Banking on the Unbanked: Everyday Peripheral Technologies for Mobile Money in Peru

By

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ABSTRACT

In 2016, an association of Peruvian banks launched a mobile money platform, Bim, announcing it as a tool for financial inclusion. Aligned with the World Bank's goal of 'universal financial access by 2020' and with Peru's National Financial Inclusion Strategy, Bim promised to provide access to financial services for the seventy percent of 'unbanked' Peruvians living in so-called informal cash economies –while generating profits for the banks. Based on extensive fieldwork with engineers, bank representatives, marketers, development consultants, state bureaucrats and shop-to-shop promoters involved in the design and daily operation of this mobile money platform, my research traces the heterogeneous communities of experts co-producing mobile money as both a financial technology for expanding finances in Peru, and as a development model that designs the 'unbanked populations' it seeks to engage.

By peering into the practices of these experts, my dissertation examines the specific contours of the financial-development network they promised to build and integrate, and the extent to which it mirrors and extends older microfinance practices, further capitalizing on the resources of people living at the margins of more fully banked economies rather than opening new possibilities through the democratization of money as 'digital cash.'

Rather than a top-down story on how capitalism always wins, my account focuses on the vibrant life occurring within this evolving techno-financial wave. I pay close attention to the tensions and controversies among the various sets of experts involved (bankers, state regulators, engineers implementing the technology), and to the day-to-day economies of small shops that these financial interventions aim to transform. On different scales, both shopkeepers and experts are figuring out how to navigate these money transformations, grappling with the potential future directions that their actions might open or foreclose.

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INTRODUCTION

A Corner Shop Universe Navigating Financialization

The system is made of lots of *partecitas* (small pieces), says Margarita, a senior engineer in the mobile money project of a partnership of banks that I studied in Peru. This is the first of many conversations we had while I was conducting fieldwork.[1] She worked for a company created by a partnership of banks that were, back in 2015, collaborating in the creation of a single mobile money platform that would use basic cellphones to become, in the words of its engineers, a "unique highway" to cater to *los no bancarizados* (the "unbanked"). The bank partners aimed to bring banking services to people without bank accounts—or to bank the unbanked—using non-smart cellphones as the entry point for offering them financial services. They called their endeavor "financial inclusion."

At the time of this first conversation, the mobile money platform was not yet ready. Its engineers were building it while still figuring out how to connect all its *partecitas*—each of which were, as per Margarita's descriptions, themselves entire systems. For instance, she mentioned that the platform had many providers: one 'little piece' was comprised of the systems of the local mobile phone carriers, and another piece was the system where transactions were processed, which was run by a Swedish telecommunication company. She also referred to the telecom components of this mobile money project as 'little systems' because they only transported information (sending requests for money exchanges and receiving digital receipts of their execution in the form of short messages or SMS), while the Swedish company was the 'big system' executing the transactions and dealing with "information that is also money." She explained the entire operation of systems exchanging information and information that is also money as a *digestion process*. To make it easy to follow for someone unfamiliar with software engineering, she performed her description for me, using objects she had available on her office desk to represent the information exchanged and digested between smaller and larger systems. Her computer screen served as an analogy for the "big system;" her coffee cup as a proxy for the "little system;" her iPhone represented a basic cellphone—the

[1] This conversation happened as I was doing preliminary fieldwork over the summer of 2015. I conducted my long-term fieldwork between 2107 and 2019. I spent 10 months in Lima during 2017, followed by a primarily online and remote fieldwork phase in 2018, and I returned to Perú for two months in mid-2019.

technology imagined for the 'unbanked'—and finally, an eraser stood in for a "small data package" circulating from one system or component to the other.

I stared at her, looking confused. *Is the mobile money wallet a combination of other 'systems' or 'platforms,' or is it an integration of them? Where are the banks, the owners of this mobile money project, in this explanation that so far only includes telecommunication corporations? And who and where are the 'unbanked'?* My questions were silent, as I waited for her to continue with her train of thought. She paused and, looking back at me, seemed to assess the situation. Realizing that my level of understanding was closer to zero, she took a step back. Without losing her characteristic calm demeanor and gentle smile, and before diving further into the system and its components, she explained that 'mobile money' had to originate somewhere—it was a transformation of cash! The 'unbanked' user had to bring cash to an *agente* (agent) at a local point of sale, often located in *bodegas, boticas* (corner shops and neighborhood drugstores). In exchange for the cash, the agent would then transfer the same amount of e-money to the mobile wallet on the user's phone by logging into their own wallet via a telecommunication channel called USSD and selecting the "send money" option from a menu that would appear on the tiny screen of their non-smart, non-internet-connected keyboard phone. Once the transaction was completed, the system sent to both sender and receiver a "digital receipt" of the transaction via SMS. She referred to this type of transaction as a cash-in. If users wanted to convert their money back from digital and into cash—or cash-out the e-money from their e-wallets—, they needed to find a bank agent in another small shop who could perform that operation for them.

The fact that in her explanation mobile money originated in local small shops, where shopkeepers perform monetary operations on behalf of banks (acting as agents) for people without prior relationships with banks (i.e., without bank accounts), reveals the assumptions the engineers were designing with, and of what they were designing. For people with bank accounts, that is, people *already banked* —like Margarita and me—the money we own is already digital and 'stored' (accounted for as information) in a bank.[2] Most of our transactions occur without altering the material state of that money; it remains digital when exchanged via credit or debit cards or through other internet or mobile-based channels. Banked individuals occasionally need cash, and to obtain it, they visit a bank branch or an ATM to withdraw it from their accounts—effectively materializing the money stored digitally as information into physical bills and coins. Banks 'store' this money for their

[2] In my dissertation, money refers to state issued currency unless otherwise noted.

clients, but the banks also borrow it from them to invest and lend to others—that is how the banking model works. Banked money doesn't roam freely as cash with its exact value printed in bills and coins; instead, banks use it, they invest it to grow 'the market,' including the market of money.

Mobile money starts with previously unbanked cash and offers it an entry point into the digital realm through small shops, human agents who receive and convert cash into digital tokens, and telecom corporation infrastructures or *tuberías* (pipelines), as engineers sometimes referred to them. These infrastructures, at the time of this conversation in 2015, were not yet standardized as financial conduits. In 2024, and especially if you live in a relatively wealthy area that is highly connected to the latest technology trends—from 5G to self-driving cars to AI dating apps—like the one where I am finishing this dissertation in California, it may be hard to recall a not-so-distant time when mobile phones were not also wallets of sorts, with multiple payment options embedded in them (i.e., Apple Pay, Google Pay, banking Apps, Venmo, PayPal, WeChat, and so on).

This mobile money project in Peru emerges in a period between mid-2000s and specially the 2010s, during which different institutions—telecommunication companies, banks, states, international development and philanthropic organizations, tech corporations and startups alike— in many places of the world were figuring out how to use mobile phones for transactions.[3] In this universe of vibrant experimentation, banks attempted to offer mobile channels for their existing clients (and perhaps those of the competition too); startups claimed to be more efficient and faster than traditional banks in handling digital transactions between clients of different banks (e.g., Venmo, WeChat); and digital applications were created to meet the needs of banked people whose transactional communities extended beyond national borders (e.g., Wise, PayPal, Remitly). These experiments were designed for populations assumed to have both mobile phones (mostly smartphones) and bank accounts.

Another subset of initiatives bridged the world of finances and the world of social development, attempting to 'bank the unbanked,' first through basic cellphones and later also through smartphones. The proponents of these initiatives labeled them "financial inclusion" and targeted populations assumed to have phones but no prior 'formal' relation with banks. This is where the

[3] This is also the time when cryptocurrencies, starting with Bitcoin in 2009, emerged—another parallel universe of vibrant experimentation and competition, initially aimed at disintermediating money from the control of states and banks. In later iterations, corporations and states also began exploring blockchain technologies for futures of money in which they remain included and retain control. Cryptocurrency experimentation is beyond the scope of my work, which focuses on experimentation with money as state currencies.

initiative I studied, known internationally as Modelo Peru (Peru Model), fits in. The proponents of this banking project aimed to push the digitization of cash via mobile phones to integrate local cash economies (or the 'informal' economies of 'the poor') into established financial systems. They called it "financial inclusion"—following the international development jargon of that time—where "inclusion" could be understood in two ways: as the inclusion of money in national economies, such as cash that was not previously digitized through other channels (like credit cards) becoming digitized, and as the inclusion of people ('the poor') in market economies—an inclusion that extends, thanks to digitization, beyond the national space. They alternatively called it "banking the unbanked"— in the financial sector's argot popularized even more by the World Bank— as bankers and the engineers who worked for them were dedicated to the task of digitizing cash via mobile phones and figuring out how to keep money under the control of banks as it traveled through the telecoms' pipelines.

While their endeavor was framed in terms of banking, mobile money, in its earlier iterations such as Kenya's M-Pesa, which started in 2007, was, however, an innovation that emerged from the telecommunications sector. Banks operated in the background; they didn't control the data generated by this money's circulation via telecom networks and only minimally profited from it. Developed by Safaricom, the largest mobile network operator in Kenya, in partnership with the UK telecom Vodafone, M-Pesa's mobile money was more akin to digital cash than to traditional banked money. This is because mobile phones, acting as digital wallets, functioned less like savings accounts and more like digital piggy banks (Maurer et. al. 2013).

In this arrangement of things, money neither 'grows' by accruing interest nor diminishes through maintenance fees. M-Pesa was, at least at its beginnings, more of a digital cash model primarily because every digital token was backed by 'real' yet still digital money in *cuentas custodia* or fiduciary accounts, which in turn were backed by physical money held in banks—that only operated in the background of this model. This means that if every mobile money user wished to withdraw their money simultaneously in paper form, they could do so—something that is not possible with the banking model, where most money is lent and thus 'not there' for the savers to access. This is the mobile money model that Modelo Peru originally replicated, and that Margarita was explaining to me in the vignette at the beginning of this introduction. But, as I suggest through the dissertation, they replicated the model as a learning process, aiming to figure out how to reverse-engineer it in order to keep the money and data under the control of the partnership of banks rather than Peruvian telecoms—while still using their infrastructure.

Based on extensive fieldwork with engineers, bank representatives, marketers, economic development and microcredit practitioners, state bureaucrats and shop-to-shop promoters involved in the design and daily operation of the mobile money platform of Modelo Peru's partnership of banks, my research traces the heterogeneous communities of experts co-producing mobile money as both a financial technology for expanding finances to the 'unbanked populations' in Peru, and as a development model aligned with the World Bank's goal of 'universal financial access by 2020' and with Peru's National Financial Inclusion Strategy. I understand each of these experts as a para-ethnographer (Holmes and Marcus 2005) with a distinct "cultural" analysis of the world they aim to transform. By peering into their practices, I sought to understand the specific contours of the financial-development network they promised to build and integrate, and whether it mirrored and extended older practices of microfinance to further capitalize on the poor (Kar 2018; Roy 2010; Elyachar 2005), or whether it might open new possibilities through the democratization of money as 'digital cash' (Maurer et al. 2013). The questions that guided my fieldwork were: Who do the builders and promoters of this mobile money platform imagine as beneficiaries of the emergent economy they are making? How will they measure its success? How are they categorizing and prioritizing people through real time allocations of technical labor and software/organizational choices as they build this infrastructure? What futures for money and for people is this infrastructure bringing about?

My dissertation is an ethnographic account of the design and deployment of this particular mobile money experiment called Bim (for *Billetera Movil* or Mobile Wallet), alongside other simultaneous mobile money experiments (such as Yape and Tunki) conducted independently by some of the largest banks involved in the Modelo Peru partnership. These banks all claim to promote financial inclusion while competing against each other in the race to bank the unbanked. By examining these endeavors, my research explores a period during which new technologies for exchanging money as state-issued currency were being created through intensive labor and various practices. I suggest that these technologies and practices are primarily aimed at monopolizing the digital existence of money as "banked money" while foreclosing the possibility of it functioning more like digital cash. At the same time, these local and global networks of experts dedicate significant efforts to establish and secure a dominant imagination that enforces this equation of digital money as "banked money"—a topic I will expand on soon.

Additionally, my account examines the vibrant life occurring within this techno-financial wave, as it keeps evolving and while it lasts, focusing on two aspects: the economies of small shops

that these financial interventions seek to transform, and the tensions and controversies among the various sets of experts involved (bankers, state regulators, engineers implementing the technology). At different scales, both shopkeepers and experts are figuring out how to navigate these money transformations, unfolding through their actions and decisions, and grappling with the potential future directions they might open or foreclose, as I will explain soon.

Methods

Based on extensive fieldwork between 2015 and 2020, my dissertation studies this mobile money initiative from its design and testing phases through to its implementation. I conducted ethnographic research and interviews with the designers, developers and implementers who were working to make mobile money circulate across and between social worlds. I organize this motley crew of experts into three groups, each representing different perspectives and material practices in relation to Modelo Peru.[4]

First, there is the group of **high-level strategists**, or as a government official described them "those who fly at five thousand meters above ground and, in their helicopter view that plans and oversees at enough distance, all ideas seem feasible and able to work smoothly." This group includes bank CEOs, ministers and state regulators (like the one suggesting this description), international development consultants, and development economists. Their work focuses on envisioning possible futures for their business and/or for the country, and aligning their mission with the chosen direction, often framed by grand promises and large-scale ambitious goals. They are concerned with the link between economic growth and policymaking, statistics and population management. While I had the opportunity to formally interview some individuals in this group, I mostly relied on secondary and publicly accessible sources due to their status as public figures.

The technical implementers and mid-level managers are the second group, or those "with tunnel vision" tasked with turning high-level ideas into a functioning financial infrastructure, specifically the mobile money platform known as Bim. Their work involves addressing the daily

[4] I did a preliminary fieldwork visit over the summer of 2015 when the conversation that starts this introduction happened. I conducted my long-term fieldwork between 2017 and 2019. I spent 10 months in Lima during 2017, followed by a primarily online and remote fieldwork phase in 2018, and I returned to Perú for two months in mid-2019, which I spent between Lima, Cusco and Piura revisiting my informants and fieldwork routines and tracing the expansion of Bim and other mobile payment wallets in other regions of the country. Online fieldwork extended through 2020, even 2021, as I started the writing of the dissertation and continued to have regular online conversations with my fellow para-ethnographers.

technical and logistical challenges, such as system crashes, project indicators, budget and data management, testing and reporting, and is oriented to producing tangible results that demonstrate the profitability of this initiative. Most, but not all, of the people in this group are engineers, like Margarita, working in PDP (Peruvian Digital Payments), the company that the banks created to administer their partnership. I spent half of my time as a participant-observer of their practices. These implementers realized at some point in the transformation of Modelo Peru from a project to an actual infrastructure for money (Bim) that the banks that hired them had many other parallel projects, often in direct competition with the partnership in which they were allegedly collaborating with each other. For instance, the three largest banks in this partnership, also its main investors, were concurrently—and secretly—developing their own proprietary and non-collaborative banking apps. These apps were developed, in part, drawing lessons from Bim, and initially targeted their already-banked clients, assumed to be smartphone users. They were launched almost simultaneously with their collaborative launch of Bim for 'the unbanked' via basic phones.

Engineers made sense of the situation by often remarking that this is how banks *really behave*, a behavior they explained by comparing it with design/test loops they were familiar with. For them, as banks experimented with Bim alongside other digital financial projects, the banks filtered their options: deciding their bets, determining what technology would prevail, what risks were more concerning to them, and allocating full support to some endeavors (such as their proprietary mobile banking apps) while withholding it from others (like the collaborative Bim). Yet Bim was not *fondeado* or "sunk" (as in sinking something on purpose to the bottom of the ocean), as these engineers knew was also common practice for banks—to acquire a potentially disrupting company or tech for their business-as-usual only to discontinue it. Instead, banks keep it barely alive for continued experimentation.

While the banks were invested in their non-collaborative mobile banking apps to become the primary pipelines through which money, including that of the 'unbanked,' would circulate, they appeared to keep Bim alive as a prestige token to generate social capital and reputation with other audiences, such as the state and international development forums. Bim enabled them to assert they were fostering 'financial inclusion,' while continually leveraging insights from this collaboration. In this light, Bim—a full-scale production for 'the poor'—seemed to be part of a design feedback loop for the products the banks were actually interested in developing. By capitalizing on the ongoing efforts of the technical implementers and mid-level managers' to propel Bim forward, and using the

sociomaterial traces of such efforts (meetings, documents, presentations, tests, pilots, Bim's monthly transaction statistics) as performative evidence, the banks, particularly the largest ones, could claim that there were permanently and always trying to include 'the poor.'

The paradox these engineers faced was that they were dedicated to the task of generating trust in a new digital payments system to ensure it functioned properly, even though they were deploying it on behalf of entities they themselves could not trust. As scholars of digital money know, money is fundamentally a shared fiction; anything can serve as money as long as it is socially accepted (Maurer 2015; Hart 2017; Brunton 2019; Swartz 2020). The value of something serving as money depends on an interplay between trust and social acceptance in which social acceptance is both a result of trust and an enactment of trust—that generates more trust in return. And yet, mistrust (between the bank partners, and between the banks and the implementers of their collaboration) abounded in a project that needed to generate trust to convince people to use its infrastructures.

While accompanying the technical implementers and mid-level managers, I observed this conundrum these experts faced in performing their daily tasks, which further attuned them as para-ethnographers. They were determined to make Bim work. This task not only secured their jobs—after all, Bim was also their creation, and they believed in it. In my dissertation, I trace the tensions between the uncertainty of the banks' support and the creative, and often low-budget field experiments and collaborations the engineers deploy, in turn, in their determination to ensure Bim' survival and success.

The third group consists of **field collaborators**, who have a street-level or everyday life perspective and are formally known as Bim advisors. They engage directly with the public in search of the 'unbanked,' going door-to-door in low-income neighborhoods in Lima, Peru's capital, to recruit small shop owners as agents for Bim (or Bimmers). The advisors provide technical support and offer monetary incentives to entice the small shop owners to enroll. Once enrolled, shopkeepers, or Bimmers, receive *comisiones* (commissions) per transaction conducted on their clients' behalf (such as phone airtime top-ups, microloans repayments) using Bim. Both Bim advisors and Bimmers serve as crucial infrastructural entry points for the mobile platform, where cash gets converted into digital money.

Most Bim advisors are in their early twenties, besides their leader in his mid-thirties. Many are students in colleges or technical institutions while working for Tambo, a small business with

fewer than five permanent workers that manages the Bim advisors' strategy. Tambo is a third-party in the PDP network, which itself is a third party that manages the mobile money infrastructure (Bim) resulting from the banks' partnership. In short, the field collaborators organized by Tambo are subcontractors of the engineers, who are themselves subcontractors of the banks. Similar to the telecoms and the Swedish company that Margarita described, which manage 'small' and 'big' systems for Bim, Tambo is another key provider. However, Tambo supplies another type of technology: the network of humans necessary for the mobile money platform to function at the peripheries of Lima and of what is centrally imagined as 'formal economy.' These are both geographical peripheries (the low-income, hilly outskirts of the capital city of the country) and peripheries of the experts' imagination of the digital.

In other words, Tambo operates the human extra-digital realm essential for the digital infrastructure to succeed, often referred to by its engineers as the "last mile." I spent half of my time as a participant-observer of the practices of this network of laborers for the banks, who worked long hours six days a week visiting shopkeepers, and which I refer as the "money missionaries," given that many Bim advisors where affiliated to the same Christian church. Through them, I got a glimpse into the lives of the shopkeepers (or Bimmers), who regularly interact with promoters from banks, telecoms, and payment providers, besides the Bim advisors. In exchange for meager monetary incentives per transaction through the digital infrastructures of these entities, many merchants become 'agents' providing services for their clients on behalf of these corporations while assuming the risk of handling cash. I observed the merchants' highly creative methods of making ends meet—negotiating with all these "missionaries" attempting to bank them (to then bank *on* them)—and carefully assessing and calculating when to participate, to what extent, and when to withdraw from these schemes. As a women merchant explained, they don't marry to any of these companies; they keep their options open.

While some chapters focus more on the work of one group, such as chapter 1 and the high-level strategists, in others, the perspectives and practices of these groups intersect, overlap, and coordinate. Although most agreed to the use of their real names on my research, I have used pseudonyms to refer to my informants and, in some cases, divided their identities into multiple characters to protect their anonymity, except when they were public figures speaking in their official capacity. I have also changed the names of some institutions.

The center of my dissertation is about how these sets of experts design populations/users as they design a technology for money and the challenges they encounter in deploying this technology with actual people. Although the daily practices of users were not part of my original research plans (though they may become part of its next phase), their presence—both as abstractions in modeling and testing phases of this technology, and as real merchants and their clients in the work of the 'money missionaries' I spent time with—permeates my writing. The universe of small shops, which exists outside the high-level strategists and mid-level implementers' offices and planning and prototyping practices, resists, circumvents and pursues its own agendas in its relatings to these technologies. This universe is the counterpoint I think with.

Banking on the unbanked: from e-money as digital cash to banked money

On a different day, in a different year—2017— Fernando, another engineer, is now attempting to explain to me the distinction between banked money and e-money. We were at the headquarters of PDP (Peruvian Digital Payments), the company created by the partnership of banks informally known as Modelo Peru to run their mobile money system called Bim. This is the same office space where Margarita first explained how this mobile money worked as a series of digestive systems mostly controlled by telecoms but, continuing with her metaphor of digestive systems, ultimately feeding the banks. I have spent the day accompanying Fernando in his meetings with bank representatives and other sorts of office work such as analyzing data digested by the mobile money platform and all its interconnected systems, to produce reports. My reader should remember that this is a project initiated by banks, which began by nearly replicating the infrastructural model of M-Pesa, a telecom-driven mobile money system, in order to learn from it and reverse-engineer it to work for banks. Initially, this system operates with e-money which is different from banked money. As time passes these two forms come closer together, but that was yet to happen when Fernando and I had this conversation. To explain the difference between these two forms of money, Fernando uses the metaphor of a casino:

> "When a casino gives you a hundred dollars in chips, it is because you have given them one hundred dollars. So, what supports the value of each chip is the money behind it, and yet these chips cannot be used outside that particular casino, they can't

> be exchanged anywhere else. Now, in the model [short for the Peru Model] it is a little more complex: imagine that all the casinos agree to make their chips interchangeable. Then you need someone to issue the chips so that everyone can have them. PDP manages a payment agreement between all the banks partnering in the Model which in practical terms means that it provides that support for the issuance of chips. But each casino, meaning each bank, decides how many to have and how many they want to play with in their cycle, and they can exchange their chips with whoever they want [the other banks involved in this mobile money platform]."

While I followed his example, it still was unclear for me if, for instance, a transaction with a credit card, was not also considered e-money, in the terminology and legal frameworks of digital money used in Peru. Fernando responded that it is not considered electronic money because e-money mimics physical money: it must be issued or minted.

> "For you to have a one-sol coin [sol which means sun is the Peruvian national currency], it means that the Central Reserve Bank has been authorized by the government and the Ministry of Economy and Finance to give that coin the value of one sol. If you deposit that coin in a bank, you are depositing a coin that has already been issued and is in circulation. Banks use that *circulante* [circulating money] for secondary purposes, like when I go to the shop and buy something with my one sol using my debit card."

A card, internet banking, and mobile banking are electronic channels for money that has already been issued by the state. As this money becomes banked, it allows banks to assign a secondary use to it—or to financialize it. In contrast, electronic money must go through an issuance process because it requires assigning value to it, which for Fernando "is more of an economic issue than an operational one." With e-money, the state, authorizes some entities, like PDP, to issue e-money through specific regulation, similar to casino chips, and assign it a 1:1 value—each chip backed by the exact amount of state currency. Then my question remained: why were the banks invested in mobile money that yields money that was different than banked money? Furthermore, why was mobile money talked about in terms of banking (as banking the unbanked) if it was not bankable?

Fernando with lots of patience, and always diagramming or sketching what he told me, continued with the same casino example. He explained that the casino has the authorization to give me an account without knowing me, meaning that different than banks, it doesn't need to perform the KYC ("know your client" or "know your customer") checks. Instead, the casino (who he is personifying in his example) would simply tell me:

> "Miss, I can only give you a certain number of chips, and you can only play with a certain number of chips." But then you say, "I'm not just anyone. I'm Mariel." I reply, "No, I don't know you." But you insist, "Yes, in fact, I've already worked with you before, I have a savings account with you,' or 'I have a credit card from you.'" Ah, you have one of my products? Then you are a member of the casino, and you can play with more chips. So that's the difference [in the mobile wallet] between a 'simplified account' and a 'general account.' In a simplified account, you don't need to have a KYC. In a general account, you do need to have a KYC. That's where the connection to banking comes in."

Mobile money, framed as "financial inclusion" for the poor and categorized as e-money, was regulated by the state with some monetary limits, which differentiated it from traditional banked money. In Fernando's explanation, a simplified mobile money account differs from a 'general account,' which is similar to a savings account—thus, banked money. As mobile money users reach certain thresholds, they must complete KYC paperwork to become formally banked along with their money. Banks can then offer microloans, insurance, and other services to these users, incorporating their money into their capital for lending purposes. This system cleverly facilitates the incorporation of mobile money users into the banking system, as it *increasingly banks those who may not initially want to be banked*, especially if the mobile money technology succeeds in becoming integral to their daily lives.

By "banked money," I mean money that is financialized by banks and, in turn, serves finance. The digitization of money via bank-run mobile money means that unbanked state-issued money is transformed into a tool or asset within the financial system: it becomes *money that does finances*. Instead of being a mere means of exchange or a form of currency, once it enters the banking system via its digitization, it begins to work for the banks by generating credit and debt relations, accruing interests and fees, and expanding their markets. It becomes integrated with

broader financial markets, where banks use it for investments, lending, and other operations, ultimately serving the interests of the financial sector rather than the 'poor' populations it claims to benefit or 'include' according to its rhetoric.

The narrative that imagines and configures the digitization of previously unbanked cash via mobile phones as equivalent to banking—and thus financialization—is promoted by numerous institutions and alliances. For instance, banks and the companies within their financial networks—such as transaction processors, payment networks and financial service providers—along with international organizations like the World Bank, the International Monetary Fund, and some countries' international development agencies such as USAID and CIDA, play a key role. Think tanks, universities, Microfinance Institutions, NGOs, and governments also contribute to this promotion. Additionally, international alliances where these and other entities come together and collaborate—such as the Better than Cash Alliance (BTCA), the Consultative Group to Assist the Poor (CGAP), Alliance for Financial Inclusion (AFI)—are instrumental in advancing this narrative. Peruvian government regulators, think tanks, NGOs, and private corporations, including banks and their associations like Modelo Perú, participate in these networks in various capacities, which I also examine in this dissertation.

These multiscalar arrangements that collapse the local and the global and patrol the boundaries of what can be thought regarding money (and how it should be managed) not only confine money to the realm of banking and finance but also lead to people being statistically categorized, studied, and subject to intervention in terms of their relationship with banks. In other words, I suggest that the project of financializing previously unbanked money requires studying and designing populations as both users of mobile phones and as financially excluded or unbanked and living in 'informal' cash economies. These populations need to be invented before these financial development networks can *bank on them*, as my title suggests.

Thus, the process of designing and developing all the *partecitas* of a technology aimed at banking on the unbanked (such as Bim and Modelo Perú) necessarily involves configuring both the user and the context of use for the technology (Woolgar 1991; Oudshoorn, Rommes, & Stienstra, M. 2004; Maurer 2012). While chapters 1 and 2 of my dissertation are more concerned with the design and testing of this mobile money technology, chapters 3, 4 and 5 contrast this design process with the actual users and contexts of use in which experts attempt to ground user populations and models. In Chapter 4, I describe the challenges and field experiments deployed by engineers to ensure that Bim

not only survives but thrives, despite the lack of support from the banks. In Chapter 3, I discuss the practices of regular people who are coded as unbanked and their mistrust of banks. In Chapter 5, I show that rather than lacking interactions with banks, the unbanked are 'informal' users of banks' services without being their clients; they engage with bank services to pay specific bills, send remittances and collect payment without having bank accounts. In other words, they keep under their control how and when, and in which terms, they relate with banks.

On one hand, the practices of merchants in low-income areas of Lima, the peripheries of the capital city of Peru, are not as homogenously unbanked or un-digital as they are portrayed by these experts. Similarly, the context in which the mobile money technology will be used—the networks of small shops where shopkeepers and their clients circulate their cash economies—is not the uncharted territory or untapped market suggested by its proponents' narratives. Rather, as I will describe in these pages, it is a space that is constantly assessed and highly mediated by, among others, the very organizations that collaborate in this endeavor, through various interventions, arrangements, and even different partnerships. For instance, since the mid-2000s, many shopkeepers have been acting as agents performing digital transactions for telecoms and banks alike in exchange for meager monetary commissions.

This situation required, as I observed during fieldwork, that the engineers leave their office and conduct fieldwork in order to make their technology work. They did fieldwork both personally and through a team of 'Bim advisors'—promoters of the technology who go from shop to shop in these neighborhoods and report back to them weekly. These advisors serve as both the 'last mile' of the technology needed in the peripheries where it is supposed to work and as an infrastructure of knowledge (helping engineers and managers to understand, better design, and bank these new groups) as I extensively discuss in Chapter 4.

In Chapter 5, I accompany the fieldworkers hired by the experts in their daily walks from one shop to another as they promote the new technology and attempt to carve out a space for Bim in these highly mediated environments. I observe the various forms of money and non-digital devices—such as physical receipts—that they mobilize to convince people to bring their cash into this mobile money platform. I also highlight how the shopkeepers we encounter skillfully navigate all these tools and relations with bank intermediaries (in their role as bank agents), with telecom intermediaries (in their role as telecom intermediaries), with Bim advisors (in their new role as intermediaries of a partnership of banks) to make ends meet at the margins of more fully banked economies. In this way,

my research ultimately reveals both the friction and the numerous sets of human intermediaries that are required for this technology to function, as well as the tinkering and creativity displayed by all those involved in this endeavor.

In the following section I engage with discussions on financial inclusion, informality, and financialization, drawing primarily from the fields of anthropology and science and technology studies, as a main theoretical framework for my research, and which is complemented by additional conceptual framings developed in each chapter according to their specific matters at hand.

Financial expansion via extraction

Financialization

There is consensus among researchers in different social sciences' fields, including economists, that finance is at the center stage of contemporary capitalism, a process they name 'financialization,' even though the concept has different meanings and emphasis depending on the author (Epstein 2005; Lapavistas 2013; Piketty 2013; Aalbers 2019). Financialization, understood as the increasing dominance of "financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies" (Epstein 2005, 3) is a regime of "accumulation by dispossession" (Harvey 2003). The growing presence of financial "practices, measurements, and narratives, at various scales," results in "a structural transformation of economies, firms (including financial institutions), states, and households" (Aalbers 2019, 4) that produces and dramatically intensifies inequality to the benefit of corporation owners, stockholders, and rentiers (Duménil and Lévy 2005). Financialization, in short, historicizes a time in which, paraphrasing economist Thomas Piketty, oligarchs are back (2013).

With financialization, "capitalist social relations are increasingly mediated by speculation and risk rather than labor" (Kar 2018, 3). Finance is no longer relegated to Wall Street but shapes life in Main Street through different financial technologies such as mortgages, pension savings, credit cards, student debt, and so on, and infuses cultural production and popular imagination (Knorr Cetina and Preda 2005; Martin 2002). It is a process in which the so-called 'real economy' is "converted into a servant of passive investment that either exploits or bypasses ordinary workers and households,

with a bottom line of more household debt, shrinking labor incomes, diminishing job security and weak employment growth" (Turbeville 2015, 3).

The financialization of development: women of color, cellphones and cash

Financialization is in permanent search of things that can be turned into capital, and the global south is the space in which financialization trends meet development practices. In this space, 'the poor' become the newest market to be conquered by finances. Or where, paraphrasing Ananya Roy, it is possible to see the tensions between the promised "democratization of capital," which gets operationalized as access to financial services to eradicate global poverty on one hand, and the "financialization of development," which takes poverty alleviation as the new frontier of capitalism, on the other (Roy 2010, 32). Roy's work "focuses centrally on those who generate the capital and the expertise around poverty eradication" (34). She proposes to understand development in the new millennium as "a particular type of commodity" created by these experts' practices which she follows as a global commodity chain, in "circuits of capital and truth"—or how knowledge-making practices go hand by hand with money-making ones (35). For Roy, the financialization of development happens through the strategies deployed by different financial actors who convert the microcapital of these populations into new global financial flows.

Women of color take center stage as the main 'beneficiaries' of microfinance. While initially microfinance was uncritically celebrated as a 'solution' to the problem of formalization and access to affordable and fair financial services for the poor, more recent scholarship, both in academia and in the professional sector has more mixed reviews. Anthropologists Sohini Kar and Caroline Schuster consider that microfinance "has created a global infrastructure for the extraction of capital from the world's poor and its circulation with the premise of economic and women's empowerment" (2016, 348). Recent scholarship in Science and Technology Studies as well as ethnographic studies on microfinance explore the ways in which people in the global South, particularly women, and even girls, and their labor turn into assets mined for financial expansion (Murphy 2013; Zulfiqar 2017; Kar 2018; Radhakrishnan 2022).

Sohini Kar, for instance, explores the relation between women and microfinance in India as an "example of the way in which the lives of those at the periphery are incorporated and shaped

through finance capital" by turning credit to the poor as a new pool of abstract finance (2018, 3). Rather than a top-down imposition, she analyzes it as the result of multiple negotiations at various levels "through which financialization is experienced, accepted, and contested" (ibid.). Smitha Radhakrishnan (2022), also working in India, deepens these insights to demonstrate how microfinance practices are governed by gender and class relations and ingrained cultural hierarchies to the extreme that women, who are the specific subject designated to receive loans from these microcredit institutions, need men in their families (husbands, and even sons) to back their debts. Furthermore, she examines how the whole institution benefits lenders and not borrowers even as it is predicated as pro-poor or 'social' finance. As such, it is a site of extraction and expansion of financialization.

STS scholar Michelle Murphy, working in South Asia as well, brings another perspective to these issues by examining how the very life of preadolescent girls becomes the investable asset of venture philanthrocapitalism. The rationale for the objectification of girls as financial assets is that by preventing early pregnancies, these abstracted girls become the engine of development of their town and consequently, the narrative goes, of economic growth of their countries –a high return, considering the initial investment. Investing in a girl's education thus turns this "ticking time bomb of risk" into a "vessel of human capital" with promised positive effects trickling down into the whole economy of a nation (2013, 117).

My work takes this conversation to a different region, Latin America and particularly Perú, and from microfinance practices to financial inclusion. Financial inclusion can be understood as the ecology of practices (Stengers 2005) of one of the newest iterations of development as a "project system" (Li 2007). Tania Li's work in Indonesia casts light on the role that projects play in the flow of funds towards officials, politicians, and brokers of diverse kinds, including NGOs, which depend on them to exist. Projects, she explains, are "an ideal vehicle to disperse state and/or donor funds" because they "come with a budget, a limited set of goals, and a fixed end point; and when time and money are finished, they discretely fizzle out" often without anyone looking "too closely at whether the goals were actually achieved" (Li 2016). From this perspective, she observes, "the most strategic outcome from a project is to generate another project" (ibid.). Li's concept has traction to examine financialization processes in a country like Peru in which development as a 'project system' is deeply entrenched as well, for its own particular historical reasons beyond the scope of my account.

Development as a project-system in the form of financial inclusion consists of a global assembling "of subjects, technics, and rationalities" with the specific purported mission of developing "poor-appropriate financial products and services" (Scwhittay 2011, 381). The practices within this project-system assemblage are predicated upon the premise that more than a billion materially poor people "who do not currently have access to formal financial services are in need of such offerings" (Scwhittay 2011, 381). An absence (lack of access to financial services) is translated into a need (financial services), and to a development solution that consists of a "scalable model of poor-appropriate financial technologies" (such as basic mobile phones). To serve these large numbers of people grouped as 'the poor,' this scalable model could only be fulfilled "by tapping mainstream financial markets" (ibid, 383). In this way, mobile money enables and habilitates the inclusion of new constituencies in the formal financial circuits of banks: financial inclusion.

When international development representatives and Peruvian government officials (as well as their peers in other countries) talk about Financial Inclusion (FI), they often refer to it as a development proposal for individuals to have access to affordable financial products and services according to their needs (and not just microfinance). They also agree that their goal of FI starts by offering access to a transaction account as a gateway to other financial services (World Bank 2018). Their discourse is modeled within the networks of practices and policies sponsored by institutions such as the World Bank, the International Monetary Fund (IMF), and the United Nations (and its 'universal' development goals) and their long chains of development intermediaries. It is a dynamic process of ideas and projects in circulation and execution: local practices, including those of national governments, feed the international discussions oriented to standardize these same practices, in a continuous back and forth. As some of my interlocutors explained and I examine in detail in Chapter 1, within these networks and their knowledge practices, 'mobile money' came to be widely understood as a technology that creates transaction accounts for its users, allowing them to send and receive money through their basic cellphones without the need of internet access or a prior bank account.

One of development's feature practices is counting and organizing populations. In the case of the financial inclusion assemblage, the World Bank/IMF developed an international survey called the Global Findex (short for Financial Inclusion Index) to count people and inquire about their economic

practices with or without banks' intermediation and including their use of cellphones.[5] Then they used the collected numbers to classify people and create categories of populations in need of interventions according to their metrics and standards: the 'unbanked.' Operationally, as witnessed during fieldwork and in the professional literature on it, this category seems to group people purportedly in need of financial inclusion, which is now possible via digital money facilitated through cellphones as transactional devices. But the category is telling: what these populations lack, unlike other lacks (say education, health, even money), is banks. There are no euphemisms or masquerades in what constitutes one of the key programs of post millennial development. Its goal is as clear as a commercial slogan: it aims at 'banking the unbanked.' As such, it shows in turn the extent to which the field of development itself has become financialized.

With microfinance, access to capital (in this case, money) in the form of credit or loans supposedly enabled the materially poor—who were, in theory, already empowered as microentrepreneur through various development practices and narratives—to improve their own living conditions without relying on the state or NGOs (Elyachar 2005). However, as has been extensively documented, microfinance does not necessarily improve the lives of the materially poor (Elyachar 2005; Roy 2010: Karim 2011, among others). As noted by Kar (2018, 18), "credit does not resolve the problem of lack; rather, it displaces it temporally."

The "mixed" results of microfinance, acknowledged not only by scholar critiques, but also by Nobel Prize economists (Banerjee and Duflo 2011) and even within the practitioner literature (Dileo and Ruisanchez 2020; Coetzee 2020), have not significantly redirected development interventions or the state welfare system towards providing the basic services that people lack and cover with the use of microloans (such as health care, education, housing). Instead, there has been a deepening and growing focus on financial aspects, to the point that a primary goal of financial inclusion as I was doing my research was to provide people with bank accounts using technologies such as mobile phones and mobile money.

Let me spell this out: a phone becomes the means, and a bank account becomes the goal of such development interventions. A bank account, rather than providing a solution to any of the basic pressing needs of the materially poor (health care, housing, education, food security), merely offers a

[5] Started in 2011, and funded by the Gates Foundation, the Global Findex is the largest data set on how adults around the world save, borrow, make payments and manage risk, and is published every three years. Source: https://www.worldbank.org/en/publication/globalfindex

place to ‘formally’ store money that people already possess. This now ‘banked money’ can then be financialized by the banks and offered back to them or to others, shifting to each individual the responsibility to address structural problems that constrain their lives. Thus, the goal of financialized development seems to be to create ways to access to money that belongs to ‘the poor’ –who are also now ‘microentrepreneurs’ and who are mostly designed as women of color.

I understand financial inclusion practices as a new wave of financial *expansion practices* (or financialization) relying on the extraction of labor and capital from ‘the poor’ and particularly from women, a phenomenon observed through my research and which I address through different dimensions in the chapters of my dissertation. However, these processes do not go unchallenged and certainly they don’t unfold as their proponents expect.

In my dissertation there is an arc, from Chapter 1 to 5, that moves from the most abstract representations of women who, in development narratives represent both the most excluded bodies and those with highest entrepreneurial potential, to the real merchants in the districts I walked with the Bim advisors. In other words, I first encountered women as representations of unbanked populations in the practices of the group that I have called the “high-level strategists.” Secondly, women were also present as representations of users in the group of “technical implementers and mid-level managers” though at this level these abstractions were in clear tension—and constantly interfered by—the feedback brought to engineers by their “field collaborators” about the women merchants they encountered in their daily rounds promoting this new money technology. Lastly, I encountered real women merchants and their everyday monetary practices as I accompanied the field collaborators’ practices. In Chapter 1, I look at the ways women are literally represented in modeling practices as cartoon characters. Chapter 2 zooms in on a picture of a woman that was used in the testing phase of the technology. In Chapters 4 and 5 I turn to the real merchants who negotiate, engage with, circumvent, and carve a subsistence economy by creatively using all these new technologies designed to financialize them.

Financial inclusion: dispossession through ‘empowerment’

I am now going to address financial inclusion building on what I just presented and connecting it with other dimensions, genealogies, and historical and social processes in its vicinity and through which it also unfolds. Particularly I will dwell on ideas of informality. Drawing on anthropologist Julia Elyachar –who draws on David Harvey—I understand financial inclusion, as a “process of incorporation” of formerly un-banked economies into formal banking networks that is “simultaneously a process of dispossession” (2005, 8). Elyachar studies the processes in Cairo during the 1990s that incorporated “the social practices of the poor into the free market,” which accompanied neoliberal structural adjustments and left many people to fend for themselves without the jobs that the state used to provide. She traces how, in this context, networks of international development organizations and local NGOs reconfigured “the survival capacity of the working poor” into a sector of the economy – “the informal economy” (8).

As STS scholar Lilly Irani explains, the category of "the informal" marks those who labor “outside the organized sector, away from labor regulations and industrial zones where economists and policy makers had long focused their calculative attention” (2019, 38). The informal economy poses a problem for economists because its "activities take place in complex outsourcing chains and in gray areas of the law” (ibid.). But since the turn towards ‘inclusion,’ marked by the World Bank’s introduction of the term ‘inclusive growth’ in the global development lexicon in the 2000s, “technocrats and business elites re-narrated the informal economy, long considered to lag behind the modern, organized sector, as a dynamic site of enterprise and innovation” (Ibid.). Informality becomes a potential for business; and poverty a site for capitalization (Roy 2010).

Social sciences contributed to these processes by conceptualizing the community resources and “networks of sociality and exchange” that made survival possible at the margins of wealthier and more formalized economic sectors as “social capital” (Elyachar 2005: 9). The ‘working poor’ were recast as ‘micro-entrepreneurs’ and their subsistence activities, previously “viewed as an obstacle to economic development,” were now regarded as indispensable “for reproducing global markets, maintaining global stability, and achieving economic growth” (Ibid). At the level of street vendors, their economic subsistence activities (i.e., cooking and selling tamales, running a small bodega or

shop, topping up cellphones, and so on) are recasted as *emprendimientos* (enterprise).[6] At the level of states and of international policies, there is a shift from poverty management to poverty as a site of investment, and of 'the poor' (at least the biopolitical category of 'working poor') as a population now expected to contribute to the economic growth of the country. "Entrepreneurial citizenship," a category that Irani develops in her research in India, "promises that citizens can construct markets, produce value, and do nation building all at the same time," and they can do so through entrepreneurship (2019, 2).

These were not only abstract, conceptual exercises, however. For instance, Elyachar traces the conjoined and intensive efforts of these entities as they recast debt for individual 'entrepreneurial' activities as empowerment (2005, 195) and persuade "people that they should embrace markets of dispossession" (10) which dispossessed them "from the power to decide what matters" (8). This affects the ways in which communities are organized and resources are exchanged, generating market indebtedness. My research examines a new moment in the waves of financialization interventions in which people are being dispossessed of control over their own money. That is, rather than losing control of money received via loans, they are being dispossessed of control over money that was already in their possession through their own economic practices.

Peru, like Egypt and India and many other countries, underwent neoliberal structural adjustments through the 1990s. These adjustments were accompanied by processes that viewed practices peripheral to the centers of power as 'informal' and as untapped markets for economic growth and accumulation among few hands through the dispossession of many. By the time of my fieldwork, with the advent of 'financial inclusion' and mobile money, these ways of understanding the economy and its participants ("entrepreneurs"), as well as the need to incorporate informal economies into the formal ones, have long been dominant ideas that international development, NGOs, and the state alike helped to invent and then systematically implement.

Thus, financial inclusion is in a way, a more recent type of inclusion experiment (as a shift from empowering the materially poor to emphasizing financialization), and it is also part of a later wave of formalization experiments. A first wave, in the nineties and early two-thousands, along with neoliberal structural adjustments, focused on the formalization of land property and businesses,

[6] Lilly Irani describes for India the conflation of capitalists and the poor through entrepreneurship: "champions of entrepreneurship …attempted to manufacture a common sense that conflated the divergent interests of the poorer Indians -"the entrepreneurial poor"-- and high-tech entrepreneurs as being one and the same." In *Chasing Innovation*, p. 40

without much success. This first wave was in part inspired by the work of the Peruvian economist Hernando de Soto, who wrote an influential book called *The Mystery of Capital: Why capitalism triumphs in the West and fails everywhere else*. The book, based on research and economic interventions he and his team did through the nineties in 'poor' countries in different regions, claimed that the mystery was not that the poor did not save money, or that "Third World" nations did not have resources, but that what they lacked was "the process to represent their property and create capital" (2000, 6).

Formalization as appropriate representation allowing things to become capital

De Soto calls "formalization" the process that attempts to "adequately" represent and integrate all assets "into one system so as to produce capital"(2000, 170). While he argues that "even in the poorest countries, the poor save," the problem is that "they hold these resources in defective forms: houses built on land whose ownership rights are not adequately recorded, unincorporated businesses with undefined liability, industries located where financiers and investors cannot see them" (6).

The problem of formalization (or the lack of) for him is then a problem of *adequate* representation: "by representing assets with titles, [people will be] able to see and draw out capital from them" (7). With proper representation (or "formalization") "assets can lead an invisible, parallel life alongside their material existence"; they become collateral for credit, assets against investment, and in that way they generate capital (6). In this reasoning, there are physical things with inadequate representations which do not allow the things to become capital. And becoming capital means that the things can double themselves through processes of abstraction so they can also live a sort of independent immaterial, perhaps digital, life. This connects back to what Fernando was explaining to me with the example of the casino. E-money cannot have a double life, while money that is banked can: it allows banks to assign a secondary use to it—or to financialize it.

Continuing with De Soto's ideas, the proposed solution is to provide the 'adequate' representation for them (or formalization) and by that he means the use of "inscription practices" (Latour 1987; Latour & Woolgar 1986) that generates a specific type of representation that is

compliant with shared international standards and national records. It is a type of inscription that makes them readable across places and thus makes them accessible to finance (it makes them *financiabilizable,* finance-able).

In his book, however, De Soto mentions that in many countries, most programs to formalize property have failed and had minimal impact. For him, the problem resides in that countries try to apply "mandatory law" without respecting existing social contracts and arrangements. Taking what he calls "advanced nations" as a model, his argumentation, importantly, is also about the need of loosening these regulatory frameworks to ease the transition from "extralegal relations to unified formal property" (174). In his words: "the systematization of the laws that underpin modern property rights systems was possible only because authorities allowed preexisting extralegal relationships among groups on the ground sometimes to supersede official laws" (174).

In a way, I think, this is the principle that became operational in many formalization strategies across the 'developing' world, was the 'simplification' of business due processes in order to attract informal entrepreneurs. De Soto's ideas on how to formalize "the assets of the poor" –or how to adequately represent them- by 'flexibilizing' (*flexiblizando*) or loosening laws, which he presented as the result of his previous and ongoing economic research practices, became very popular and, in turn, guided further policy, research, and development practices in that direction around the world. Thus, what often gets 'simplified' (*simplificado*) are workers' labor protections. In short, political rights are 'simplified' in favor of market efficiencies. In Chapters 4 and 5, I trace what I call 'efficient informalities' in the ways in which bankers deploy their projects to formalize the unbanked, while flexibilizing (i.e., informalizing) the labor arrangements with their many third parties involved in the process, such as Bim advisers and shopkeepers as Bimmers.

The financial crisis of the invisible parallel life of 'formal' assets and the rise of mobile money and the unbanked

Continuing with my story of formalization processes, in the late two-thousands, however, assets of people in places such as the United States were, using De Soto's words, having a formal and highly integrated "invisible, parallel life alongside their material existence" leading to a major housing and financial crisis and its concomitant liquidity shortages. At the same time, in other parts

of the world, like Kenya, a mobile network operator or telecom company called Safaricom succeeded in creating a mobile money system (M-Pesa, in which M stands for mobile and Pesa is the Swahili word for money) which managed to attract hundreds of thousands of urban and rural users very rapidly. There, many people transformed their cash into digital tokens to send it to family or friends in other areas of the country. Most transactions were of very small amounts of money but grouped together they were mobilizing significant amounts of capital. Most of these users fell in the economists' categories of 'the poor' and the 'working poor,' which I have presented here and extensively discuss in Chapter 1.

In other words, the monetary practices of people in Kenya and in its neighboring countries to which this mobile money innovation spread quickly, revealed to economists, bankers, NGOs, international development officers and scholars alike that the poor not only saved money in, as De Soto calls them, "defective forms" like houses without clear land ownership titles, but also *as money*. Because the poor actually had money *in money form*, the attention turned to formalizing their money through financial inclusion.

Moreover, in Kenya, the poor not only had money in money form but they were representing it digitally through the pipes of telecoms (like M-Pesa) and not of banks, and, retrospectively viewed, that representation was not considered adequate by these experts, as it can be observed in the very simple empirical evidence of the language that organizations such as the World Bank and the International Monetary Fund coined to name these populations: the un-*banked*. What they lacked was not digital money but bank accounts. Thus, the representation that became dominantly considered adequate was that of banking and money as finance—as money that can be digitally broken down between actual money and its invisible life as capital, like De Soto proposes—and not of money as communication/information flowing through telecom pipes—which could have a different quality perhaps just as cash in which its amount is the same in digital and physical representation and cannot have an independent invisible life as finance—. In short, and within these sets of practices and experts working closely with private banks, 'adequate' ways of saving and investing and of insurance needed to happen through 'formal' bank-led financial networks.

Drawing on these analytical frameworks, in sum, my dissertation explores the financialization of money, people, and development practices, as well as the practices that resist and circumvent these efforts while still 'informally' (not as clients) engaging with digital and banking services. My contribution is to ethnographically show how these processes unfold in practice, across

different scales and contexts—from international development discussions to the universe of small neighborhood shops or bodegas. While my examination describes how experts address issues, find solutions, and manage daily practices in ways that distribute populations, roles, hierarchies, and the expected positions that different groups should occupy along the lines of the coloniality of current life structures in the country (Quijano 2001; De la Cadena 2008), my focus is on exploring the creativity—*el recurseo*—that emerges within these contexts.

I propose replacing the term "informality" with "recurseo," a colloquial term which comes from the noun *recurso* (resource) and is used in popular culture to refer to the act of being resourceful and the daily "resource-ing" that people engage in to survive and thrive. This involves a form of contextual cleverness and individual ingenuity in the face of lacking economic capital, generational wealth, or reliable networks. I suggest that *recurseo* provides a lens to better witness the unfolding of various collaborations aimed at making ends meet, using both cash and digital money, at the margins of more fully banked economies.

In other words, I follow the mechanisms, strategies, and tensions in the daily practices of different mobile money mediators (not only engineers, but also Bim advisors, and Bimmers) and how they all circumvent, bypass, and operate within these social structures to ensure the project's success and make ends meet. Interestingly, we will also encounter what I term *corporate recurseo*—sets of practices that exist in the gray areas of legality as sorts of efficient (informal) shortcuts, through which banks and other entities manage their relatings with the constituencies they serve or seek to serve (and extract) at the peripheries.

A final note before proceeding: every successful piece of writing is a collective effort, and a completed dissertation is no exception. The following chapters are the product of the generosity of those who welcomed me during fieldwork and accompanied me on the various trips that constituted my research. They are also shaped by insightful conversations with colleagues and mentors, inspired by the work of others, and enriched by the feedback received on multiple iterations over time.[7] My dissertation owes much to this collaboration. However, any absences or inaccuracies are my sole responsibility. Like any piece of writing, it represents a partial vision. Furthermore, some aspects, perhaps central were left for future investigation —such as in-depth discussions on trust when examining money or expanding my analysis of 'informality'—, not because they lack importance,

[7] I am deeply grateful to Marie McDonald for her careful proofreading of this Introduction.

but because every dissertation is a work in progress, constrained by time and resources, and guided by the interests and curiosities that shaped more saliently my choices as its author.