

The Cryptopolitics of Digital Mutuality

Daivi Rodima-Taylor

“WhatsApp Stokvels Are Back and You’re Probably Being Scammed!”¹ screamed a newspaper headline in South Africa in 2020.² “New WhatsApp Scam Doing the Rounds in South Africa,” announced another.³ “WhatsApp ‘Stokvels’ Are a Scam & Don’t Be Tempted to Join Telegram or Signal ‘Stokvels’ Now . . .” implored a third.⁴ “WhatsApp stokvels are all the buzz at the moment. It starts with a promise that if you invest R1,000, you’re likely to end up with a R6,000 payout but many think it’s nothing more than elaborate pyramid scheme that will end in tears,” explained one of the news articles. Another one conveyed the warning of the chairman of the National Stokvel Association of South Africa who advised that “fraudsters were using the popularity of stokvels to take advantage of gullible and vulnerable people. ‘People will take chances and we can only warn people not to fall for things that have not been tested. Stokvels have been tried and tested for many years.’”⁵

These heated opinions illustrate the contentious response around the growing popularity of WhatsApp-mediated savings groups in Africa. While a share of scams is certainly occurring, this also highlights the controversy around the foray of the digital medium of messaging apps into the territory of informal savings groups that are central to many African economies. In Kenya, an estimated one-third of the adult population belongs in a savings group (Gichuru 2014), while in South Africa, about 810,000 stokvel groups mobilize around 11 million participants and manage up to R50 billion (over US\$3 million) a year (Pillay 2022). The groups are also increasingly popular among the diaspora and migrant communities, mobilizing remittances and facilitating social support (Ardener 2010; Hossein 2017; Rodima-Taylor 2022a). My chapter explores this paradoxical partnership between a BigTech platform and

these informal initiatives that offer alternatives to those excluded from formal finance and addresses the novel questions that this poses about digital media, cryptopolitics, and the civic spaces of resistance and change in Africa.

Transnational migrants increasingly rely on internet-based social media and chat apps to keep up connections with kin and friends in their countries of origin—including Facebook, WhatsApp, Skype, Facetime, Snapchat, Twitter, and Google Hangout (Plaza and Plaza 2019). People celebrate family events, rituals, and national holidays, and they exchange information about news and politics through newsgroup debates, list serves, and website postings. These digital platforms are also used to pool money and mobilize remittances—migrants’ money transfers to their families and friends.

At the same time, the messaging platforms also facilitate applications that are less constructive and peaceful. To some degree, these relate to general trends observed around the spreading digital platforms. In recent years, a significant rise has been noted in pyramid schemes and “get-rich-quick” scams globally, particularly as related to electronic media (Comaroff and Comaroff 2001: 22). A recent Consultative Group to Assist the Poor (CGAP) report notes that such fraudulent digital investment schemes often claim to be “mutual aid networks that mimic the informal savings groups and village banks that people in such markets are used to” (Chalwe-Mulenga, Duflos, and Coetzee 2022: 21). John Comaroff and Jean Comaroff suggest that arising from a “promiscuous mix of scarcity and deregulation,” these schemes feature in many “occult economies” of the Global South. Such economies have emerged with the recent expansion of speculative global investment—an expression of the unregulated excess of “casino capitalism” where the globalized markets, electronic media and finance capital have fueled speculative venture enterprise (2001: 7; see also Strange 1986). They resonate especially hard in the developing economies where postcolonial disappointments disrupt the neoliberal narratives of progress.

My chapter suggests that the spreading digital media platforms play a significant role in mediating the new “hidden economies”—with diverse effects that can lead to empowerment as well as marginalization. Advances in communication technologies have transformed the ways the hidden is mediated through diverse media and public spaces. Secrets have been seen as intricately connected to power and social control. While concealed knowledge can be instrumental in manipulating the boundaries of belonging, secrets could also constitute a powerful tool of resistance (Manderson et al. 2015; Simmel 1906). Both public spaces

as well as publics themselves are transformed through the acts of revealing secrets. Publics are convened and civic life reshaped through the practices of disclosure of hidden information (see also Warner 2002). While the rapidly diversifying contemporary media is affecting the practices of concealment and disclosure, it is also reconfigured through the practices of revealing information and addressing the publics. Critical media studies have highlighted the gradual transformation of the meaning of transparency and revelation with the ongoing multiplication of outlets for new forms of public communication (Manderson et al. 2015; see also Jones 2014). The democratization of the means of publicity has also amplified political calls for transparency (Nutall and Mbembe 2015: 318). New digital communication technologies enable new tools for people to counteract surveillance, and these tools have often been associated with power contestations and potentially subversive communication. At the same time, they have also created new means for concealment, deception, and exclusion.

It is also important to bear in mind the integral connectedness of online and offline modalities in these power negotiations occurring through new media. Victoria Bernal's study of African diasporas (2014) highlights the significance of cyberspace in contemporary politics and demonstrates the existence of multiple forms of territoriality and extra-territoriality that do not correspond to a neat division of online versus offline or nations versus the Internet. Both virtual and offline spaces are socially constructed as well as political.

My chapter explores the cryptopolitics of the emerging digital mutuality in Africa as facilitated by encrypted chat apps. It argues that the popularity of digital messaging apps such as WhatsApp in Africa presents an intriguing paradox: while it is part of the BigTech dynamic of global data capture by increasingly monopolistic service providers (see Nothias 2020), it is increasingly used to mediate informal, local livelihood initiatives and collectivities. This chapter focuses on the use of WhatsApp for providing a digital medium to informal savings groups as well as fundraising initiatives. While there is more information available about the role of such encrypted chat apps in advancing political participation and dissent, little is known yet about the dynamics of their mobilization toward these everyday livelihood causes, and the broader consequences of this engagement to civic activism and emerging digital peer-based collectivities. My chapter aims to address this research gap and raise areas for further investigation.

The first section of the chapter provides an overview of existing scholarly debates about the role of encrypted messaging apps in advancing

digital activism. It then proceeds to examine the use of WhatsApp in mobilizing savings groups and crowdfunding initiatives in Kenya and South Africa that have emerged as local, informal alternatives to the initiatives advanced by dedicated FinTech platforms and commercial banks (see Langley and Rodima-Taylor 2022; Rodima-Taylor 2022b).⁶ Instead of assuming that WhatsApp engenders group cohesion and frictionless cooperation because it enables greater privacy than open social media platforms or allows broader outreach than place-bound savings groups, my analysis suggests that it is important to examine the social and historical embeddedness of both mutuality and the digital infrastructures. The chapter discusses the complexities of the notion of “digital publics” in an era of Big Data, highlighting the need to situate the conversations around digital resistance and agency in the Global South within a framework of coloniality in its past and present forms. The concept of coloniality refers to the continuing effects of historical colonization that endure into the present day, and the repressive power patterns that are heightened and transformed through the ongoing “data coloniality” of financial technology platforms (Couldry and Mejias 2021; Mohamed, Png, and Isaac 2020).

The next section discusses the development of crypto-publics as novel digitally mediated collectivities (Johns 2020; see also Vidan and Lehdonvirta 2019), problematizing some features of such techno-communities in the light of empirical cases from Africa. It highlights the importance of examining the evolving digital structures as multilevel sociotechnical assemblages that bring together diverse formal and informal, online and offline, physical and “peopled” infrastructural elements (Rodima-Taylor and Grimes 2019). The chapter argues that to understand the role of encrypted messaging platforms in facilitating social activism and peer group cohesion, we need to look at new and old mutualities, social imaginaries, local institutions and cultural repertoires, as well as the complex materialities of infrastructures with their historical embeddedness. My chapter integrates perspectives from social anthropology, media studies, and science and technology studies and draws on historical and ethnographic accounts, reports, and working papers from financial and development industries, news media articles, and policy documents and memos. The analysis is also informed by my background of longitudinal field research in East Africa on informal savings groups and financial inclusion. The article contributes to the study of social media and data politics in the Global South, and presents novel perspectives on civil society, migration, and the increasingly borderless African informal economies.

Encrypted Chat Apps and Digital Collectivities

Encrypted messaging platforms, such as Telegram, Signal, and WhatsApp, are often seen as enabling safe spaces for their users that are hidden from repressive state monitoring. WhatsApp, a digital messaging and voice call service, has become a foremost platform for mediating conversations and resource pooling around livelihood issues in many regions of the Global South. Designed to work on low-cost phones in contexts of limited bandwidth, the app has a big following in Africa where it has been rolled out in thirty-two countries since 2014. It became the most popular messaging application globally by 2015 and has emerged as the primary means of Internet communication in much of Latin America, South East Asia, and large parts of Europe and Africa (Malik 2022; Metz 2016).

The platform enables voice and video calls, messages, and sharing of images and documents.⁷ It allows users to form groups of over two hundred members and enables personal communication among them. The service is accessible from computers, smart phones, as well as certain feature phones. The “simplicity, reliability and accessibility” of the app make it especially relevant for the users in the Global South where mobile phones are more widespread than computers for online connectivity (Treré 2020). Due to its group functionality, it has been likened to social media rather than regular text-messaging services. At the same time, differently from publicly visible social media platforms such as Twitter or Facebook, communication on WhatsApp can be seen by only a designated group of people. Encrypted chat apps thus incorporate the qualities of both a public social media platform and a private messaging service, by allowing group conversations while limiting the audience able to access them. The perceived privacy of the app is further enhanced by its end-to-end encryption feature that was introduced in 2016.

This has contributed to a growing use of the platform for political mobilization in many countries where freedom of public speech is restricted (Milan and Treré 2019). In the contexts of repressive state surveillance of open media platforms, such semi-public messaging services are becoming a “critical infrastructure” for social activists (Johns 2020). As users shift to these platforms from public-facing social media such as Facebook and Twitter, encrypted chat apps have given rise to new types of publics—“crypto-publics,” suggests Amelia Johns (2020). The apps may therefore not just affect individual privacy but enable new forms of collective freedom from surveillance and novel activist mobilization. The notion of crypto-publics has been shaped by discourses on

cryptographic technologies and currencies, and the vision of cryptography as a technology that ensures privacy “as not only a personal right but a public good” (2020). Parallels can therefore be drawn between the political mobilizations within WhatsApp and open-source software technologies.

The ability of encrypted chat apps to build solidarity between users has been attributed to their propensity to advance “informal and depoliticized conversations” (Pang and Woo 2019). In many groups that did not start out as openly political, casual everyday conversations turned out to be instrumental for further cooperation. Stefania Milan and Sergio Barbosa (2020) argue that WhatsApp is facilitating the rise of a new type of political subject—“WhatsApper,” whose engagement with political issues emerges gradually in an “intimate and familiar context,” facilitated by ever-accessible mobile phones. Mobilization builds organically on people’s lived experiences and feelings as they go through the app-mediated process that encourages emotional exchanges. Chat group activities inspire joint responsibility: “WhatsApp ‘private groups’ are associated with a stronger sense of belonging rather than network-based Facebook” (2020).

These qualities of the encrypted chat apps seem of particular relevance for building the virtual solidarity necessary for the functioning of online contribution groups and networks—which we will examine in more detail in the following section with the example of material from East and Southern Africa.

WhatsApp as a Tool of Mutual Security in Africa

The Rise of WhatsApp Savings Groups

The recent rise of WhatsApp in the political and economic lives of Africans has been unprecedented. In countries such as Kenya, WhatsApp has grown from a “tool for interpersonal communication into a group channel for engagement within families, companies and even for holding religious services” (Kimega 2021). Its use has skyrocketed during the COVID pandemic that restricted in-person meetings. Banks and other formal sector businesses are moving onto WhatsApp while transitioning away from website chat boxes or physical branches (Kivuva 2021). Commercial banks in Kenya have introduced banking services on WhatsApp for balance inquiry, bill payments, and money transfers. Zamara Group⁸ recently announced WhatsApp access to its digital pension plan and funeral insurance that target customers in the informal

sector: “We are using a channel that more than 12 million Kenyans use. This is the app we use to communicate with our friends, family and connect with brands and businesses. Now you can use WhatsApp to enrol, join a pension plan, save and take out insurance” (Kivuva 2021). Such service is especially likely to offer solutions to the estimated 17 million Kenyans that are currently without insurance or pension solutions (Mwita and Okwemba 2021). The *Business Daily Africa* article notes that social media channels “including Telegram, Instagram and Facebook have become common with companies for onboarding customers and services” (Kivuva 2021).

The power of social media is also evident in the recent governmental efforts in Africa to impose social media restrictions during contentious election campaigns—including in countries such as Cameroon, Congo, Uganda, Tanzania, Guinea, Togo, Benin, Mali, and Mauritania (Kene-Okafor 2021). It is significant that the Zambian government reportedly prioritized cutting WhatsApp on the day of general elections in August 2021 (Campbell 2021), highlighting the perceived importance of that platform in organizing and channeling social dissent.

Facebook and WhatsApp have also emerged as primary instruments to help people keep in contact with their overseas family and kin. These platforms are used by migrants to connect them to familiar people and cultural practices (Plaza and Plaza 2019). They also serve to “solidify linkages of obligation” within transnational kin networks, motivating people to send back remittances. Mobilizing remittances as well as saving and pooling money increasingly occur through digitally powered transnational networks that draw on various social media and payment apps.

I suggest that the WhatsApp platform is used to extend digitally the informal networks of mutual security that have historically served as a powerful expression of cryptopolitics for migrants marginalized from formal financial sector opportunities. These networks build on the principles of rotating savings-credit associations (ROSCAs) and are widespread among migrant communities for mobilizing funds. Haitian migrants in Toronto create such informal financial cooperatives that they are familiar with from their communities of origin, to counter their racialized exclusion from the formal financial sector (Hossein 2017). Tapping into their cultural networks and personal friendships, the “Toronto’s Banker Ladies” change Canada’s social economy through these incremental, everyday activities—and teach commercial banks that “banking can be done by ordinary women who collect and share funds among members in a way that is caring and supports individual and community projects” (2017: 39). Knowing that such peer-to-peer

lending systems may invite scrutiny from the formal sector and could be criticized as being illegal, the women keep their activities under close guard (2017: 39). I suggest that the formation of such informal—and frequently secretive—collectivities to counteract social exclusion constitutes an act of cryptopolitics.

Describing the popularity of rotating savings groups among the Cameroonian diaspora in the United Kingdom and United States, Shirley Ardener (2010) notes that for many migrants, the groups offer viable alternatives to sub-prime, high-interest bank loans and predatory payday lending. Many diaspora members pool money for building homes in their countries of origin where they can retire. The savings groups also function as a “private health insurance company” for their members. Participating in these groups is driven by more than economic need; many wealthier members have joined to show their solidarity as “sons and daughters of the soil” (Ardener 2014: 5). Through membership in diaspora ROSCAs, people enhance their social reputations and professional identities. Migrants can belong to several rotating groups, producing a network of overlapping circles, with “lace-like support networks covering large areas of England” (2014: 6). Similar patterns emerge among the Cameroonian diaspora in the United States: Ardener’s informant in Massachusetts belongs to multiple ROSCAs, putting her in contact with several hundred fellow Cameroonians across the country (2010). Through such groups, “migrants can quickly settle in and make their way” (Ardener 2014: 6). I suggest that these groups can be seen as important sites of cryptopolitics where people counteract their exclusion by relying on these culturally familiar grassroots collectivities that enable new types of affinities and serve novel goals.

A growing number of such groups manage their affairs online by means of WhatsApp. In South Africa, for example, WhatsApp and Facebook are among the most popular social media apps among low-income internet users (Reichel et al. 2020). As the app already serves as a widespread means of communication among young people in many areas of Africa, its recent use for savings group management has skyrocketed. In Kenya, easy socialization and instant payouts are seen as a major draw of the app that does not demand much data or airtime, argue Paul Kariuki and Lizzy Ofusori (2017). Recent research among informal savings groups in the Western Cape, South Africa, found that group members drew extensively on various forms of information and communication technology, including “mobile phones, spreadsheet applications (Excel), mobile banking, social media communications (mostly WhatsApp) and e-mail” when managing their group activities (Tsibolane, Nokwazi, Van Belle 2019: 35). The most popular form of

digital media used for group management was WhatsApp, viewed as a means to “save time and money when you want to be in touch with people” (2019: 42). WhatsApp stokvels usually utilize some sort of electronic payment solutions, such as mobile payments—eWallet or Instacash—or electronic bank fund transfers (Menze and Tsibolane 2019).

Frequently, planning an online savings group would start on Facebook where group members introduce themselves, and then move to WhatsApp as a more private communication platform (Menze and Tsibolane 2019). As members do not meet in person and may not know each other outside their group activities, important social safeguards are missing that secure the functioning of traditional, offline savings groups. Digital groups lack regular interaction around their goals and procedures. Communication often remains minimal: “Yes announcements are made on the WhatsApp group but it’s mostly reminders or enquiries about the payments” (2019: 9). These digital money pooling networks can bring together people from different regions of the country and diaspora abroad, eliminating many aspects of common language and understanding. They can therefore facilitate deceptive bonds between people who do not know each other well. While it has been argued that savings groups utilizing WhatsApp and Facebook may develop “new forms of socio-cultural ties that extend the traditional meaning” of the groups and facilitate “previously non-existent social bonds” (Menze and Tsibolane 2019), it is not clear that this has been the case so far. Significant limitations of the app to advance social ties among the members have been noted: “The use of WhatsApp for communication in stokvels, and the restrictive rules that typically govern what can be discussed and not discussed on the group chat, negatively impacts the free flow of casual communication characteristic of traditional stokvels” (2019: 11).

Stories of endemic scams and failures of online savings groups abound. In South Africa, the “WhatsApp stokvels” (sometimes referred to as “WhatsApp-Gifting”—a phenomenon that has seen rapid rise in the past few years) have recently been plagued by media reports about fraudulent activities and quick collapses (see Mavundza 2020; Moodley 2019; Pijoo 2019). What started as members of existing stokvels using social media to ease communication has quickly become a trend of online-only groups, some of which served as “get-rich-quick” schemes for their organizers. These digital groups became widespread in South Africa in 2019, inviting people to join and contribute certain amounts of money—usually around R200 (around US\$13.00)—while offering bigger payouts, often up to R6,000 (around US\$400.00) within a short time period. Many of them left their trusting contributors stranded when

group administrators disappeared with the money. The National Stokvel Association of South Africa has cautioned residents about the high likelihood of the “WhatsApp stokvels” being pyramid schemes, where those joining first may get their payout but latecomers would lose their money (Kgophane 2020). Many of the victims are unemployed and economically vulnerable. Such electronic scams build on the trusted reputation of traditional stokvels, but also damage that reputation when the breach of trust becomes evident (Lindeque 2019). Similar reports about possible scams⁹ perpetuated by the members of WhatsApp-mediated digital savings groups can be found in Kenya (Mvowa 2022).

Scams can be particularly prevalent in savings groups with large, anonymous memberships. Recently, over 230,000 investors in the Up Money grocery stokvel¹⁰ were reportedly swindled and bank accounts containing over R18 million (about US\$1.2 million) were frozen by the National Consumer Commission of South Africa (Githathu 2020). Prospective members were solicited over social media with promised meat and grocery packs and required to pay a one-time joining fee of R180 (US\$12.00) and recruit five new participants. Promises included getting access to cheaper grocery prices with bulk buying. Some of the money, however, was transferred to private accounts of the savings scheme’s director and used for purchasing luxury vehicles for group organizers.

The platform can also be vulnerable to hacking and outsiders can use specially crafted messages to sabotage the network, take over someone’s account, or delete some of the information (Kariuki and Ofusori 2017: 257). Privacy concerns also abound, and these can be quite different from those in the Global North. While social media platforms enable companies to profit from extracting user information and selling it to third parties, this was not the main concern of platform users in South Africa (Reichel et al. 2020). Instead, users were worried about who could see their messages and how this would affect their social standing, particularly among their elders and superiors. Concerns about physical safety also affected what and how users posted on social media. People often concealed their locations to avoid kidnapping when living in high-crime areas (2020: 1). Scams leading to robberies proliferated, and phone sharing and theft added to security concerns. Users in developing countries are particularly vulnerable to privacy breaches, often posting large amounts of personal data without knowledge of who can access it and how. Many social media users were unaware how to use privacy settings and left them on default (2020: 1). WhatsApp was perceived as more private and easier to control than Facebook in that regard, but stories about hacking and information stealing were still widespread in users’ accounts.

The scams around digital savings groups are not just a feature of the Global South. There have been recent reports from UK about loan sharks targeting victims through WhatsApp and Facebook groups. While local WhatsApp groups have proliferated during the pandemic, “creating community ties and support networks,” these are increasingly penetrated by criminals offering members short-term loans with abruptly increasing interest rates (Tapper 2021). Such online scams may particularly affect low-income communities with high volumes of recent migrants.

Whatsapp as Alternative Tool for Crowdfunding

In addition to assisting existing or new savings groups in their regular efforts to pool money, WhatsApp is also becoming a preferred tool for (one-time) digital fundraising in many African societies. Frankline Matanji (2020) reports that crowdfunding has become widespread in Kenya through the reliance of fundraisers and contributors on the WhatsApp platform, in conjunction with M-Pesa mobile money service. One of the reasons for WhatsApp’s popularity as an informal fundraising platform is the fact that the chat app is already in wide use for everyday communication. Fundraising calls get the attention of many people by directly reaching their inboxes. In addition to these “strong ties” between the primary members the network, fundraising calls indirectly engage with the “weak ties” of secondary contacts of every group member with their own networks. The process of digital fundraising entails “creating a WhatsApp group with a title, adding friends, from either your phonebook or friends of friends and updating an appealing narrative to members explaining why they should contribute” (2020: 245). Group links can be shared with other WhatsApp users, thereby expanding the circle of contributors. The group treasurer shares updates on contributions and defaulters, encouraging people to contribute. The WhatsApp communicative model enables group members to receive messages jointly, while also building on the ease of one-on-one conversations. As communication on the platform is not public, it enables sufficient privacy regarding the cause and contributors of the fundraising event, while still allowing visibility within the group to facilitate accountability. WhatsApp-based fundraising is on the rise in many sectors of society and employed for business projects, events and ceremonies, medical emergencies, and educational expenses. Matanji documents frequent use of WhatsApp fundraising among students at Kisii University in Kenya to fund education-related costs. Kenyan politicians also increasingly turn

to WhatsApp to mobilize voters to assist with public sector expenditures (2020: 245–46).

Digital crowdfunding became popular in Kenya after the #1Milli-ForJadudi campaign in August 2015 that aimed to raise KSh1 million (Kenyan shillings) (approximately US\$10,000) to help fund a cancer patient's surgery in India. The campaign that drew on online blogs as well as Twitter and Facebook went viral within hours of launching it, and within three days, had managed to raise US\$71,000, which had been contributed by Kenyans all over the country. The money was collected through M-Pesa mobile money contributions.¹¹ This campaign demonstrated the effectiveness of spontaneous online funding pleas in conjunction with social media platforms and digital payment technologies, enabling private citizens to effectively reach wider publics to mobilize monetary assistance.

The potential of WhatsApp and similar encrypted chat apps for crowdfunding remains significant in Africa, as the continent faces a strong prevalence of foreign-based dedicated crowdfunding platforms—with only an estimated one-third of the total funded amounts coming from African-based platforms (N'Guessan, Alegre, and Berbegal-Mirabent 2019: 288). Most of the African-based platforms are active within their respective countries only,¹² with very few Pan-African platforms (Hiller 2017: 65).

Potentially, crowdfunding technologies in Africa are likely to successfully harness diaspora philanthropy, as many diaspora members are interested in donating for the social benefits of a community broader than kin and family (Chao et al. 2020). Insufficient regulatory frameworks as well as unreliable internet connection are the main impediments. Due to the widespread adoption of mobile money and low rate of penetration of traditional financial institutions, crowdfunding initiatives in Africa frequently leverage mobile technology and build on SMS-messaging and mobile chat apps such as WhatsApp to mobilize fundraising (2020). Offline methods of fundraising remain important in such settings.

At the same time, however, the digital medium is likely to introduce a new competitive aspect to collective fundraising endeavors—and possibly cause changes in traditional fundraising mechanisms. People turn to crowdfunding when their formal and informal “conventional safety nets” fail them, but crowdfunding is more than just “friendfund-ing,” argue Sumin Lee and Vili Lehdonvirta at the example of medical crowdfunding in the United States: the funding is not need-based but rather depends on one's entrepreneurial abilities to “outcompete rivaling needfuls” (2022: 1151).

The Infrastructures of Cryptopolitics

These cases reveal that the emerging crypto-publics in Africa are constituted through multiple materialities and communicative forms, including the offline spaces of self-help groups with their social and historical embeddedness, and new digital interfaces with their BigTech connectivities. This highlights the importance of examining the evolving digital structures as multilevel and fragmented sociotechnical assemblages that bring together diverse formal and informal, online and offline, physical and peopled infrastructural elements (Rodima-Taylor and Grimes 2019). Mediated by encrypted chat apps, the poor and marginal exercise their agency through self-help groups and networks, carving out new civic spaces in the process. This links to the prevailing conceptualization of the public sphere as a mediated space for citizens to voice and share their opinions about public affairs (Habermas 1992, see also Johns 2020 for a nuanced critique). New communicative technologies may therefore foster a new, virtual public sphere that similarly allows freedom of expression.

The realities are more complex, however. First, as feminist and decolonial critiques have pointed out, the concept of public sphere has historically evolved around the “male bourgeois public sphere” that instituted a number of exclusions (Frazer 1992). Marginalized social groups created their own oppositional counter-publics as “parallel discursive arenas” (see also Warner 2002). The rise of digital technologies with their proprietary platforms have fragmented the public spaces even further. Johns has suggested that social media platforms should not be seen as neutral enablers of civic discourse, but as expressive of institutional power exercised through algorithms (2020). The “backstage media channels” such as encrypted messaging services, on the other hand, may allow safe spaces to negotiate internal differences and affirm solidarity, away from public scrutiny and manipulative news media. I suggest, however, that these assumptions about encrypted apps as enabling activism and solidarity need to be questioned, too. Instead of assuming that encrypted chat apps engender alternative public spheres, we should ask what kinds of new and old solidarities and inequalities the technology fosters and builds upon.

The democratic potential of people enacting their rights in society through digital technologies has been distorted by the ubiquitous data collection by technology companies and governments, argue Arne Hintz, Lina Dencik, and Karin Wahl-Jorgensen (2017). Those who control people’s personal data gain unprecedented insights into people’s lives, resulting in an unequal power dynamic (2017: 733). Big Data

is continuously generated and scalable, processed through software-empowered machine learning that detects patterns and builds predictive models (Kitchin 2014: 9). Datafication—the processes by which the system and lifeworld are transmuted into data—can thus be seen as a fundamental shift in contemporary society (Beraldo and Milan 2019). Critical approaches to datafication have highlighted the colonial heritage of modern technology, situating it within the broader history of European colonial powers aggregating global resources that gave rise to industrial capitalism. Coloniality can be traced in the extraction of value through data that can be compared to historical land grabs, suggest Nick Couldry and Ulises Mejias (2021: 10–11). The concept of coloniality thus refers to the continuing effects of historical colonization that endure to the present day. Automated, data-driven systems can extend the biases and privileges of algorithmic oppression in society (Mohamed et al. 2020:665). The following sections of the chapter explore the broader infrastructural embeddedness of the self-help groups as well as digital platforms, with attention to the legacies of power inequalities, and discuss the characteristics of the emerging digital publics as they strive to negotiate these.

Savings Groups and the Histories of Mutuality

Instead of assuming that WhatsApp engenders group cohesion and frictionless administration just because it enables greater privacy than open social media platforms or allows wider outreach than place-bound savings groups, I suggest that it is important to examine the broader social histories of the mutual help groups as well as the digital infrastructures that they are increasingly part of. Self-help groups can be found in many areas of Africa, including the *chama* groups of Kenya, *isusu* of Nigeria, and *stokvel* of South Africa (Ardener and Burman 1995; Ardener 2010). A considerable rise has occurred in these groups with the neoliberal restructuring reforms of the 1980s–1990s, with a decline in formal sector employment and state-funded producer cooperatives (Rodima-Taylor 2014; Tripp 1997). As my two-year fieldwork in north-east Tanzania revealed, a variety of self-help groups were widespread among the Kuria people. These built on the norms of cooperation that had emerged in the distant past for sharing agricultural labor, transitioning from large “festive” work parties to regularly mobilized, smaller work groups. As an informant told me: “Nowadays we have much more old-time groups than in the past” (Rodima-Taylor 2014: 553). While many of them had retained the element of rotating farm work, they were also active in non-agricultural ventures such as carpentry,

brick-making or tailoring, managing a group farm plot or retail kiosk, and many had joint credit arrangements (most often rotating savings-credit). The groups provided new opportunities for marginalized social groups, such as women and youth. They assisted women with farm work and cash income, allowing them more independence especially in polygynous households. Through their group membership, people constructed their social personhood through the practices claim-making and extending debt (Rodima-Taylor 2014). Group affairs and mutual loan contributions were concealed from the public, and informal bylaws frequently included sanctions against revealing them to outsiders. By providing new economic and social opportunities for women and young people marginalized from the men's sphere of cattle wealth, these groups constituted a conducive site for cryptopolitics—as well as an important venue for negotiating people's increasingly unstable livelihoods.

Similar self-help groups (locally called *chama*) are also proliferating in neighboring Kenya: according to recent estimates, there are around 300,000 *chama* groups in the country, circulating over US\$3 billion (Chidziwizano et al. 2020). The groups are widespread among both genders and many of them also manage joint business projects (Mwangi and Kimani 2015; Nyataya 2016). Informal savings groups are also popular in South Africa where they emerged in the era of colonial displacement. In 2019, 10 million people saved through stokvel groups and 45 percent of the population belonged to an informal burial society (Shipalana 2019). The evolution of these groups has been shaped by the country's colonial history. Stokvels emerged with the labor migration of many Black South Africans into gold and diamond mines in the early 1900s and spread across the country with the migration of Black women as urban domestic and industrial workers (see Rodima-Taylor 2022b).

Both Kenya and South Africa carry the legacies of White settler economies where the colonizing population inhabited the African territories, appropriating land and labor. It is therefore important to remember that the ideologies and practices of mutuality, while building on customary norms, are not static. Rather than merely embodying timeless sentiments of sharing and reciprocity, savings groups in those countries have been impacted by the extractive coloniality of European settler economies and later neoliberal restructuring that has fueled the informal economy and over-indebtedness. The new digital initiatives that claim to build on the “traditional” mechanisms of risk sharing and local cosmologies of “unity” could render the groups more vulnerable.

The BigTech Implications of WhatsApp Groups

While WhatsApp may offer its users in Africa more autonomy and flexibility than dedicated fundraising or savings group management platforms, the fact that it is owned by a foreign BigTech company could complicate the dynamic. WhatsApp started in California in 2009 and was acquired by Facebook (now Meta Platforms) in 2014. As a recent *Guardian* article claims: “Across Africa, Facebook is the internet” (Malik 2022). The Free Basic service launched in 2015 is an application that provides access free of data charges to a variety of local news and information platforms and Facebook itself.¹³ Free Basic has faced opposition in several countries, where it has been critiqued for insufficient transparency in selecting services available on the app and restricting the development of local startups (Nothias 2020). Partly in response to the backlash from digital rights activists, Facebook has recently focused more on engagement with civil society organizations and assisting local software developers (2020). Facebook and WhatsApp have thus contributed to facilitating free speech and civic activism in countries with oppressive regimes.

Recent media reports discuss Facebook’s plans to transform its huge global user base into a “profit center” by motivating retailers to sell goods and services inside the WhatsApp application (Wagner 2020). For Facebook, WhatsApp therefore presents a chance to diversify its business as well as deepen control over a brand and its customer: “‘Instagram and Facebook are the storefront’ . . . ‘WhatsApp is the cash register.’” There are also plans to further consolidate the business-consumer interface within WhatsApp—an important new line of revenue for Facebook—by enabling consumers to process payments inside the app, thereby turning the messaging service into a WeChat-like digital storefront. The payment aspect of WhatsApp already operates on a limited scale in some countries.

The ongoing commercialization of the WhatsApp platform may raise broader concerns about the growing influence of Western-owned companies in African communicative space. Michael Kwet (2019: 9) suggests that the emerging global architecture of the digital economy is shaped by structural inequality as BigTech companies exercise monopoly power over rent and user data extraction, making it difficult for the local firms to compete with the incumbents. At the same time, encrypted chat apps continue to offer autonomous and empowering spaces to civil society activists as well as savings group members in Africa—suggesting a fertile terrain for further research into these emerging synergies.

The Ambiguities of the Digital Public Sphere

Ambiguities also surround the effects of the digital medium to the socialities of the savings groups. Considering that many self-help groups have turned to social media, in particular to encrypted chat apps, to manage their affairs and extend outreach, one may assume that the digital connective modality is well suited to the needs of these informal collectivities. However, it has been noted that the ease of digital communication comes with undesired side-effects. Matanji (2020: 246) points out that one of the downsides of digital crowdfunding is isolation: “People who used to see one another physically, talk and chat and laugh in traditional Harambees no longer exist. This technological advancement has led to family ties being broken and people moving away from a collectivist society. The price of efficient fundraising is replacing the face-to-face interactions.” I suggest that this erasure of in-person communication can fundamentally alter the dynamic that has defined offline savings groups. B. Njeru (2018) points out that informal savings groups (*chama*) in western Kenya operate in a highly oral space. In South African stokvels, despite complex written group constitutions, interpersonal communication between group members was central for upholding its laws (Hutchison 2020).

In my field observations of Kuria self-help groups in neighboring Tanzania, I similarly noted the central importance of oral negotiations in group affairs (Rodima-Taylor 2014). Most of the groups had elaborate written bylaws, and their rules and hierarchies constituted a creative mix borrowed from the traditional social institutions of Kuria clans and more recent administrative structures of the socialist era. While there was a tension between the more indirect mode of “customary” decision-making and the “statutory” hierarchical model of negotiating differences, it was the consensus-based model that prevailed most of the time. Written documents carried symbolic significance and were used to legitimize the groups with local administrative bureaucracy, but they offered little formal recourse for disputes. Group bylaws were subject to a constant reinterpretation in daily practice (2014: 563). This shows a fundamental disconnect between the offline modalities of savings group management and the ways that communication tends to be structured in digitally mediated savings groups.

Evidence from recent studies of the emerging “digital publics” in East Africa testifies to the enduring importance of the form and function of traditional public assemblies in shaping the new online spaces. In Swahili communities, *baraza* signified a place for regular public

gatherings. The new digital publics or “cyberbaraza” that emerged during the 2015 Zanzibar presidential elections enabled alternative ways of political participation by contesting dominant political discourses, suggests Irene Brunotti, while its form remained molded by the “discursive tradition of Swahili orature” (2019: 25). Baraza had mediated the Kenyan state through a rhetoric that recast the daily concerns of citizens into moral themes, while at the same time also rendering these narratives debatable (Haugerud 1995: 193–96). Discussing the complexity of the evolving “political personhood” in Kenya, Duncan Omanga (2019) suggested that while offline forums such as county assemblies and committees failed to encourage meaningful participation in local governance, WhatsApp groups made information more accessible and enabled safer dissent. George Ogola (2019) argues that the disruption created by social media platforms in Kenya is partial and piecemeal—facilitating “pockets of indiscipline” and encouraging popular participation, while staying limited by costly computer and internet access, and lacking digital literacy. Social media therefore remains situated within the existing, unequal structures of economic opportunity and can reproduce offline divisions and marginalities (2019).

Uncertain Crypto-Publics: Code, Community, and Politics

When discussing the potential of encrypted chat apps to enable new types of collectivities built on peer solidarity—including WhatsApp-empowered savings groups or fundraising endeavors—it may be helpful to draw parallels with the types of crypto-publics that emerge with cryptographic technologies and currencies. Blockchain technology can facilitate organizations where individuals cooperate on a peer-to-peer basis, with no need for centralized management structures. These techno-communities where connections are formed through cryptographic protocols can be viewed as a technological advancement of commons-based peer production systems that are based on “sharing resources and outputs among widely distributed, loosely connected individuals” (De Filippi and Wright 2018: 136). Their activities are governed by algorithmic “smart contracts,” and governance relies on group consensus rather than formal hierarchy (2018: 137). Such systems for “human and machine coordination” in decision-making seek to bypass the “messiness of human relationships, legal contracts, and leaky information flows” (Dupont 2019: 194).

In applying the cryptographic protocol, technology thus appears autonomous—erasing the work of governance and politics (Vidan and

Lehdonvirta 2019). The trustlessness of the blockchain is therefore not just material (as giving priority to certain gatekeepers and infrastructures) but also discursive—expressed in the commitment of the users to the social imaginary of trustworthy code and algorithmic regulation. The “trust in code” discourse, however, can be seen as inspired by a binary perspective on modernity and transition—one that views modernity as a shift from traditional social ties to centralized, formal institutions that become mediators of “impersonal economic relationships.” Cryptographic authentication technologies thus come to replace both personal ties and formal institutions (2019).

While cryptocode is often viewed as a “fundamentally democratic process” that results from peer production (2019: 45), Gili Vidan and Vili Lehdonvirta point out that this promise of trustlessness is an ongoing process of discursive maintenance by powerful actors in the network. Open-source software communities could be seen as recursive publics that construct themselves as such through the sharing of source code at the basis of a moral and technological order. Such publics emerge as “organized around the ability to build, modify, and maintain the very infrastructure that gives it life in the first place” (Kelty 2008). The infrastructures of cryptographic trustlessness are therefore not just material but also discursive, with collective imaginaries and narratives playing an important role.

We could therefore say that the emerging digital crypto-publics bring along hierarchies and group templates from offline spaces, but may also fall victim to a new type of technocratic governance that obscures the location of power and encourages trust in the (hidden) code. Easy deception can follow. The combination of offline and online spaces remains important and is a frequently overlooked aspect of the new types of online communications. I suggest that the search for technologically mediated trust may be more pervasive in societies that are subject to chronic political and economic instabilities, with unreliable administrative and financial infrastructures. People in such settings are more dependent on online, fragmented, and privately managed alternatives. It can thus be expected that the technology-driven alternatives become increasingly central in the livelihoods of the marginal and displaced populations in the Global South. At the same time, these spaces remain of a “hybrid” nature, incorporating online and offline, material and discursive dimensions. It is therefore important to acknowledge the hidden political dimensions of the new digitally empowered publics, and the continued inequalities that may play out in their material infrastructures and power relations.

Conclusion

My chapter explored the cryptopolitics of informal savings groups and contribution networks in two African countries—South Africa and Kenya—as mediated through encrypted digital messaging platforms. It argued that the emerging crypto-publics are constituted through multiple materialities and communicative forms, including the offline spaces of self-help groups with their social and historical embeddedness, and new digital platforms with their BigTech connectivities. Mediated by encrypted messaging apps, the poor and marginal exercise their agency through self-help groups and networks, carving out new civic spaces. The article argues that such spaces always involve important and interconnected offline and online, and material and human modalities. It offers new perspectives to the formation of the digital public sphere through attention to cryptopolitics, and advances new approaches for analyzing it.

WhatsApp has rapidly become one of the most widely used digital platforms in the Global South. This has been attributed to its peculiar features that allow it to accommodate large groups as well as private chat messaging on its platform. It has been suggested that especially in the contexts of repressive states, such “semi-public chat apps” may constitute critical infrastructures for social activism (Johns 2020). While some studies focus on the role of WhatsApp in advancing political activism, this chapter argued that an important use case of the platform has been overlooked so far. In several African countries, WhatsApp is increasingly central for mobilizing online savings groups as well as used for fundraising for a variety of causes, both public and private. It has also emerged as a primary platform connecting the diaspora with their home communities in the Global South through mobilizing remittances and facilitating everyday conversations and often features as an essential part of transborder care networks.

In existing research, the platform’s ability to mediate informal and depoliticized conversations has been highlighted as a reason for its effectiveness in mobilizing new connections as well as inspiring collective action (Pang and Woo 2019). By forging connections between “the vernacular and the political” (Milan and Barbosa 2020), such encrypted messaging apps may give rise to a new type of political subject that builds on the joint responsibility advanced in the chat groups. The notion of crypto-publics links encryption to digital resistance and citizenship, and such publics have been viewed as counteracting the ongoing datafication and challenging the power of bureaucracies (Johns 2020).

This leads us to the question about the nature of the present-day digital publics as mediated through social media platforms. Data coloniality connects to the enduring effects of historical colonization in the Global South (Couldry and Mejias 2021). My chapter argues therefore that when analyzing the data coloniality of social media, it should be seen as integrally connected to other kinds of coloniality—calling for an integrated approach to offline and online dimensions of these processes. In order to study the algorithmic coloniality (Mohamed et al. 2020) in the Global South through a “de-Westernized” epistemic lens, the chapter suggested attention to the sociotechnical infrastructures with their physical and peopled dimensions that channel the construction of mutuality both online and offline. My chapter examined the “contentious politics of data” (Beraldo and Milan 2019) with the example of WhatsApp as mobilizing collective action around people’s livelihoods and harnessing their customary collectivities of savings groups and mutual support networks. These have a long history and have been integrally related to the unstable economies shaped by colonialism. In the present day, the savings groups continue providing mutual support and manage risk among low-income people domestically, as well as offer innovative solutions for the diaspora to counteract their economic and social marginalization. On the other hand, digital groups have also become fodder for rapidly spreading new scams and get-rich-quick schemes, and increasingly attract high-interest online loan offers. While social imaginaries abound about the integrative function of the savings schemes among strangers, there is little evidence to support that. The chapter also revealed an important disconnect between the offline modalities of savings group management and the ways communication tends to be structured in digitally mediated savings groups.

Instead of assuming that WhatsApp engenders group cohesion and frictionless cooperation because it enables greater privacy than open social media platforms, my chapter thus argues that it is important to examine the histories and social embeddedness of the offline mutualities it channels and the broader political economies of the digital infrastructures involved. As part of the ubiquitous Facebook platform, WhatsApp encapsulates the extractive dynamic of BigTech global data capture. At the same time, it has also emerged as a local alternative to digital group accounts increasingly offered by commercial banks and FinTech platforms and dedicated crowdfunding services that in Africa are still dominated by Western-owned companies and developmental paradigms. As the chapter revealed, successful fundraising campaigns frequently draw on WhatsApp and combine the online platform with offline contribution networks and mobile payment channels, demonstrating the

continued importance of integrating the diverse existing modalities of financial management in local livelihoods. More research is needed into the rapidly growing use of encrypted chat apps and other social media platforms for facilitating the informal collectivities of the “hidden economies” in the Global South.

Crypto-publics as digitally mediated collectivities frequently advance social imaginaries that highlight trust in code and community, as we learned. Social imaginaries, however, can also lead to alternative epistemologies and local agendas of change—those inspired by decolonial thinking and “working toward epistemic justice” (Milan and Treré 2019: 328). While in contemporary Western-centered conceptualizations of datafication, local people have been relegated to the margins as passive objects of surveillance, the social imaginaries of the Global South may thus allude to alternative ways of thinking about digital information that emerge in the fringes. Such imaginaries inspired by “grassroots data practices” (2019: 329) may therefore contain novel paradigms of resistance and autonomy. These may reveal alternative ways of imagining borderless cooperation among relatives and existing and new friends in the global diaspora, while building on people’s own initiatives and circumventing formal sector exclusion—and countless other instances of cryptopolitics advanced by people both online and off.

Daivi Rodima-Taylor is a social anthropologist and researcher at the African Studies Center of the Pardee School of Global Studies of Boston University. Her research focuses on African informal economies, financial technology and social media platforms, and migration and remittances. She has conducted longitudinal field research in East Africa and published in journals including *Africa*, *African Studies Review*, *Global Networks*, *Social Analysis*, *American Ethnologist*, *Journal of International Relations and Development*, *Environment and Planning: Politics and Space*, *Geoforum*, *Global Policy*, and *Review of International Political Economy*. Her recent publications include the co-edited volume *Land and the Mortgage: History, Culture, Belonging* (Berghahn Books, 2022) and the co-edited special issue *Fintech in Africa* (*Journal of Cultural Economy*, 2022).

Notes

1. Informal savings groups in South Africa.
2. Mavundza (2020).
3. “New WhatsApp Scam Doing the Rounds in South Africa.” *BusinessTech*, 9 October 2019. Retrieved 16 January from <https://businesstech.co.za/news/mobile/345424/new-whatsapp-scam-doing-the-rounds-in-south-africa/>.

4. Ntombizakhona. 2021. "WhatsApp 'Stokvels' Are A Scam and Don't Be Tempted To Join Telegram or Signal 'Stokvels' Now . . . How To Start A Stokvel." *Search Medium*, 16 January. Retrieved 16 January from <https://studentanalyst.medium.com/whatsapp-stokvels-are-a-scam-amp-don-t-be-tempted-to-join-telegram-or-signal-stokvels-8b503a4dafef>.
5. Pijoes (2019).
6. See also Paul Langley and Andrew Leyshon (2020) on platform intermediation as premised on multisided value extraction and rapid scaling, which can foster oligopolies and change the competitive basis of retail finance.
7. *WhatsApp*. Retrieved 16 January 2023 from <https://www.whatsapp.com/>.
8. The Zamara Fahari Retirement Plan account is a platform backed by Kenya's Retirement Regulatory Authority (RBA) and the Insurance Regulatory Authority (IRA).
9. Samrack. "Kate wa Gladys, a Kenyan Woman Who Runs Multiple WhatsApp Chamas Reportedly Arrested over Fraud Allegations." *Samrack: Diaspora News and Updates*, 29 August. Retrieved 16 January 2023 from <https://samrack.com/kate-wa-gladys-a-kenyan-woman-who-runs-multiple-whatsapp-chamas-reportedly-arrested-over-fraud-allegations/>.
10. The "retail stokvels" in South Africa are savings groups that pool money to obtain bulk groceries from retailers at a discount. Retailers target such stokvels as their regular clients, developing business models that include storage space, discounts, and special payment systems (Lappeman et al. 2019).
11. "Kenyans surpass the #1MilliforJadudi target and raise Sh6 million." *Nairobi News*, 6 August 2015. Retrieved 16 January 2023 from <https://nairobinews.nation.co.ke/32265/>.
12. While there is a scarcity of statistical data about the present state of crowdfunding platforms as a more general category in Africa as well, foreign-based platforms are still prevalent also in that overall sector, covering about 64 percent of the crowdfunding platforms operating in Africa in May 2020 (Adjakou 2021).
13. *Meta Connectivity*. Retrieved 16 January 2023 from <https://www.facebook.com/connectivity/#what-s-free-basics->.

References

- Adjakou, Oloutchegoun. 2021. "Crowdfunding: Genesis and Comprehensive Review of Its State in Africa." *Open Journal of Business and Management* 9: 557–85.
- Ardener, Shirley. 2010. "Microcredit, Money Transfers, Women, and the Cameroon Diaspora." *Afrika Focus* 23(2): 11–24.
- Ardener, Shirley. 2014. "Credit Unions and Money Clubs (ROSCAs)." *Anthropology Today* 30(4): 3–6.
- Ardener, Shirley, and Sandra Burman (eds). 1995. *Money-Go-Rounds*. Oxford and Washington DC: Berg Publishers.
- Beraldo, Davide, and Stefania Milan. 2019. "From Data Politics to the Contentious Politics of Data." *Big Data & Society* July–December: 1–11.
- Bernal, Victoria. 2014. *Nation as Network: Diaspora, Cyberspace, and Citizenship*. Chicago: University of Chicago Press.
- Brunotti, Irene. 2019. "From Baraza to Cyberbaraza: Interrogating Publics in the Context of the 2015 Zanzibar Electoral Impasse." *Journal of Eastern African Studies* 13(1): 18–34.

- Campbell, Ian Carlos. 2021. "WhatsApp, Twitter, and Facebook are Reportedly Blocked in Zambia during Its Presidential Election." Retrieved 5 October 2022 from <https://www.theverge.com/2021/8/12/22621875/whatsapp-twitter-facebook-blocked-zambia-presidential-election>.
- Chalwe-Mulenga, Majorie, Eric Duflos, and Gerhard Coetzee. 2022. *The Evolution of the Nature and Scale of DFS Consumer Risks*. Washington, DC: CGAP.
- Chao, Emmanuel James, Priscilla Serwaah, Prince Baah-Peprah, and Rotem Shneor. 2020. "Crowdfunding in Africa: Opportunities and Challenges." In *Advances in Crowdfunding*, ed. Rotem Shneor, Liang Zhao, and Bjørn-Tore Flåten, 319–40. London: Palgrave MacMillan.
- Chidziwisano, George, Susan Wyche, and Rellikson Kisyula. 2020. "SmartChama: Designing Collaborative Digital Financial Systems for Chama Groups in Kenya." In Proceedings of the 2020 International Conference on Information and Communication Technologies and Development (ICTD2020). Association for Computing Machinery, New York, NY, USA, Article 13, 1–12. <https://doi.org/10.1145/3392561.3394641>
- Comaroff, John, and Jean Comaroff, eds. 2001. *Millennial Capitalism and the Culture of Neoliberalism*. Durham, NC: Duke University Press.
- Couldry, Nick, and Ulises Mejias. 2021. "The Decolonial Turn in Data and Technology Research: What Is at Stake and Where Is It Heading?" *Information, Communication & Society*. <https://doi.org/10.1080/1369118X.2021.1986102>.
- De Philippi, Primavera, and Aaron Wright. 2018. *Blockchain and the Law: The Rule of Code*. Cambridge, MA: Harvard University Press.
- Dupont, Quinn. 2019. *Cryptocurrencies and Blockchains*. Cambridge: Polity Press.
- Frazer, Nancy. 1992. "Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy." In *Habermas and the Public Sphere*, ed. Craig Calhoun, 109–42. Cambridge, MA: MIT Press.
- Gichuru, Mercy. 2014. *Strategic Planning in Investment Groups (Chama) in Nairobi County*. MBA thesis. Nairobi: University of Nairobi.
- Githathu, Mwangi. 2020. "Over 230,000 Investors in the Up Money 'Stokvel' Swindled." *IOL*, 5 August. Retrieved 5 October 2022 from <https://www.iol.co.za/capeargus/news/over-230-000-investors-in-the-up-money-stokvel-swindled-8a9261c0-beca-4de6-bac8-fa8e173df7a4>.
- Habermas, Juergen. 1992. "Further Reflections on the Public Sphere." In *Habermas and the Public Sphere*, ed. C. Calhoun, 109–42. Cambridge, MA: MIT Press.
- Haugerud, Angelique. 1995. *The Culture of Politics in Modern Kenya*. Cambridge: Cambridge University Press.
- Hiller, A. 2017. "An Empirical Analysis of Crowdfunding in Sub-Saharan Africa." Ph.D. dissertation. Leipzig: Leipzig Graduate School of Management.
- Hintz, Arne, Lina Dencik, and Karin Wahl-Jørgensen. 2017. "Digital Citizenship and Surveillance Society." *International Journal of Communication* 11: 731–39.
- Hossein, Caroline. 2017. "Fringe Banking in Canada: The Collective Economies of Toronto's 'Banker Ladies.'" *ANSERJ* 8(1): 29–43.
- Hutchison, Andrew. 2020. "Uncovering Contracting Norms in Khayelitsha Stokvels." *The Journal of Legal Pluralism and Unofficial Law* 52 (1): 3-27.
- Johns, Amelia. 2020. "'This Will Be the WhatsApp Election': Crypto-publics and Digital Citizenship in Malaysia's GE14 election." *First Monday* 25(12). <https://doi.org/10.5210/fm.v25i12.10381>.
- Jones, Graham. 2014. "Secrecy." *Annual Review of Anthropology* 43: 53–69.

- Kariuki, Paul, and Lizzy Ofusori. 2017. "WhatsApp-operated Stokvels Promoting Youth Entrepreneurship in Durban, South Africa." *ICEGOV '17: Proceedings of the 10th International Conference on Theory and Practice of Electronic Governance*, 253–59. <https://doi.org/10.1145/3047273.3047397>.
- Kelty, Christopher. 2008. *Two Bits: The Cultural Significance of Free Software*. Durham, NC: Duke University Press.
- Kene-Okofor, Tage. 2021. "WhatsApp and Other Social Media Platforms Restricted in Zambia amidst Ongoing Elections." *Yahoo! Finance*, 12 August. Retrieved 5 October 2022 from <https://ca.finance.yahoo.com/news/whatsapp-other-social-media-platforms-143333617.html>.
- Kgophane, Karabo. 2020. "Warning: WhatsApp Stokvel Makes a Comeback in 2020." *The South African*, 5 July. Retrieved 5 October 2022 from <https://www.thesouthafrican.com/technology/whatsapp-stokvel-2020/>.
- Kimega, Godfrey. 2021. "Kenyans Behaving Badly on WhatsApp Groups." *The Star*, 29 August. Retrieved 5 October 2022 from <https://www.the-star.co.ke/sasa/lifestyle/2021-08-29-kenyans-behaving-badly-on-whatsapp-groups/>.
- Kitchin, Rob. 2014. "Big Data, New Epistemologies and Paradigm Shifts." *Big Data & Society* April–June: 1–12.
- Kivuva, Elizabeth. 2021. "Zamara Targets WhatsApp Users with Digital Pension Plan." *Business Daily*, 7 December. Retrieved 5 October 2022 from <https://www.businessdailyafrica.com/bd/markets/capital-markets/zamara-targets-whatsapp-users-with-digital-pensions-plan-3644884>.
- Kwet, Michael. 2019. "Digital Colonialism: US Empire and the New Imperialism in the Global South." *Race & Class* 60(4): 3–26.
- Langley, Paul, and Andrew Leyshon. 2020. "The Platform Political Economy of FinTech: Reintermediation, Consolidation and Capitalisation." *New Polit. Econ.* 26(3): 376–88.
- Langley, Paul, and Daivi Rodima-Taylor. 2022. "FinTech in Africa: An Editorial Introduction." *Journal of Cultural Economy* 15(4): 387–400.
- Lappeman, James, Jemma Litkie, Shrya Bramdaw, and Abigail Quibell. 2019. "Exploring Retail-Oriented Rotating Savings-Credit Associations: Festive Season 'Stokvels' in South Africa." *The International Review of Retail Distribution and Consumer Research* 30(3): 331–58. <https://doi.org/10.1080/09593969.2019.1667853>.
- Lee, Sumin, and Vili Lehdonvirta. 2022. "New Digital Safety Net or Just More 'Friendfunding'? Institutional Analysis of Medical Crowdfunding in the United States." *Information, Communication & Society* 25(8): 1151–75.
- Lindeque, Mia. 2019. "WhatsApp Stokvels: How Fraudsters Use Group Chats to Steal Money." *EWN*, 9 October. Retrieved 5 October 2022 from <https://ewn.co.za/2019/10/09/whatsapp-stokvels-how-fraudsters-use-group-chats-to-steal-money>.
- Malik, Nesrine. 2022. "How Facebook Took Over the Internet in Africa—And Changed Everything." *The Guardian*, 20 January. Retrieved 5 October 2022 from <https://www.theguardian.com/technology/2022/jan/20/facebook-second-life-the-unstoppable-rise-of-the-tech-company-in-africa>.
- Manderson, Lenore, Mark Davis, Chip Colwell, and Tanja Ahlin. 2015. "On Secrecy, Disclosure, the Public, and the Private in Anthropology." *Current Anthropology* 56 (S12): S183–90.

- Matanji, Frankline. 2020. "WhatsApp and Mobile Money: Ameliorating Crowdfunding for Social Change in Kenya." *Asia Pacific Media Educator* 29(2): 237–48.
- Mavundza, Bombi. 2020. "WhatsApp Stokvels Are Back and You're Probably Being Scammed." *Business Insider*, 1 July. Retrieved 5 October 2022 from <https://www.businessinsider.co.za/whatsapp-stokvel-scams-2020-6>.
- Menze, Aviwe, and Pitso Tsibolane. 2019. "Online Stokvels: The Use of Social Media by the Marginalized." *CONF-IRM 2019 Proceedings*. 26. <https://aisel.aisnet.org/confirm2019/26/>.
- Metz, Cade. 2016. "Forget Apple vs. the FBI: WhatsApp Just Switched on Encryption for a Billion People." *Wired*, 5 April. Retrieved 5 October 2022 from <https://www.wired.com/2016/04/forget-apple-vs-fbi-whatsapp-just-switched-encryption-billion-people/>.
- Milan, Stefania, and Sergio Barbosa. 2020. "Enter the WhatsApp: Reinventing Digital Activism at the Time of Chat Apps." *First Monday* 25(1). <https://doi.org/10.5210/fm.v25i12.10414>.
- Milan, Stefania, and Emilio Treré. 2019. "Big Data from the South(s): Beyond Data Universalism." *Television & New Media* 20(4): 319–35.
- Mohamed, Shakir, Marie-Therese Png, and William Isaac. 2020. "Decolonial AI: Decolonial Theory as Sociotechnical Foresight in Artificial Intelligence." *Philosophy & Technology* 33: 659–84.
- Moodley, Clinton. 2019. "How WhatsApp Groups Are Ruining the Travel Stokvel's Reputation." *IOL*, 24 October. Retrieved 5 October 2022 from <https://www.iol.co.za/travel/travel-news/how-whatsapp-groups-are-ruining-the-travel-stokvels-reputation-35772880>.
- Mvende, Mwova. 2022. "Unsuspecting Kenyan Women Losing Millions in Whatsapp, Facebook Chamas." *Bizna*, 18 October. Retrieved 5 October 2022 from <https://biznakenya.com/facebook-chamas/>.
- Mwangi, J., and E. Kimani. 2015. "Factors Influencing Participation of Men and Women in Informal Finance Groups." *Int Journ Hum Soc Stud*. 3(1): 42–48.
- Mwita, Martin, and Charles Okwemba. 2021. "Regulators Back WhatsApp Pension Plan Targeting Informal Sector." *The Star*, 8 December. Retrieved 5 October 2022 from <https://www.the-star.co.ke/business/kenya/2021-12-08-regulators-back-whatsapp-pension-plan-targeting-informal-sector/>.
- N'Guessan, Marie, Ines Alegre, and Jasmina Berbegal-Mirabent. 2019. "Crowdfunding: A Global Phenomenon Arrives to Sub-Saharan Africa." In *Globalization and Development. Contributions to Management Science*, ed. Nezameddin Faghieh, 285–306. Cham: Springer.
- Njeru, B. 2018. "Communication as Organization: An Exploration of a Constitution of Chamas in Kenya." *Journal of Media Critiques* 4(14): 153–70.
- Nothias, Toussaint. 2020. "Access Granted: Facebook's Free Basics in Africa." *Media, Culture & Society* 42(3): 329–48.
- Nuttall, Sarah, and Achille Mbembe. 2015. "Secrecy's Softwares." *Current Anthropology* 56 (S12): S317–24.
- Nyataya, I. 2016. "Women Self-help Groups Enhancing Women's Development Processes in Kenya." *IJRSA* 2(2): 18–25.
- Ogola, George. 2019. "#Whatwouldmagufulido? Kenya's Digital 'Practices' and 'Individuation' as a (Non)Political Act." *Journal of Eastern African Studies* 13(1): 124–39.

- Omanga, Duncan. 2019. "WhatsApp as 'Digital Publics': The *Nakuru Analysts* and the Evolution of Participation in County Governance in Kenya." *Journal of Eastern African Studies* 13(1): 175–91.
- Pang, Natalie, and Yue Ting Woo. 2020. "What about WhatsApp? A Systematic Review of WhatsApp and Its Role in Civic and Political Engagement." *First Monday* 25(12). <https://doi.org/10.5210/fm.v25i12.10417>.
- Pillay, Vernon. 2022. "Saving, the Truly South African Way." Retrieved 9 February 2023 from <https://www.iol.co.za/business-report/economy/saving-the-truly-south-african-way-a-look-at-stokvels-and-tax-free-savings-accounts-8631d37d-a935-4306-89b9-5224a62da71c>.
- Pijoo, Ivan. 2019. "Don't Fall for the R200 WhatsApp Stokvels Scam, Association Warns." *Times Live*, 9 October. Retrieved 5 October 2022 from <https://www.timeslive.co.za/news/south-africa/2019-10-09-dont-fall-for-the-r200-whatsapp-stokvels-scam-association-warns/>.
- Plaza, Dwaine, and Lauren Plaza. 2019. "Facebook and Whatsapp as Elements in Transnational Care Chains for the Trinidadian Diaspora." *Genealogy* 3(2): 15. <https://doi.org/10.3390/genealogy3020015>.
- Reichel, Jake, Fleming Peck, Mikako Inaba, Bisrat T. Moges, Brahmnoor S. Chawla, and Marshini Chetty. 2020. "I Have Too Much Respect for My Elders': Understanding South African Mobile Users' Perceptions of Privacy and Current Behaviors on Facebook and WhatsApp." SEC '20: Proceedings of the 29th USENIX Conference on Security Symposium, 1949–66.
- Rodima-Taylor, Daivi. 2014. "Passageways of Cooperation: Mutuality in Post-socialist Tanzania." *Africa* 84(4): 553–75.
- . 2022a. "Sending Money Home in Conflict Settings: Revisiting Migrant Remittances." *Georgetown Journal of International Affairs* 23(1): 43–51.
- . 2022b. "Platformizing Ubuntu? FinTech, Inclusion, and Mutual Help in Africa." *Journal of Cultural Economy* 15(4): 416–35.
- Rodima-Taylor, Daivi, and William Grimes. 2019. "International Remittance Rails as Infrastructures: Embeddedness, Innovation and Financial Access in Developing Economies." *Review of International Political Economy* 26(5): 839–62.
- Shipalana, Palesa. 2019. *Digitising Financial Services: A Tool for Financial Inclusion in South Africa?* SAIIA Occasional paper 301.
- Simmel, George. 1906. "The Sociology of Secrecy and of Secret Societies." *American Journal of Sociology* 11(4): 441–98.
- Strange, Susan. 1986. *Casino Capitalism*. Oxford: Blackwell.
- Tapper, James. 2021. "Loan Sharks Target New Victims via Whatsapp and Facebook." *The Guardian*, 9 May. Retrieved 5 October 2022 from <https://www.theguardian.com/money/2021/may/09/loan-sharks-target-new-victims-via-whatsapp-and-facebook>.
- Treré, Emilio. 2020. "The Banality of WhatsApp: On the Everyday Politics of Backstage Activism in Mexico and Spain." *First Monday* 25(12). DOI: <https://doi.org/10.5210/fm.v25i12.10404>.
- Tripp, Aili. 1997. *Changing the Rules: the Politics of Liberalization and the Urban Informal Economy in Tanzania*. Berkeley and Los Angeles CA: University of California Press.
- Tsibolane, Pitso, Biyela Nokwazi, and Jean-Paul W. Van Belle. 2018. *Domestication of ICTs in Community Savings and Credit Associations (Stokvels) in the Western Cape, South Africa*. Conference: Making ICT Research Locally Relevant. South Africa.

- Vidan, Gili, and Vili Lehdonvirta. 2019. "Mine the Gap: Bitcoin and the Maintenance of Trustlessness." *new media & society* 21 (1): 42–59.
- Warner, Michael. 2002. *Publics and Counterpublics*. New York: Zone Books.
- Wagner, Kurt. 2020. "Facebook Sees WhatsApp as Its Future, Antitrust Suit or Not." *Bloomberg*, 9 December. Retrieved 5 October 2022 from <https://www.bloomberg.com/news/features/2020-12-09/facebook-fb-plans-to-turn-messaging-app-whatsapp-into-a-moneymaking-business>.