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To cite this article: Leah Jerop Komen & Richard Ling (2021): 'NO! We don't have a joint account': mobile telephony, mBanking, and gender inequality in the lives of married women in western rural Kenya, *Information, Communication & Society*, DOI: [10.1080/1369118X.2021.1927137](https://doi.org/10.1080/1369118X.2021.1927137)

To link to this article: <https://doi.org/10.1080/1369118X.2021.1927137>



Published online: 05 Jun 2021.



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'NO! We don't have a joint account': mobile telephony, mBanking, and gender inequality in the lives of married women in western rural Kenya

Leah Jerop Komen^{a,b} and Richard Ling^c

^aCommunication, Daystar University Nairobi Campus, Nairobi, Kenya; ^bResearch, Daystar University Nairobi Campus, Nairobi, Kenya; ^cWee Kim School of Communication and Information, Nanyang Technological University, Singapore

ABSTRACT

This paper examines how mobile communication and mobile banking is used by women in rural western Kenya (Elgeyo Marakwet), a resource-constrained area where women must carefully monitor the flow of money through their households. Also, women face structural inequality. Among other things, polygyny (one husband and several wives) is legal. Based on the inductive analysis of 25 interviews with women, and using the lens of intersectionality, we examine their use of mobile banking. We examine how mobile technology plays into the management of the household economy, and how it is used in extramarital relationships. We discuss how women use mobile communication in their collective savings groups (*chama*). We see how the mobile phone can be the locus of tensions within the household and how mBanking both supports the lives of the women but also how this can eventually undercut social support.

ARTICLE HISTORY

Received 4 May 2020
Accepted 16 April 2021

KEYWORDS

Kenya; Chama; Women; Polygyny; mobile communication; mPesa

Introduction

Women in rural western Kenya (Elgeyo Marakwet) face a difficult balancing act regarding the flow of cash into and out of their households. The women strive to gather the resources with which to care for their families, a goal they often share with their husbands. However, other uses of money can compete with caring for the family. The use of the mobile phone and mBanking has become a part of this mix. Indeed, mobile phones can be the locus of tension within the household. In a context where a fundamental suggestion is that one's partner can be untrue, the introduction of the mobile phone that can be a tool used in that errand raises suspicion (Malhotra & Ling, 2020; Soleil Archambault, 2011). Also, rationalizing monetary exchanges with mBanking raises questions about traditional money management strategies.

In this paper, we use the lens of intersectionality (Crenshaw, 1989) to examine how rural Kenyan women use a mobile-based system to navigate through what Sylvia Walby (1990, p. 20), called the 'set of structured and institutionalized social relations

in which certain men dominate, oppress and exploit women.’ While mobile-based money management can facilitate the goals of the women, the rationalized individualism of mBanking can also tear at the functioning of important sororal social groups.

The women interviewed for this paper have a precarious economic position. In 2017, Kenya was ranked at 187 of 228 in GDP/capita (USD \$3500).¹ About one person in three lives in extreme poverty.² For many Kenyan women, money is difficult to come by. That which is available is carefully managed. There are also often different economic priorities for marital partners. Where the wife traditionally attends to domestic needs (Thomas, 1989), the husbands’ expenditures are more often directed towards personal consumption and entertainment (Hoddinott & Haddad, 1995). In addition, the *de facto* and *de jure* existence of polygyny (a husband having several co-wives), as well as the incidence of extramarital affairs, means that women need to be careful in the way they manage, save and use money lest it is re-appropriated by her husband, or eventually by a co-wife (Jankowiak et al., 2005).

One way that Kenyan women have managed their money is through informal, female-based collective savings groups called *chama* – Kiswahili word for group or body. In addition to being an informal type of banking system, these groups also function as important social touchpoints for women. The introduction of mobile-based banking has become a part of this context. As will be developed below, the Kenyan use of mPesa (a commercial mobile banking service) and the accompanying mobile savings system mShwari,³ have changed how money is managed, the way that *chamas* operate, and the opportunities for women and men to receive and spend money beyond the purview of their partners (Hughes & Lonie, 2007; Lule et al., 2012).

We will address the following research questions: How has mPesa and mobile communication affected intra-household relationships and gender (in)equality? Do *chamas* play a role in this process?

In the following section, we will review the literature on the social position of women in rural Kenya. Following this, we will describe the methods used and the findings. Finally, we will discuss the findings including an examination of how the mobile phone can be the locus of tensions in the household and its role vis-à-vis other women.

Literature review

The situation of rural Kenyan women can be seen using the lens of intersectionality (Crenshaw, 1989). This approach illuminates how gender, race, and other layers of subjugation result in an oppressed status. While conceived to unite gender and race in the US, intersectionality can be applied to women in the Global South (Bastia, 2014; Chow et al., 2011) including its application to mobile communication (Pei & Chib, 2020). As we will suggest, polygynous marriage can be seen as a dimension of intersectional domination since there can be status differences among the co-wives.

Women and managing the household economy

An important dimension of the Kenyan household is women’s management of money. Traditionally, women have ensured that domestic needs are met (Thomas, 1989).

Following Author 1 (2016; see also Gates, 2014), household chores, e.g., child care, food procurement/preparation elderly care, etc. are the domain of women (Okeyo, 1979).

Rural Kenyan men divide their time between farm work and leisure while not often being involved in domestic work. Research shows that increasing the women's share of income increases household spending on food and reduces expenses for, for example, alcohol, cigarettes, and entertainment (Hoddinott & Haddad, 1995). When women invest income back into their families, the resulting outcomes are often more positive for their children (World Bank, 2011, p. 47). Because of this, women have been touted as most likely to spur economic progress and improve health and education outcomes. Arora and Rada (2014) note that enhancing the economic position of rural Ethiopian women makes them active agents of change. Duflo (2003), for example, found that cash transfers to grandmothers of granddaughters under age 5 had a positive impact on the child's physical wellbeing.

In Kenya, women earn money by selling their surplus garden produce. They also obtain money from their relatives, or in some cases, they get money from male admirers. Acknowledged cash in the home can be appropriated by men and used as they see fit. Because of this, the *chama* is used by women to protect money from re-appropriation. More recently mBanking (usually mPesa) has also become an option in women's efforts to manage money (T. P. Hughes, 1987).

Extramarital affairs, polygyny, and sororal groups

According to Odhiambo and Maito (2012), disagreements regarding the use of money are a major source of stress in Kenyan households. Particularly difficult areas are the role of extramarital affairs (by both partners) and polygyny (one husband with several wives). These play through to the way that money is used in the household, particularly if money is used by the husband for extramarital affairs (locally known as *mpango wa kando*). Indeed, women's intersectional vulnerability can be seen in this institution. For her part, extramarital trysts can be a source of money for the woman (Horst & Miller, 2005; Soleil Archambault, 2011, 2017; Stark, 2013). That said, extramarital affairs are somewhat condoned on the part of the male, but not for women.

Polygyny has been legal in Kenya since 2014.⁴ The codification of polygyny simply legitimated a pre-existing situation. Indeed, during the Parliamentary debate, MP Junet Mohammed said, 'When you marry an African woman, she must know the second one is on the way and a third wife ... this is Africa.' Underscoring the intersectional nature of polygyny, Okeyo (1979) pointed out that there is not necessarily equality among co-wives.

These inter- and intra-gender social formations reduce the ability of the women to control money in the home (Jankowiak et al., 2005; Komen, 2016) (Author 1). If the man uses household money while wooing a new co-wife, the legal/social structure, as well as tradition, tolerates the use of household resources (including those earned by the wife) in this errand.

One source of power available to women in polygynous societies is to develop cooperative relationships with other women. According to Yanca and Low (2004), women can gain power and better control of resources when they can have strong sororal ties in this type of society. Savings groups (i.e., the *chama*) are one type of sororal group. We will return to this theme below.

Mobile communication and mobile banking

Mobile communication is increasingly structured into the lives of those living in the Global South (Author 5, Author 2). It is common for Kenyans to have their own individual mobile phone thus reducing the reliance on shared devices (Burrell, 2010). At the time of this writing, Kenya ranked 149th of 205 countries in mobile phone adoption with 86 subscriptions per 100 individuals.⁵ Kenya is in the middle of African nations on this distribution (Wyche et al., 2019). There are, however, some gendered technical divides. While a few of the interviewees had smartphones, most had only second-hand feature phones, passed down by other family members.

An area where Kenya has outpaced others is in the use of mBanking (T. P. Hughes, 1987). This service, and specifically mPesa, is convenient, accessible, flexible, and secure. Users can access the service anywhere, and at any time. More than 80% of Kenyan rural households use mPesa. This has enabled women to save money and in turn, it has allowed them new forms of economic independence (Maurer, 2012; Morawczynski, 2009).

The widespread use of mobile communication and mPesa is, however, a double-edged sword in the interaction between partners (Author 1, Author 2). They allow for the personal control of money, hidden accounts, economic subterfuge, etc. (Morawczynski, 2009; Mureithi, 2015). At the same time, husbands assume the right to review the communications and transactions carried out on their wife's phones. As will be developed, this suggests a technical layer that results from women's intersectional position. In the material below, we trace the role of mobile communication, mBanking, and the flow of cash among rural Kenyan women.

The chama and the M-chama

As noted, Kenyan women feel the need to make cash inaccessible to their husbands and eventually their co-wives. Since formal banks are often scarce in the rural, informal rotating savings and credit associations known as *chama* in Kenya are used to manage money (Collins et al., 2009). In these groups, a lump sum is collected via regular (e.g., weekly) contributions from all members. Each member then receives the 'pot' on a rotating basis (Geertz, 1962, p. 243). In some cases, it is paid out in a fixed rotation. In other cases, it is paid out based on a lottery of the members where the winner of one drawing will not be eligible to win until all the others have won. This latter form increases the excitement of the group and underscores the social dimension of the institution.

These informal savings groups are common around the globe. These groups can go by many names including, *tandas* (Latin America), *ekub* (Ethiopia), *partnerhand* (West Indies), *tigănesc/roata* (Romania), *kigo paare* (Chad), *arisan* (Indonesia), etc. There are risks associated with using a *chama* that can lead to their demise and the loss of the individual's money. Funds can be embezzled and those receiving an early pay-out can leave the group thus reducing the pay-out for subsequent members. Since these are informal groups, there is often no formal form of recourse.

Chamas are often small informal groups. However, they can also be larger groups used to make major capital investments. The *chama* covers some, but not all, functions of the formal banking system, e.g., it is a local repository, but it is not insured. In 2018, it was

estimated that there were more than one million *chamas* in Kenya holding a large portion of the country's GDP (Kariuki, 2018).

As noted above, Kenyan women cannot leave cash available in the home. A *chama* moves cash outside of the home allowing Kenyan women to guard against demands from their husbands and eventually co-wives (Gugerty, 2007; Kusimba et al., 2015; Morawczynski, 2009)(Author 1). Anderson and Baland (2002, p. 968) cite an interviewee who said, 'You cannot trust your husband. If you leave money at home, he will take it'. Thus, the *chama* is a reaction to the relatively powerless position of women giving them some control over their money. The *chama* also allows women to bring cash into the home without raising the suspicion of their husbands. Funds that the women raise by illicit activities can be said to have come from her participation in a *chama*, thus disguising its provenance.

In addition to the instrumental work of the *chama*, it is also an important source of sororal solidarity, something that is important in polygynous cultures. The *chama* often provides women with a trusted cohesive social network (Gugerty, 2007). This, in turn, engenders solidarity. Further, the *chama* provides women with an opportunity to gather, to enjoy one another's company, to banter, and to chat.

There is a need for transparency among the members of the *chama* since disagreements, and even perceived disagreements can suggest corruption and embezzlement. Because of this, these groups often draw on strong social and kinship ties. According to Miguel and Gugerty (2005), in successful *chamas*, there is a sense of obligation, mutual aid, and collective responsibility. *Chamas* have been known to collapse, however, after only a few months, especially where trust and accountability are in short supply.

Traditionally, a *chama* was carried out locally, face-to-face, using cash. However, the use of mBanking⁶ has been adopted by these groups (Kendall & Voorhies, 2014). Using their mobile phones, members can contribute to a digital 'group wallet'⁷ This allows each member to track the contributions. Also, digital bookkeeping is made possible hence boosting accountability and transparency.⁸ Indeed, it has been suggested that mPesa and mShwari were developed, at least in part, to support women's participation in *chama* (Ngugi & Komo, 2017). This rationalizing tendency, e.g., replacing informal with more formalized/recorded interaction (Weber, 1968), has its positive sides. We will also consider how the digitalization of the *chama* can lead to a reduced need for co-present interaction and the resulting sororal cohesion.

Method

Interviewees

Female informants were recruited using a convenience sample with several different geographical threads to ensure a diversity of insight. To be included, the women needed to be married, own or have access to a mobile phone, and be a member of a *chama* (usually having fewer than 15 members). The informants came from Elgeyo Marakwet County, Kenya. Interviews were done in February and March of 2019. The County has a population of 454,480. It has a somewhat lower literacy rate (77.6% vs 81.5%) than Kenya as a whole, and a higher poverty rate (55.5% vs. 36.1%). The specific locations were

the districts of Tot (pop. 17,774), Iten (pop. 31,813), and the village of Kaptarakwa (pop. unknown).

We carried out 25 semi-structured open-ended ethnographic interviews (Magwa & Magwa, 2015; Spradley, 1979). The interviewees engaged in a variety of work including mixed farming, keeping livestock, operating small shops for tailoring or selling groceries, etc. Each interview lasted between one and one and a half hours. Five of the interviewees were in a polygamous marriage and six others reported that they were sure that their husbands were having extramarital affairs. Several of the women wanted their husbands to make their extramarital lovers into co-wives since it gave them more control over sexually transmitted diseases. The interviewees said that it could also legitimate their own sexual indiscretions.

With permission from the research participants, the interviews were recorded.⁹ The interviews were carried out, transcribed, and translated by the first author (who is a Kenyan woman) in Marakwet (the Local dialect) and Swahili. Interviewees received 200 Kenyan Shillings (approx. \$2.00) for transport costs plus tea and cakes/cookies during the interview.

Analysis

The analysis used an inductive qualitative approach (Braun & Clarke, 2006; Glaser & Strauss, 1967) that sought to capture the themes and patterned responses arising from the material. The approach to the data started with an immersion into the transcribed material using Excel (Meyer & Avery, 2009) to become familiar with the content (Braun & Clarke, 2006). This was followed by a thorough reading of the transcripts while noting/sorting the initial themes. As the themes emerged, new utterances were considered to see if they supplemented, or eventually nuanced the emerging themes (Glaser & Strauss, 1967).

Themes that emerged from data include the different dimensions of financial interactions between marital partners including *mpango wa kando* (extramarital lovers for both partners), mPesa and the *chama*, and the use of mobile communication in financial secrecy and subterfuge. These themes are developed below. In the discussion section, the themes are examined at a higher level of abstraction that examines the mobile phone as the locus of tensions in rural Kenyan families, and an analysis of the eventual drift towards rationalization and individualization.

Findings

At the most basic level, mBanking has simplified the women's lives by giving them access to banking. Chepsiror, (a single-mother aged 52) noted that using mPesa meant that she could *send and receive money conveniently*. Another woman, Chepsianjo, (43) said that she could *deposit and withdraw money from the bank just using your phone [she could] save time instead of queuing in the bank to perform the same transaction*. mBanking frees up time; it streamlines dealing with cash remittances, and it provides banking services that had not been possible heretofore (Author 7). Beyond this, the material shows that mPesa affects the gendered management of money within the household and changes the operation of the traditional *chamas*. The material also illuminates how the

use of mPesa can generate strains and suspicions (either founded or imagined) between marital partners.

Financial interactions with husbands

The comments of the women indicate that economic activities could be a delicate issue vis-a-vis their partners. Indeed, there is an inequality associated with the very knowledge of one another's formal income. The material shows that men often know the income and the economic situation of the women, but the opposite does not always hold. Emmy says:

I am being accountable to him you see. Sometimes I do this hoping that he would similarly feel obliged to share his income, but for the past 20 years, he has never [shown me]. So, I don't know and don't think I will ever know.

The women noted that, in many cases, their acknowledged income was a common household resource. However, with the use of personal mobile phones and individual mPesa accounts, there are new dynamics.

- Lina: Nowadays each one owns a phone unlike the past which we used to share [with my husband]. But currently, we own them independently. If there is any money which I have received, and he knows it, then it is okay it was a family affair
- Moderator (probing): Which means he knows the amount of money that you have?
- Lina: Not necessarily, [...] but mostly what I own is mine and I have the freedom to use it.
- Moderator (probing): Does he inquire of the source of the money?
- Lina: He does not inquire because we have a chama, we can access loans from groups. Each one of us owns a phone with an individual mPesa account. We work and sometimes we receive allowances via mPesa. If you have a vegetable garden, you sell and save the proceeds in mPesa accounts and this leads to independence.

While Lina's comments note that she shares her income with her husband, they also betray a distance between the two in their economic affairs. The acknowledged money that she receives is defined as common. However, there is also the money that he does not know about. The same is seen in the comments of Janet who, when asked, if she had sources of income about which her husband did not know said, *Yes. I am also involved in a chama and I can also withdraw money directly from my phone through mShwari, I can access loans through mShwari.*

There is the sense that an mPesa account is the woman's own space. Indeed, none of the interviewees said that they shared their account information with their husbands. For example, Chebet said, 32 *We don't have a joint account¹⁰ and each one of us has our own independently.* The comments of Dursila, 35 also echo this. *There is freedom and I use my money the way I wish.* Florence was quite explicit. When asked if she has a joint account with her husband she said:

NO! We don't have a joint account and each one of us has [our own] personal mPesa account [...] I don't know my husband's mPesa details and he doesn't know mine [...] We sometimes share some money when he has a need which he needs to attend to, but he does not know my account details

Jepchumba 38 outlines why she chose not to have this arrangement.

- Moderator: Do you have a joint mPesa account with your husband?
 Jepchumba: I don't have a joint account with my husband and I also don't plan to do so. This is very challenging because the husband might decide to withdraw money and use it without informing me. However, when he has a need that he wants to attend to, then I will withdraw some cash from mPesa and give it to him.

Thus, while there is a tradition that the husbands had prerogative over their wives' income, the mPesa has provided a way for the women to control at least some of their own resources. The material shows that the women did not share their PIN/banking details with their husbands. The women say that they contribute to the household economy, but they were unified in declaring that mPesa an account is their own financial space. This, in turn, has allowed them to protect their savings, and to save money as a hedge against unforeseen events (Kiranga, 2018).

Mpesa, the chama and the 'M-chama'

The women said that they saved money for household maintenance and personal development (e.g., education) by participating in a *chama* and by saving in mPesa/mShwari. In some cases, the women used the money they saved for domestic care, as with Florence, 43 who said that she used these monies to buy ... *household goods, buy clothing for my children, and daily upkeep*. She went on to note, *I study part-time and while I am at home, I do some work which will earn me money and save through mPesa which I later withdraw and pay for my school fees*. Florence also used mPesa to arrange micro-credit for her schooling.

I have used my phone for communication, looking for a job online, studies, and I have made a request for a loan in mShwari. [...] I have been able to save money that is a basic requirement in opening other savings accounts [...] which I use to access loans and use in economic development. [...] I have been able to study for a certificate in ECD¹¹ using the savings in mPesa, and currently, I am doing a diploma in the same field, and I save money through mPesa to pay for my school fees.

In addition to their individual banking via their mobile phones, another dimension of money management is seen in the informants' use of the *chama*. For example, Florence noted that,

I am in two chamas that we contribute on a weekly basis and when it is my turn [to get my pay out], I save in mShwari for later use. [...] We are in a group of five friends as a chama, and we contribute jointly and whenever there is a need or a ceremony. We buy a present and visit as a group.

Florence's comments describe both the functional side of the *chama* as well as its social/expressive dimension (Gugerty, 2007). On the one hand, the *chama* is a repository for money. At the same time, Florence's comments also point to the sororal aspect of the group, namely the *chama* is an opportunity for social interaction and camaraderie. For women living in a patriarchal polygynous society, sororal solidarity has particular importance. It is a space where women's ties can be confirmed and maintained.

On the positive side, using an mPesa *chama* account facilitates economic transparency. It simplifies making contributions and the women can all follow the transactions, thus increasing trust within the group. Also, the digital version of the *chama* eliminates the need to hold cash that can be pilfered or embezzled.

While the *chama* provides an opportunity for sociation, there are indications in the interviews that its position is changing. According to the informants, the mobile phone and mPesa have begun to play a role in the operation of this institution. For example, Truphena, 38 said,

I am in a chama and during the day of contributions, we just send the money via mPesa to whoever is to collect the money for the day; we also update each other on any new developments. [...] Members can inform each other of a scheduled meeting and when [your] contributions are being saved you just deposit to your bank account through mPesa. And when sharing the proceeds, it is always done through mPesa.

Jeni, 40 said, '[The mobile phone] it is very beneficial, nowadays we rarely meet to contribute in our chama but instead, we send the money through mPesa.' Jeni also noted that participating in the chama gave her a welcome chance to be 'away from the house chores and responsibilities and **live life** (emphasis added).' Salina also recognized the efficiency and the security of using mPesa for the chama. However, like Jeni, she lamented the inability to 'meet to socialize'. The comments of Truphena, Jeni, and Salina suggest that an mPesa-based chama has rationalized the operations of the chama.¹² Similar sentiments were seen in the comments of other interviewees.

I am a notorious absentee In face-to-face chamas. I usually see it as a waste of time and energy, So I send in my contributions and give an excuse (Truphena)

As the chair of my chama, I feel so bad when people just call to say Jambo (Swahili term for hello) and send in contributions. You see, you miss the warmth of a face-to-face chat and interactions (Teresia)

Although making chama payments via mPesa is a good thing because it saves time and helps with record-keeping for accountability, it is breaking closeness among us and you know, we are Africans, we value physical togetherness (mama Kip)

Their comments also suggest this development has led to the loss of a social contact point. This is a theme to which we will return in the discussion below.

The instrumental advantages to using an mPesa *chama* account can also reduce the expressive role of the chama in the lives of the women. Digitally mediated *chamas* mean that the women do not have the same opportunities to meet, to engage in one another's company, and to cultivate social cohesion (Collins, 2004). This can conceivably reduce the *chama's* role as a positive form of sociation for the women. Thus, the rationalization of *chama* has both advantages and disadvantages sides when compared to the traditional, face-to-face, cash-based version. The individualization associated with mBanking thus transforms and potentially competes with the *chama* (Ling, 2013).

Secrecy and financial subterfuge

We have discussed the women's use of (usually) acknowledged accounts and sources of income. Some women, however, used various forms of subterfuge to hide money, (e.g.,

using the account of a friend) or to hide the provenance of income (e.g., claim that it came from a *chama* when it actually came from illicit activities).

As seen above, based on their intersectional position, the women guarded their mPesa accounts for fear of their husbands using the money for extramarital activities. In the words of Florence,

Phones have contributed to both family building and breakups. In building it has helped in generating income [...] savings through mPesa, through family breakups, it has aided in communication with extramarital affairs, and husbands sending money to their other partners.

Florence points to a variety of both positive and negative consequences of the mobile phone. It facilitates income generation and savings. The negative side is the role it plays in eventual extramarital affairs. Beyond not sharing PIN codes with their partners, some women also noted the use of secret accounts. Again, quoting Florence,

Yes, I have one secret account that my husband does not know [about] which I plan to use it for personal development because you might not know what future life holds for you. I really don't want him to know because he might demand and use it in other projects which I do not have plan or intentions for.

Likewise, in response to a question of whether she would consider a secret account of which her husband is unaware, Jepchumba, 28 noted, *Yes [...] because most of the time when I have money and my husband is aware of it, he will do any means to ensure that I give him the cash. That is why I prefer a secret mPesa account.* These unacknowledged accounts allowed women to keep money from the reach of their partners. The accounts were also a type of insurance with which to meet unexpected exigencies. As Florence warns, *you might not know of what future life holds.*

Another area where there was a cloak of secrecy regarding money is in the case of women who were having illicit affairs and who received money from these men (see Soleil Archambault, 2017 for a discussion of this in Mozambique). In these cases, the women noted that they needed to hide the information regarding their activities to avoid repercussions. For example, Sisyó noted that she knew *... of many married women who receive mPesa texts from their mpango wa kando. They immediately delete such texts, that way their husbands won't know.* Thus, while the extramarital affairs of the men, and their attendant use of money, are to some degree recognized and condoned, this is not the case for women.

Several of the women discussed the use of the *chama* as a method with which to disguise/laundry illicitly gained income. If a husband sees a payment to his wife's mPesa account (the husband has the implicit right to check their phones), the woman can claim that it is a payout from her *chama*. Jeni, 40 described how women who have affairs, and who receive payments from their lovers, need to protect the information. They did this by saying that the money came from the *chama*.

Moderator: How do married women who receive money from their mpango wa kando do you hide it in order not to get caught

Jeni: That is very serious, and it happens. [...] Whenever such women receive the money, they will delete the message [from their mobile phone] immediately especially if they know their husbands will always check through their phones. Some have put a lot of passwords to protect their phones. Some

women would claim that the money was for their friend whom she had requested for help to pay school fees or say it is from chama.

Jeni's comments illuminate another dimension of the chama, namely its nominal use as a source of money. This was also noted by Truphosa,

Yes, there are those who have private accounts that their husbands will not know [about], others will claim that the money they received is for someone else who does not have a phone in order not to be caught, or say it is from a member of their chama.

In these cases, the phone, and the information that it contains is a threat to the women. If their husband becomes suspicious, it can be problematic. In the words of Jeni, ... *There are families that have broken because of even receiving calls at the wrong hours, like late at night when people are asleep. Sometimes some women hide their money, or they lie to their partners.* Jepchumba noted that women who engage in affairs *have secret [telephone] lines, which their husbands are not aware of, and they use to communicate with their lovers or receive money from them.* The mobile handset can be the locus of various kinds of potentially incriminating information. According to Chebet, some women who need to cover up their situation go so far as to ... *take their phone even to the bathroom when they want to shower.* Interestingly Florence suggests that men do not need to be as guarded. She says that husbands might: *use my phone in calling other women with whom they are in a relationship, they text each other and you later find the message, or he sends money to them and you get frustrated and it is really not good.* since she can risk having her phone destroyed.

As can be seen, the digital traces that can be found on a woman's mobile handset can be problematic. The transparency of the women's economic transactions vis-a-vis their husbands and the need to use various types of subterfuge underscore the intersectional position of the women. Interestingly, these women's comments also describe a technical dimension to their intersectionality. Not only do they often have second-hand phones, but they cannot assume the privacy of their communications since their husbands have access to their mobile phones. The need for secrecy in the women's communications, savings, and eventually with the money coming from illicit sources, is a new part of the social landscape (Wandibba et al., 2012).

Discussion

The informants' insights paint a picture of how women in rural Kenya use mPesa in their everyday lives. They describe the flow of money into, and out of the home. They describe how the mobile phone and mPesa facilitates activities but also can have socially explosive dimensions. In this resource-constrained situation, the management of this flow can become a point of agitation between the partners. Further, the informants' comments illuminate how the gendered aspects of marital power present yet another dimension of complexity.

We focus on two broad issues that arise from the material. First, we examine how the mobile phone can be the locus of tension and stress. In addition, we discuss how the convenience of mPesa can potentially influence the more collectivist/sororal traditions of the *chama*.

The phone as a locus of, tensions and power differentials

As has been developed, women in rural western Kenya live in a fraught situation. In a context characterized by poverty, lack of economic opportunities, and patriarchy, the informants described the difficulties of managing the flow of cash into and out of their households.

In this situation, the mobile phone becomes a locus for a variety of both positive and stressful interactions (Soleil Archambault, 2011). On the one hand, mobile telephony facilitates marital communication (Author 3). Indeed, the device is ever more structured into the interactions of the closest social sphere (Author 5, Author 6). We can call a partner to see how they are doing, or we can call to surveil them. So long as there is a power symmetry and a reservoir of trust in the relationship, there is likely reciprocity in these interactions (Taylor, 2004). However, to the degree that there are intersectional power differentials, one partner can claim the right to surveil the other while maintaining their own privacy. The material here shows that the privacy/surveillance ratio is limited for women but necessarily for men. Indeed, according to the interviewees, this is structured into society. In this unequal patriarchal landscape, various digital artifacts on the mobile phone (photos, call logs, banking records, etc.) can be the origin of mistrust (Mureithi, 2015).

The intersectional power differences are also seen in the practice of polygyny where the husband has a relatively free hand in seeking out new partners (and using familial resources via mPesa for this purpose). While women reported the occurrence of their own extramarital affairs and eventual payments from the lover, these activities are necessarily more constrained and more veiled. Again, the mobile handset is a tool in the coordination of these interactions and in the movement of money. The use of mPesa means that the mobile phone becomes a space where the monetary resources associated with both the marital and the extramarital activities are worked out. The digital traces left on the mobile phone from coordinating trusts as well as those from the mobile payments to *mpango wa kando* are particularly damning (Horst & Miller, 2005; Soleil Archambault, 2017).

These considerations challenge the notion of a household as a socio-economic unit into which both the partners contribute. The transcripts indicate that, in many cases, monetary issues are discussed between the partners. For example, as noted above, Florence says, *[my husband and I] discuss how to spend the money and we may decide to pay school fees for our children*. However, the transcripts also show that there was the motivation to guard their individual funds. This plays out in guarding their mPesa account number and having secret accounts. This can be for fear that making the account accessible would mean that these monies can be spent on the husband's dalliances, or it can be because of their illicit provenance. For the husband, there is also the need for caution when using the money for his extramarital affairs. While there is a tacit recognition of his ability to do this, the comments of the respondents indicate that it is not unreservedly condoned on the part of the women.

Thus, the mobile phone becomes the locus of both positive as well as fraught interactions between the partners. It can be used to facilitate positive activities, and, in the eyes of the informants, it can be used for activities that detract from the marriage.

Mobile communication, social cohesion, and individualization

The women's comments also provide insight into how mobile-facilitated individualization (Beck et al., 1994) is effecting the more collectivist practices of the women. The material suggests that mobile communication is contributing to the broader rationalization of social and economic interactions (Weber, 1958, 1968). This, in turn, can restructure the legacy of sororal interaction as practiced in the *chama* by reducing its position in their daily lives.

The material outlines how mobile communication and mPesa streamline economic transfers and logistics (Author 1). The women noted that they could interact with their *chama* and carry out mBanking regardless of their individual locations. This facilitates instrumental interaction, making moot the need for the physical meetings of the *chama*. If the group agrees on the transactions, and if they have mutual trust, there is not the need for a physical meeting. Indeed, this is noted above in the comments of Jeni, 40 who said, ... *nowadays we rarely meet to contribute in our chama but instead, we send the money through mPesa.*

Jenni's comments, along with those of Truphena and Salina, underscore the benefits of mPesa vis-à-vis the *Chama*. However, her words also can suggest that the digitally reconstituted *chama* undercuts the expressive function of the institution. Indeed, this social interaction in a patriarchal society is a reason for continuing to arrange physical meetings. Following Collins (2004), it is in these face-to-face interactions that social cohesion is developed and maintained. Thus, there is a paradox. On the one hand, the rational/instrumental need for the co-present meetings is being replaced by mediated banking. At the same time, given the intersectional position of the women in polygynous Kenyan society, there is also a need for them to retain the sororal social institution of the *chama*. In some cases, the mobile device can provide a link to other women. However, there is not the same co-present interaction afforded by the meeting of the *chama*.

Consequently, the interviews possibly captured a nascent moment of social transition. The continued existence of the *chama* indicates a strong rooting in what Weber (1968) called communal relations and which Tönnies (1965) referred to as *Gemeinschaft*. In this social regime, the women draw on well-developed notions of how the *chama* should operate including levels of trust, the frequency of meetings, etc. All of this is embed in the fabric of local ties and local context (Beckert, 2006; Overå, 2006) with the well-drawn understanding of the rules, the roles, the notions of power, and trust (Beckert, 2006). The comments of the informants indicate that, currently, there is still a functional as well as an expressive function to this social formation.

The transition to mBanking marks a small step, however, in the direction of the more contractual/rational notion of Tönnies (1965) *Gesellschaft*. For, example, Jeni, who was cited above, noted that she was able to carry out her *chama*-based interactions remotely. In addition, the accounting function of the mPesa-based *chama* lifts that role from the members of the group. Again, this is a transition away from the local informal management of the *chama*. Despite all its faults, the previous accounting regime was a construction of the women in the group.

This does not mean that the cultural role of the women's groups will disappear. Indeed, the comments of the informants indicated that they show resilience. However, the use of mPesa also illuminates a redundancy in the social function of the *chama*.

mPesa gives the women another way with which to manage their money and to remove it from the home. To the degree that this solution is used, it leaves only the social dimension of the *chama*.

Ogburn's theory of cultural lag (1949) suggests that as a particular technology is adopted the social formations of the earlier period will be maintained for some time. Further, to the degree that a social formation such as the *chama* has a function in society; it will be retained, albeit in some mutated form. In the case of the Kenyan women, if the need for expressive sororal association remains, it will find a form. It may be that this will continue to be some form of face-to-face interaction. Alternatively, it may be that the social interaction afforded by mediated groups will fill in a part of this niche.

Conclusion

This analysis examines how mPesa and mobile communication affected intra-household relationships. We have examined how mPesa plays into the gender (in)equality. The situation of the women can be seen from an intersectional perspective (Crenshaw, 1989). Where earlier analyses have examined this by using concepts such as race, gender, class/caste, etc. we also examine their position in vis-à-vis the role of polygyny, and differential access to personal privacy as played out in access to one another's mobile phones.

Given this situation, the material illuminates the difficult balancing act that they confront the women regarding the flow of cash into and out of their households. The material shows that mobile technology helps them to manage resources in their homes. The analysis shows how mobile technology plays into a social context that is characterized by constrained resources, gender inequality, and sororal social formations such as the *chama*.

In many cases, the women interviewed here noted that they and their partners shared the same familial goals. However, the unequal status of the women was played out in their use of the mobile phone and mBanking to manage money in the face of a stressed everyday life and institutionalized patriarchy. Their comments provide insight into different forms of personal and collective savings (e.g., the *chama*). The mobile phone has become the locus of both possibilities and the repository of digital traces that can eventually destabilize the situation of the women.

It is evident that women have found some sense of empowerment, a sense of personal dignity, and increased decision-making power now that mBanking has created a new space. It is also clear that there are other dimensions that result from the adoption of mobile banking and mPesa.

Notes

1. <https://www.cia.gov/library/publications/the-world-factbook/fields/211rank.html#KE>.
2. This is defined at less than \$1.90 per day. <https://www.gapminder.org>.
3. mShwari is a paperless mobile phone-based savings account offered through the mPesa system. Money in an mShwari account accrues interest as with a traditional savings account. (<https://www.safaricom.co.ke/personal/m-pesa/do-more-with-m-pesa/loans-and-savings>). There is also a microcredit service.

4. The law refers to polygamy, but it explicitly recognizes the right of the man to have several wives but not the opposite. <https://www.theguardian.com/world/2014/mar/21/kenya-parliament-passes-bill-allowing-polygamy>.
5. International Telecommunication Union <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>.
6. <https://www.mangotree.org/Technology-Post/M-Chama>.
7. See: <https://techguy.co.ke/m-pesa-chama-account/> or <https://www.dhahabu.co.ke/2017/03/26/m-pesa-chama-account-works/>.
8. <https://chamapesa.com/hashtagfecosystemone>. Accessed 17/1/2019.
9. The study received ethical clearance from ___ (removed to ensure anonymity) University in Kenya.
10. A couple can have a shared account if they share the PIN-code on a common phone.
11. Early Childhood Development.
12. <https://www.safaricom.co.ke/personal/m-pesa/do-more-with-m-pesa/m-pesa-chama-account>.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by Nanyang Technological University: [grant number 001].

Notes on contributors

Leah Jerop Komen, is a senior Lecturer at Daystar University's School of Communication in Kenya. She holds a doctorate in New Media and Development from University of East London, UK and is currently the Deputy Director, Resource Mobilization and Partnerships at Daystar University. Her research focus include Mobile communication and domestication of ICTs for development communication.

Prof. Richard Ling, (PhD, University of Colorado, 1984) is a Shaw Foundation Professor of Media Technology at Wee Kim, School of Communication and Information, Nanyang Technological University, Singapore. He has focused his work in the Social consequence of mobile communication, In mobile communication circles, he has been termed as the Father of mobile communication.

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