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The financial inclusion assemblage: Subjects, technics, rationalities

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Abstract

This article introduces financial inclusion as a global assemblage of subjects, technics, and rationalities that aim to develop poor-appropriate financial products and services. Microfinance forms the foundation, but also the boundary of the assemblage, which is premised on the assumption that the 2.7 billion poor people in the world who do not currently have access to formal loan, savings, and insurance products are in need of such offerings. The work of the Institute for Money, Technology and Financial Inclusion at the University of California, Irvine, with its emphasis on ethnographic research into culturally grounded monetary practices and logics, is presented as an alternative to the quantitative, economic, and financial logics that drive the assemblage.

Keywords
ethnographic research, financial inclusion, microfinance, mobile money, monetary practices, poor-appropriate financial services

Participants at the second annual conference of the Institute for Money, Technology and Financial Inclusion (IMTFI) at the University of California (UC) Irvine learned that rural women in south-west Nigeria raise small ruminants as a source of financial security, how Ghana's urban poor manage their money after the country's redenominated currency lost a few zeros, that people in Papua New Guinea celebrate new forms of cargo cults after the disappearance of the cash-generating tourist boat, and how relatives of dead Bangladeshi migrant workers are trying to recover their remittances. All of these papers were presented by academics from the countries under study who had received grants from IMTFI to carry out field research. The presentations, and others about online person-to-person microfinance lending networks, the design of savings products for cooperative coffee farmers in Mexico,

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and the use of quantitative data to understand the exploding mobile phone use in Africa were discussed by representatives from the World Bank, Microsoft Research India, the Grameen Foundation and Intel Labs. The conference concluded with a closed-door session in which Dr Bill Maurer, Professor of Anthropology at the UC Irvine and founding director of IMTFI, brainstormed with the researchers how to create better financial products for people who live on less than $1/day and are excluded from the formal banking sector.

In a recent review article on the anthropology of credit and debt, studies of microfinance were highlighted as a promising venue to illuminate practices of debt, usury, and international financial movements (Peebles, 2010). Such studies also lend themselves to an analysis of 'the range of calculative practices that aim to produce new subjects and spaces for achieving development' (Ilcan and Phillips, 2010: 868). Articulating these two areas, this article introduces financial inclusion as a global assemblage that constitutes materially poor people as fiscal subjects, financial consumers, and monetary innovators. To provide them with poor-appropriate microfinance services, including loans products, savings mechanisms, and insurance policies, a wide variety of institutions, from multilateral development organizations and foundations to corporations and academic research institutes, have begun to regard financial inclusion as a development problem and a market opportunity.

IMTFI is part of this financial inclusion assemblage. Housed at the Department of Anthropology at UC Irvine, it was established in 2008 with a US$1.69 m grant from the Bill and Melinda Gates Foundation's Global Development Program. Part of a network of research institutes at the university, IMTFI operates independently from its sole donor. In its first two years, the institute funded over 50 researchers, mainly from low-income countries, to undertake ethnographic research into how poor people the world over store, transfer, and spend their money. Through this work, IMTFI is contributing to the knowledge that circulates through the financial inclusion assemblage and to the design of poor-appropriate financial services.

This article is based on my experiences as an IMTFI Fellow. In 2009 I, together with Paul Braund with whom I was running the RiOS Institute in Silicon Valley at the time, answered the institute's first call for proposals for 'original research on the use of money of all kinds as a means of saving, storing and transferring value among the world's poorest people' (IMTFI, 2008: 1). Projects with the 'potential for transformative interventions, new thinking and unexplored possibilities' were especially welcome, and our proposal to study the person-to-person financial network of kiva.org, the world's first online microfinance lending platform (Flannery, 2007), and its connections with partner organizations in Mexico and Indonesia, hit the mark. As a fellow I was able to experience the work of the institute first hand and attend the annual conference that brings all funded researchers to UC Irvine to present findings and discuss their applications. I conducted participant-observation at the second annual conference in 2010 and carried out informal interviews with a number of fellows, followed up by more structured interviews with IMTFI's director

and four fellows. This article also draws on IMTFI's extensive documentation as found on its website and in its publications.

Theorizing financial inclusion

In conceptualizing the financial inclusion assemblage, I follow Tania Li's (2007) analysis of community forest management as an assemblage containing a set of practices that encompass things, subjects, and organizations as well as various systems of knowledge, objectives, and regulations. These practices come together to improve the management of natural resources, in particular forests, in the name of sustainability, conservation, and efficiency. Li highlights the agency of situated subjects who connect disparate elements, accommodate sometimes contradictory knowledges, and render social problems amenable to technical solutions.

Similarly, financial inclusion can be considered an assemblage because of 'the consistency with which [its] set of elements... are drawn together, and by the resonance of the label itself' (Li, 2007: 266). Even though financial inclusion emerged more recently around the more established and recognized practice of microfinance, it 'flags an identifiable terrain of action and debate' (Li, 2007: 266). To chart this terrain is the aim of this article, which will introduce the financial inclusion assemblage's main subjects, technics, and rationalities (cf. Inda, 2005). The work of IMTFI will serve throughout the article as a lens that illuminates the assemblage from its margins.

Financial inclusion is a global assemblage. Rather than referencing (only) a geographic condition, global here refers to the 'distinctive capacity for decontextualization and recontextualization, abstractability and movement, across diverse social and cultural situations and spheres of life' (Collier and Ong, 2005: 11). This movement across time, space, and contexts is determined by a number of factors, among them 'technical infrastructures, administrative apparatuses, or value regimes' (Collier and Ong, 2005: 11). In addition, the financial inclusion assemblage is shaped by rationalities of calculation, politics of knowledge, and practices of implementation. Where global assemblages become territorialized in particular locales, they 'define new material, collective and discursive relationships' (Collier and Ong, 2005: 4), not only among materially poor people but also between them and the organizations serving them.

The financial inclusion assemblage is premised on the assumption that the 2.7 billion poor people in the world who do not currently have access to formal financial services are in need of such services (World Bank, 2010). Defined by an absence that is translated into a need, financial inclusion calls for scalable models of poor-appropriate financial technologies to serve these vast numbers, which can only be achieved by tapping mainstream financial markets. This results in a tension at the heart of the assemblage, between the 'financialization of development' that constitutes poverty alleviation as the new frontier of capitalism, and the 'democratization of capital' that promises access to financial services as one of the eradicators of global poverty (Roy, 2010: 47).

This tension plays out most dramatically in the area of microfinance. In 2006, Mohammad Yunus received the Nobel Peace Prize for his groundbreaking work

with the Grameen Bank, which was one of the first to provide microloans to mainly poor women who did not have collateral to qualify for commercial loans. Microfinance's global expansion from its humble beginnings in the 1970s to one of the foremost global poverty alleviation strategies implemented in practically all corners of the world constitutes it as the foundation of the financial inclusion assemblage. Correspondingly, microfinance institutions (MFIs) are its most visible actors, at the same time as some of their practices also mark the assemblage's boundaries, by exposing the tensions generated by its diverging objectives. However, MFIs are only one among a number of subjects populating the assemblage. The diversity of these subjects and their motivations will be examined in the next part of the article.

Subjects

At the moment, about 150 million materially poor people are being served by MFIs of various shapes and sizes, which have recently been joined by an increasingly diverse group of other practitioners (Karnani, 2011). Ranging from industry players such as banks, technology companies, and social enterprises to multilateral development organizations as well as foundations and the various institutions they fund, these participants are motivated by different objectives. What unites them is the will to address the financial needs of materially poor people through large-scale, market-driven interventions. This places an implicit social mission at the center of the assemblage, which at times collides with the profit motive that drives the financial market emerging around financial inclusion. According to Consultative Group for the Assistance of the Poor (CGAP), a microfinance think tank housed at the World Bank, 'the worldwide number of poor people that have access to credit is nowhere near the market potential'.[1] Hence the clarion call to greatly expand financial services for the poor, mainly through access to commercial capital.

The poor and their financial services

At the heart of the financial inclusion assemblage are the 2.8 billion materially poor people the world over who are constituted as in need of financial services (World Bank, 2010). Put differently, 'the essential need for the most deprived communities is supposedly the need for credit' (Servet, 2010: 135). This need is thought to result from the absence of access to such services; it is a product of the financial inclusion assemblage and a precondition of its existence. As the subprime mortgage crisis, to which microloans are sometimes compared (Roy, 2010), has shown in regards to the extension of credit to people who could ill afford it, 'new needs are created to promote the need for new debts' (Peebles, 2010: 227, citing Strathern, 1992). Similarly, the need for financial inclusion is carefully produced and operationalized through a range of organizational practices.

Among these are studies that aim to make the financial practices of materially poor people knowable. While anthropologists have long been interested in the

ethnographic practices associated with currencies of various sorts (Akin and Robbins, 1999; Guyer, 2004; Munn, 1986; Parry and Bloch, 1989), financial inclusion practitioners draw on such books as *The Poor and their Money* (Rutherford, 2001) and *Portfolios of the Poor* (Collins et al., 2009), which limit money to state-issued tender. IMTFI's research aims to bridge the gap between these literatures by repositioning materially poor people as 'financial innovators' who are linking their 'ancient monetary cultures and practices' to new mobile communication technologies such as cell phones (IMTFI, 2010: 1).

Financial inclusion is legitimized by discourses of raising productivity, stabilizing livelihoods, and protecting against emergencies (Gates Foundation, 2010). Arguing for the benefits of financial improvement, these discourses attempt to align the assemblage with the needs, interests, and desires of its target population (Li, 2007). They also constitute the poor as prudent fiscal subjects, in order to govern them 'through the cultivation of a different kind of relationship to the future' (Phillips and Ilcan, 2007: 108). In this regard, the creation of poor-appropriate savings and insurance products is presented as a way to help their poor beneficiaries manage the inherent uncertainty and vulnerability of their lives.

Not all materially poor people are equally deserving of financial inclusion however, as membership in the assemblage is stratified according to economic activity. While the Grameen Bank continues to insist, in line with its general poverty alleviation mission, on extending credit to the ultra-poor, more commercially oriented MFIs see those as 'unbankable' and in need of grants rather than debt (Roy, 2010: 54).[2] These MFIs are limiting credit to the 'economically active and entrepreneurial poor', who are thought to have more opportunities to convert their loans into economic enterprises (Roy, 2010: 99). Such redlining operates mainly in the dispersion of micro-credit and thereby reveals the 'boundary-building capacity' of credit and debt (Peebles, 2010: 227; see also Elyachar, 2005). It also nuances the rhetoric of inclusion, which is not all-encompassing.

The public face of microfinance is the Third World woman entrepreneur, who is empowered by the small loans given to her to start and grow her own business and thus enterprise herself and her family out of poverty (Rankin, 2001; Roy, 2010). Important critiques have been made of this simplification, focusing on the patriarchal control exerted over female borrowers (Rahman, 1999), the gendered notions of honour and shame deployed to exert repayment (Brett, 2006; Karim, 2008), and the use of community structures as mechanism of social control (Lazar, 2004; Roy, 2010). Especially in light of claims of female empowerment through microfinance, the latter is most productively conceptualized as a venue in which power and authority are negotiated (Kabeer, 2000; Moodie, 2008; Shakya and Rankin, 2008).

Mutations of MFIs

The financial marketplace that is catering to potential and actual microfinance clients is becoming increasingly crowded. It has until now been dominated by MFIs, which are concentrated in Asia, Africa, Eastern Europe and Latin

America. Most estimates enumerate a core group of 400–500 MFIs, with another 2000–3000 smaller ones operating on the periphery (Cull et al., 2009; Rhyne and Otero, 2007). These institutions range from the developmentally oriented non-profit organizations that have been leading the way in Bangladesh, to public sector banks that dominate the microfinance market in Indonesia, to specialized microfinance banks rising to prominence in Latin America (Rhyne and Otero, 2007). The latter result from non-profit organizations upscaling to become financial institutions or commercial banks downscaling to reach poorer customers (Drake and Rhyne, 2002). It is these specialized microfinance institutions that are forging the path towards the commercialization of microfinance, which has also seen the entrance of local, regional, and international banks, as well as consumer lenders, into the arena. This commercialization, which is most advanced in Latin America, is driven by the stated need to access the commercial and private capital that will allow microfinance to scale to the level where it can fill the need for more comprehensive financial inclusion (Drake and Rhyne, 2002).

Commercialization has brought with it changes in ownership structures, regulation, and supervision, as MFIs of all types are being disciplined by best practices, financial indicators, and the drive for transparency (Roy, 2010). Most importantly, commercialization has led to debates about mission drift from poverty alleviation to profit maximization (Armendariz and Szafarz, 2010; Woller, 2002). Such discussions reveal the boundaries of the financial inclusion assemblage.

In April 2007, Banco Compartamos, a Mexican MFI cum bank, went public and raised over US$1 billion (Cull et al., 2009). Having begun in 1990 as a non-profit organization lending to the poor in Oaxaca and Chiapas, ten years later it had 60,000 clients. To extend its outreach, Compartamos became a for-profit bank and seven years later served over 800,000 clients (Bishop and Green, 2008). This growth is celebrated by commercialization advocates as proof of the scale microfinance can achieve when it plays by the rules of the market. It is thus the need for capital to serve all of the deserving poor that drives the mutations of the financial inclusion assemblage.

Critics of the initial public offering (IPO) object to Compartamos' explicit exclusion of the poorest Mexicans; the company's CEOs argue that microfinance is only for the working poor (Danel and Labarthe, 2008). More significantly, the bank's excessive interest rates – 94 percent per annum at the time of the IPO – and the link between these rates and the bank's profit margins, which contributed to the success of the IPO and the personal enrichment of its founders, are cited as proof that microfinance has lost its way (Cull et al., 2009). Yunus reacted to the news of the IPO with shock, fearing a 'public backlash against microfinance' (quoted in Cull et al., 2009: 168). To him, Compartamos revealed itself as one of the greedy money lenders he had set out to abolish. Where the profit motive is seen to be taking precedence over the social mission of financially including the poor – be this towards the end of poverty alleviation or as an end in itself – the borders of the financial inclusion assemblage are revealed. This boundary is the line separating financial improvement of the poor from profit for outside investors.

Companies with a mission

Promises of profits are also attracting a host of corporations to the financial inclusion assemblage. Large multinational financial and technology companies are looking for the fortune at the bottom of the pyramid, following C.K. Prahalad's seminal work on how corporations can eradicate poverty through profit (Karnani, 2011; Prahalad, 2005; Schwittay, 2011). Foremost among financial institutions are multinational banks, such as Citigroup, JP Morgan, Barclays, and Deutsche Bank, which are expanding their portfolios into the microfinance niche market. Because microfinance was one of the few growth areas during the global financial crisis, it has been considered a relatively low-risk investment venue (Roy, 2010).[3] Banks often partner with non-governmental organization (NGO) MFIs to 'outsource' the financial disciplining of the poor, in order to escape the crisis of legitimacy that would ensue if 'a Wall Street bank goes after poor, rural Bolivian women and tries to press loan repayment' (Wall Street banker, quoted in Roy, 2010: 55).

Constructing microfinance as an asset class has also led to the emergence of new types of institution, such as Microfinance Investment Funds, which specialize in directing towards MFIs private capital, such as pension and mutual funds, from investors who want financial and social returns on their money (Matthaeus-Maier and von Pischke, 2006). Investments by such institutions tripled between 2004 and 2006, with most of the funds being of German, US, and Dutch origin (Servet, 2010).

In addition to financial customers, materially poor people are also constituted as technology consumers. As the participation of Intel and Microsoft at the IMTFI conference shows, technology companies are hoping to capitalize on the growth of mobile money, that is, the coming together of mobile communication and financial technologies. Indeed, the very term 'mobile money', which has become a catch-all phrase for this articulation, first originated from the Mobile Money Summit hosted in 2008 by the GSM Association, an industry group representing mobile network operators (IMTFI, 2010). Based on the phenomenal uptake of M-Pesa, an SMS-based money transfer system launched in Kenya in 2007 by a Vodafone subsidiary, mobile technologies are seen as key to making financial inclusion a reality on a large scale. In an environment where 'loyalty is as easy as swapping your SIM card', as one IMTFI conference participant put it, technology companies are adding new functions to mobile phones, in order to keep customers and increase their revenue streams (IMTFI, 2010).

Multinational companies in the financial inclusion assemblage are joined by a number of smaller, so-called social enterprises, which are seeking to alleviate poverty through large-scale social transformations using market-based principles (Martin and Osberg, 2007). A foremost example is kiva.org, a person-to-person microlending platform that allows anyone with a credit card to lend US$25 or more to a 'Kiva entrepreneur' in any one of over fifty countries (Flannery, 2007). Kiva sees poverty alleviation as its central mission, towards which it harnesses internet technology as well as the desire of micro-donors to be invested in others less fortunate financially and emotionally (Black, 2009).

Among the corporate subjects of the financial inclusion assemblage, the profit motive, while primary, is always decentered by the social mission of financial inclusion. Companies therefore often frame their participation as Corporate Social Responsibility or Corporate Citizenship efforts (Schwittay, 2009). To implement these efforts, corporations frequently partner with multilateral development organizations, which concentrate their financial inclusion work in the microfinance area.

Development funders old and new

The World Bank claims to be the largest contributor to microfinance (Littlefield, 2006; cited in Roy, 2010). It also houses CGAP,[4] a microfinance think tank established in 1995 as a consortium of 33 funding bodies, among them development organizations, foundations, and international financial institutions. CGAP espouses the financially minimalist, commercially oriented, and profit-driven model of microfinance exemplified by Banco Compartamos. In this vein, it has developed a set of 'best practices' prescribing the abolition of interest rate ceilings and donor subsidies in the name of MFIs' financial self-sustainability and transparency (Roy, 2010). These prescriptions take on an authoritative character because of their association with the World Bank, remade as 'the source for cutting-edge knowledge on development' (Goldman, 2001: 195).

The United Nations (UN) declared 2005 the International Year of Microcredit and runs the UN Capital Development Fund to support microfinance expansion in Least Developed Countries. Here, microfinance is often used as a government strategy to reach the Millennium Development Goals (Servet, 2010).[5] In 2009, the International Monetary Fund launched its Access to Finance project, which is collecting annual geographic and demographic data on 'basic consumer financial services' for use by policy makers and researchers.[6] National aid agencies also support microfinance; USAID practically established the microfinance industry in Egypt (Roy, 2010), while DfID is partnering with CGAP to boost mobile banking for the poor.

More recent entrants into the development arena, collectively referred to as 'philanthrocapitalists', are also participating in the financial inclusion assemblage (Bishop and Green, 2008). Compartamos' rise was supported by Alfredo Harp Helu, the owner of Mexican retail bank Banamex, one of Latin America's leading philanthropists, and the mentor of Compartamos' CEOs (Bishop and Green, 2008). E-Bay co-founder Pierre Omidyar is a staunch believer in for-profit microfinance and gave US$100 m to his alma mater Tufts University to pursue this market-driven route. The Bill and Melinda Gates Foundation launched its Financial Services for the Poor Initiative in 2006 and, since then, has invested over US$500 m in developing 'next-generation' savings products, delivery channels and policy frameworks (Gates Foundation, 2010). Besides more conventional grant recipients such as CGAP and Opportunity International, the foundation has funded a number of universities to undertake academic research that would support the expansion of the financial inclusion assemblage.

Financially included universities

In 2006, the Financial Access Initiative, a research consortium housed at New York University, which is working with Yale University, Harvard University and Innovations for Poverty Action, received US$5 m from the Gates Foundation to assess existing research about demand for financial services, carry out field research to study their impact through randomized control trials,[7] and offer policy recommendations. Another grant worth US$15 m was awarded to the University of Chicago Consortium on Financial Systems and Poverty, which aims to support research on savings, regulatory issues, and mobile banking.

In comparison to these sums, which aid the production of orthodox quantitative, economic, and financial data, the US$1.69 m awarded to IMTFI reveal the unconventional nature of the ethnographic knowledge it generates. IMTFI's objective is to 'create a community of practice and inquiry' into 'people's everyday innovations with money and mobile technology' (IMTFI, 2010: 1). Specifically, Maurer sees the institute filling the gap between the growth in new money and payment systems and rigorous academic research about them. While contributing to this emerging academic literature, IMTFI's research also feeds into the design of poor-appropriate financial products and services.

Its fellows are trained as anthropologists, economists, business scholars, and designers, and to date 70 percent of them hail from low-income countries, mostly from Africa, South Asia, and Latin America. Their diversity contributes to IMTFI's unique character of multiculturalism, transdisciplinarity, interinstitutionality, and heteroglossia. At the conference, the language of academia (circuits of exchange, intersubjective closeness), markets (emerging markets, opportunity area), and design (prototyping, brainstorming) intermingled, as did culturally specific manners of speaking and presentation styles. Maurer acts as the prime translator between these different constituencies; he exemplifies the kind of anthropologist who occupies a key role in the financial inclusion assemblage: as interlocutor, critique, and 'expert' on what people do with their money.[8] He also contributes his expertise in the anthropology of finance, law, and property and, more recently, the design of mobile financial services.

While not being native ethnographers because of their socio-economic differences from the people they study, most IMTFI researchers are from the countries where they are conducting their research and therefore work with a good understanding of local contexts, have more sustained and longer-term commitments to their research, and produce a culturally 'deep knowledge' that contributes to IMTFI's uniqueness (Maurer, 2010: 7). They often partake personally in the local innovations they study; at the conference, a group of researchers working in Haiti reported that while they were in the field, the first Western Union office opened, cell phone towers were erected, and Digicel emerged as a major cell phone carrier.[9]

In addition, IMTFI acts as a meeting place not only for academics and development practitioners, but also for people in the mobile money industry who come here to have 'honest discussion and debate unencumbered by the strictures of non-disclosure

and intellectual property' (Maurer, 2010: 8). The institute has an external board of advisers constituted mainly by industry practitioners; one of them called the global research network created by IMTFI 'radical' because it bridges so many boundaries (Mainwaring, 2010: 43). In the spirit of openness, IMTFI makes its findings, such as the design principles it issued at the end of its first year, available for free. While this is following the tradition of the public university where the institute is housed, it is a highly unusual practice for corporations. The articulation of the institute's free-access model, with its commitment to using its findings for innovations in the financial inclusion assemblage, and IMTFI's constitution of the poor themselves as monetary and technological innovators (IMTFI, 2010), raises the possibility of it contributing to a rethinking of intellectual property practices around innovations in low-income countries (cf. Hayden, 2010).

IMTFI's design principles focus on the creation of culturally aware savings products, which are but one of the technics of the financial inclusion assemblage.

Technics

Technics are the domain of 'practical mechanisms, devices and apparatuses through which the authorities of various types seek to shape and instrumentalize human conduct' (Inda, 2005: 2). They result from ideas made actionable and thereby operationalize the rationalities of the assemblage. Most important among the technics of the financial inclusion assemblage is money, broadly defined. Others include poor-appropriate financial products and services, risk management technologies, and the digital devices that are driving the spread of electronic and mobile money.

Multiple monies

At the opening dinner of the IMTFI conference, Maurer invited us to go on a mental journey of all the financial transactions we had conducted the previous day. His own list encompassed seven transactions in an equal number of media, ranging from cash to credit cards to hotel room charges to text messages. It is through such thought experiments that Maurer encourages IMTFI's fellows and guests to start thinking about money beyond state-issued currencies. It is a playful decentering of what is regarded as money in the financial inclusion assemblage, to become aware of the wider varieties of things and their associated practices that are constituted as money.

The diversity of money, as 'a symbolic referent, a social system, and a material practice' (Maurer, 2006: 17, quoting Gilbert, 2005), manifests along two axes: the different things that count as money (what IMTFI calls 'monetary ecologies') and the different things people do with it ('monetary repertoires').[10] At its core, money functions as a means of exchange, a method of payment, and a store or standard of value (Maurer, 2006). It can also index social relationships and serve as a prestige item or spiritual force. However, 'existing frameworks flatten the diverse monetary ecologies and repertoires in which people generally operate, and the multiple systems of calculation, scales and standards of value, temporal cycles, and forms of literacy and

numeracy with which they do' (Maurer, 2006: 7). This flattening is reflected in the ways in which many anthropologists have focused on the immoralizing and desocializing aspects of the introduction of modern money into non-Western societies (Maurer, 2006). Conversely, ethnographic descriptions of monetary practices, such as produced by IMTFI researchers, can also counter this flattening (Akin and Robbins, 1999; Truitt and Senders, 2007).

Importantly, money is not just state-issued currency. Livestock and other physical assets are often currencies surrounded by moral boundaries or sanctions of various kinds (Akin and Robbins, 1999; Comaroff and Comaroff, 1990). While such objects are usually relegated to the sidelines of the financial inclusion assemblage, as for example in the financial diary project that is part of its foundational knowledge (Collins et al., 2009), in IMTFI's research they take center stage. Here they are joined by new forms of electronic money, or e-money, resulting from financial inclusion practitioners' increasing deployment of mobile digital technologies. A central task of the financial inclusion assemblage is to assist materially poor people in accessing and managing these diverse currencies.

Poor-appropriate financial services

One of IMTFI's recommendations is to look towards the 'alternative infrastructures' that materially poor people have created by tapping into electricity lines or water and oil pipes, as a source of inspiration for poor-appropriate financial technics (IMTFI, 2010: 13). Given the original focus of microfinance on loans,[11] there has been much experimentation with loan products, especially as the competition among MFIs has increased. While initially group loans of standard size and inflexible repayment obligations were the norm, these conditions are increasingly seen as imposing burdens on materially poor people that disadvantage them vis-a-vis more affluent borrowers (Wilson, 2007). This had led to a shift to more flexible, individual loans that combine convenience with higher interest rates.

Loans are joined by savings and insurance products, which are regarded as helping their owners escape the 'tyranny of emergency' (Appadurai, 2001: 30) by enabling them to draw on lump sums of money. There is a growing realization, however, that simply getting the poor to open savings accounts is not enough, as they might never be used. While anthropologists have long documented the ethnographic richness of savings practices (Caldwell, 2004; Gudeman and Rivera, 1990; Mayer, 2001; Shipton, 1995), financial inclusion practitioners look, once again, towards mobile technologies to convert value transfer into value storage. This raises interesting questions about the ways in which e-money can be saved. Incidentally, it was the realization by staffers at the Gates Foundation that, because of the emergence of e-money, they would have to rethink the nature of money that brought them to Maurer in the first place (personal conversation with Bill Maurer, 2010).

In line with the Gates Foundation's focus on savings, IMTFI issued a number of recommendations for the design of savings schemes that take the social, cultural, and religious complexities of materially poor people's lives into account (IMTFI, 2010).

These schemes would allow them to fulfill their social obligations while accumulating savings; they acknowledge the importance of social rank as a safety net by maintaining rather than trying to level it, and they include convertibility devices that take materially poor people's unique calculative logics into account. Integrating financial products into their owners' lives is also a way to reduce risk for the organizations serving them.

Managing risk

Most important among the risk management technics of poor-appropriate financial service providers, who themselves use the language of 'credit technologies,' has been the use of joint liability lending groups, where loans are made to a group of lenders who cross-guarantee repayments (Lazar, 2004). While joint liability is celebrated by microfinance practitioners as capitalizing on the trust and social capital that exists among the poor (Casson and Della Guista, 2004; Sriram, 2005; Van Bastelaer and Leathers, 2006) and as building solidarity among poor women (Young Larance, 2001), it has been exposed by feminist scholars as also leading to exclusion, surveillance, and control of group members through peer pressure and social sanctions (Brett, 2006; Karim, 2008; Rankin, 2002; Rozario, 2002). Most importantly, joint liability ensures the high repayment rates for which microfinance has become so famous, which is also achieved by threats of defaulters not being able to access new loans.

As commercialization brings with it a move away from group towards individual loans, more mainstream financial tools such as credit bureaus and credit scoring are also starting to be used (Campion and Valenzuela, 2002; Schreiner, 2009). However, being mindful of the particular circumstances under which many poor lenders live, critics argue that such technologies will not protect them but rather present 'an attempt to shift attention away from people and focus instead on large systems and procedures' (Freytag, 2009: 234). This echoes not only criticisms of similar shifts in retail banking (Leyshon and Thrift, 1999), but also of microfinance's commercialization in general.

Financial institutions, and especially smaller MFIs, are themselves increasingly coming under scrutiny as calls for financial sustainability and transparency become louder. Benchmarks such as Portfolio at Risk, which measures the outstanding balance of loans past due, have become dominant indicators of risk, in spite of being 'borrowed from the very banking industry microfinance was supposed to challenge' (Roy, 2010: 31). There has also been much recent concern with assessing the social impact of financial services, which is acknowledged to be much more difficult than measuring its financial counterpart.

Going mobile

New digital technologies are an ever more present part of the financial inclusion assemblage. Since the success of M-Pesa, especially mobile phones, which are seen as being universally accessible, are regarded as crucial for bringing about true financial

inclusion. The internet is harnessed by social enterprises such as kiva.org, which capitalize not only on the technology's ability to transfer money but also to connect people and create shared experiences (Black, 2009; Flannery, 2007). These technologies do not substitute for but rather complement existing financial practices, thereby adding to the complexity of the poor's payment ecologies (IMTFI, 2010). As shown above, this technological turn brings industry players into the assemblage and complicates its social mission.

It also links the discourse of financial inclusion to the one of technological inclusion that posits materially poor people's access to digital technologies as central to poverty alleviation.[12] Technological inclusion has given rise to the so-called ICTD (digital information and communication technology) literature, and IMTFI attempts to match the extensive research on poor people's mobile phone use with similar attention to their everyday handling of money. More generally, the debates in the ICTD literature around power, control, and the fetishization of technologies of all kinds can be a guidepost for students of financial inclusion (Schwittay, 2008). Such attention to the political aspects of the financial inclusion assemblage is one of the intersection points of technics and rationalities.

Rationalities

Rationalities are the 'intellectual machineries that render reality thinkable in such a manner as to make it calculable and governable' (Inda, 2005: 7). At the center of the financial inclusion assemblage calculative practices establish commensurabilities, equivalences, and abstractions (Maurer, 2006; Power, 2004). Indeed, calculative practices could be regarded as constitutive of the assemblage, insofar as they link its subjects, technics, and rationalities (Miller, 2008). They also have to be situated within a broader politics of knowledge. New regulatory regimes are coming into existence in response to the rise of e-money, and a rationality of inclusion frames the entire assemblage.

Modes of calculation

IMTFI's research to date has shown that materially poor people employ elaborate calculative rationalities, including sliding scales, different numerologies, and various value standards (IMTFI, 2010). Studying these diverse modes of calculation is important 'to understanding how the poor conceptualize their economic well-being and how systems might be devised to assist them in keeping hold of more of their money' (IMTFI, 2010: 23). These systems translate understanding into practices that endow the poor with sufficient foresight to manage the uncertainties of their lives (Phillips and Ilcan, 2007). The concerted efforts assembled towards this end, which include financial literacy classes, borrower group meetings, and numeracy lessons, are part of the assemblage's rationalities that aim to inculcate poor fiscal subjects with reasons and habits that will enable them to make appropriate financial decisions.

The calculative practices of poor-appropriate financial service providers link up with the risk management technologies discussed above. Being held to new forms of financial transparency and control, organizations have to generate predominantly quantitative data about themselves to make oversight, benchmarking, and, where necessary, disciplining possible (Roy, 2010). As assemblages authorize certain knowledges over others (Li, 2007), the politics of knowledge production and legitimization of the financial inclusion assemblage mirror broader development knowledge politics and larger knowledge inequalities between the global North and South (Roy, 2010). CGAP's performance measures, best practices, and benchmark studies are seen as the gold standard, also because of its association with the World Bank. This has resulted in a shift in development reason, whereby 'financial norms [have] come to supersede social norms' (Roy, 2010: 47). The latter still guides the work of the original microfinance institutions in Bangladesh, whose leaders recognize the 'knowledge asymmetry' that has resulted from the ascent of CGAP (Roy, 2010: 124). They complain that their own knowledge now has to be validated by CGAP, and are seeking alternative ways of knowledge authorization through setting up their own knowledge institutions and foregrounding practice (Roy, 2010).

IMTFI meanwhile is focusing on the production of a different, ethnographic and qualitative, kind of knowledge. However, 'what counts as professional expertise in development is not primarily founded on in-depth geographic knowledge about other places and people, but is located in technical "know-how"' (Kothari, 2005: 430). This, together with the increasing bureaucratization of development, has resulted in donors' growing demand for 'management information', which in turn reinforces the use of quantitative indicators to measure impact and produce accountability (Townsend et al., 2002: 833).

While for some organizations the modes of calculation to which this technical turn gives rise are part and parcel of their modus operandi, for many, especially smaller MFIs, they call for new ways of managing and making visible their data, reporting on their activities, and dealing with their clients. This often results in MFIs refocusing their work or restructuring their operations, especially among those NGOs that provide social services in addition to microfinance. Regulatory changes can further a separation between the two.

Regulating the assemblage

In general, national regulatory regimes determine the shape of financial inclusion services in a particular country (Servet, 2010). Some countries have passed laws forcing NGOs to separate their financial from their social activities. This has led to the creation of new legal entities, such as the Mexican SOFOMs (*Sociedad Financiera de Objecto Multiple* – Multiple Purpose Finance Company), which are unregulated corporate financial intermediaries that can offer financing but cannot collect savings. The latter is still reserved in most countries for regulated financial institutions. In many cases, the newly created financial entities are run as for-profit enterprises, while the social service parts of the NGOs remain nonprofits.

Growing calls for the regulation of the microfinance sector focus on demands for more transparency, lower interest rates, and less abusive loan recovery practices (Karnani, 2011). These changes are mandated by the special vulnerability of poor lenders, who often lack the literacy and numeracy skills needed to understand microfinancial transactions. While the microfinance industry advocates self-regulation through voluntary Codes of Conduct, there is a growing sense that 'government regulation is the best way to protect microfinance clients' (Karnani, 2011: 53). Critics frequently refer to the existence, and expansion, of financial consumer protection laws in places like the US, and in countries such as Bangladesh, India, and South Africa, dedicated microfinance regulatory bodies have been created.

New regulatory requirements also stem from the special character of e-money. A keynote speaker at the IMTFI conference argued that e-money forces open the classic Aristotelian definition of money as a unit of account and store of value and raises a host of questions: Is e-money legal tender? What is the legal characterization of pre-paid airtime? When cash gets converted into something that belongs to mobile operators, how can consumers be protected and money laundering be prevented? Many of these questions still have no good answers, but the growing use of mobile money services in low-income countries puts their discussion firmly on the table of policy makers. While these discussions are currently confined to national contexts, the cyberspatial properties of e-money call into question these very nation-state jurisdictions (Maurer, 2004).

The logic of (financial) inclusion

The financial inclusion assemblage pivots on the concept of inclusion with its powerful connotations. Its empowering, beneficial, and harmonious sheen bestows inclusion with persuasion and allure. Just like 'community' and 'participation', 'inclusion' is rarely used in a negative sense, which makes it a dangerous term (Kothari, 2001; Williams, 1976). However, financial inclusion is not all-encompassing, excluding those too poor or too economically inactive to be seen as deserving of credit. On the other hand, by forcing people to participate, inclusion can also be an exercise of control and power (Kothari, 2001). In the increasingly competitive environment of microfinance, pressure on loan officers to recruit new clients can and does result in predatory practices.

As Maurer reminded participants of the IMTFI conference, in environments of financial and political instability, materially poor people might have good reasons to be ambivalent about state-issued currencies and the formal banking sector. Their experiences with mainstream banks have often not been positive; from hour-long waits to discriminatory treatment to their alienating environment. Drawing historical parallels to the use of money for purposes of 'training, disciplining and oftentimes controlling the poor in the name of modernity', Maurer is calling on contemporary researchers of the poor and their money to acknowledge that legacy (IMTFI, 2010: 14).

In a similar vein, the rhetoric of financial inclusion and its emphasis on technical solutions, such as better savings products and delivery channels, mask the political

sources of global poverty and thereby also sideline discussions about necessary structural changes. This is part of the anti-political character of assemblages, where 'political struggles over rights... become submerged by technical prescriptions' (Li, 2007: 272). By turning questions that are at their heart about social justice and wealth redistribution into problems of mobile phone saving devices, for example, political action is foreclosed.

Conclusion

In November 2010, microfinance borrowers in the Indian state of Andhra Pradesh stopped paying their loans en masse, supported by local politicians critical of the profits earned by for-profit MFIs. The *New York Times* asserted that 'India's rapidly growing private microfinance industry is facing imminent collapse' and that mainstream Indian banks, which have invested about US$4 billion in the country's microfinance industry, fear the emergence of an 'Indian version of US subprime-mortgage debacle' (Polgreen and Bajaj, 2010).[13] Andhra Pradesh's legislators have passed stringent laws about how money can be lent and collected, but that is not placating lenders' anger, which is also fuelled by the IPO of SKS, India's largest for-profit lender, in August 2010. Following in the footsteps of Compartamos, SKS's revenues and profits have grown at an annual rate of 100 percent, and its founder, Vikram Akula, became personally wealthy in the deal. Still, he argues that 'microfinance has made a tremendous contribution to inclusive growth. Destroying it would result in nothing less than financial apartheid' (quoted in Polgreen and Bajaj, 2010).

This is not the first time that the poor have stopped making payments, as Bolivia's debtor revolt in 1999 showed (Rhyne, 2002). Because risk assessments in microfinance are based not on poor people's productivity gains, but on the assumption that 'the poor always pay back' (Dowla and Barua, 2006), once they stop doing so, the edifice of the financial inclusion assemblage begins to look shaky indeed (Roy, 2010). And because stellar repayment rates have made microfinance the darling of the financial industry, they need to be enforced by any means necessary. The use of coercive measures of varying types and degrees has been recorded by journalists and feminist scholars alike, and has led to borrower suicides in India (Karnani, 2011; Roy, 2010).

On the other hand, 'recourse to coercion lays bare contradictions in the assemblage' (Li, 2007: 278). It is not only undesirable for the organizations providing financial services for the poor, and their donors, but, by implying the possibility that materially poor people might not want these services, it threatens the very foundation of the financial inclusion assemblage, built as it is on the assumed need of poor people for more loans, savings, and insurance products. On the other hand, money, in its varied forms, has become a central part of the lives of materially poor people the world over and the practices to which this centrality gives rise need to inform any attempts to support them in their livelihood struggles. It is here where 'IMTFI replicates the contingent explorations of poor people worldwide

who are continuously repurposing money and new technologies as they work to make a life for themselves' (IMTFI, 2010: 25).

These explorations are shaped by diverse modes of calculation. It should come as no surprise that such modes are at the heart of the financial inclusion assemblage, which after all concerns itself with matters of financial reckonings. In addition, calculative rationalities, which are increasingly assumed to be universal, 'have become constitutive features of modern life' (Rudnyckyj, 2010: 261). They have also become central to the development endeavor at large, as the Millennium Development Goals, in their involvement of 'an array of calculative practices for governing at a distance', show (Ilcan and Phillips, 2010: 850). From this centrality calculative practices shape the conduct of new, in this case financially prudent, development subjects. These not only include the materially poor people the world over thought to be in need of poor-appropriate financial services, but also the organizations serving them, which are themselves expected to be efficient and economical calculators. It is this convergence that makes the financial inclusion assemblage a critical point for the study of new subjects, technics, and rationalities of human development.

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Notes

1. See: http://www.cgap.org/p/site/c/template.rc/1.11.1792/.
2. Servet argues that the very use of the term 'financial inclusion' 'marks a further retreat from the original goal of fighting poverty' (2010: 132).
3. However, just as in the recent global financial crisis based on subprime mortgages, 'speculative arbitrage' also forms the foundation of microfinance, its valuations based in 'assessment of capacity to enact repayment' (Roy, 2010: 213).
4. CGAP was originally called Consultative Group to Assist the Poorest and Yunus served on its first advisory board (Roy, 2010).
5. It is important to point out that microfinance services are also increasing in developed countries, where they aim at employment creation and thereby often undermine traditional wage labour and social welfare systems (Servet, 2010).
6. See: http://www.microfinancefocus.com/news/2009/10/08/princess-maxima-launches-imfs-access-to-finance-project.
7. Maurer points to the parallels between randomized control trials and the view of the poor being in need of treatment to achieve their savings goals (IMTFI, 2010).

8. This description of himself is taking from his talk at the Stanford Humanities Institute (http://www.imtfi.uci.edu/imtfi_stanford_humanities_event).
9. This project received extra funding from the Gates Foundation as it was able to piggyback onto the Foundation's Haiti mobile money initiative.
10. The term 'monetary ecologies' is based loosely on Gibson-Graham's work, while 'monetary repertoires' is borrowed from Guyer (2004) (personal conversation with Maurer, 2010).
11. The semantics of microfinance versus microcredit are important; that the UN called 2005 the International Year of Microcredit was a major success for Yunus (Roy, 2010).
12. The provision of ICTD is anchored in Millennium Development Goal number 8.
13. Ironically, after having survived the global financial crisis relatively unscathed, Indian banks now could become entangled in financial losses in the microfinance area, which was seen as relatively secure during the crisis (Roy, 2010).

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