

# UC Irvine

## UC Irvine Previously Published Works

### Title

Data-Mining for Development? Poverty, Payment, and Platform

### Permalink

<https://escholarship.org/uc/item/66w4x8n8>

### ISBN

978-0-8203-4843-8

### Author

Maurer, Bill

### Publication Date

2015

Peer reviewed

**GEOGRAPHIES OF JUSTICE AND SOCIAL TRANSFORMATION**

**SERIES EDITORS**

Deborah Cowen, University of Toronto  
Nik Heynen, University of Georgia  
Melissa W. Wright, Pennsylvania State University

**ADVISORY BOARD**

Mathew Coleman, Ohio State University  
Sapana Doshi, University of Arizona  
Zeynep Gambetti, Boğaziçi University  
Geoff Mann, Simon Fraser University  
James McCarthy, Clark University  
Beverly Mullings, Queen's University  
Harvey Neo, National University of Singapore  
Geraldine Pratt, University of British Columbia  
Ananya Roy, University of California, Berkeley  
Michael Watts, University of California, Berkeley  
Ruth Wilson Gilmore, CUNY Graduate Center  
Jamie Winders, Syracuse University  
Brenda S. A. Yeoh, National University of Singapore

# Territories of Poverty

RETHINKING NORTH AND SOUTH

EDITED BY

**ANANYA ROY**

**EMMA SHAW CRANE**

THE UNIVERSITY OF GEORGIA PRESS

*Athens and London*

## Data-Mining for Development? Poverty, Payment, and Platform

BILL MAURER

As Ananya Roy argues in the introduction to this volume, the new territories of poverty are not merely new spaces or geographic locations. They are instead new political technologies. And they sit alongside, on top of, and interwoven with layers upon layers of the old. They are, with apologies to Foucault, problematizations that open up the assumptions and contingent connections between this or that claim, practice, or ethical stance. Poverty, generally understood as a condition, is more properly a political categorization and a set of techniques that institute that categorization, including often many of the techniques and claims that went before. This is not to imply, however, that territories of poverty are whole or encompassing without contradiction or messiness. As political technologies, they are contested within themselves, from within their own structuring logics or in terms of the conglomerations of people, capital, infrastructure, and space making them up. In the nineteenth century, Viviana Zelizer (1995) showed, social reformers advocated direct payments to the poor as a way to channel their consumption practices and thereby turn them into good citizens. Poor recipients of relief had other ideas of what to do with their welfare payments. We can see this as a contestation from below. I think the new territories of poverty are different insofar as the contestations come very much from within: for poverty professionals, territories of poverty are new kinds of problem-spaces that they actively construct and manipulate as they argue with one another and build often incompatible systems.

Compared to nineteenth-century social reform, late twentieth-century microfinance sought to institute a different kind of subjecthood, less a citizen than a businessperson whose entrepreneurial spirit would be unleashed by the provision of credit. Very much in line with a shift at the World Bank documented by Roy (2010), microcredit's proponents began to connect their effort to the wider financialization of the global economy as a means of further leveraging the assets of the world's poor—imagined to be a route to greater investment of the capital markets and thus presumably poverty alleviation. The sea change represented

by C. K. Prahalad's (2009) *Fortune at the Bottom of the Pyramid* was not just its recapitulation of the poor as consumers as put forward by earlier social reformers. It was its claim that poor people's own knowledges and practices—collective, innovative, unexpected ways around and through the dilemmas of daily life in poverty in the midst of phenomenal and rapid global technological transformation—could be leveraged as assets to find new sources of value rather than hitching them to the old (Elyachar 2012).

The internal debates among those making the problem-space of poverty in the early twenty-first century have to do with both the absorption of the critique of microfinance and the focus on the poor as innovators (and the absorption of some of those innovative poor themselves into the professional poverty-alleviation workforce). Importantly, they take place in the context of widespread diffusion of communications technology and technology market actors. These actors are by definition always in competition with one another, yet they always must coordinate in order to realize the network effects their operations promise. The challenge to poverty scholarship is that if it could once focus either critically or appreciatively on the role of capital markets in the construction of (the category of) poverty, it now has to appreciate the weird complexity and internal problematizations of what we continue to call capitalist markets even after a global financial crisis and the animation of business models not based on accumulation or extraction or even profit in the traditional sense. This chapter is an effort to explain what I mean through a case study of the genesis and transformation of “mobile money.”

Mobile phone-enabled money transfer, payment, and savings products—so-called mobile money services—have captivated industry and philanthropic attention since around 2007, when the Kenyan mobile network operator Safaricom launched M-Pesa. Now used by more than half of Kenya's population, and processing more transactions in Kenya than all of Western Union globally, M-Pesa is a money transfer service using the mobile network instead of the existing banking or payments infrastructure. Originally viewed as having the potential to “bank the unbanked” and provide an on-ramp to the “formal” financial sector, M-Pesa and other mobile money services are increasingly being imagined as payment platforms. That raises the question of what exactly a payment platform is, and how and why it can be imagined to have consequences for economic development and poverty alleviation. It also has ambiguous political, economic, and moral effects.

This chapter explores the practical consequences of the industry and philanthropic shift from mobile banking to mobile payment. In order to address the question of why some development practitioners are focusing on payment platforms for poverty alleviation, it proposes an analytical shift from poverty capital

to poverty payment. It explains why payment, distinct from banking or other financial services, warrants closer scrutiny by critical development scholars and social scientists in general. It is based on my having followed and occasionally led mobile money professionals and policymakers into this realm of payments—the means of value transfer, sometimes understood to be a public good despite its privatization by credit card networks and, now, mobile network operators.

The payments industry is little studied or understood outside its own borders (see Evans and Schmalensee 2004; Maurer 2012c). In this chapter, I focus on the retail payments industry—the process of providing services that allow people, businesses, and governments to clear, settle, and process the movement of funds. “Payments” as an industry term (often pluralized) encompasses the purchase of goods at a physical or virtual point of sale; bill payment to a government agency or a corporation; payments made person to person, business to government, business to person, or government to person or business (for remittances, taxes or rents, salaries, or welfare or state subsidies or rebates, respectively). The payments industry is that collection of public and private entities that make sure value—generally in the form of funds denominated in state-issued currencies—gets from a sender to its intended recipient. The world of payments includes cash and checks, but increasingly is focused on electronic forms of value transfer, from credit card transactions to mobile phone-enabled services. When you hand over cash, the transmission of funds is straightforward. It is less so when any other payment mechanism besides cash is employed. Payment providers usually carry out this service for a fee. Payment is a basic operation on which exchanges of all sorts depend, but it is rarely focused on by people outside the infrastructures and processes that make it possible.

Payments are interesting because the payments industry business model does not square with market logic. The tolls and fees of private payment infrastructures pose challenges to competition law as well as to critical analyses of capitalism. Not set by the market mechanism in any conventional sense, these fees have vexed antitrust lawyers and consumer protection advocates, and have puzzled many a judge and legal scholar (see Levitin 2008; Porter 2008). They also raise the issue of the public interest in payment: most payment systems today are privately or shareholder owned, yet they are ever more essential to the forms and functions of value transfer, especially in a digitally connected world (Maurer 2012c). Traditionally, businesses and governments earned money from payments by levying fees on transactions when offering money transmission, clearance, and settlement services. Adding a lending function to a payment device provided a route to revenue from interest on funds extended (as well as, importantly, overcharge and late fees). This was the genius of the credit card. Even before the financial crisis that began in 2007–8, however, consumers were

shifting their payment behavior away from credit cards and toward debit cards that drew directly from funds in bank accounts. In a world of debit, not credit, the motivation for offering payment is fee generation. Many new entrants into the payments business initially sought to capture a piece of that fee revenue.

Payments are also interesting because at this particular historical juncture the payments industry is itself undergoing a paradigm shift. Fees are receding; in some cases, they are being regulated away. Payment providers are experimenting with new ways to generate revenue—most notably, by seeking to profit from the promise of “big data.” This represents a new business model: not based on interest or fees, but instead on accessing and leveraging vast troves of transactional data captured at the point of sale.

Where philanthropic and development attention to mobile money services like M-Pesa initially focused on their potential for “banking the unbanked” (Maurer 2012b) and could be seen as part of the phenomenon Roy terms poverty capital (Roy 2010), there is an emerging shift to poverty payment in places in the development world where mobile money services are being launched. By poverty payment, I refer to the idea that the design of digital platforms for the transfer of value, agnostic as to what value is being transited or what it is being used for, has positive spillover effects that ultimately benefit poor people. For philanthropic actors, poverty payment is mainly about reducing the costs of cash to the poor. For industry actors, poverty payment is increasingly oriented around the potential uses of transactional data to benefit the poor. It fits into an overarching belief that “big data” generally provides a “next frontier” in development (as Fengler 2012 puts it), that the increased connectivity and the overlaying and articulating of diverse databases may provide new solutions to old development problems. Attention focused first on the use of big data for tracking the spread of disease and social and economic conditions (Fengler 2012). By 2012, however, small startups and payments industry professionals were wondering whether transactional data could create new consumer markets in a sort of “bottom of the pyramid” approach to economic development (Pralhad 2009): knowing who was buying what, and how, could provide insight into new goods and services for the poor that would create business incentives to serve this new market niche.

As I have argued elsewhere, social science is ill equipped to understand payment (Maurer 2012c). One reason is that the social sciences, born in an age of capital, maintain capital as their reference point for economy. So, when we look at things like microfinance or development, we see reiterations of the original primitive accumulation via the enclosure of various commons in the name of the virtues of private property (as in de Soto and de Soto 2003), and we see attempts to liquefy the real assets of the poor—livestock and land (Shipton 2009), for

example, but also expertise and relations (Elyachar 2005, 2010; Roitman 2005)—generally a first step toward their liquidation. We witness and criticize arguments about the virtues of debt, magically transformed into wealth (Peebles 2010), and we watch as people in specific institutional locations, from microfinance to global investment banks, seek to redefine the newly “freed” assets of the poor as “savings” to be leveraged in capital markets (Bruett 2007; Bystrom 2008). This all does little to help us understand payment, however, those infrastructures that enable value to move from one place to another, regardless of whether that value is involved in capital accumulation.

The following section briefly situates mobile money within the relatively short history of electronic payments at the point of sale (that is, at the till of a physical world shop). This historical digression is necessary in order more fully to explain the motivation of payments industry professionals in moving from a world of fees to one of data. Next, I will trace the history of the shift from mobile banking to mobile payments, along with a discussion of the realization in some circles around 2010–11 that providing electronic payment platforms could serve certain development agendas while at the same time, perhaps unwittingly, perhaps not, pose a challenge to the state’s monopoly over the means of value transfer. Finally, I speculate on the political implications of seeing money as a private infrastructure versus a government utility, and the conundrum posed by big data to democracy and development more generally.

### Payment at the Point of Sale

In 1973 IBM launched two electronic payment and inventory management systems: the 3650 Retail Store System and the 3660 Supermarket System. These were complete systems that included point-of-sale terminals with cash drawers, centralized data flow and storage, a magnetic label-maker for inventory control, a label-reader to be used at the point of sale, and a telephone modem to allow communication with warehouses and satellite stores. These systems represented a dramatic increase in the amount of data about inventory and payment available to retail businesses. If customers paid with cash, however—as was mostly the case when these machines were introduced—the data collected was limited essentially to cash in and inventory out, with ancillary data potentially to be collected on the performance of individual store employees assigned to specific terminals or stations.

The widespread acceptance of credit cards in retail stores added customer data to the ever-growing archive of retail transactional data. Even so, customer data was generally held only by the card companies, which could assemble records of customers’ purchases. Without that data being cross-referenced with

stores’ inventories, however, a card company would acquire information about the amount and location of the purchase, but not the specific item bought. Stores carefully guard their purchase data, using it to offer coupons and rewards as part of loyalty marketing schemes (and at least once, to defend themselves in court against a consumer claim).<sup>1</sup> These schemes most often rely on the use of a store-branded payment card or a separate loyalty card presented at check out. In the United States, point-of-sale terminals at most major retail stores have one system for recording purchases for price scanning and inventory management, usually based on optical scanning technology and linked to a loyalty card (itself most often equipped with a bar code for optical scanning), and another for payment processing, usually based on magnetic stripe-enabled plastic cards. These two systems do not directly talk to each other (or, in the jargon of the industry, they do not interoperate). This is because the store is guarding its inventory and purchase data, which is linked to a specific customer only if the customer participates in a loyalty program, while the payment services are guarding their transaction data, recording only the purchase location and price.<sup>2</sup>

Imagine for a moment an everyday purchase of goods at a small shop. You make your selection and head to the till, money in hand. The clerk totals your purchases and tells you how much you owe. You tender cash and coin. The clerk provides change and a receipt, and off you go. The clerk may have a system for recording the goods purchased, for the purposes of inventory management. If the store uses any kind of mechanical or electronic cash register, it is likely that it can keep track of tax receipts and inventories. This information does not leave the store, however. And the clerk is left with your money but, most likely, no information about you at all, not even your name. Consider this a vast, unenclosed commons: in this scenario, very little “data” is produced—that is, very little information is objectified as such, demarcated from the flow of social and economic life, recorded, coded, stored, and then harnessed or sold for other purposes. This scenario, a retail point of sale with minimal “data capture,” is the modal payment encounter around the world, in countless small shops and informal open-air markets, where goods and money change hands as if in a great bazaar. The bet of many new entrants and legacy players in the payments industry today (from Square and PayPal to Visa, American Express, Google, and Amazon) is that there is value to be gained by enclosing that commons of retail transactional data.

What does any of this have to do with poverty? As I argue below, some development actors’ recognition of the shortcomings of microfinance as a poverty alleviation strategy, or desire to avoid its politics, led them to other “solutions,” as some of my informants and research collaborators put it. Those solutions, in turn, were adapted and modified by their “targets,” exemplifying the process

Prahalad (2009) hypothesized. Along the way, poverty payment emerged as a new problematic.

### From Banking to Payments

The virtue of the focus on poverty capital is that one does not have to go too far to see it. Anthropologists, critical development scholars, and others have been documenting it for more than two decades. This does not mean that it is a seamless or single process, as Roy (2010) reminds us. It is “messy,” “fragile,” and “requires considerable and constant work”; it sits “uneasily alongside other poverty truths, such as those concerned with social protection or development infrastructure” (Roy 2010: 221). Roy finds in poverty capital not one dominant plan but multiple foldings and complicities, what Deleuze describes in another context as the impossibilities that continually generate new borders between and lines across divergent worlds (Deleuze 1992: 81; see Maurer 2012a).

Some of those impossibilities appear from “within” the beast, so to speak, when experts, academics, policymakers, and others—including the “targets” of development—articulate alternative visions and put them into practice. Much of the research for this chapter derives from the work I have conducted through the Institute for Money, Technology and Financial Inclusion, which I have directed since 2008. By funding and nurturing an extremely diverse group of specialists from the countries that development and philanthropic organizations have singled out for various financial inclusion interventions, the institute has created a vast repository of data and analysis that often lies in the way of some of the best-laid plans of the poverty alleviation apparatus. Replacing cleanliness with complexity, it agitates what Anke Schwittay (2011) has called the financial inclusion assemblage—arguing, for example, that savings could be denominated in goats or that technologies be developed to support, not subvert, the illiquidity preferences of many of the world’s poor. Another aim has been to highlight the position of poor people not just as targets of finance but as monetary innovators in their own right, and, insofar as they are innovators in money itself, to highlight the political and theoretical consequences of the remaking of money through people’s everyday practices with mobile technologies (Maurer 2012b).

Originally, much of the research at the institute had been on complicating certain stories or “hypotheses” about savings: in particular, that the mobile phone could serve as a new “channel” for enhancing and mobilizing poor people’s savings, harnessing the mobile network and capitalizing on the ubiquity of the mobile phone as an infrastructure for financial services rather than communication. The mobile phone—and new services like M-Pesa, originally imagined as a tool for microfinance loan repayment—could serve as a kind of “branchless

banking.” Where brick-and-mortar banks and electronic banking infrastructure are scarce or absent altogether, the mobile network and the basic communications channels of even the simplest mobile phones present a ready-to-hand information-processing and management system easily redirected from, say, voice and text to financial data.

A revisiting of the institute’s output from 2008 to 2012,<sup>4</sup> my own field notes and interview notes with mobile money regulators and developers, the written products of experts from CGAP, the World Bank, the World Economic Forum, the Gates Foundation, and USAID indicates a slowly emerging understanding that mobile money represented something else besides a new channel for branchless banking. People started talking more and more about payment and found they had to give themselves a crash course in the existing payments industry in order even to begin examining their prior assumptions.

There are actually two shifts here: a first shift from microcredit to microsavings, and a second shift from microsavings to payment. The first shift is an effect of the absorption of the critique of microfinance levied by academics and others. The second is an effect of the operations of mobile money, and the increasing use of mobile money to serve payment functions by people in the countries where they have been deployed.

From the beginning, many observers believed that mobile money services would be used as *de facto* short-term piggy banks. People would load value into their account via an agent, handing over cash in exchange for electronic tokens of value (e-money, in the regulatory language), and instead of transferring it to another customer on the network—the modal use-case for mobile money—they let it sit there. This helped them avoid theft when traveling through the countryside. Today, some users of India’s Eko mobile money service are using it to replace saving coins in clay pots (Nandhi 2012).

Directly related to this potential for mobile money itself to serve as a kind of savings account, mobile money intellectuals realized a fundamental contradiction in most countries’ regulations around such services. Bank regulators from the start were understandably nervous about mobile network operators taking on quasi-banking functions. They worried about the potential for fraud and money laundering, since by running financial transactions over the mobile network there was no opportunity for monitoring by the established financial regulatory apparatus. But they were also worried about disintermediation of the banks themselves through the creation of a non-bank system for creating, storing, and transferring electronic value. The contradiction, however, was that although such services could function as small-value, short-term savings accounts (even if this was rarely realized in practice), the regulations did not permit either deposit insurance or interest. Loading funds into a non-bank entity but having

no guarantee that the funds would be protected in the event of a bankruptcy, and saving money without the benefit of interest, the users of mobile money services were doing a kind of banking without its protections or benefits. Mobile-money intellectuals argued forcefully for the regulators to address these issues (see, e.g., Stephens 2012; Tarazi and Breloff 2010); regulators at times pushed back equally forcefully, but many adopted new rules. At the same time, mobile operators began to form partnerships with banks to provide basic financial services with the same protections and benefits of full-fledged banking (e.g., M-KESHO, a partnership between Safaricom and Equity Bank in Kenya).

Meanwhile, researchers started filling out with greater granularity and complexity users' behavior with M-Pesa and other mobile money services. When people used M-Pesa to send money to another person, researchers found, the recipient tended to "cash out" almost immediately—that is, upon receiving a text message notification that someone had sent them money, the recipient would immediately visit an M-Pesa agent and ask for cash, rather than letting the funds sit in their account or using them to make an over-the-air purchase of, say, a ringtone (Stuart and Cohen 2011). This was true even for the purchase of mobile phone airtime, bought from the same agent who disbursed the cash. Even when it was possible to pay directly for airtime using the electronic value held in the mobile network, people would still prefer to cash out, and then hand the cash over to the M-Pesa agent who provides both cash in/cash out services, and airtime sales. M-Pesa was not displacing the use of cash. Rather, it was functioning as a channel for *moving* money. Cash in/cash out was seen as the dominant use-case for mobile money. Some in the industry started wondering if there was a way to get people to keep their money in the system *forever* (in the words of one), not as a kind of savings but as a continually circulating pool of value endlessly looping through the mobile network. They wondered about this possibility not necessarily because of the presumed benefits to the poor of going cashless (benefits including protection from theft or loss, as well as the prevention of graft or extortion) but for the possibility of enhanced transaction-based fee income.

In Nairobi, meanwhile, a whole ecosystem of new services had sprung up around M-Pesa, with start-up businesses developing other products that used the mobile money channel as the primary or even sole means of moving money in order to achieve some other aim, like providing a health savings account product or agricultural insurance (Kendall, Maurer, and Machoka 2012). The payments industry frequently uses railroad metaphors to explain its infrastructures. For all intents and purposes, M-Pesa was functioning as a set of electronic payment "rails" for Kenya. It had become a new payment platform without any-one planning it as such.

Two authors nicely summed up the potential of mobile money as a new

payments platform in 2010. At the time, both were at the Gates Foundation: "Where most financial inclusion models have employed either 'credit-led' or 'savings-led' approaches, the M-PESA experience suggests that there may be a third approach—focusing on building the payment 'rails' on which a broader set of financial services can ride" (Mas and Radcliffe 2010: 172). About a year later, USAID had announced its "Better Than Cash Movement," in which it cited the work of myself and my colleagues (Kendall, Maurer, and Machoka 2012) as demonstrating that mobile money had already come to serve as an electronic payment system more than a peer-to-peer money transfer or banking service:

If you care about reducing poverty, then you must also care about reducing the reliance on physical cash. We begin a movement to do just that. USAID Administrator Rajiv Shah is announcing a broad set of reforms to use USAID's \$22 billion financial footprint as a force for good—as a way to reduce the development industry's dependence on cash. This includes integrating new language into USAID contracts and grants to encourage the use of electronic and mobile payments and launching new programs in 10 countries designed to catalyze the scale of innovative payments platforms. (<http://blog.usaid.gov/2012/02/we-must-do-better-than-cash/>)

Then, having devoted itself primarily to savings since around 2008, the Financial Services for the Poor program at the Gates Foundation undertook a strategy refresh exercise in 2011, and in 2012 announced a new focus on payment, seeking to displace cash with digital payment platforms:

After conducting a thorough analysis of the global financial inclusion landscape, we concluded that one of the main reasons why it is so costly to serve poor people with formal financial services is because most poor households conduct most or all of their economic and financial transactions in cash. We believe that the best way to reduce the cost of reaching poor people with financial services is to support efforts to shift the majority of their cash-based financial transactions into digital form through a mobile phone or other digital interface. Our new strategy aims to capitalize on the rapid evolution of mobile communications and digital payment systems to help catalyze this transition. (e-mail, March 28, 2012, copy in author's possession)

In the fall of 2012 and into early 2013, the newly formed Better Than Cash Alliance hosted a launch event in New York announcing a global effort to move people without access to electronic forms of value transfer into the digital money age. The event took place at the Ford Foundation headquarters in New York, and the alliance consisted of the Ford and Gates Foundations, the Omidyar Network, USAID, UNCDF, VISA, and Citi. Another event sponsored by Citi and

Imperial College was held in London in January 2013. The alliance has added new members since that time.

### State and Market Moneys

The broader political-economic phenomenon co-occurring with the shift to cashlessness as a strategy for aiding the poor was the renewal of a profoundly antistate perspective on money. This was monetarism (Guyer 2007) combined with the belief that the state should get out of the business of money altogether. Since the 2008 financial crisis the Anglophone world has seen the drawing together of all manner of constituencies calling for the elimination of the state's monopoly of the means of exchange. These have ranged widely, from gold bugs, cryptocurrency advocates, and neo-Hayekian "denationalization of money" proponents, to legacy network partisans (meaning the card networks and the wire services), new payments industry startups like Dwolla and older ones like PayPal, journalists, authors (Wolman 2012; Boyle 2011), a few academics, local currency and Time Banking adherents (their numbers increasing during the recent recession), and at least one U.S. presidential candidate (Ron Paul) who ran unsuccessfully for his party's nomination in 2012.

Now, there is nothing necessarily anticash about antistate money proponents. One could imagine a private currency or currencies that take paper as one form. Yet the new constituencies of anti- or nonstate moneys are almost uniformly also antipaper, drawn by mobile and other information technologies to imagine private systems for the means of exchange that are almost exclusively digital.

Some states are in on the act, as well, even sometimes to the point of outsourcing the state's public function to provide a means of exchange. USAID's cashlessness initiative is in line with several sub-Saharan African central bankers' attempts to reduce reliance on physical cash in order to reduce fraud and theft as well as the costs of cash for the poor—costs related to transport, or loss due to climate (a significant concern where stashes of banknotes can rot or be eaten by vermin), not to mention cash's articulation to several "informal economy" money savings and transfer systems that often come with unclear or negligible protections and high transaction costs. The Central Bank of Nigeria, for example, began promoting a "cashless Lagos" project in 2012. This is in the context where interbank clearance and settlement can still involve bank employees with suitcases full of cash and receipts meeting in parking lots at the close of the business day. Again, lacking the basic electronic infrastructures necessary for the digitized financial transactions taken for granted in much of the global North, such projects make sense.

The broader emerging consensus on antistate money, however, includes

skepticism toward any such state-led efforts. Canada, a leader in the provision of public infrastructure for payments,<sup>5</sup> recently issued a call to product designers, hackers, and app developers to come up with proposals for a digital currency to replace cash and coin. This Mint Chip project received fifty-seven entries. The reaction from the antistate money camp, however, is summed up nicely in the following article from a commentator in *Forbes*. Citing Bitcoin, the pseudo-anonymous (and anonymously created) cryptographic currency that received wide media attention in 2011 (Maurer, Nelms, and Swartz 2013), the author states: "My objection still lies with the fact that it is a non-free-market approach to the payments issue. Bitcoin has so far demonstrated its exchange value without being backed by anything that isn't backed by anything. Remove the standing armies and all money is essentially a mass illusion. Bitcoin just happens to be a voluntary, bottom-up mass illusion with scarcity, like gold" (Matonis 2012). The invocation of standing armies may be unexpected to some listeners. It is in fact a reference to the state and credit theorists of money (as opposed to commodity money theorists), who argue that the origins of money lie in the state's mandating of one method of payment for the purposes of raising revenue to support armies for territorial expansion.

The tax issue is not far from the minds of regulators charged with overseeing mobile money deployments. Mobile money offers the potential, after all, to track all exchanges—and therefore a way to ensure merchants and ordinary people are reporting taxable exchanges to the authorities.

There is more than tax on the mind of regulators, however. The shift from mobile banking to mobile payments also represents the rediscovery among regulators (not just academic observers like myself) that the means of payment—the technologies of value transfer, whether by government-issued paper notes or electronic infrastructures—serve an important public function. In many countries with mobile money, the race is on to build the rails for electronic value transfer. Companies from Visa to Citibank as well as global telecommunications network operators and traditional wire services like Western Union all see opportunities in creating for many countries in the global South what the card networks did in the North: an electronic payments network.

This is the first sense in which the shift to payments matters. It is a shift away from capital and from capital markets. Now, I do not mean to imply that these markets are withering away—far from it—or that, say, microfinance will not continue to bring profits to those leveraging it for capital gain and potentially further destitution for the already poor. However, something else is afoot here. And that something is a focus on generating revenue from the privatization of the means of value transfer.

### Money, Data and Democracy

As I have been arguing for a number of years, payments are not like normal exchanges, and capitalogocentric accounts (Gibson-Graham 2006) of them often miss the point of what they are and how they work. The value in payments comes not from value itself but tolls on its transfer. Tribute lives on in the modern-day fees levied on the passage of freight—in this case, financial data—going over the payment rails. Focusing on payment platforms rather than capital or credit thus throws a spotlight on those fees. This is important analytically because it also brings to the fore the centrality of noncapitalist relations within this thing we have been calling capitalism.

At the same time, my own analysis is anticipated by regulators and antitrust lawyers. They notice those fees, as well as the fact that they do not seem to follow the same rules of the game of other kinds of market-based processes. It is curious but not surprising that in most of the major antitrust cases levied against them, the card networks have chosen to settle out of court (see Maurer 2012c). The European Union recently promulgated regulations lowering the rate of interchange that the card networks can assess on transactions. One of the major accomplishments of the administration of U.S. President Barack Obama and the Democratic Senate during the president's first term was to do the same in the United States.

I would go so far as to argue that, with poverty capital, the state could adopt a *laissez-faire* approach: the capitalization of poor people's assets simply represented another zone for financial speculation and accumulation, and not an affront to a state that was already captured or that had capitulated to financial interests. With poverty payment, in contrast, the state sees a threat to its traditional authority to tax, expressed in terms of the concomitant threat to its ability to maintain a monopoly over the legitimate means of exchange. Thus, the regulators' concerns over interoperability, transaction fees, and the emergence of a (minority) position in the mobile money literature that the means of value transfer should not be privatized. In an important World Bank report on which I was asked to provide comment, Kevin Donovan sums up the position among some observers (like me) that "the provision of money by private companies over private infrastructure risks undermining an important function of the public sector, namely, that the means of value transfer are not 'owned' by anyone" (Donovan 2012:71).

Where a corporate-led mobile money effort promises to serve as a new set of payment rails, for example, central African regulators vociferously argue with donor agencies that "payments are a public good."<sup>6</sup> They are increasingly demanding interoperability—that competing mobile money providers build their

services such that a client of one can send money to a client of another, and that any customer on any network using any device should be able to access their funds without undue fees.

We arrive at the core of the problem of money, really: not only, as Keith Hart (1986) famously argued, is money ultimately a warrant of value underwritten by the state, or is money a commodity, or are these two sides of the same coin? But also, are money and the means of value transfer a *utility*?

The utility question is directly related to the data capture potential of electronic value transfer. If the new value proposition for mobile payments is based on leveraging transactional data, then who owns that data, who has access to it, and who can write and rewrite it? Rather than being based on leveraging the float in the system at any given time, or on levying tolls on transactions, the new business model capitalizes on the data being gathered when mobile or other electronic payments systems are used for purchases at the point of sale, realizing the potential of those old IBM 3660s.

By far the majority of economic transactions on the planet are undertaken with cash. Again, imagine this vast field of transactions as a commons—the common and collective property of the planet's human population, its "memory bank," as Hart has called it. "Once we accept that money is a way of keeping track of complex social networks that we each generate, it could take a wide variety of forms compatible with both personal agency and collective forms of association at every level from the local to the global. It is up to us to build them," Hart writes (2007). With electronic means of value transfer, transactions become sources of data; that data can be imagined as individual or collective property, and that data can be enclosed or mined, and, of course, monitored by governments.

I do not want to conclude on a dystopian note, however, where the privacy of even the world's poorest is evacuated as the billions of small transactions, this commons of transaction relations, is enclosed by private payment companies seeking a new business model when opportunities for fee income decline. This concedes too much to "big data," as well as to flatfooted conceptions of "privacy." My point is simply that the conversation and the technology are shifting: from concerns around liquefying (and maybe liquidating) poor people's assets via microfinance, to concerns that bind the world's poor with everyone else around questions of the nature and ownership and privacy of "personal data."

Is cash good, or bad, for the poor? Are transaction fees levied by corporate payment providers any better or worse? Does the privatization of payment diminish the public good, and does it even matter where people live in severe poverty? Poverty payment suggests that the contestation over these questions, and their messy connection to old debates and infrastructures for value transfer,

opens new problematics, new territories of poverty that are themselves political technologies, requiring political not technical stances and solutions.

Making visible the transactional data in our everyday exchanges may, like making visible the rails and pipes of value transfer, have important public effects. In the face of antistate money proponents, therefore, I tend to imagine this public as a democratic polity, of the kind likely to make anarchist critics like David Graeber (2011) cringe. Not a state, then, but perhaps a new kind of archive. In an agenda-setting essay on critical questions for “big data,” danah boyd and Kate Crawford provide a caution but also a prod to action. I close with their invocation of Derrida: “Effective democratization can always be measured by this essential criterion: the participation in and access to the archive, its constitution, and its interpretation” (Derrida 1996: 4, quoted in boyd and Crawford 2012:13).

Having already reopened money for interpretation and re-constitution, mobile money may provide just such access.

#### NOTES

The author would like to thank Ananya Roy and Emma Shaw Crane for the invitation to write and present the first version of this essay at the Territories of Poverty conference at the University of California, Berkeley. He is grateful for their hospitality and their critical feedback. He would also like to thank Taylor Nelms, Lana Swartz, Elizabeth Reddy, Nicholas Seaver, Robert Kett, Tom Boellstorff, Julia Elyachar and Scott Mainwaring for comments, criticisms and suggestions as this chapter was taking shape. Research has been supported by National Science Foundation, Law and Social Sciences Program (SES 0960423) and the Intel Science and Technology Center for Social Computing at the University of California, Irvine, of which the author was codirector. The author is the Director of the Institute for Money, Technology and Financial Inclusion, which is funded by the Bill and Melinda Gates Foundation. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation, Intel Labs, or the Bill and Melinda Gates Foundation.

1. The case involved a supermarket’s use of purchase data to challenge a customer’s liability claim after a slip-and-fall incident inside the store. The supermarket used the fact that the customer was a regular liquor purchaser—as recorded in the supermarket’s loyalty card records—to challenge his claim (and he lost; see Silverstein, 1999). This case in part led to the State of California’s regulation of the loyalty card industry through the Supermarket Club Card Disclosure Act of 1999.

2. On the development of these competing standards, see Stearns, 2011.

3. This is an emic term among the development practitioners with whom I have worked on mobile money.

4. Much of this output is available on the Institute for Money, Technology and Financial Inclusion’s website at <http://www.imtfin.uci.edu>.

5. Canada’s Interac network links private debit and interbank networks much like Visa but has been denied for-profit status by the country’s Competition Bureau. Thanks to Lana Swartz for this observation.

6. I did not directly overhear this assertion, but it was reported to me by an attendee of a closed-door conclave of banking regulators in an East African country in late 2010.

#### REFERENCES

- boyd, danah, and Kate Crawford. 2011. “Six Provocations for Big Data.” Paper presented at Oxford Internet Institute’s “A Decade in Internet Time: Symposium on the Dynamics of the Internet and Society,” September 2011. Available at SSRN: <http://ssrn.com/abstract=1926431> or <http://dx.doi.org/10.2139/ssrn.1926431>.
- Boyle, Mark. 2011. *The Moneyless Man: A Year of Freeeconomic Living*. London: One-world Press.
- Bruett, Tillman. 2007. “Cows, Kiva, and Prosper.com: How Disintermediation and the Internet are Changing Microfinance.” *Community Development Investment Review* 3:2, 44–50.
- Bystrom, Hans. 2008. “The Microfinance Collateralized Debt Obligation: A Modern Robin Hood?” *World Development* 36:11, 2109–26.
- Deleuze, Gilles. 1992. *The Fold: Leibniz and the Baroque*. Minneapolis: University of Minnesota Press.
- Derrida, Jacques. 1996. *Archive Fever: A Freudian Impression*. Trans. Eric Prenowitz. Chicago: University of Chicago Press.
- de Soto, Hernando. 2003. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York: Basic Books.
- Donovan, Kevin. 2012. *Mobile Money and Financial Inclusion*. In *Information and Communication for Development 2012*, ed. Tim Kelly and Michael Minges, 61–73. Washington, D.C.: World Bank.
- Elyachar, Julia. 2005. *Markets of Dispossession: NGOs, Economic Development, and the State in Cairo*. Durham: Duke University Press.
- Elyachar, Julia. 2010. “Phatic Labor, Infrastructure, and the Question of Empowerment in Cairo.” *American Ethnologist* 37:3, 452–64.
- Elyachar, Julia. 2012. “Next Practices: Knowledge, Infrastructure, and Public Goods at the Bottom of the Pyramid.” *Public Culture* 24:1, 109–29.
- Evans, David, and Richard Schmalensee. 2004. *Paying with Plastic: The Digital Revolution in Buying and Borrowing*. 2nd ed. Cambridge, Mass.: MIT Press.
- Fengler, Wolfgang. 2012. “Data—the Next Frontier of Development.” World Bank blog, December 5, <http://blogs.worldbank.org/african/data-the-next-frontier-of-development>.
- Gibson-Graham, J. K. 2006. *The End of Capitalism (As We Knew It): A Feminist Critique of Political Economy*. Minneapolis: University of Minnesota Press.
- Graeber, David. 2011. *Debt: The First 5000 Years*. New York: Melville House.
- Guyer, Jane I. 2007. “Prophecy and the Near Future.” *American Ethnologist* 34:3, 409–21.
- Hart, Keith. 1986. “Heads or Tails? Two Sides of the Coin.” *Man* 21:4, 637–56.

- Hart, Keith. 2007. "Money: Toward a Pragmatic Economic Anthropology." The Memory Bank blog, July 15, <http://thememorybank.co.uk/2007/07/15/127/>.
- Kendall, Jake, Bill Maurer, and Phillip Machoka. 2012. "An Emerging Platform: From Money Transfer System to Mobile Money Ecosystem." *Innovations: Technology, Governance, Globalization* 6:4, 49–64.
- Levitin, Adam J. 2008. "A Critique of the American Bankers Association's Study on Credit Card Regulation." Georgetown Law and Economics Research Paper no. 1029191. Retrieved from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1029191](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1029191).
- Mas, Ignacio, and Daniel Radcliffe. 2010. "Mobile Payments Go Viral: M-PESA in Kenya." March 1 version. Reprinted in Capco Institute's *Journal of Financial Transformation*, no. 32, 169–82. World Bank, August 2011. Available at SSRN: <http://ssrn.com/abstract=1593388>.
- Matonis, Jon. 2012. "MintChip Misses the Point of Digital Currency." Forbes.com blog, April 12, <http://www.forbes.com/sites/jonmatonis/2012/04/12/mintchip-misses-the-point-of-digital-currency/>.
- Maurer, Bill. 2012a. "Credit Slips (But Should not Fall)." *Distinktion: Scandinavian Journal of Social Theory* 13:3, 283–94.
- Maurer, Bill. 2012b. "Mobile Money: Communication, Consumption and Change in the Payments Space." *Journal of Development Studies*, June, 37–41.
- Maurer, Bill. 2012c. "Payment: Forms and Functions of Value Transfer in Contemporary Society." *Cambridge Anthropology* 30:2, 15–35.
- Maurer, Bill, T. Nelms and L. Swartz. 2013. "When Perhaps the Real Problem is Money Itself!: The Practical Materiality of Bitcoin." *Social Semiotics* 23:2, 261–77.
- Nandhi, Mani. 2012. *Impact of EKO's SimpliBank on the Saving Behaviour and Practices of Low Income Customers: The Indian Experience*. Delhi: Centre for Micro Finance (CMF), IFMR Research. <http://www.centre-for-microfinance.org/wp-content/uploads/attachments/csf/3164/Impact%20of%20EKO%20-%20Savings%20Behavior.pdf>.
- Peebles, Gustav. 2010. "The Anthropology of Credit and Debt." *Annual Review of Anthropology*, 39, 225–40.
- Porter, Katherine. 2008. "The Debt Dilemma." *Michigan Law Review* 106, 1167–92.
- Prahalad, Coimbatore Krishnarao. 2009. *The Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits*. Rev. ed. Upper Saddle River, N.J.: Wharton School Publishing.
- Roitman, Janet. 2005. *Fiscal Disobedience: An Anthropology of Economic Regulation in Central Africa*. Princeton: Princeton University Press.
- Roy, Ananya. 2010. *Poverty Capital: Microfinance and the Making of Development*. New York: Routledge.
- Schwittay, Anke. 2011. "The Financial Inclusion Assemblage: Subjects, Technics, Rationalities." *Critique of Anthropology* 31:4, 381–401.
- Shipton, Parker. 2009. *Mortgaging the Ancestors: Ideologies of Attachment in Africa*. New Haven: Yale University Press.
- Silverstein, Stuart. 1999. "What Price Loyalty?" *Los Angeles Times*, February 7, <http://articles.latimes.com/1999/feb/07/business/fi-5738>.
- Stearns, David L. 2011. *Electronic Value Exchange: Origins of the VISA Electronic Payment System*. London: Springer.
- Stephens, Maria. 2012. "Promoting Responsible Financial Inclusion: A Risk-based Approach to Supporting Mobile Financial Services Expansion." *Banking and Finance Law Review* 27:2, 329–43.
- Stuart, Guy, and Monique Cohen. 2011. *Cash In, Cash Out Kenya: The Role of M-PESA in the Lives of Low-Income People*. Washington, D.C.: Microfinance Opportunities.
- Tarazi, Michael, and Paul Breloff. 2010. *Nonbank E-Money Issuers: Regulatory Approaches to Protecting Customer Funds*. Focus Note 63. Washington, D.C.: CGAP, July.
- Wolman, David. 2012. *The End of Money: Counterfeiters, Preachers, Techies, Dreamers—and the Coming Cashless Society*. Cambridge, Mass.: DaCapo Press.
- Zelizer, Viviana. 1995. *The Social Meaning of Money: Pin Money, Paycheck, Poor Relief, and Other Currencies*. New York: Basic Books.