerere University. Villages selected were ones Mr. Matovu was known within either through his personal life or

his research pursuits and so we benefited from the communities familiarity with him. My presence in these villages was notable and unusual, but there was little evidence of unwillingness to speak with us apart from one interviewee who appeared nervous and concluded our interview prematurely. I was sometimes assumed to be an aid worker, a missionary, or an employee of a mobile phone network provider, so we made efforts at all times to clarify our purpose for being there, though it is possible some accounts may have been exaggerated, underestimated or censored in some way in light of these misperceptions. Since this analysis is not concerned with matters of measurement or magnitude, this is less of an issue. Instead the claims made in this paper deal with the cultural reasoning behind real-world behaviors—the ‘why’ and ‘how’ of phone access and sharing. Given the way culture is inhabited by its members in accordance with what is ‘common sense’ or the natural way of things, this would certainly be difficult for interviewees to substantially alter in their interviews. The interviews were audio recorded and translated and transcribed in-country by fluent speakers of Luganda. Analysis involved reviewing the data and transcripts and coding according to the emerging distinction between the various roles and relationships individuals had to mobile phones and to one another mediated by the phone. The outcome is the model of sharing outlined below. This coding was pursued systematically to flesh out, give examples of, and challenge or identify counter-examples of the emerging distinctions and relationships.

Distinguishing Between Roles in Shared Access Arrangements

The absence of explicit guidelines for what to recognize as *sharing* has limited the broader application of insights from relevant, existing case studies. How broadly or how narrowly might we define sharing, what are the key dimensions, and in what ways do instances of sharing vary? To move towards an explicit definition of sharing activities that will aid systematic analysis and structure comparisons across contexts, Yochai Benkler’s paper titled “On Sharing Nicely” offers an established framing (Benkler 2004). What he examines in particular, is the sharing of durable commodities that are owned as personal property but lent out in some way to those who have no ownership stake. This distinction between the two roles, owner and non-owner/user, maps in a basic way to the sharing of mobile phones and other durable technologies. What he excludes as a separate phenomenon is work on ‘the commons’ that often focuses on natural resources and anything considered to be undesirable, impossible, or immoral (especially for an individual) to own. Benkler defines ‘social sharing’ as productive cooperation centered around a useful good that is based neither on price systems nor managerial command. The fact that it takes place fully outside of the market is what defines it as *sharing* and this conceit, while excluding shared access within commercial settings such as Internet cafes, focuses attention on little explored non-remunerative motivations for sharing access to technology that are culturally variant.

Further elaborating upon Benkler's distinction between owner and non-owner roles, I wish to point out the possibility of distinguishing between five roles an individual may have in relation to a given phone and draw out the implications of this for the benefits realized from phone access (see figure 1). One may be: (1) purchaser, (2) owner, (3) possessor, (4) operator, or (5) user of the phone. An individual may fill one or more of these roles at a given time. *For the purpose of this analysis, sharing is the arrangement where multiple individuals fill one or more of these five roles in relation to a single artifact without financial remuneration.* Each role can be fully differentiated from the others and, in most cases, it is possible for a single role to be filled by an individual who fills no other role. Each of the roles may also be filled by multiple individuals. The purchaser is the individual (or group of individuals pooling their money) who made the financial exchange to obtain a phone. The owner, a separate role, is the one who has the authority to decide who is permitted to use it, where it is to be kept, and how others may interact with the device. The owner role is distinguished from purchaser in light of gifting practices, a phenomenon to be dealt with at length in following sections. Specifically, one may own a phone without purchasing it if it was received as a gift and may consequently have a kind of social debt to the gifter. Possessor is a third role denoting the individual who carries or houses the artifact, but with the understanding that it can still be recalled or given out to another at the discretion of the owner. The role of operator refers to those who physically manipulate the phone. This role goes along with possessor at least momentarily as one cannot operate a phone without being for a few brief moments in possession of it. And it is also necessary to distinguish operators from users.



Figure 1 Modeling shared access to mobile phones in rural Uganda.

Many women reported that the phone they used belonged to their husband. Some also reported almost complete exclusion from phone operation when the husband insisted on entering the phone number himself before handing off the phone to the wife. Therefore, she did not manipulate the phone's buttons, use the address book, or send text messages. Use can also be fully differentiated from operation of the phone where a *proxy* user operates the phone on behalf of another as when a young family member makes a call on behalf of an elderly grandparent and then relays the message. The grandparent thereby is using (in the sense of sending and receiving messages) and benefitting from the phone but without any direct manipulation of its interface. To be comprehensive about the full range of individuals involved in and benefitting from phone access this proxy use arrangement must be considered as well.

This focus on a form of sharing that retains *ownership* as an element is an intentional challenge to the romanticized depiction of rural village societies in Africa and other regions of the Global South as communalist² settings where ownership privileges are considered culturally unsound. The idea of a singular African "culture of sharing" as shaping mobile phone access and use (James and Versteeg 2007: 118) proved to be an inaccurate overgeneralization in relation to observed practices of mobile phone sharing in rural Uganda. There were, rather, a range of contingent activities of sharing that did not map to any single overarching cultural principle. Sharing depended upon the object in question and the relationship between prospective sharers. The cultural logics at play were multiple, sharing was selective and strategic, and a moral economy (Sayer 2007, Silverstone and Hirsch 1992) produced systematic exclusions as well as forms of preferential access. In light of the complexities of sharing, the ways that equity in access to new Information and Communication Technologies (ICTs) could be amplified or undermined by on-the-ground realities requires careful reconsideration.

The model and accompanying definition of sharing is not meant as a comprehensive or universal summation of sharing practices, but rather as a heuristic for drawing out distinctions between these identified roles as a way to engage with a richer range of questions around equity in access beyond the established access/non-access binary. The utility of the model in settings beyond rural Uganda is, as of yet, unestablished. The model relies on the roles being reasonably distinguishable and to some degree enforced and in rural Uganda these roles generally are. There is evidence in other settings for greater ambiguity and overlap. For example, Ureta (2008) examining Chilean households as well as Steenson and Donner (2009) speaking of Indian households find that mobile phones are sometimes collectively owned. The phone could be left at a fixed point in the home, its portability ignored, and its operation and use flowing fluidly between household members. To what extent boundaries around roles exist or are enforced may serve as an interesting offshoot for future research.

Phone sharing of the form defined above cannot be said to be a product simply of resource constraints as similar patterns exist in locales where such constraints are not a key concern. The motivation for sharing may vary significantly and the benefits are not always reducible to survival or livelihood needs. Taylor and Harper

(2003), for example, examine similar sharing behavior among teenagers in the UK as do Weilenmann and Larsson (2002) among teenagers in Sweden. Both explore how acts of sharing and collaborative use were a form of sociability that enhanced social ties between sharers. Taylor and Harper analyze this through the lens of theories of gifting arguing that phones themselves, text messages, and air time are exchanged in a process of cementing social relationships. Conversely, individual possession might be argued to be a luxury of affluent societies as appears to be the case in Japan where intimate, exclusive possession of the phone was related to the emerging norm of maintaining a state of constant communication (i.e. Dobashi 2005, Ito et al. 2005). Yet, this protective possession could also be found in quite poor societies in relation to the phones crucial role in survival strategies. For example, in Horst and Miller's study of the mobile phone in Jamaica constant possession was related to the use of the phone as a life line for calling in favors and support among the poorest segment of society (Horst and Miller 2006). This body of work points out that sharing cannot simply be understood as a mechanism for coping with scarcity. This insight is borne out in the way rural Ugandans offer or refuse others access to their phones and following sections will flesh out the model outlined above with insights and specific examples gathered during fieldwork.

The Mobile Phone as Surrogate and as Lure

Phone sharing arrangements generate social ties that entail broader benefits and costs of access beyond the merely financial. Gifting is a subclass of the broader sharing practices considered in this article. It is the voluntary transfer of ownership from the purchaser to another without an immediate and equivalent financial transfer in return that would dissolve the social tie between the giver and receiver. Gifting establishes some stronger and greater tie between individuals (Mauss 2000 [1925]) due to the delay in return and the non-equivalence of what is returned (Bourdieu 1977:5). The following examples, however, show variations in the demand for reciprocation that is implied by a gift. The demand for reciprocating a gift is very clear and immediate in the way the phone is used as a 'lure' but less calculative and manipulative in the case of the phone operating as a 'surrogate.'

In rural Ugandan villages women frequently depended upon a male provider to supply them with many of their possessions as gifts, including mobile phones. In interviews, both women and men expressed the general expectation that husbands would provide all things financially for the wife. There was no general expectation for women to pursue substantial income generating activities. In practice, however, out of the sheer necessity of survival or to better provide for their children many women did pursue an income. This was especially true among widows, the unmarried, and women whose husbands were not able or willing to provide adequately. Despite the clear necessity, women's presence in the markets was sometimes controversial (Musisi 1995, Snyder 2000). Husbands sometimes wished to keep their wives from working for fear that spending time in a restaurant or as a trader in the market

would make them available to other men. This attitude was not universal and some women were permitted, encouraged, or aided by their husbands to pursue income generating activities to ease his responsibilities to her or for the general betterment of the household. Nonetheless, certain forms of work were off-limits for women. The pressure many women faced to eschew income-generating work especially in public market spaces³ was a contrast to previous research I carried out in Ghana where women had privileged access to the markets, where trade was the domain of “market women” (Clark 1994, Clark 1989). In the context of these patterns in gender relations, practices of mobile phone sharing between men and women in rural Uganda involved managing or manipulating this dependency of women upon male providers.

Given these norms of financial support and income-generation between men and women, the mobile phone sometimes came to play the role of **surrogate**. It served as an income generating object for a woman in lieu of her husband’s labor. This links to a broader strategy among men to extend and replicate their earning power in material form. For example, we were told about a local fisherman in village 4 who had eight wives for whom he had purchased eight matatus⁴ each labeled with a number. Each vehicle generated profits going to one wife alone. Some husbands saw such investments as a way to sustain their role as provider even in the unfortunate circumstance of their death. David, a 46-year-old fisherman with two wives noted that, *“it’s easy to prepare for a wife something like that depending on your earning capacity. . . It’s in my heart. . . I have cattle and two kraals and time might come and I die and each woman takes over a kraal.”* Rosemary who operated a kiosk selling bottled drinks, boiled water, and a public phone service described the phone gifted to her by her husband as an effort to provide her some financial autonomy and to offload some of the burden from him of providing financially. She commented, *“there are times I may need some things and he doesn’t have the money at that time or there are secret things I may need. . . you may see a good dress. . . and also, our knickers, petticoats, Always [sanitary pads], onions, tomatoes, and things of that sort you don’t have to beg from your husband.”* This practice was not limited to male/female relationships; parents often gifted tools to their children (a pair of scissors from a father to his son an aspiring barber, a bicycle to another are two observed examples) as a way to launch entrepreneurial ventures. The phone as *surrogate* illustrates a measure for handling unpredictability, an informal form of insurance. It generates benefits in the form of profits rather than by the giftees own use of the communication functions of the phone. It is a pro-social measure taken by a gifter to ensure the long-term financial self-sufficiency of giftee.

A second notable mediation role the mobile phone played between men and women was as a **lure**. This particular pattern of sharing was most clearly explained in a frank discussion with Mariam, a middle-aged woman who earned an income trading in small, smoked fish. She was temporarily staying away from her family in a remote village on lake Kyoga (village 1), drawn to the place by the possibility of buying these fish. She regularly placed calls to check in with her husband and

children, but described how her interactions had soured with a man whose mobile phone she had been using for this purpose. He was known for being quite generous with his phone, allowing others to use it so long as they loaded their own air time. But he wished to become involved in a relationship with Mariam and she resisted out of a desire to remain exclusively monogamous with her husband. As a consequence he cut off her access to his phone. She recognized this as a broader pattern among women like herself in this area where public phones were not conveniently available. As she noted, *“because some women. . . come and do fish trading so when they want to communicate to their families they have to look for someone with a phone. So if one has a phone he would be very happy because he knows it is a way of getting women and if you refuse [his advances] then he will not give you the phone.”* She saw evidence of this practice whenever a woman was able to use the phone of a man who was otherwise not known to be generous. She said that she would comment to a woman about a man, *“that ‘he seems to be difficult’ and she will say ‘he gives [phone access to] me’—meaning for her she pays in kind.”* Another example of this particular mediating role for the phone is found on billboards that dot the paved roads around Uganda warning young women against becoming involved with ‘Sugar Daddies.’ The billboards show a mobile phone, perfume and other luxury items, gifts that an older man would give a younger women in the course of the developing relationship. The phone serves as a lure or enticement along with these other desirable items.

Refusals and Secrets

This section explores the reluctance of many phone owners to transfer possession to others or to permit others to operate or use their phone. By focusing on refusals of sharing, the limits and asymmetries in sharing practices can be clarified. Observations in rural Uganda powerfully illustrate how cultural difference constitutes a persistent and consequential reality bearing upon technology practice⁵. These cultural processes are far too over-elaborated and richly symbolic to be reduced entirely to strategies of survival, reproduction, and productivity (Sahlins 1976). What is clear from careful and direct observation is that the life of a village in rural Uganda is marked by the complexity and delicacy of social relations. There was a clear concern expressed in interviews about the secrets contained in the phone. This concern made phone owners hesitant to offer more generous access to others. The matter of secrets relates in a superficial way to the topic of privacy discussed extensively in the literature on computer-mediated communication in that both are about control over the disclosure of possessed and personal information. The term in Luganda that was used translated with greatest accuracy to ‘secrets’ as a matter of social reputation management in relation to intimate and proximate others, to reaffirm the exclusivity of certain social bonds, and to manage competition over resources. This diverges from discussions of privacy in the domain of American and European networked computing dominantly concerned with protecting personal information in relation to corporate or government institutions.

When phone owners were asked whether they would refuse to allow anyone to use their phone, the answer as often as not was yes. Mariam described how such a refusal could be blunt or bitter in relation to her comment (above) about evading men's phone luring tactics noting, "*you can tell the person - please lend me your phone I would like to talk to the people at home, and that person would say, 'are we the ones who refused you from buying your own phone?' You can even tell the person that 'I will pay for it' and the person refuses and tells you, 'why don't you buy yours?'*" A boat maker highlighted how the informal sharing of phones was subject to the subtle and seemingly arbitrary shifts in relations between phone owner and prospective borrowers commenting, "*some people do not want to be disturbed. . . you know people's hearts and attitudes. There are times when he does not want you around. Sometimes someone can hate you for one day and does not want to talk to you for only that one day and the next day you are in good terms.*" Such attitudes could change day by day or be more enduring. For example, a local female politician noted that she would share her phone with anyone except the second-wife of her polygamous husband because, "*a co-wife is an enemy to me. . . she knows that she's the second wife. . . you're already rubbish. That's why [the husband] left you and goes for her.*" Some phone owners refused to lend their phone out to anyone after an experience with a careless borrower. A fisherman named Musoke in village 1 shared his phone with nearly anyone who paid a little bit of cash to cover the cost of air time and phone charging, but drew the line at married women who might use the phone to call a lover. It was more important for him that the fidelity of these village women be policed and enforced even if it constrained their ability to engage in legitimate forms of communication (such as contacting distant kin). In summary, the explanations for refusal reveal all the intricacies of the densely interwoven social world of a village and the efforts of members to navigate these relations. There were a number of reasons that put a damper on sharing relations including jealousy, generosity met with carelessness, and attempts to police behavior.

The very existence of certain social contacts is something phone owners frequently wanted to protect. The capacity of the mobile phone to materialize and bundle social contacts together in the address book was a distinctively new socio-material reality contrasting with the decentralized nature of contact management prior to the phone. By bringing all of these contacts together to a single point of access, phone owners found themselves vulnerable not only to the theft of their costly phone, but also the contacts it contained. For example, a businessman visiting village 1 who traded in millet referred to this special quality of the phone as different from his motorcycle which was, by contrast, a "public"⁶ thing he was willing to lend out. His phone was "personal" because "*the phone records, it can keep my secrets. . . which I don't want anybody to see.*" Asked to clarify what those secrets might be he stated, "*ok, I want to say my business, my personal business, I don't want anybody to know where I'm getting everything because I'm in business.*" What he is referring to in this explanation is the contact-driven nature of business in Uganda and his knowledge of suppliers that gave him an edge over potential competitors.

The possibility of shifting away from using intermediaries to relay messages and towards more private communication mediated by only the phone drove the desire to acquire a phone for many. A housewife in village 4 described this desire for privacy in communications rather than passing messages along through others as the reason she had been given a phone by the man who is now her husband. The ability to keep secrets was seen as an advantage and a problem of phone ownership depending upon whether the speaker was referring to themselves or others. Men sometimes saw the ownership of phones by their wives as a possible problem for this reason. For example the boat maker quoted above described his desire to purchase a phone for his wife, but also was concerned that, “[my wife] may have her own plans and she does not want me to know about them. . . when she has her own phone she can just connect with whoever she wants to communicate to without me knowing.” A woman in the same village made money by renting out some fishing equipment she owned enabling her to purchase her own phone rather than relying on her husband to gift it to her. Yet, she noted that every evening when her husband came home he would take her phone and review her call log questioning her about each call she had made. She noted that before she owned her own phone her husband reluctantly permitted her to make calls on his phone, but he would dial the numbers for her and she had to make the call in his presence. She thought that perhaps he had secrets of his own that he was protecting on his phone. In summary, the phone facilitated a more individualized, direct, less interconnected path for carrying messages and yielded some consequent concerns, jealousies and suspicions on the part of those (husbands typically) who found themselves suddenly out of the communication loop.

Although concerns about managing secrets could restrict the degree to which phone owners shared their phones, this was sometimes overcome by a stronger sense of obligation and other motives that led phone owners to share their phones widely with friends and/or neighbors. A local village leader who was responsible for security in village 1 expressed more altruistic motives noting, “it is not so easy [to deny someone] because whomever comes, it is because he is in need.” He received many calls for his neighbors and made great efforts to deliver the messages he received. Others who were interviewed mentioned some satisfaction in helping others. They noted how they gained small amount of extra air-time when people loaded-air time to make calls. Yet these financial rewards realized by informal phone sharers, as they themselves pointed out, were too small to directly compensate the costs of sharing.

The concern with secrets highlights several material features of the phone that differentiate it from other kinds of shareable goods. There were clearly stated norms in these villages for sharing basic goods related to survival. One must offer food to visitors who come to the home during mealtimes. One feels great pressure to offer money when a friend or neighbor suffers a health emergency. Radio and television support concurrent use and their contents are impersonal leading these items to be treated as shared household property⁷ in a way that the phone was not⁸. The phone because it contained ‘secrets’ led many phone owners to place limits on how widely they would share the device. While permitting use, very few phone owners were

comfortable transferring possession of their phone to another (except in the case of the permanent transfer of gifting). In the case of a few interviewees, they admitted to keeping their phones hidden (i.e. in pockets or beneath clothing) so that others would not know they had a phone at all. Some phone owners disallowed users from physically operating the phone—entering in numbers or typing text messages. In these patterns of sharing there is also evidence of a systematic exclusion of women from phone ownership by their husbands (and sometimes other men) for fear that they might keep secrets or pursue forbidden contact with other men using the device. The phone became entangled in efforts for policing and social enforcement of women’s activities and for controlling and reducing their autonomy where it was thought to possibly present a threat to their husband or other family members.

Preferential Access

Scholars have argued for connectivity as a key, basic service that ought to be universally available to all, even to the very poor and those in remote regions considered unprofitable as a market (Clement and Shade 2000). It is implicit in such arguments that equity in access is related either to equal capacity to use among members of a population (proximity to a phone and the required skills and money to use it) or equal actual practice (such as same frequency of use) (i.e. Scott et al. 2004). This section discusses the practice of gifting mobile phones to family members who were in ill health as an alternate asymmetric, non-universal but pro-social pattern of provisioning access. Such an example points to one of the social groups that local populations think should be helped the most or helped first. For ill family members preferential access to a phone was meant to serve as a life-line to be used in case of emergencies, for example, to arrange transport to a clinic. For example, Stella, an HIV+ woman interviewed in village 2 had for years supported her household by trading in second-hand clothing. She described falling suddenly ill with only her school-aged children around to keep the house in order. Her husband had died as had her parents and she had only a brother who was in South Africa and whom she had no contact information for. She noted:

“... when I was sick I suffered a lot to the extent that I could even fail to get what to eat. [I] did not have any one to help me out and that brother of mine was not here and I had no way of communicating to him. So when he came and found out that I had got so ill to that extent, he decided to give a phone so that we can communicate in case of anything. Both my parents are dead so I have no one else to help me apart from that brother of mine.”

Periodic, debilitating illness creates the need for the immediate contact a phone offers. Changes in health can be quite sudden and unpredictable. Action to resolve the situation often needs to be taken immediately. In a number of interviews we found many people who had acquired phones from family members to cope with their

fragile health conditions—a son with a seizure disorder who was away at boarding school received a phone from his parents, a woman with high blood pressure who looked after many of her grandchildren received a phone from her adult daughter, a woman who traded in dried fish who suffered an unspecified health condition received a phone from her adult son. In the case of David, who had two wives, he found himself struggling to negotiate between two conflicting ideals of equal access when he decided on the necessity of gifting a phone to his second wife due to the frequent health problems of her children. He noted:

Fisherman: *“One of [my wives] used to have a lot of problems and she has a lot of kids and they used to fall sick more often. So since I used not to stay there, I had to buy her a phone and now it became a problem because I have to buy the other [wife] a phone.”*

...

Author: *“And then are all the obligations [to the wives] the same? It sounds like you have to treat them the same.”*

Fisherman: *“That’s the obligation. You have to cater for them in whatever situation. I feel a problem now that I haven’t bought a second phone.”*

These examples illustrate gifting with less clear and less immediate expectations of reciprocation. In that sense it is quite different from the use of the mobile phone as a lure to attract women, gifted with the expectation of a short-term return in sexual favors and denied without this reciprocation. It is also distinct from the classic chain of reciprocation in gifting rituals. An example of this chain of gifting was described by a teacher in Village 1 who sent pocket money to a friend at boarding school, who in return gifted him with a phone, and he in turn offered the gift of a goat—each step underlining and cementing their social tie. Alternatively, *justice* in social arrangements, according to rural villagers in Uganda, did not mean precisely equal shares of access for all or the immediate reciprocation of a gift, but accommodated human diversity. Preferential access was offered for those with greater need in certain circumstances. The gifting of phones to those in ill health exemplifies a particular process whereby benefits of the mobile phone can accrue to those most in need in processes of non-remunerative sharing. Whether one had the money to pay for a mobile phone or to use a mobile phone, therefore, was not the final word on whether one had access to it.

The Materiality of Sharing

The examples above show how rural Ugandans reason about the most appropriate ways to configure sharing. This reasoning relates directly to the form and features of the mobile phone. For example, having ones social contacts kept altogether in an address book generated a sense of vulnerability that tempered a willingness to

share without imposing certain constraints. This is one reason a generalized sense of whether a society tends towards 'communalism' or 'individualism' fails as an overarching explanation that will apply in the same way to practices of food sharing, television watching, as well as mobile phone use. The properties of the good itself and its distinctive place within a society matters. Some goods more shareable than others or shareable only in particular ways. Along these lines, Benkler (2004) in his effort to define sharing and the kinds of goods that are especially shareable identifies some key properties including "excess capacity" and a certain degree of "lumpiness" combining together in a good such that it is affordable for individual ownership, but is sold in units larger than are regularly needed. An example would be a car that seats four but is usually used by an individual alone and thereby lends itself to carpooling. While these properties hold true of the mobile phone in Uganda, the refusal to share relates to other, competing properties of the phone. What Benkler doesn't account for is the way material properties inevitably come bundled together in any object (Keane 2007). Objects always exhibit multiple irreducible, co-existing qualities and capabilities. In this case, the mobile phones qualities that made it shareable were tempered or negated by other properties. The totality of its form contributed to the inequalities in access perpetuated through informal sharing practices. That being said, certain redesigns to the phone could be an effective way to address and resolve such emerging inequalities, to facilitate and further encourage informal sharing. For example, the ability to put the phone into "sharing mode" such that the address book would be locked from prying eyes.

Stories of mobile phone sharing and gifting in rural Uganda have shown how the costs and benefits variably accrue to different roles in sharing configurations. Individuals in certain roles have a greater or lesser capacity to determine the distribution of costs and benefits to others. For example, the purchaser of a phone is able to determine whether to give the phone as a gift and to whom. Figure 2 organizes the roles in terms of their control over directing and determining the distribution of benefits to other roles. This diagram is meant to communicate the idea that these roles can be understood as circumscriptions with the purchaser in a position to determine who is ultimately the owner, the owner in a position to determine who will possess the phone, all the way down to the user. This is the normative model meaning that socially transgressive behavior (such as stealing a borrowed phone) has the capacity to overturn this basic set of relations between roles.

The purchaser is able to benefit from the phone in all the possible ways, by manipulating it as an object of exchange, transferring ownership by offering it as a gift, charging for its use by others, or by using it to place calls and manage social ties at great distances. By contrast, the humble user may be denied even the opportunity to press the buttons on the phone and any privacy in communication and in that way is limited in terms of the range of benefits from access. Pre-existing relational dynamics (such as social policing or a sense of obligation between men and women) can become concretized materially in these roles, but possessed goods can also be employed to amplify, reformulate, or undermine one individuals control over



Figure 2 The circumscription of roles shapes an asymmetrical distribution of benefits.

another. This conclusion reaffirms the importance of considering not just whether a person has access to the mobile phone in a binary sense, but the conditions of and constraints on that access. The user role still can produce great benefits and the trade off in this reduced power is often the reduced financial expense. Yet, the full range of benefits that can be realized becomes less self-determined with each more greatly circumscribed role.

Conclusion

Users relate newly available technologies to an existing social order and may manipulate access to technologies accordingly to preserve, enhance or challenge that order. Through this process users play a role in determining the way benefits of the new technology are distributed to others. This article pursued a reoriented approach to questions of equality beyond the access/non-access binary to consider inequality *within* sharing arrangements. The full range of possible benefits a phone user could realize could be dampened by constraints placed on access even though access was not wholly denied. For example, where users were disallowed operation of the phone they lacked a certain technical facility with the device and did not use some of its key features (like the address book and text messaging). When users were made to place phone calls in the presence of the owner, they were denied privacy in their communications. Certain roles typically mapped to demographic categories and it frequently appeared to be women who disproportionately held roles that entailed lesser determinative control over the device. They were operators or users, receivers of gifts, and the ones being lured rather than the other way around. This article has shown a way that observed differences in access can be evaluated to consider their causes and consequences and whether it warrants the label of inequality.

One major conclusion to be drawn from this work is the continuing importance of public phone services, especially for women, despite the rise of personal phone ownership in rural Uganda. Public phones are often an important source of income for women. Yet pricing schemes have changed over the past few years greatly benefitting consumers but making the phone as a business investment less and less profitable. Yet, it is through these public phones, that many women gain some autonomy in their communications and are able to inquire privately about work opportunities, health matters and other concerns. Where phone sharing is rendered calculative as with these public services, women have the option to pay for access rather than being limited to informal exchange relations with men who may manipulatively use their phone as a lure. So in some cases, the impersonality of commercialized sharing is important for addressing concerns around equality in access. Conversely, the non-calculative sharing of phones with preference given to those in poor health demonstrates that access is not wholly circumscribed by the way the market for phone services is organized, incentivized or regulated. In gifting practices motivated by a giftees health problem a cultural logic was at play promoting social cohesion within families and communities beyond the self-serving forces of market optimization that focus on expanding and redistributing access to phones purely by driving down costs.

The elaboration of the concept of shared access in this article has worked to disentangle practices and configurations that have been unknowingly collapsed together in prior accounts. Such a model can be useful for identifying assumptions made in data collection on mobile phone access and use for statistical analysis. For example, there does not yet seem to be any survey work that distinguishes between phones that were acquired through purchasing and those received as gifts. There is also little consideration of what the costs of access might be beyond payment for equipment and use or the time and expense of travel to the phone. While gifting may benefit both giver and receiver by strengthening social ties, the obligations implied by the act of gifting the phone may make the receiver of the phone vulnerable in new ways. For example, a young woman may compromise her health exposing herself to STDs by becoming involved with a man who has gifted her a phone. Incorporating the model of sharing in this article into survey work could be a valuable next step by establishing the magnitude and distribution of the phenomena documented here, both in Uganda and other locales. Such continuing work would help to establish the new and significant concerns around equity that arise when researchers are attuned to the distinctions between these five asymmetrical roles.

Notes

- 1 Postal, telegraph, and telephone (PTT) service were bundled and provided through a government-owned monopoly in Uganda up until 1996.
- 2 This distinction between communalism and individualism has appeared in attempts to account for cultural difference in trajectories of technology uptake. It is one of the key dichotomies in Hofstede's framework (Hofstede 1991) for assessing the cultural values of national cultures as they play into organizational behavior in the high tech sector.

- Though his model has also been critiqued as having weak explanatory power for cross-cultural differences in technology uptake (Ess and Sudweeks 2005).
- 3 Though it should be kept in mind that many Ugandan women in rural areas did subsistence farming and generated funds by selling any surplus. This was a wholly expected and appropriate activity for women. Generally women's income-generating activities involved trading in less lucrative goods (small, smoked fish rather than Tilapia or Nile Perch which are export crops) or work that involved skills consistent with their domestic role—such as cooking.
 - 4 Privately owned vans that provide public transport throughout Uganda.
 - 5 Ito et al(2005) suggest that in the case of the mobile phone, distinctive trajectories in different cultural contexts are expected. In this sense, such an argument is less difficult to promote than in the case of the Internet which is still often viewed as on “a single trajectory towards a universal good.” (pg. 6).
 - 6 While most of the interviews were conducted in Luganda, this interview was conducted in English so the ‘public’ and ‘private’ distinction is the interviewees own terminology.
 - 7 An example supporting this is Spitulnik's (2002) observations of a radio in a Zambian village moving fluidly from the possession of one individual to another without the owner anywhere in site.
 - 8 Yet statistics on phone ownership per household, as evidenced in the most recent Uganda census (2002) hide the way phones within households may be available to only one member, or may benefit other members in different or lesser ways. Television, radio, and phone are inaccurately equated through tables reflecting household ownership statistics. My assertion follows from what Cheal (1989) and Wilk (1989) observe about the household as the domain of a moral economy of non-calculative, but not precisely even distribution of resources.

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About the Author

Jenna Burrell is an assistant professor in the School of Information at UC-Berkeley. Her interests span many research topics including theories of materiality, user agency, transnationalism, post-colonial relations, digital representation, and especially the appropriation of Information and Communication Technologies (ICTs) by individuals and social groups on the African continent.

Address: School of Information, University of California, Berkeley, 102 South Hall, Berkeley, CA 94720. **E-mail:** jenna@ischool.berkeley.edu

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