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## **I Have to Give an "I Can" Attitude : Gender Patterns in Beeping Practices**

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# I Have to Give an “I Can” Attitude: Gender Patterns in Beeping Practices

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## Abstract

Intentional missed calling, referred to as beeping through the mobile phone, is a popular communication practice among Africans. Targeting young mobile phone users in Uganda, this article builds on previous research on beeping, but focuses on gender as a point of analysis. Data informing this article are based on 76 qualitative interviews with university students and recent graduates who are currently employed, and the results indicate that beeping practices are embedded in sociocultural, normative, gender patterns. The data also show that beeping is a multilayered exercise that each individual at some social-relational level engages in: It is the relationship to the beep recipient that negotiates this practice. Mapping local, diverse expressions of masculinities and femininity at the intersection of beeping activities, the study offers some recommendations on how Information Communication Technologies (ICT) in general can be useful signals of understanding sociological order.

## Keywords

mobile phone, ICT, beeping, gender, Uganda

## Background

In September 2007, I came across an online Reuter's article titled, "Phone credit low? Africans go for beeping." The article went on to reveal that on a daily basis, approximately 130 million missed calls swarm the circuits of mobile phone service providers in Africa.<sup>1</sup> What is apparent is that a large percentage of these missed calls are intentional (Castells, Fernandez-Ardevol, Linchuan Qiu, & Sey, 2006; Donner, 2007; Mckemey et al., 2003). This is a practice that does not always imply a "call me back" action but is an exercise that has been developed and perfected by users into an effective means of communication, with the added bonus of being absolutely free of costs. These intentional missed calls are referred to across Africa as buzzing, flashing, miskin, pitiful, menacing, boom-call, fishing, bipage, beeping, missed calling, and, although the term of reference to intentional missed calling may differ from country to country, the action is the same. In Uganda, the country under focus, the practice is referred to as beeping, and this reference will be maintained for the rest of this article.

Beeping someone is an action that involves calling the other user's mobile phone and hanging up before they have an opportunity to pick up the call. The messages emitted through this action are usually prenegotiated between users prior to the action (Donner, 2007), such as "I have arrived home safely," or "goodnight," or "I'm thinking of you," "I love you," and even "please call me back." The phone features such as the call log and phone book records enable the receiver to discern who has "called" them. Beeping on the

part of the service providers has created two (among others) glaring challenges that will be explored here. First, communication through the mobile phone is supposed to earn the service providers money whether it is a call or a text message. The general idea has been and continues to be that all communication through this technology is charged a fee. But how and what constitutes as communication is a constant power play between the end user and the service provider because what producers offer does not always tie in with the consumers' uses of a product<sup>2</sup> (cf. Cockburn & Ormrod, 1993; Johnson, 1988; Lie & Sørensen, 1996; Oudshoorn & Pinch, 2003). The other challenge with beeping is that these missed calls swarm the circuits, clogging up the communication channels. Service providers across the continent have stepped up to respond to this challenge by creating "call me back" services that are circuited through different channels, and some of these have been limited to a specific number a day.<sup>3</sup> Not every country though has managed to curb the practice, and an effort to discern why this practice persists has instigated research interests that have produced varying reasons behind the practice.

Even though Africa boasts the world's highest mobile telephony penetration figures in the world, some of the world's poorest are encountered in the same region (Coyle, 2005) and

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the predominant reasoning behind beeping is that the economic situation for most Africans has pushed them to devise a communication practice through the technology that fits in with their finances (Castells et al., 2006; Donner, 2007; Goodman, 2005; Horst & Miller, 2006). This article builds on these debates, specifically highlighting gender performances through the practice of beeping. Instead of thinking of beeping as purely informed by economics, this article forges an understanding of how the identities constructed in relation to gender are aided by finances or lack of, and made visible, through beeping practices. Thus, the economic argument put forth by some of the previous work in beeping may not be the principal negotiator of beeping practices, but rather gender.

In this article, beeping is contextualized as a relational practice, a communicative exercise that is understood by individuals who are engaged in some sort of relationship. The social relationships alluded to here involve class negotiations, cultural negotiations, generational negotiations, intellectual negotiations, economic negotiations, as well as gender-based negotiations; a cluster of categories that reveal beeping as a practice imbued with intersectional social orders. These are enacted on multiple levels simultaneously with an overall impact on social exercises, existences, and expressions. I return to a theoretical outline for this article shortly but will at this juncture reemphasize that gender as a social category is the focus for this article. Generational, kinship, or class forms of beeping can be subjects for further research, not to mention the notion of users being active agents in what a technology becomes.

To understand who constitutes the 130 million daily missed calls, this study analyses diverse gender-based negotiations that confront beeping practices. Mapping local, varied expressions of masculinities and femininity at the intersection of beeping activities, the study offers some recommendations on how Information Communication Technologies (ICT) in general can be useful signals of understanding sociological order.

In terms of organization, this article is structured as follows. Immediately following this introduction are the objectives that informed this study. The reader is then introduced to the methods used before an outline of previous research related to beeping is provided. The cultural landscape within which beeping occurs receives mention within the theoretical outline that is lodged within social constructivist approaches to gender and technology. Six empirical sections follow the theoretical discussion, the first section details a quantitative side of the data that serve as a backdrop to the subsequent qualitative analyses before rounding up the discussion with some conclusions on who constitutes the daily 130 million beeps.

## Objective

My goal going into the field was to investigate to what level the economic argument put forth by the literature on beeping

influenced the practice. Having engaged in beeping exercises myself, I knew there was more to the process than one's financial ability or lack thereof. I therefore sought to establish, under what circumstances, how often, and to whom the 130 million daily beeps were directed. Looking at my notes from the field, and the transcriptions from the recorded interviews, I noticed specific themes relating to expressions of gender, emerging in the data, many of which were aided by but not altogether overridden by the respondent's socioeconomic status. The objective of this article based on these identified themes, is to ascertain through the specific practices of beeping, how gender relations have been affected by and have affected mobile phone use in Uganda. As more than 70% of Uganda's population is below the age of 30,<sup>4</sup> the study focus aimed at this segment of society can also establish how modern technologies such as mobile phones have influenced or are being influenced by the gender structure in place.

In the field of ICT for development (ICT4D), there is the understanding that these technologies of which the mobile phone is a prominent member have ushered in an era of empowered development (Plant, 1998). Cyberfeminists view the ICT era as "providing the technological basis for a new form of society that is potentially liberating for women" (Wajcman, 2010, p. 148). As the most prominent and fastest-growing technology in ICT4D, studying the communication practices with the technology may help answer the question whether ICTs are in fact liberating women in the developing regions. McGuigan (2005) asserts that "[i]f you want to understand any kind of society you should look at how its members communicate with one another" (p. 47; see also Bray, 2007, p. 37). Symptomatic to these analyses are cyberfeminists (cf. Kirkup et al., 2000; Plant, 1998) who allude to a reembodyment of gender in the cyber realm as mentioned earlier. Wajcman's (2004) *Techno feminism* argues differently as she takes seriously the ways in which technologies are often framed to distance or subordinate women. Bending toward this reasoning, this article approaches the beeping practice with critical interrogations toward how gender relations are renegotiated, or even subverted through the use of the mobile phone.

If 130 million beeps circulate the mobile communication channels on a daily basis, to what extent can this figure be translated into empowered development? More specifically who constitutes these beeps, how are the beeps informed, executed, and perceived? In the process of answering these questions, this study draws on previous research that has identified social, contextual rules to the practice that go beyond cost-saving strategies (Donner, 2007). As such, if specific rules pervade the practice, additional questions such as how these rules are conceptualized and maintained will hopefully be answered. On another register, because majority of the accounts informing the gender and technology field are from Western experiences (see, Bray, 2007; Mellström, 2009), this article further contributes to the growing body of

work emanating from developing regions, especially the meager contributions that come from the African continent.

## Method

Limiting the study to Uganda, located in East Africa, this research is a result of a year of ethnographic observations, 23 conversational interviews, and a subsequent 53 qualitative interviews. The research group relating to beeping was further narrowed to young adults pursuing university education within close proximity to Uganda's capital city, Kampala because it is the young "urban users" who are "generally said to be the early adapters of newer communication technologies" (Berg, Mörtberg, & Jansson, 2005, p. 51; McGuigan, 2005; see also Katz & Sugiyama, 2006). Second, the practice of beeping is largely concentrated among university students (Castells et al., 2006; Donner, 2007) although the practice is known to also cut across generations (Castells et al., 2006). Third, more than 70% of Uganda's population is below the age of 30 as mentioned earlier.

I refer to the conversations from which some of the data presented henceforth were derived, as conversational interviews (see Dowson & McInerney, 2003) because all the informants were made aware that the thoughts shared were being gathered as data for a scholarly article. These conversations took place at informal gatherings, in public transport, with extended family members, with friends and acquaintances with whom rapport had been established (Aull Davis, 1999; Fetterman, 1998). The situations in which I engaged in these conversations, did not always provide an opportunity to digitally record the exchange because not only was the location inappropriate but the natural conversation flow would have been disturbed if I had stopped to request for permission to record (for a discussion on this method, see Fetterman, 1998). These conversations not only explained the beeping behavior but also helped give cultural meaning to the practice (Fetterman, 1998). On the occasions when I had the opportunity of discussing this research with the same informants twice, I asked for permission to record the exchange. These discussions lasted anywhere between 30 min to 2 hr.

Building on the observations and conversational interviews, I crafted a short questionnaire, which I personally administered to willing participants. Administering the questionnaire ensured clarity of the questions posed (Bryman & Cramer, 2001); it also provided an opportunity to follow-up on some responses with further questions (Nachmias & Nachmias, 1996). Meeting these students was done either in the libraries, outside their lecture halls, at the beginning or end of a lecture, or, as in one case, when I stationed myself outside a residence hall. The duration of the interviews with the students ranged from 10 to 30 min. I took notes as the respondent answered the questions, making sure to capture the nuances raised from question to question. The option not to record these encounters allowed the students to talk freely

at times even read through my notes and provide more information. Majority of the students alluded to owning Nokia phones and as additional material, I also read through 20 Nokia mobile phone manuals—found online—of the more popular brands in 2008/2009 looking for any mention of instructions on how to perform beeping.

To establish whether beeping was also prevalent among young working recent graduates, ages ranging from 23 to 28, seven willing respondents were also interviewed from an advertising agency. These seven participants highlight an interesting class dimension to the practice of beeping that is intersected with gender and social norms. A qualitative presentation of data will be used although numerical mentions will be made liberally throughout the text.

## Earlier Research

Castells et al. (2006) present a global perspective on mobile communication in society and rely on the term "mobile network society" to amplify social networks built on "wireless communication technology" (Castells et al., 2006, p. 6). Beeping receives mention as a last resort form of communication for mobile subscribers that beep the friends and relatives with the financial ability to return the call. Emphasis is also cast on the social rules to the practices, such as the social faux pas performed when a gentleman suitor beeps his love interest, suggesting gender rules to the practice (cf. Donner, 2007). Chango's (2005) contemporary review queries whether the desperate need to communicate by "the urban poor," who use beeping, does actually make them members of the information society. Mckemey et al. (2003) present a technical report that identifies patterns of telephony use unique to the African region, such as beeping and the potentials of using these practices as advertising campaigns to foster greater mobile phone use/integration. Horst and Miller (2006) in their anthropological study of the cell phone in Jamaica, encounter the practice as a cost-saving strategy. In Donner (2005, 2006, 2007), the author traces the practice across sub-Saharan Africa, and discovers a social etiquette to the practice. These articles pay the most social attention to beeping, and Donner concludes in his 2007 article that the practice is more than a "cost-saving practice," and that it can be categorized into three major beeps. He identifies a "call me back beep," a "prenegotiated beep" that involves prearranged messages such as "when I beep you I will have arrived at the agreed destination," and "relational beeps," which he notes cut across friendships, and romantic relationships, which this current article focuses on with an in-depth gender and technology analysis. Other sources that have informed this study include news reports such as a BBC article by Borzello (2001), titled "Uganda's 'beeping' nuisance." The article suggests an underlying financial impact to the practice, with the financially able users bearing the responsibility and cost of "the call backs."

## Mutual Shaping of Gender and Technology

Beeping in this article will benefit from the social constructivist framework in gender and technology studies that sees “technology as both a source and a consequence of gender relations” (Wajcman, 2010, p. 149). This argument continues to inform feminist approaches to the field of Science, Technology Studies (STS), where it is suggested that science and technology do not “evolve in a vacuum rather they participate in the social world, being shaped *by* it and *shaping it*” (Law, 2004, p. 12). As such, feminist readings of STS seek to problematize the complex relationship women appear to have with technology as well as the obvious dominance of men in the field (Lagesen, 2008; Wajcman, 2004). Sociologist, Judy Wajcman (2010) notes that “gender relations can be thought of as materialized in technology, and masculinity and femininity in turn acquire their meaning and character through their enrolment and embeddedness in working machines” (Wajcman, 2010, p. 149). Among the youth in Uganda, one can see this mutual shaping emerging in beeping practices. This co-construction of gender and technology erupts in beeping as the youth engage with the mobile phone in specific and structured ways.

Performances of masculinity and femininity (cf. Butler, 1990, who looks upon gender as a performance) “are practices through which men and women engage in gender and effects of these practices [consequentially impact] practices on bodily experience, personality and culture” (Connell, 2005, p. 71). Masculine and feminine practices are varied, hence the emphasis on pluralized masculinities and expressions of femininity, and are learned and expressed individually, communally, or even culturally. Analyzing the dominance or subordinances within and among masculinities in particular, Connell (1987) notes a hegemonic form of masculinity that negotiates power relations in lieu of women and other men. The role of provider over a woman is one of the “prevailing hegemonic masculine ideal”<sup>5</sup> (Kiyimba, 2005; Nannyonga-Tamusuza, 2005; Nyanzi, Nyanzi-Wokholi, & Kalina, 2009; Sorensen, 1996; Wyrod, 2008, p. 809) and is a characteristic particularly developed through oral literature, language, music, dance, and folklore among Uganda’s youth. Not only do these media create “near indelible impressions in matters of social organisation, political power relations, resource management and sharing, and gender relations, these impressions in turn lay down rules of the future social behaviour and contact of the young people” (Kiyimba, 2005, p. 254). Expected social behaviors are made visible in the games that young boys and girls engage in, the same are held in check by peers, relatives, the community “and recently through electronic mass media” (Nannyonga-Tamusuza, 2005, p. 116-119). I note that both boys and girls are constructed by and restricted by the local gender system and are groomed in opposition of each other, which helps establish relations of codependency (cf. Nannyonga-Tamusuza, 2005; Nyanzi et al., 2009). When asked if, how

often, why, and whom they beep, all the informants in this study alluded to being engaged in heterosexual relationships. As such beeping as a practice fortifies these cultural constructs but the same practice also makes visible the iterative quality of these expressions as well as their fragility.

## Forms of Beeping: Results

The implicit economic argument put forth by (Borzello, 2001; Castells et al., 2006; Heavens, 2007; Horst & Miller, 2006; Mckemey et al., 2003) cannot be disputed regarding the practice of beeping. The empirical data provided henceforth are indicative of sociocultural practices among the young people, perhaps as a minion of economic inabilities. That said, it was also evident that even financially able female respondents (e.g., the working advertising firm female respondents), still beep their boyfriends, with a nonchalance that suggests an expectant “call me back” situation in most cases. Far from being a representative sample of the youth in Uganda, the subsequent numerical depictions are useful for the ensuing qualitative analyses as they provide general trends among the informants that provide the emphasis needed in detailing the qualitative data that follow this section.

From the 53 participants that informed this study, 46 of them are university students. Of the 46 students, 26 are female students and 20 are male students. The questions listed on the questionnaire first established if the respondent owned a mobile phone, after which demographic questions such as age, year of study, and name were also sought. Thereafter, the respondents’ phone billing plan was queried. This question was essentially posed to establish if economic factors motivated the practice of beeping. All 53 respondents (including the working respondents) are on the prepaid phone billing plan, the choice plan made for the economically challenged who would want to monitor their expenditure (Skuse & Cousins, 2008; Waverman, Meschi, & Fuss, 2005). Further along the interview, the participants were asked to choose from a list of features available on their mobile phones, three of their favorite and most frequently used. Beeping is not a feature on any mobile phone, and scrutiny of the manuals sold with each mobile phone do not list this practice as a feature or supply instructions on how to go about the exercise.<sup>6</sup> Nonetheless, beeping was included (deliberately to establish if it was considered important) among the list of features to choose from, and with the exception of 1 female university student, who questioned whether beeping was a mobile phone feature, the rest of the informants either scorned at the feature, or jovially pointed at it as one of their favorite mobile phone features.

More specifically, 11 of the 26 female university students selected beeping as one of their favorite features and 8 men out of 20 male university students selected it. That this nonfeature is one of the most favored offered by the mobile phone by 19 of the university student respondents is

indicative of just how prevalent the practice is among this group of users. The respondents were also asked how often and with whom they engaged in the practice of beeping. About 50% (13) of the female university students beep on a daily basis, and 35% (7) male university students beep on a daily basis. From the same group of university respondents, it was also established that 21 (81%) of the female respondents beep their boyfriends, while 8 (40%) of the male respondents alluded to beeping their girlfriends. With the 7 recently graduated respondents, all employed, the following responses were recorded. Of 4 female respondents, 3 chose beeping as one of their favorite mobile phone features, and 1 out of 3 male respondents selected beeping as a phone feature they favored. Two of the girls from the advertising agency claimed to beep on a regular basis, and were quick to point out that the beeping was to specific people such as to their boyfriend, or family or parents, never their peers, because “now that I am working I don’t think it is good. When I was in college, it was very understandable. I only beep [my friends] if there is a prearranged message” (Daniella, 24, PR executive). None of the young working males beeped their girlfriends or buddies. But they did admit to beeping parents or older family members whom they knew would be able to call them back. Comments made especially by male respondents when asked if they beeped their girlfriends were noted. The strong reactions toward beeping their partners were mostly experienced from the male participants, while majority of female respondents almost seemed to consider the same practice as normal. To analyze these attitudes and further deconstruct the data provided here, the subcategories enlisted below relate to a relational beeping analysis further contextualized within the construction of gender in Uganda and among these participants.

### *Beeping Performances*

To untangle the structures that order beeping performances as shown in the previous section, the empirical presentation in this section is enveloped in discussions on masculinity, and how this enterprise is produced through beeping practices. Seen as a process, masculinity is a relational concern within gender relations or as Connell (2005) puts it “[m]asculinity’ does not exist except in contrast with ‘femininity’” (Connell, 2005, p. 68). As such bringing masculinity into focus further makes visible other constructions of gender categories (Carrigan, Connell, & Lee, 1985; Donaldson, 1993) that call various models of masculinity into play within beeping. The production of masculinity in beeping is assisted by class dynamics driven by economic resources as alluded to earlier. As the economic processes vary for informants in this study, the forms of masculinity are plural in their production. The strong affiliation between economic resources and expressions of masculinity provides another explanation for beeping. As a matter of course, Connell’s

(1987) concept of hegemonic masculinity is taken as a point of departure and is maintained as a central focus in the process of analyzing the order in beeping practices. Hegemonic masculinity to recapitulate is when “particular groups of men” validate, maintain, and defend their positions of power over women and other men (Carrigan et al., 1985; Connell, 1987, 2005). In beeping practices, hegemonic masculinity is called into play through one’s ability not to beep but also the ability to respond to a beep.

During one of my conversational interviews, I was made to realize how the relationship between masculinity and economic resources is the source of specific beeping practices:

While I was at campus this was the case; a guy who is interested in a girl, will want to show her that he is capable of taking care of her. And guys like to show off, so the guy will start buying the girl airtime and he tells her that she should beep him, and he will call her back, and when her airtime runs out she must tell him, he will load more on her phone. So the girl gets used to this airtime. (Salome, November 2008)

The specific gender relations constructed in the interaction described in this excerpt can be better understood when the historicity of the gender order (cf. Donaldson, 1993) in Uganda is considered. If parallels are drawn between the breadwinning practice and the guy’s ability to buy airtime, and respond to a girl’s beep, hegemonic masculinity is conditioned upon and modeled, toward the guy not beeping, simultaneously encouraging his girlfriend to beep him. It is imperative for the guy in question to provide the call credit, which according to this excerpt must never be used to call the credit provider. This pattern of masculinity, may not necessarily be oppressive to the girl in question, in fact “some expressions of the hegemonic pattern [may be] more familiar and manageable” (Donaldson, 1993, p. 645) for women, who are actively engaged in its production. I discussed some of the patterns emerging in my data with Salome, whose insights were very useful in fleshing out the various reasons many young men in my data consciously chose not to beep.

### *Responsible Beeping*

I came across 20-year-old Richard early October 2008, on his way to the library, and he mentioned that even though he did not have a girlfriend at present, he would never beep her because “I have to show an ‘I can’ attitude,” and he followed this comment with “you know how it is for us guys.” Richard spoke with hand gestures as he tried to get his opinion across. The historicity of the gender order referred to earlier is particularly evident in Richard’s reference to “you know how it is for us guys.” How society grooms and regulates gender relations can be reflected on how Richard interprets and adheres to these regimes. I also realize that I cannot be absolved of Richard’s perception of me and the impact this

might have had on the interview. The “I can” attitude alluded to may have also been directed at me as a woman. Shortly after meeting with Richard, I chanced upon 21-year-old Michael outside his residence hall. When asked who he practiced beeping with, his disapproval toward beeping his girlfriend was visible in his facial expression before he stated, “I would rather send her a SMS, beeping is too ‘high school.’ It’s for immature boys.” Michael, however, talked about beeping his parents claiming, “Oh yes, there is always money there.” This was a clear theme among the informants. Namely, that the same young men do engage in the practice with their family displaying that construction of a good son, in relation to the familial hierarchies of parents caring for and protecting their children is unlikely to berate a beep from the son. Whereas the construction of a good boyfriend, within this category of respondents may be contingent on being responsive to a girlfriend’s beep. Michael’s reference to “there is always money there,” with regard to his parents steers the discussion back to the economic resources that are central to Michael’s beeping practices and depending on the social arrangements the same can both motivate and undermine who Michael beeps or does not beep.

On another occasion, stationed a few meters away from a roadside phone kiosk on one of the University campuses, I happened upon 21-year-old Steven. Steven was very chatty, and when asked who he beeps, his friends and his girlfriend were not in this category. As a way of explanation to not beeping his girlfriend, Steven supplied, “beeping doesn’t show responsibility, I must show my girlfriend that I am responsible!” Steven gave some fascinating alternatives as opposed to beeping his girlfriend. We were standing a few meters from a roadside phone kiosk as mentioned already, and he stressed that rather than beep his girlfriend he would call her from the public phone, which he gestured toward. Call charges to mobile phones from one of these public phone booths are cheaper than direct mobile-to-mobile calls. This practice has social connotations to the effect, that one who calls another mobile phone from one of these phone booths communicates their financial inability to communicate directly from a mobile phone particularly if the call recipient is aware that the caller is in possession of a mobile phone. When Steven stressed that he would rather call from these phone booths he demonstrated his abhorrence toward beeping his girlfriend and also created hierarchies in communication practices that are worth pursuing in further research.

Ronald, a 22-year-old, had just come out of a lecture on a Tuesday afternoon when he agreed to an interview. We sat in the empty lecture hall and soft-spoken Ronald quietly responded to my questions with a conviction I had not seen with some of the other male informants. Ronald disapproved of beeping in general but with specific reference to his girlfriend he said, “I have to show that I care about her.” I asked as a follow-up if beeping the girlfriend was an indication that he did not care for her, he simply nodded.

## Beeping Behaviors

The context and the environments in which I met these informants further contributed to the material at least with regard to the expressions of masculinity. For example, John, an advertising agent, sat in an open office with several other colleagues and this interview could be heard by all who were present. When we reached the section in my question sheet that asked about his beeping practices, 25-year-old John exclaimed “I never beep my girlfriend, she is different.” I asked him what was different about his girlfriend and he explained while looking around at his female colleagues “you know how girls are they expect you to call them.” And to his credit, the female colleagues gestured and mentioned that it was important that a boyfriend calls his girlfriend as opposed to beeping. Seated a couple of desks away from John was 27-year-old Ivan. Ivan was a jolly boisterous interviewee who may have also wanted to show off for his colleagues in the same open office space as John. As he responded to the questions, he encouraged the participation of his colleagues by challenging them with questions or comments. Although Ivan did not mind his girlfriend beeping him, he took issue with friends or colleagues beeping him and when he mentioned this, one of his female colleagues calmly mentioned that sometimes a call is unnecessary when all you want to say is “hi, I am thinking of you.” To this Ivan responded “you might as well call me and blurt out the ‘hi’ and then hang up, beeping is so unloving.”

The environments were themselves highly gendered and produce varied enactments of masculinities. Alternatively, the context had an influence on or helped convey masculinity. Ronald John and Ivan put forward the same argument but expressed it differently. While John and Ivan fed off of their colleagues, Ronald’s quiet conviction paralleled exemplified different expressions of masculinity, that are still “centrally connected with the institutions of male dominance” (Donaldson, 1993, p. 645). Put another way, the girlfriends are a critical aspect in the production of hegemonic masculinity as long as they are the ones doing the beeping. For example, the female respondents (students and employed), who alluded to beeping their boyfriends, did not follow their response to this question with strong comments as noted above. A case in point is 24-year-old advertising executive, Daniella, who mentioned that she does not beep as much now that she is working, unless she is communicating a pre-arranged message. Daniella and her female colleagues suggest here that as working women, they have to adhere to specific codes of behavior such as only beeping when they have to. The same informants claimed to beep their boyfriends, however, with Daniella providing that “he expects me to beep him” (January 2009). Even though these ladies may be in a position to afford to call their boyfriends, they do not do so. As such when Wajcman (2010) talks about technology being a source and a consequence of gender relations, the performance of masculinity, emerging in this category of



informants emphasizes the hegemony of these men in relation to women (Connell, 1987). Richard's comment about having an "I can" attitude, or Michael's comment about beeping being an "immature" trait for men, along with "beeping is so unloving," or "I have to show that I care about her," are comments that demonstrate that if, as a man, you love or care about your girl you cannot *devalue* what she means to you by beeping her (Chango, 2005) or risk the embarrassment of being labeled as "*cheap*" (Donner, 2007, p. 6).

Emphasis is made with words such as *devalue* and *cheap*, to highlight the socioeconomic implications of beeping at the same time as I problematize the exclusive focus on economic resources in previous research by making visible the gender structure that informs beeping. Put differently, the economic argument that feeds its way into specific sociotechnical practices is part of "large-scale social structures" (Carrigan et al., 1985, p. 577). In addition to the earlier research on beeping, this article argues that beyond the economic argument, the production of masculinity can be undermined or strengthened within specific conventions of gender practices. Each of the young men in this section have to show that they "care" about their girlfriends, and their inability to maintain the relationship could be seen as a loss of their masculine identification (see for comparison, Connell, 1987, pp. 183-187; Connell & Messerschmidt, 2005, p. 840; Kimmel, 1987, p. 266). As informed by another conversation interview,

I had a chat with this guy who was complaining that his previous girlfriend who was from the [south] of Uganda was fond of beeping him. He said, "I used to buy her the airtime and she would beep me only, never called, so I started wondering—if I am buying her the airtime, who is she calling with my money? After a while we broke up and I am now seeing this lady from the [east] of Uganda, this lady is different, she will even go to the phone kiosks when she has no airtime, I don't understand, I have told her to beep me, but she always calls, is she more desperate than girls coming from the [south] or what?" (Mary, October 2008)

Several issues are raised in this excerpt, and as mentioned earlier, the various attributes that negotiate beeping such as ethnicity as inferred in this quote are topics for future research. But the idea promoted here illustrates the construction and expression of masculinity, around notions of power. This man, encourages his girlfriends to beep him and the girl who fails to adhere to his ability of assuming the role of provider, has him pondering whether or not she is desperate, a trait he clearly finds disconcerting toward the performance of masculinity. There is a lot of showing off, of being financially able, and for hegemonic masculinity to emerge successfully; women like Daniella have to be compliant in "accommodating the interests and desires of men," a process

that Connell (1987) labels as "emphasised femininity" (p. 183) meaning that the women are active participants in the process and production of hegemonic masculinity.

### Expressing Resistance

Whereas Donner's (2007) and York's (2002) materials suggest that employees as well as students in this particular case can beep their employers or lecturers, my data does not agree with this assessment. The students and the advertising agents provided very emphatic nos to this question. Both male and female student respondents did not beep their lecturers and the employed respondents did not beep their employers, suggesting that social hierarchies can renegotiate the gendering of technology and why a situated context-specific analysis of sociotechnical practices is important.

Thinking back to Michael's comment when asked if he beeps his parents, where he reveals "oh yes, there is always money there," as opposed to him not beeping his lecturers or girlfriend, one can conclude that masculinity is expressed, both in situations of beeping and nonbeeping. Hence, within the family discourse, constructions of masculinity are still prevalent where the construction of "son" builds upon certain traits of masculinity at the same time as it dismisses others. Similarly the construction of "boyfriend" rests upon and is reinforced by certain traits of masculinity—caring for your woman—just as femininity when confronted by particular rankings in society, may not be an acceptable excuse for engaging with technology in specific ways.

Other tensions were registered with some of the subverted beeping performances as in the example of eight university male students who alluded to beeping their girlfriends, while five female university students did not beep their boyfriends. These young women considered the whole practice unfair to the recipient of the beep. Rebecca in particular was very vocal on her feelings toward the practice saying "it's a moral issue I don't consider it proper, like I am *detothing* him." *Detothing* is a form of dependency literally meaning to render someone toothless by deliberately enjoying financial favors from them with no intention of returning the goodwill. Hence young ladies who succeed in having men lavish money on them without a capitulation on their part are said to *detothing* guys. I contend the same can happen the other way around or even within same gender relations. For Rebecca, 22, a 3rd-year university student, she considers this reliance on a boyfriend to call her back as immoral and a practice only for the "cheap" girls.

To suggest that the forms of masculinities expressed among the category of men who beep as well as those who appear to have no qualms with receiving calls as opposed to beeps from girlfriends like Rebecca are subordinated forms in relation to hegemonic masculinity would be a rather simple conclusion. Rather the power structures that demotivate certain groups of men from beeping, and encourage others to beep, may be different but it also shows that the differences

are not just about power—or power may assume a different character. Put differently, some of these masculinities resist the established assumptions at the same time as they stabilize the associated notions of power. The breadwinning position, shaped by social norms also shapes masculinity, and some of these norms are made visible through the young men who express the provider role by responding to a beep. The empirical material does not delve into how these groups of men negotiate alternative forms of masculinities, but it shows that not all men engage with technology in relation to conventional gender expressions, and certainly not women like Rebecca either for whom beeping the boyfriend may subjugate her boyfriend's masculinity rather than qualify it. I return to my conversation with Salome to help flesh out this section,

Those guys who end up saying “my girlfriend is dethoothing me,” have brought that upon themselves, you can't start buying airtime and change your mind along the way, she is not dethoothing, she is doing as you have showed her. (Salome, November 2008)

It would in fact appear that some men find the requirement to respond to a girlfriend's beep, disempowering especially if they refer to the process as one that *dethooths* them. Even if it is the men who encourage the beeping according to Mary and Salome, the power structures that inform the exercise become subverted as women assume greater control and power over the process. The fragility and process-oriented quality in expressing masculinity, especially hegemonic masculinity, is evident in the men who fail to control their girlfriends beeping and as in the case of Mary's discussion also the girlfriends calling patterns. The economic incentives that appear to create the hegemonic pattern in beeping are not ahistorical. Their construction would benefit from a deeper examination of what practices sustain them (cf. Connell & Messerschmidt, 2005; Kimmel, 1987). But it is noteworthy that the five girls in this category do not engage in any form of beeping, and passionately dislike the practice. While on the flip side, the eight men who beep their girlfriends—an interesting contrast to the women they are being compared with in this category—noted how it was perfectly alright for their girlfriends to beep them, but they would also do (did) the same.

### Peer Beeping Practices

Within the male homosocial/male–male circles, an unspoken tension was communicated on beeping one's male friends. The notion of responsibility discussed by the male respondents according to their reference of girlfriends was in this instance put forward as a boyish trait that is not popular even among their male friendships. As Donaldson has it, “[t]hrough hegemonic masculinity most men benefit from the control of women. For a very few men, it delivers control of other men” (Donaldson, 1993, p. 655). Held in check by

peers, as mentioned earlier, the gendered power relations among men (Connell, 2009) are amplified in relation to other men and manifest among the informants in this study in how they communicate through the mobile phone with each other. The male respondents were emphatic when they mentioned that beeping their friends almost always involved communicating a prenegotiated message, such as “I have arrived at the ‘agreed meeting place.’” The girls on the other hand did not communicate the same friction regarding beeping each other. Beeping fellow girlfriends, just to communicate a “hello” message was a common practice mentioned by the female respondents. Some female respondents narrated the number of beeps required to communicate particular messages and that it was commonplace to beep friends on a regular basis.

Among the male respondents, 78% (18) in total mentioned beeping their friends, most of them following this with a comment to the effect that a beep had to be agreed upon prior to its emission. Among the female respondents, 83% (25) indulge in the practice liberally with fellow girlfriends, without the same tension as communicated by the guys. One female respondent noted that some of her friends did not appreciate being beeped so she did not beep them, but those that did not mind she beeped them every once in a while to say “hi.” This demonstrates that the practice is not used within all female-to-female relationships, but it is more prevalent among this group than the male-to-male friendships. This shows that even among their male-to-male social bonds, there is the unspoken responsibility of elaborating masculinity. Because as Steven phrased it, “beeping doesn't show responsibility”; a trait that men are taught very early on in their childhood. The girls on the other hand, are taught to emphasize their dependence, (Kiyimba, 2005; Nannyonga-Tamusuza, 2005) and for them displaying these traits even among each other, may not always result in their femininity being compromised, to the level that masculinity is among the guys (Connell, 1987, p. 186f).

### Conclusion

It is highly likely that beeping as a form of communication will wane as other features are introduced on the mobile phone. The smartphone revolution has afforded many students and Uganda's youth in general with cheaper affordable communication features powered by Wi-Fi or mobile Internet bundles. With Wi-Fi services spread liberally at many universities in Uganda, communication through these various applications can take place with little or no cost to the student. But even though the mobile phone may continue to provide affordable means of communication, this article has illustrated how to some extent expressions of gender are changing with the advent of ICT, but to a greater degree, the gender order at play is reinforced as made visible through mobile phone communication practices.

Beeping is ubiquitous within the Ugandan society (Borzello, 2001). The concept has been analyzed by

researchers with the conclusion that it is not only a nuisance but is a practice deeply embedded in the socioeconomic status of Ugandans and Africans in general (Borzello, 2001). The current article develops this analysis by emphasizing an aspect of beeping that has received passing attention in the published works that of beeping being primarily informed by or negotiated by gender. This article has not dismissed the economic aspect put forth by previous research, but has sought to build on this enterprise by illustrating the conscious efforts applied by mobile phone users, to convey their gender identities when they communicate through the mobile phone. For example, the pressure, perhaps even pleasure, and power that young men face when they receive a beep from a love interest requires a cultural performance of the local understanding of what it means to be a responsible man. One also has to understand that the girls' practice of beeping does not preclude them as passive in the practice because their interactions with the mobile phone precipitates the enactment of hegemonic masculinity as made clear by Daniella's confession. Some of these ideas substantiate the hegemony of some groups of men that can be paralleled to the culturally idealized form of breadwinning, an enterprise that is actively sought by most men. Under the umbrella of socioeconomic processes, juggling the various positions of son, boyfriend, student, or employee, for the young men in this study requires various expressions of masculinity in beeping as regulated by the social arrangements. Not only does a mundane (in)significant practice such as beeping contribute to establishing these gendered norms, the practice through this technology also enables a glimpse of how gender is structured (Bray, 2007) in Ugandan society.

Cyberfeminists have alluded to a Cyberutopia that has the potential to redress inequalities in societies (Kirkup et al., 2000; Plant, 1998). A positive way of looking at the 130 million beeps is to consider the rapid uptake of the mobile phone by a region that has for the most part struggled to catch up with the rest of world with regard to ICT uptake (Polikanov & Abramova, 2003). But looking at the technology, and the social and cognitive structures in place, the way technology is used depends on the subject, and making the kind of jump alluded to by the cyberfeminists of a more equal society through technology (especially if a hype is created around the 130 million daily beeps), may in fact obscure more than illuminate interactions with ICT. Rather,

both technology and gender are products of a moving relational process, emerging from collective and individual acts of interpretation. It follows from this that gendered conceptions of users are fluid, and that the same artefact is subject to a variety of interpretations and meanings. (Wajcman, 2010, p. 150)

Bray (2007) suggests that “[t]echnical skills and domains of expertise shape [and are shaped by local] masculinities and femininities” (p. 37).

As a social symbol of negotiating beeping practices, gender illustrates among this category of informants that the hegemonic masculine ideal of provider, prevails among majority of the young men who ascribe to this role by consciously choosing not to beep. In the same vein, majority of the young women practice beeping in line with local cultural emphasized femininity. These social signals are useful in “charting the coproduction of global and local culture” (Bray, 2007, p. 53) in the perpetual movements toward globalization. Masculinity and femininity expressions are tenuous within gender relations. They are confronted by or intersect with other social attributes such as class, kinship, cultural norms, age to name a few, which create a situated expression of the same, and beeping as a practice is particularly indicative of this. The socioeconomic aspect of beeping when shown to interact with the gender reveals a practice that extends beyond the economics of beeping. In principle, the social relationship to the beep recipient negotiates this practice to a greater extent than the economic resources. Africa's 130 million daily beeps are thus doing much more than merely informing recipients of a missed call. They are reinforcing and sometimes negotiating relationships and hierarchies across the continent.

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### Notes

1. [http://news.zdnet.com/2100-1035\\_22-166877.html](http://news.zdnet.com/2100-1035_22-166877.html)
2. Users as active agents in thwarting what producers initially have in mind for a technology is an interesting thought worth pursuing, but it is beyond the scope of the current article. For other similar studies that denote similar arguments (cf. Cockburn & Ormrod, 1993; Oudshoorn & Pinch, 2005).
3. [http://news.zdnet.com/2100-1035\\_22-166877.html](http://news.zdnet.com/2100-1035_22-166877.html)
4. [www.populationaction.org](http://www.populationaction.org)
5. I realize the debate surrounding the concept of hegemonic masculinity, where a number of arguments disagree with the

notion of hegemonic masculinity (cf. Donaldson, 1993) as first introduced by Connell (1987). Connell and Messerschmidt (2005) rethink the concept by advising that hegemonic masculinity as a concept be situated when utilized to avoid, homogenizing the notion.

6. For example, the Nokia 3310 manual mentions “beep” as the noise made by the phone when an incoming call interrupts an ongoing one. A “beep” sound can also be the signal selected for incoming calls. Another example in the Nokia 6300 manual indicates beeping as the sound made when an ongoing call is recorded by the recipient of a call. With the 6210, a beep is described as the noise made by the phone when a voice tag to a phone number is added. Even though beeping as a phrase appears in the Nokia manuals, it is not listed as a communication feature in the same sense that the informants of this study relate to the practice. None of the manuals studied supplied instructions on how to perform beeping as a communication process.

## References

- Aull Davis, C. (1999). *Reflexive ethnography: A guide to researching selves and others*. New York, NY: Routledge.
- Berg, E., Mörtberg, C., & Jansson, M. (2005). Emphasizing technology: Socio-technical implications. *Information Technology & People, 18*, 343-358.
- Borzello, A. (2001). Uganda’s “beeping” nuisance. Retrieved from <http://news.bbc.co.uk/2/hi/africa/1132926.stm>
- Bray, F. (2007). Gender and technology. *Annual Review of Anthropology, 36*, 37-53.
- Bryman, A., & Cramer, D. (2001). *Quantitative data analysis with SPSS release 10 for Windows*. New York, NY: Routledge.
- Butler, J. (1990). *Gender trouble: Feminism and the subversion of identity*. New York, NY: Routledge.
- Carrigan, T., Connell, B., & Lee, J. (1985). Toward a new sociology of masculinity. *Theory and Society, 14*, 551-604.
- Castells, M., Fernandez-Ardevol, M., Linchuan Qiu, J., & Sey, A. (2006). *Mobile communication and society: A global perspective*. Cambridge, MA: MIT Press.
- Chango, M. (2005). Africa’s information society and the culture of secrecy. *Contemporary Review, 286*, 79-81. Retrieved from <http://www.bizcommunity.com/Article/416/78/13760.html>
- Cockburn, C., & Ormrod, S. (1993). *Gender and technology in the making*. London, England: SAGE.
- Connell, R. W. (1987). *Gender and power*. Cambridge, UK: Polity.
- Connell, R. W. (2005). *Masculinities* (2nd ed.). Berkeley: University of California Press.
- Connell, R. W. (2009). *Gender* (2nd ed.). Cambridge, UK: Polity.
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society, 19*, 829-859.
- Coyle, D. (2005). An overview, of in Africa: The impact of mobile phones. Retrieved from [www.vodafone.com/etc/medialib/attachments/cr\\_downloads.Par.78351.File.tmp/GPP\\_SIM\\_paper\\_3.pdf](http://www.vodafone.com/etc/medialib/attachments/cr_downloads.Par.78351.File.tmp/GPP_SIM_paper_3.pdf)
- Donaldson, M. (1993). What is hegemonic masculinity? *Theory and Society, 22*, 643-657.
- Donner, J. (2005, May). *The rules of beeping: Exchanging messages using missed calls on mobile phones in sub-Saharan Africa*. Paper presented at the 55th Annual Conference of the International Communication Association, New York, NY. Retrieved from <https://blog.itu.dk/DMKS-E2008/files/2008/10/donner-rules-of-beeping-ica.pdf>
- Donner, J. (2006). The social and economic implications of mobile telephony in Rwanda: An ownership/access typology. *Knowledge, Technology, & Policy, 19*, 17-28.
- Donner, J. (2007). The rules of beeping: Exchanging messages via intentional “Missed calls” on mobile phones. *Journal of Computer-Mediated Communication, 13*. Retrieved from <http://jcmc.indiana.edu/vol13/issue1/donner.html>
- Dowson, M., & McInerney, M. D. (2003). What do students say about their motivational goals? Towards a more complex and dynamic perspective on student motivation. *Contemporary Education Psychology, 28*, 91-113.
- Fetterman, M. D. (1998). *Ethnography step by step* (Applied Social Research Methods Series) (2nd ed.). Thousand Oaks, CA: SAGE.
- Goodman, J. (2005). Linking mobile phone ownership and use to social capital in rural South Africa and Tanzania, Africa: The impact of mobile phones. Retrieved from [www.vodafone.com/etc/medialib/attachments/cr\\_downloads.Par.78351.File.tmp/GPP\\_SIM\\_paper\\_3.pdf](http://www.vodafone.com/etc/medialib/attachments/cr_downloads.Par.78351.File.tmp/GPP_SIM_paper_3.pdf)
- Heavens, A. (2007). Phone credit low? Africans go for “beeping.” Retrieved from <http://www.reuters.com/article/worldNews/idUSHEA92325720070926>
- Horst, A. H., & Miller, D. (2006). *The cellphone: An anthropology of communication*. Oxford, UK: Berg.
- Johnson, J. (1988). The mixing humans and nonhumans together: The sociology of a door-closer. *Society for the Study of Social Problems, 35*, 298-310.
- Katz, J. E., & Sugiyama, S. (2006). Mobile phones as fashion statements: Evidence from student surveys in the US and Japan. *New Media & Society, 8*, 321-337.
- Kimmel, M. (1987). Men’s responses to feminism at the turn of the century. *Gender & Society, 1*, 261-283.
- Kirkup, G., Janes, L., Woodward, K., & Hovenden, F. (2000). *The gendered cyborg: A reader*. London, England: Routledge.
- Kiyimba, A. (2005). Gendering social destiny in the proverbs of the Baganda: Reflections on boys and girls becoming men and women. *Journal of African Cultural Studies, 17*, 253-270.
- Lagesen, V. A. (2008). A cyberfeminist Utopia: Perceptions of gender and computer science among Malaysian women computer science students and faculty. *Science Technology & Human Values, 33*, 5-27.
- Law, J. (2004). *After method: Mess in social science research*. New York, NY: Routledge.
- Lie, M., & Sørensen, K. (1996). *Making technology our own? Domesticating technology into everyday life*. Oslo, Norway: Scandinavian University Press.
- McGuigan, J. (2005). Towards a sociology of the mobile phone. *Interdisciplinary Journal of Humans in ICT Environments, 1*, 45-51.

- Mckemey, K., Scott, N., Scouter, D., Afullo, T., Kibombo, R., & Sakyi-Dawson, O. (2003). Innovative demand models for telecommunications services: Final technical report. Retrieved from [www.telafrica.org/pdfs/FinalReport.pdf](http://www.telafrica.org/pdfs/FinalReport.pdf)
- Mellström, U. (2009). The intersection of gender, race and cultural boundaries, or why is computer science in Malaysia dominated by women. *Social Studies of Science*, 39, 885-907.
- Nachmias, F.-C., & Nachmias, D. (1996). *Research methods in the social sciences* (5th ed.). London, England: Arnold.
- Nannyonga-Tamusuza, S. (2005). *Baakisimba: Gender in the music and dance of the Baganda people of Uganda*. New York, NY: Routledge.
- Nyanzi, S., Nyanzi-Wokholi, B., & Kalina, B. (2009). Male promiscuity: The negotiation of masculinities by motorbike taxi-riders in Masaka, Uganda. *Men and Masculinities*, 12, 73-89. doi:10.1177/1097184X07309503
- Oudshoorn, N., & Pinch, T. (Eds.). (2003). *How users matter: The co-construction of users and technology*. Cambridge, MA: MIT Press.
- Oudshoorn, N., & Pinch, T. (2005). Introduction: How users and non-users matter. In N. Oudshoorn & T. Pinch (Eds.), *How users matter: The co-construction of users and technology* (pp. 1-29). Cambridge, MA: MIT Press.
- Plant, S. (1998). *Zeros and ones: Digital women and the new technoculture*. London, England: Fourth Estate.
- Polikanov, D., & Abramova, I. (2003). Africa and ICT: A chance for breakthrough? *Information, Communication & Society*, 6, 42-56.
- Skuse, A., & Cousins, T. (2008). Getting connected: The social dynamics of urban telecommunications and use in Khayelitsha, Cape Town. *New Media & Society*, 10, 9-26.
- Sorensen, P. (1996). Commercialization of food crops in Busoga, Uganda, and the renegotiation of gender. *Gender & Society*, 10, 608-628.
- Wajcman, J. (2004). *Techno feminism*. Oxford, UK: Martson Book Services.
- Wajcman, J. (2010). Feminist theories of technology. *Cambridge Journal of Economics*, 34, 143-152.
- Waverman, L., Meschi, M., & Fuss, M. (2005). The impact of telecoms on economic growth in developing countries. In *Africa: The impact of mobile phones* (pp. 10-23). The Vodafone Policy Paper Series, Number 2. Retrieved from <http://info.worldbank.org/etools/docs/library/152872/Vodafone%20Survey.pdf>
- Wyrod, R. (2008). Between women's rights and men's authority: Masculinity and shifting discourses of gender difference in Urban Uganda. *Gender & Society*, 22, 799-823.
- York, T. (2002). Wireless taking African sub-continent by storm. Retrieved from <http://web.archive.org/web/20030705211335/cooltown.com/mpulse/0602-africa.asp>
- Nokia user phone manuals reviewed** (Retrieved through Google search: July 18, 2009, and June 2, 2012)  
3310, 6300, 6210, 5230, 5140, 5110, 3330, 5210, 3410, 3210, 8810, 8210, 2100, 1650, 6085, 6280, 3220, 6111, 7280, 7373, 6288.

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