Economic Anthropology, "Financialization" 2018; 5: 247–260 DOI:10.1002/sea2.12121

"It is easy for women to ask!": Gender and digital finance in Kenya

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This article examines the role of gender in the use of digital finance in Kenya, including the well-known case of mobile money but also the emerging use of smartphone apps, payment tills, digital credit services, and digital fund-raising computer programs. Development professionals have explicitly feminist goals in bringing digital finance to women in the Global South. In several recent reports, they outline the belief that gender norms are a barrier to women's use of finance. They hope digital finance will bring women agency and control over money and consequently shift restrictive gender norms. This article offers a critique of these assumptions based on ethnographic conversations, a diary exercise, and network self-portraiture conducted in Kenya in 2016 among both rural farmers and urbanites. Adopting a distributed agency perspective, the ethnographic study demonstrates that Kenyan women and men use digital finance not to seek individual control of their money but to produce themselves as connected and trustworthy members of financial groups and collectivities. Gender norms may not hinder women from finance but rather enhance and deepen women's and men's financial relationships and bring women success in amassing funds.

Keywords Mobile Money; Finance; Gender; Mobile Communication; Indebtedness

During a March 24, 2017, webinar on women and financial inclusion, experts from Innovations for Poverty Action (IPA) expressed disillusionment with microcredit as a poverty alleviation tool. Globally, microfinance has reached more than 200 million borrowers, two-thirds of them women (Garikipati et al. 2017), but the hosts explained that microloans were not leading to "higher incomes or more product investment" (Innovations for Poverty Action webinar, March 24, 2017; see also Banerjee et al. 2015; Roodman 2011). The webinar hosts suggested a new approach: digital finance delivered via mobile phones. They proposed that digital finance could bring women empowerment, control, and agency and lead to positive social change: "We want to create financial tools that will create agency and control for women and shift gender norms."[1]

Through reports, studies, and research evidence, development professionals are articulating a new project to bring digital finance to women in the Global South—especially poor and rural unbanked women. They are using data sets of bank account ownership and studies of household economics, including women's bargaining power with husbands (Agarwal 1997), to claim that social and gender norms are barriers to women's agency with money (CGAP 2017a, 2017b). Development thinkers hope that digital finance on mobile phones will "rapidly connect women to digital financial services that enable them to more easily store, transfer, secure and build value digitally, beyond money payment transfers" and that digital finance will bring "empowerment and equitable decision-making in households" (Gates Foundation 2015, 2; see also Innovations for Poverty Action 2017).

How fitting are development understandings around finance, technology, and gender for Kenyan women? This article defines finance as relations between people, money, and time that are "grounded in practices of everyday life" (van der Zwan 2014, 102). In Kenya, financialization—as I define it, the increasing use of everyday finance—often relies on digital channels and has emerged as a meld of formal (provider-designed) and informal (user-innovated) sources. Formal products designed for the low-income and unbanked include digital credit via mobile phones.

Informal user innovations with apps and services are equally if not more common, such as WhatsApp fund-raising and money pooling and circulation through M-Pesa, a money transfer service.

In this article, I describe the cultural practices and meanings around gender that influence people's engagement with digital finance. I question the idea that the value of digital finance for Kenyan women is resistance to social and gender norms. My critique centers on the idea of agency. For the development professionals of the IPA webinar, agency is a quality of individuals. It is a noun, "something one has" or does not have (Gero 2000, 34), and from a liberal feminist perspective, it implies autonomy, emancipation, and resistance to social norms (Mahmood 2001). Rather, I suggest that the agency of Kenyan women is profitably viewed as a way of acting and being in particular settings—as "the condition and constraints under which we pursue our goals" (Enfield 2017, 3). This broader view draws attention to agency as joint action in groups, as distributed through relationships between people and material systems (Burrell 2016; Enfield 2017; Pettit and Schweikard 2006).

The practices of digital finance in Kenya rest less on household budgets and bargaining power with husbands than on a distribution of debt and credit relations across diverse financial circuits including kin, friends, community, and financial providers. For the Kenyan women with whom I have interacted, finance is produced by people mindful of their roles as part of groups—through which they engage with money transfer services, computer programs, and smartphone apps as dynamic sociotechnical networks.

Using technology, women elaborate new understandings of gender around trustworthiness and connection to others. As trustworthy friends, mothers, daughters, and sisters, they pursue economic strategies in concert with others. At the same time, men also use digital finance to be loyal to male friends and age mates, respectful to elders, and generous providers. Through this exploration of gender norms and digital finance, I question the idea that Kenyan women's social position is a barrier to their use of finance; rather, gendered relationships may not be a barrier to finance or to agency—but a potential for gain.

Methods

This article draws on a diary exercise in which we followed eight women who allowed us to record how they used money transfers, digital credit, and other financial services over twenty-two weeks during January to June 2016. As a part of this exercise, women drew network self-portraits to illustrate how they participated in financial and social relationships. It is also based on ethnographic interviews and informal conversations conducted in June, July, and early August 2016 with sixty Kenyan men and women in urban Nairobi and rural Kimilili who use money transfers, digital fund-raising platforms, and digital credit.

Kenya's digital ecosystem

For several decades, women in the developing world have been the targets of an effort to democratize banking and credit beginning with microfinance in the 1980s (Roy 2010). The advent of mobile technology in the 2000s introduced a way of reaching the last-mile customer with finance via mobile devices, which dovetailed with existing microfinance commitments. Kenya's M-Pesa money transfer service, introduced in 2007, is a highly regarded success story of financial inclusion via mobile phones. By 2017, it had become a digital channel for diverse finance products, including banking, credit, payment, e-commerce, insurance, crowdfunding, fund-raising, peer-to-peer lending, sports betting, and even a government bond—and for nonfinancial services, such as electricity, water, and solar power. Approximately 90% of Kenyans have used money transfers, most using it often (World Bank Group 2015). Digital credit is also popular and offers small, short-term loans charging a fee or interest (CGAP 2015, 2016). One of the most popular digital credit services is M-Shwari (*shwari* means "smooth" or "calm"), which offers small, immediate loans for a 7.5% fee levied monthly.

Social networks

Like the mobile communication of which they are a part (Ilahiane and Sherry 2009; Palackal et al. 2011), money transfers are used to create social networks. Money-sending networks circulate frequent transfers for everyday needs, including food, medical care, school fees, and so on. As Johnson (2015, 2016) points out, these frequent exchanges have origins in the give-and-take of a long-standing gift economy or "fiduciary culture … of borrow and lend, entrust and repay … over minutes or several generations" (Shipton 2007, 110). Most Kenyans participate in numerous networks; family networks shaped by money transfers are reciprocal and often involve siblings, cousins, mothers, and mothers' kin. Women and men can have positions of advantage, such as central nodes with many connections or bridges between different family groups—these women may be family matriarchs, employed or schooling daughters, cousins who look after the family farm, and so on (Kusimba, Yang, and Chawla 2015, 2016).

To know how women produce their network roles, and following Zelizer (2000), I wanted to understand how social ties are formed through the exchange of various media. "In all areas of economic life, people are creating, maintaining, symbolizing and transforming meaningful social relations" (Zelizer 2000, 385). People use what Zelizer (2005) has called *media*, defined as "accounting systems and their tokens" (37), or *currencies of exchange* that are used to produce social relations through exchanges; "every currency attaches to a circuit of exchange and every circuit of exchange includes a concrete set of meaningful social relations" (388). It follows that the circuits of money transfers are a part of larger circuits involving other media.

Network self-portraiture

As part of a series of ethnographic interviews and a diary exercise, I asked women participants in my study to draw their social/financial networks, their ties to others formed by different "circuits of exchange" and media, following Zelizer. The drawing exercise included many iterations with participants of varying levels of education (Balen 2017). I asked women to draw themselves at the center of a sheet of paper as the hub of an ego-centered network (Prell 2011, 118) and to place others whom they help and support, and from whom they receive help and support (in Kiswahili, *kusaidia*), around the periphery of the paper as alters. In social network analysis, alters are the nodes directly connected to ego (Prell 2011, 118). Women depicted themselves connected to diverse alters, including friends and relatives; informal groups, such as church and savings groups; employers, if they were employed; financial service providers, including M-Pesa money transfer, M-Shwari, or KCB digital bank, if they used it; and so on. I asked them to use differently colored markers to denote types of support they give and receive, both material and nonmaterial, as media of exchange.

In Figure 1, Consolata, the headmistress of a school in rural Western Kenya, depicts herself as a heart, with books, students, and a pen inside, in order, she said, to show her love of education. She portrays herself as connected to other members in her social network, which she has drawn around the perimeter of the page. Her two illustrations depict ties she creates by giving and sending (Figure 1, left) and ties she creates by receiving (Figure 1, right). To depict different media of exchange that produce these social ties, Consolata used assorted colors of pens to denote food, information, money, mobile money, other digital financial services, and emergency loans (my categories). She used these colors to draw in friends, relatives, the M-Shwari service, and her savings groups. She also offered her own media of exchange: security and advice, categories that several women mentioned. Advice often passes from older to younger people and is associated with age and social ranking. The oldest participant in our study, a woman in her seventies, corrected us sternly when we suggested she draw advice givers on her network drawing. "I do not receive advice. I give advice," she said (interview, July 23, 2016).

Consolata's self-portrait expresses her understanding of her network position. Her role as a schoolmistress is expressed by her central heart. In our interviews, she spoke of her work to bring achievement, love, and hope to this

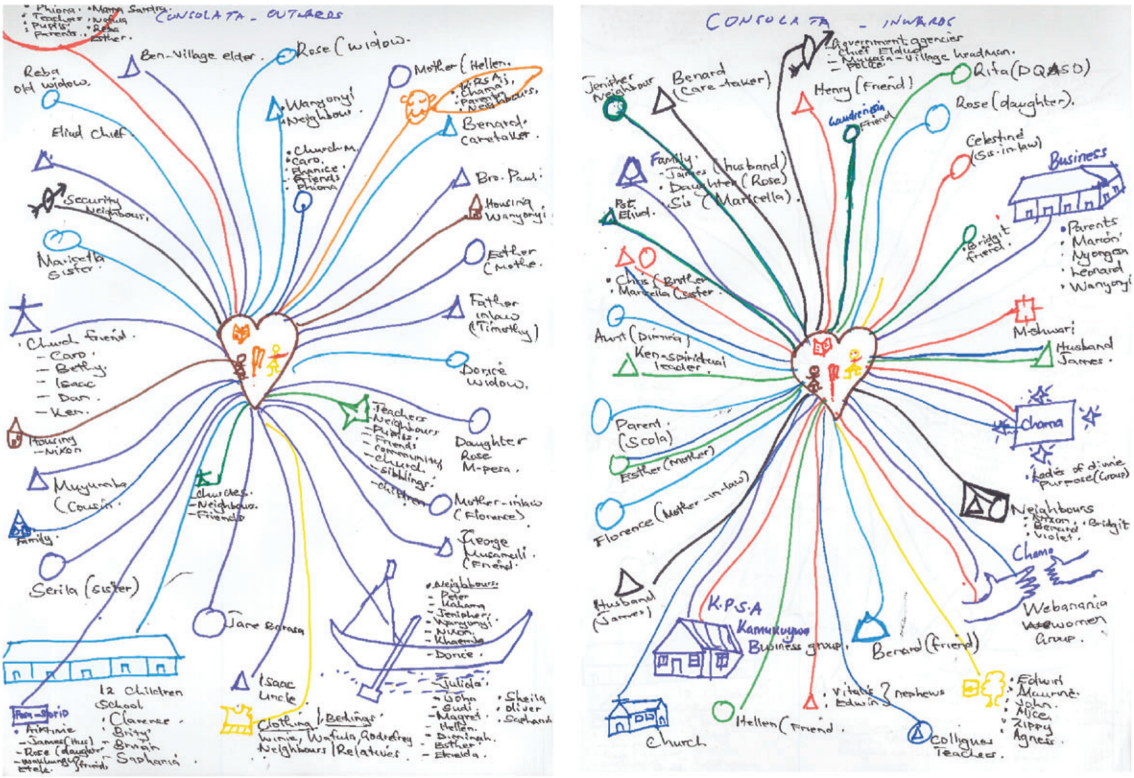

Figure 1 Consolata's outbound (left) and inbound (right) self-drawn social network maps. Different colors show mediums of exchange, including money (purple), emergency loans (red), advice (green), security (black), and in-kind gifts (yellow). In the left-hand drawing (bottom right corner), she has depicted herself as a boat that carries her many neighbors. Her self-portrait as a heart at the center of the graph contains a pen, a book, and two of her students.

impoverished rural community. Yet reinterpreting my instructions to "place yourself at the center," she drew other people, two of her students, inside her heart. Furthermore, she placed another self-portrait in her outbound graph, where she listed the many neighbors to whom she provides material support (Figure 1). Over the list of names, she drew herself as a boat, which, as she put it, "carries many people over rough waters" of poverty and need (interview, August 20, 2016) (Figure 1, left). She is often called on for material support in this poor rural neighborhood. During the week of our interview, Consolata contributed 200 Kenyan shillings (US$2) to a neighbor raising funds for an orphanage; sent 2,000 shillings (US$20) in mobile money to "comfort" her friend Fiona, who had lost a husband; sent 1,000 shillings (US$10) to the mother of a pupil and friend of the family to prepare for a wedding; and took 1,000 shillings (US$10) in cash to her brother, hospitalized for a spinal injury. The previous week, another neighbor miscarried. They came home to bury the child but could not return to Nairobi, so Consolata gave them 200 shillings (US$2) to assist with transport; similarly, she gave a neighbor with a sick parent 150 shillings (US$1.50) for food, as they had nothing to eat. She frequently gave out small amounts of money as a portion of the immediate and urgent needs of friends and neighbors.

Consolata drew emergency loans in red; she can access her siblings, her sister-in-law, her nephews, her savings group, or the digital credit service M-Shwari. Consolata participates in savings groups and in two welfare groups for funerals; she has also contributed toward buying a church plot for her congregation. Consolata's network and those of eight other women form a diverse web of alters including friends and relatives; financial services, such as

M-Shwari loans and M-Pesa money transfers; and even sports betting, savings groups, churches, welfare societies, and savings and credit cooperatives.

Figure 2 depicts the self-drawn network for Praxides, a twenty-nine-year-old farmer from Western Kenya. Praxides has a diploma in library science and, in addition to her farming, earns income from retail trading in basic household goods at a kiosk, selling vegetables, and trading in bananas. She currently works part-time at a private primary school in the neighborhood, bakes bricks, farms kale, and keeps a flock of sheep. Praxides lives with her mother and her own children. Both her husband and father work elsewhere. Her main M-Pesa connections are to siblings with whom she circulates frequent small transfers. Praxides receives 2,000 shillings (US$20) monthly from her brother for the family.

In Praxides's map, digital money is represented as an airplane delivering money from her wide social network. M-Shwari is shown as a useful source of quick loans, represented as a useful but watchful eye (Figure 2). Praxides drew herself as a diffuse flower whose petals extended out toward her alters (Figure 2), and, like Consolata, she drew herself among her alters along the perimeter of the graph. Like Consolata who drew herself as a boat, Praxides also depicted herself as a vehicle, this time as a bus that carries others (Figure 2, outbound drawing, top left corner). She said of herself, "In emergencies she is essential to those who board it. She helps those who run to her" (interview, June 28, 2016).

The maps for nine women in total showed a diverse assemblage of social and financial alters. Their networks circulate money, and they also pass on food; plants, such as bananas; clothing; information; and relationship qualities, such as respect. The drawings depict the building of reciprocity and a sense of self through acts of connection to others. These network drawings show how women establish themselves as connected people with roles of importance in their communities using diverse media, including digital finance. These maps demonstrate that finance is a distributed agency, a product of give-and-take, of flow of media in networks.

Consolata's and Praxides's maps both challenged my instructions to place themselves "at the center" of a set of alters (see also Maurer 2005, 18; Strathern 1988, 269–71). Both drew themselves in the center according to my instructions and again along the periphery among their alters. Consolata drew others (her students) inside the symbol depicting herself, and then drew herself again as a boat, metaphorically carrying a list of names of her neighbors whom she frequently assists (Figure 1). Praxides's self-portrait as a flower that extended into network space and her second depiction of herself among her alters as a bus that carries others (Figure 2) also flouted my instructions on the positions of ego and alters.

Vehicles are frequent metaphors for agency across social boundaries (Lipset 2014), and in Kiswahili, both vehicles and people are said to carry others (*kubeba*). These drawings express what Alfred Gell (1998, 21), in his analyses of art and agency, called "distributed personhood. … As agents, they were not just where their bodies were, but in many different places and times simultaneously." In drawing themselves as a boat and a bus, in containing others within them, these women depict "personhood as the aggregate of external relations" (Gell 1998, 139).

In user maps, women depict the salient attributes of their media of exchange, the unique qualities of these various media of social ties. Savings clubs were often depicted as a purse of money (in Kiswahili, the savings club, or *chama*, is often called the purse, *mfuko wa chama*) or as open hands. The attributes of digital media include speed (M-Pesa was drawn as an airplane that delivers an emergency loan quickly) and privacy (the M-Shwari account was represented as a box with three locks on three of its sides in two drawings[3] or as a "rat that hunts in the dark for money" (interview, June 16, 2016) by one participant. This interlocutor emphasized the secrecy and privacy of the M-Shwari loan, in contrast to money available through her savings group—whose members might have questions about the purpose of the funds. The social/financial maps show that varying social ties (people, groups, or formal services) create an assemblage of complementary media. For example, the privacy of M-Shwari—"the rat that hunts at night"—can be contrasted with the sociality of the savings group, depicted as a purse or as extended, open hands.

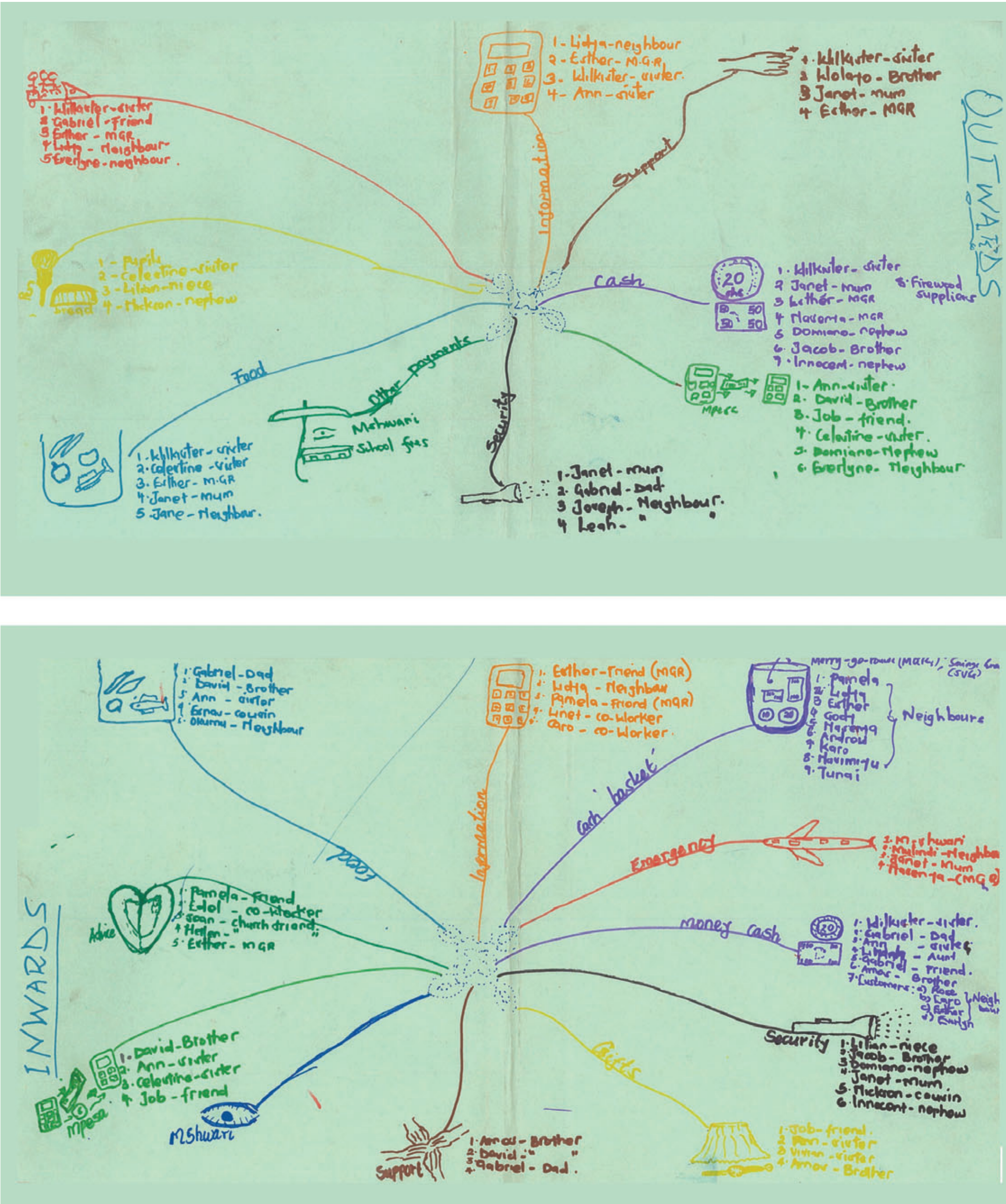

Figure 2 Praxides's outbound (top) and inbound (bottom) self-drawn social network maps. Different colors show media of exchange, including money (purple), emergency loan (red), advice (green), security (black), and in-kind gifts (yellow). At above left, Praxides has depicted herself as a bus.

Technology

The network perspective brings to light one of the most important yet poorly understood dimensions of the money transfer service: Not just the sender – receiver dyad but triads and larger groups use mobile money for impromptu fund-raising and money pooling. Employing the social network is a little-appreciated aspect of everyday finance in Kenya. Especially in rural areas and among the poor, everyday finance involves bringing together three, four, or more people around needs and crises large and small, including medical needs; school fees; documents and bribes; contributions to life cycle rituals, especially funerals; transportation emergencies; lack of food or fuel; and so on. Indeed, this informal fund-raising is so common in rural areas that much of M-Pesa traffic seems to involve pitching in for some portion of a need along with a few other people.

Pooling and collecting money, then, is one of the most common digital financial practices with which Kenyans engage, yet there is no existing product for this practice, which is largely mediated through user creativity using M-Pesa money transfers or, through smartphones, using WhatsApp combined with a Safaricom Paybill number to collect digital donations using M-Pesa. WhatsApp is free, cross-platform instant messaging software through which Kenyans engage primarily in group texting. The Safaricom Paybill was designed for merchant payments using mobile money. Safaricom, now aware that many Paybill numbers are instead used for fund-raising rather than for commerce, advertises the slogan "Get a short-term Paybill number," accompanying a photo of a bride and groom. Fund-raising campaigns emerge out of WhatsApp sociality, as groups announce campaigns for life cycle rituals, medical needs, school fees, and plane tickets.

Eva, a mother of three in her late forties, works as a secretary at a college and engages with nine to fifteen WhatsApp groups on any given day. She checks her group chats every morning and takes a daily call from her middle daughter in college. When the groups have specific targets or contribution pools, they set up a Paybill and she does her contributions in the morning, if any, after checking up on the group activities. The many groups of which she is a member include a group of coworkers of her own ethnicity that is pooling resources to buy a plot of land; two women's savings groups; her neighbors; her siblings and their children; and the group formed by her five sisters-in-law, all married to a set of brothers, as needs arise. She is estranged from her husband, but through the sister-in-law group, she keeps up with the goings-on in her husband's family, which holds important resources to which she wants her children to lay claim. She stresses her need to "be someone who knows what is happening" (interview, July 14, 2016).

Eva's case illustrates the constant social connection via a mobile device that is the habitus of Kenyan women among the smartphone middle class. Other Nairobi dwellers told me, "You are not really a Kenyan woman if you are not on WhatsApp" or "What kind of Kenyan woman is not a member of many groups on her phone?" These new understandings of gender (and national identity in East Africa's most connected country) around digital connection are not so new but rooted in everyday practices of connection and mutual aid and in several decades of involvement with group savings and microfinance. It is not uncommon for a woman to be a member of upward of ten savings groups, some or all of which are also on WhatsApp. Through digital groupings, men are also actively involved in informal technology-mediated finance. One savings group of men is called "The Ten Brothers." These interactions are creative uploads of social infrastructures onto technology platforms. Other women are investors, even joining investment groups on Facebook. Annette is part of a Savings and Credit Cooperative Organization (SACCO) that met on Facebook and began meeting in person for about a year before making investments in four properties, one of which was purchased under the Safaricom SACCO Investments product.

M-Changa is a Nairobi-based online fund-raising service. M-Changa (Swahili for "to contribute") is a financial tool of often urban and often well-off Kenyans who raise funds for medical and educational needs and life cycle rituals. Some of M-Changa's most successful customers are women who have remarkable agency in pooling and circulating funds. M-Changa's customer data show that fund-raisers run by women collect more money from a larger group of contributors in a shorter amount of time than those run by men (Kusimba, Kunyu, and Mark 2016).

One of M-Changa's most successful fund-raisers I will call Mary, a lady I met for cappuccinos in the affluent Nairobi area of Karen. She has led six M-Changa fund-raisers to support her high school, help relatives with medical needs, buy airline tickets for friends living abroad to return home for funerals, provide a coming-of-age retreat for her daughter and other adolescent girls at her church, organize medical care for her parents, and provide a respectful burial for her father. Most recently, she fund-raised to support her favored candidate for parliament. She also uses WhatsApp and the Safaricom Paybill regularly together with M-Changa to coordinate funds from diverse groups across these multiple platforms. Mary drew herself as a hub between groups from her church, her group of high school friends, and her relatives, whose WhatsApp group Safaricom Paybill totals she brings together under the M-Changa ledger account using the M-Pesa channel.

The benefit of the M-Changa process, as Mary explained it, is that the four to five leaders of every fund-raiser share a link to the ledger showing all the donations coming in. She explained that the process is "transparent." But the real benefit of transparency is the way this transparency reflects on Mary and the way others see her because of it. The transparency of the process "makes me trustworthy":

> I share the link on the fund-raiser account with [the committee of four to five leaders] which allows them to see all the donations that are coming in. … Sharing the link is the buffer between me and the process. … As I show them that the process is transparent and trustworthy … it reflects on me positively and makes me trustworthy to the committee. … Now people know me from school, from church, my neighbors, back home. … When my dad died they really rallied. … My trustworthiness meant now more people. People contributed I had not seen for years, because of who I am to people. … [Through more recent campaigns to refurbish her school and support political candidates] I am realizing more and more who I can be to people. (interview, August 6, 2016)

The distributed ledger (Maurer 2017), Mary explains, and its shared record of fund-raising, brings transparency to the group and makes her more trustworthy to her social network. The distributed ledger, like the WhatsApp group, is a digitized version of the record book often used to record donations at funerals and other rituals. Mary also offered that as her fund-raising prowess has grown, she has realized that "I am now seeking prestige and recognition" (interview, August 6, 2016) — which in turn produces more fund-raising success and ambitions around political activism. Indeed, as she produced her network graph, she chose an unused color and wrote in "prestige and recognition" on her drawing as one of her media of exchange.

I asked Mary, "Why are women better at fund-raising?" She responded immediately: "It is easy for women to ask!" Her friends may have difficulties, for example, in marriage:

> We wives had to get involved and solve the problem. … [The husband] would not tell my husband anything. … If it's women … they will fund-raise and talk it out. Men do not want to appear weak. Their way of dealing with [problems] is to have a drink. (interview, August 6, 2016)

Mary's goals around social capital reflect her elite background. But like Eva, who explained to me that being on WhatsApp is just natural for her; like Consolata, who is a boat that carries others over rough waters; and like Praxides, who is a bus "essential to those who board it," Mary articulated a habitus of connections, a sharing of vulnerability and mutual concern through which women solve problems and build ties that bind. This interconnected way of being, produced by demonstrations of caring and trustworthiness, is valued by women at opposite ends of Kenya's vast social class divide.

Relational work

The circulation of money in sociotechnical networks is embedded in relationships shaped by age, generation, income, and gender in a variety of ways. Gender is a significant part of how inequality and difference produce the asymmetrical and situational credit and debt relationships of day-to-day giving and long-term support. Most of Kenya's cultural groups have long practiced patrilineal inheritance of land and other assets; as Shipton (2007, 30) writes, "creditors are symbolically likened to males and debtors to females." But as Shipton also writes, entrustment entails obligation; those who are entrusted with wealth are obligated to distribute and circulate it. Gender norms are informed by this sense of an underlying obligation, which more recent patterns of wage work have reinforced. These gendered norms position women as receivers in mobile money circulations. In fact, an industry report found that women received 33% of their income from digital remittances—as compared to only 4% for men—and that, compared to men, women were "more likely to receive help when they need it" (FSD Kenya 2014, 41). Digital money exchanges tend to reproduce these status distinctions of sender and receiver but, at the same time, also bestow the obligation to pass on and circulate. Possession of resources creates an obligation to others but also an opportunity for both men and women to become the creditor in the relationship. To underscore the point as it is enacted in money sending, in common etiquette, the sender includes the cash-out fee the recipient pays to the agent along with the amount sent and might be politely reminded to forward it along: "*Ongeza ya kutoa*" (add on the cash-out fee).

Women invoke these norms to ensure that they receive funds. For example, Daniel, a land surveyor in Bungoma, frequently sends money to his estranged wife and two children some 80 km away. In the first year of their separation, his wife reported him to his parents and village elders for neglect. They demanded that he attend to their fees and other needs. For the past three years, he has sent school fee payments directly to the school so that his wife does not need to call first. He said he transfers her money weekly or biweekly.

Trust is essential to women's strategies in maintaining networks. Kate, a farmer in rural Bituyu, Kenya, was surprised when her friend Amos asked for 500 shillings (US$5) for bus fare, because she knew that Amos earns good pay. She felt "it was a test of my generosity" (interview, June 3, 2016)—as he has frequently helped her out when she requested. She reasoned that Amos might really need the money and promptly sent him the exact amount—another example of the production of trustworthiness through money transfer. To illustrate this point further, one common response to "Why did you send him money?" was "I know he could never do a lie against me."

Expressions of providing and caring inform many relationships, including the brother–sister bond and romantic or spousal relationships. Barry works in construction in Nairobi and, through money transfers and other media, supports two sisters, three and ten years younger than him. He explained that his support was to protect his sisters' reputations from "sponsors" (i.e., sugar daddies). Barry also regularly sent his fiancée e-money, saying with pride that it

> is my responsibility [to take care of her]. … She is also very open about what she needs the money for whenever she calls to ask for money. When I do not have the money, I call and explain to her so that the relationship is not strained. … When I can I just send her the money for her to go and take care of whatever she needs to. (interview, July 18, 2016)

Social norms also give women privacy and make it quite inappropriate to judge amounts or ask about intended uses. Barry says that women often have needs that cannot be explained. Similarly, Tobias of rural Bungoma once sent 700 shillings (US$7) to a friend and church member. "She did not tell me what it was for and I did not ask. Ladies have needs they do not like to discuss" (interview, June 6, 2017).

Family seniority, gender, age, employment, and education all may confer responsibilities to assist the wider family network. Older brothers and fathers coordinate responses to family crises by assigning targeted donations to various family members based on their presumed ability to pay. Tensions run deep when the prospect of disappointing or failing the family is raised or when mothers and sisters are neglected. Emmanuel is a church caretaker and was born out of wedlock when his mother was a teenager. Emmanuel sends money to his grandmother who raised him every month before she needs to ask him. He is more ambivalent toward his mother, who was absent during his childhood. If his mother is dissatisfied with Emmanuel's remittance, she does not call him to acknowledge receipt but instead, through her silence, registers her dissatisfaction with the amount sent. She will sometimes call Emmanuel with a "false excuse of checking on me" (interview, June 3, 2016) but at the end of the call inquire if he has something to send her. In May 2016, Emmanuel's mother called and requested assistance, barely two weeks after Emmanuel had sent her 300 shillings (US$3). As a way of persuading Emmanuel, she called her brother—Emmanuel's maternal uncle—who then called Emmanuel to remind him to send his mother money to buy fertilizer. Calls like this often compel Emmanuel to break into his savings.

By the end of May, Emmanuel's mother was facing surgery. Another maternal uncle called him to impress the urgency of it all. The two maternal uncles had agreed to raise 36,000 shillings (US$360), assigning Emmanuel a target of 6,000 shillings (US$60), almost one month's salary. After his uncles called and pressed him, he still only gave 1,500 shillings (US$15), as he said it was all he had. Seven maternal aunts and the two uncles had managed only 18,000 shillings (US$18), with others pledging to make their contributions in time. One maternal uncle offered to pay the 6,000 shillings (US$60) on Emmanuel's behalf, but on the condition that he would repay the money. At our June interview, Emmanuel explained his biggest worry—that his uncles would feel he was selfish and that they would not believe he had no more money to help.

These examples show men's strategies of relational work as productive of social ranking and of the association between masculinity, possession of resources, and obligations to support others, which may make it not "easy to ask" for men but rather quite a bit harder. To this point, "subtle linguistic expressions … give away the asymmetry between the participants in relational work" (Bandelj 2012, 180). Euphemisms might be used to minimize the value of the money sent, depict its value as a social gift, and perhaps blunt any shame a receiver might feel. Pithon, a university student, was broke and called a female friend to ask her for more minutes for his cell phone (which tend to circulate in much lesser amounts, mostly as greetings and gifts). In fact, he needed money. She sent him 300 shillings (US$3), which he used to buy soap and toiletries. He also called his friend Evans, who sent him 500 shillings (US$5), reassuring Pithon via text that the money was merely "a friendly handshake" after a long period of not meeting (interview, June 29, 2016). Other euphemisms male age mates and friends used include "some of this beer" or "a refreshment." However, a man will admit to his sister that he is "broke" (Pithon, interview, August 2, 2016).

Men consider their position in vertical networks of unequal prestige around age and, in urban areas especially, money and other economic resources. Barry will ask for money from people who are in a lesser financial position than he is, especially if the amount is small. For example, if he needs "just 500 shillings," he will not call a relatively affluent friend; he will rather "save that call for a bigger favor" (interview, July 18, 2016). He will look instead to a friend for whom this sum is significant. Barry said that these friends of lower income and means than himself (who "understand that people have challenges regardless of their status") will also help him quickly, because as someone of greater means, he is a valuable friend; they will need his assistance at some time in the future for a bigger favor and are eager to help him out. Similarly, John, a DJ in Nairobi, asked for money from those who "understand me and know my life struggles" (interview, July 5, 2016). He cannot ask those less well off; he compared such a request to "asking for money from your house help." "The water guy comes, and you don't have money on you, but you cannot ask her [your house help] because it's 'wrong' and things are working in reverse" (interview, July 5, 2016). Age is also very important among men, who often send money to fathers and elders.

Financializing the unbanked

Women's network drawings are depictions of distributed personhood within their social networks. How can a network perspective help us understand how digital finance and financialization insinuate themselves into women's relational work? To understand how social/financial instruments are used as part of social groups over time, we conducted a diary exercise over twenty-two weeks, visiting eight women weekly and recording their use of money, e-money, and gift transfers with alters; use of digital credit and other digital financial tools; exchanges of gifts; expenditures on household income or businesses; and gains from businesses, farming, or salary.

Praxides, whose self-portrait is the flower with extending petals, has become financially included through the M-Shwari digital credit service; she has no other bank account. When she described the service to us, she highlighted its affordances around safe, private storage and quick loans. She said her borrowing and repayment fund, a firewood-selling business, gave her enough money for the transportation and purchase of the logs, which she brought back to her neighborhood, split, and sold. She mentioned that M-Shwari could support her business with credit and that she could save some money on M-Shwari to build her business, "instead of meeting every family need" (interview, August 1, 2016). Such entrepreneurship is widely promoted by digital credit service firms. In Western Kenya, income generation is widely promoted by nongovernmental organizations and even churches as a responsible and moral pursuit.

Praxides is aware that M-Shwari loans must be repaid on time to avoid being blacklisted and that loan limits can be grown through prompt repayment. She had used the service for one year and had grown her loan amount from 2,000 shillings (US$20) to 7,500 shillings (US$75). She observed that M-Shwari interest rates are lower than local table banking and drew M-Shwari on her map as a source of quick loans and as a useful but watchful eye (Figure 2). Furthermore, Praxides showed an understanding of bank rules and noted the importance of self-discipline around repayment. Praxides told us she pays M-Shwari back through small, regular payments. If a deadline is approaching, she tries to accelerate her payments or repay larger amounts of money.

Praxides borrowed from M-Shwari seven times and repaid M-Shwari three times during the twenty-two-week period. It was hard to say if she really used it to support her firewood project, and sometimes the reason she gave us for taking an M-Shwari loan was expressly to help a friend—she borrowed from M-Shwari to assist friends and relatives with medical and school fee emergencies and needs for medicine and then strategized repayment through friends, her savings group, or her friend who was an M-Pesa agent. Once, she asked this agent to deposit 4,000 shillings (US$40) in her account so she could pay this amount to M-Shwari. After she repaid the 4,000 shillings from the M-Pesa agent's loan, she borrowed 4,500 shillings (US$45) from M-Shwari again to pay the agent back. She now owed M-Shwari 4,500 shillings (US$45) after paying back the agent 4,000 shillings (US$40)—but, she explained, she had another thirty days to repay before her first reminder SMS message from M-Shwari.

Praxides maintained between five and nine social connections per week through in-kind, cash, and digital money media of exchange with her social networks. Her overall money balance was mostly negative throughout the period. The diary exercise was not long enough to understand the economic impact of digital credit; however, it did show that, along with the money transfer service and her exchange of gifts, food, and security with her neighbors, the digital credit product was a way for Praxides to create and maintain her financial and social relations. Praxides's story is reminiscent of the kind of shifting and juggling of obligations that debtors experience with microfinance (Guerin, Morvant-Roux, and Villarreal 2013; Schuster 2015). Setting the M-Shwari product within the broader social network illustrates that financializing the so-called bottom billion will rely on and profit from the relational work of people like Praxides (Elyachar 2010; Hayes 2017). Even so, the financial inclusion project in Kenya may be going somewhat awry with digital credit, which has recently led to customer blacklisting and indebtedness (Microsave 2017).

Distributed personhood, ledgers, agency

In Kenya, digital media are rapidly becoming everyday channels for finance, creating new relationships between money, people, time, and space. E-money has increased the circulation and movement of value across family and social networks and produced new collectivities formed around shared economic agency—what Schuster (2015, 15) has called *liability*.

For development thinkers, technology will unlock women's agency and shift social norms with a PIN-secured mobile wallet. As the IPA webinar asked, "how can credit be redesigned to create more control and agency over funds? What financial tools will create agency and control and shift gender norms?" In this view, agency is individual control of money, decision-making with money, and bargaining power with husbands and others (for an important critique of assumptions about husbands, see Johnson 2017). It is a goal of the Gates Foundation that every woman has her own phone, SIM card, and accounts, and it is assumed that these tools will be personal technologies (but see Burrell 2010). From this perspective, the risks of using finance are understood primarily in terms of individual indebtedness.

The mobile account certainly gives highly valued security and privacy, which can enable secret or even illicit transfers and payments (Kusimba, Yang, and Chawla 2015). Security was indeed important in this rural area of semipermanent housing, and was represented on drawings as a flashlight or a neighbor. In the network portrait exercise, the quality of privacy associated with the M-Shwari loan was drawn as a lockbox (Figure 1) or even as a rat. Such metaphors underscore the problematics of individuating money in contexts where group agency aims at producing trust, transparency, and legitimacy. Security, privacy, and decision-making with funds are sometimes illicit ways of shaping financial ties and relationships and of building social and economic assets—the collateral of financial ties.

In sum, Kenyan women's financial agency does not seek to individuate money; rather, their relational work builds on the connectivity of digital technology, binding their economic agency to others'. Relational work with digital finance produces dynamic and asymmetrical social ties. Within these ties and with the material agencies of technology, such as distributed ledgers, women seek to create themselves as "trustworthy"; as people with "prestige and recognition"; as people who respond right away to "a test of my generosity"; as people who "know what's happening"; or as people who, like a boat or a bus, carry and give mobility to others. Women's digital finance is a crowdfunding of agency that is "multidimensional, graduated and distributed" (Kockleman 2007, 376)—an agency "grounded in joint commitments entailed by social relations of many kinds" (Enfield 2017, 9). Finally, women's financial agency is not hindered by gender norms but rather relies on and reinforces these norms. It is easy for women to ask.

Notes

1 Innovations for Poverty Action Webinar, March 24, 2017. See Innovations for Poverty Action (2017) for the accompanying report.

2 All names used here are pseudonyms.

3 This lockbox with three locks is an important part of a popular savings group methodology developed by Care International in East Africa (Green 2016).

Acknowledgments

This research was supported by the Institute for Money, Technology, and Financial Inclusion (IMTFI) and by a Bill and Melinda Gates Foundation grant to Changa Labs. I thank the editors, especially Aaron Pitluck, and the anonymous reviewers, Maia Green, Susan Johnson, Chapurukha Kusimba, Bill Maurer, and Ursula Dalinghaus, for their input on this research and for generous comments on the manuscript. Nanjulula Musombi and Gabriel Kunyu were valuable field colleagues who helped locate informants and translated, transcribed, and typed interviews. I also thank Dave Kim of the Gates Foundation and Dave Mark and Kyai Mullei of Changa Labs for their support.

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