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Challenging the dominant narratives of a Digital Financial Inclusion

By

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Abstract

Challenging the dominant narratives of a Digital Financial Inclusion

by

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'Financial Inclusion' has over the years assumed a central role in poverty alleviation by connecting the materially poor with formal financial services. Access to these formal financial services is expected to help the poor manage their erratic income streams and thus manage their day-to-day and critical expenses. In this way, the financial inclusion narrative assumes that the poor around the world are a homogeneous population that suffers from a universal condition of 'financial exclusion'. In this scenario, informal finance is considered to be sub-optimal, expensive, and unpredictable. Yet researchers have begun to challenge this formal/informal, and consequently the inclusion/exclusion (false) dichotomies. I maintain and extend this intellectual tradition in this dissertation within the context of a digital financial inclusion paradigm.

With the growing popularity of mobile money in the developing world, and its ability to connect the poor to financial services, the financial inclusion agenda is becoming increasingly digitized. Mobile money now constitutes a type of formal financial access that preserves and further normalizes the assumptions made about 'formal' and 'modern' financial services and their ability to help the poor. I interrogate these simplistic assumptions of a digitized financial inclusion paradigm. In general, the mobile money narrative prioritizes its technological innovations and its ability to create and sustain a cashless society while sidelining the broader infrastructure(s) that helps accomplish the challenging task of managing the poor's unique and precarious cash flows. This narrative also renders invisible the human work that goes into making financial inclusion work for the poor. I challenge these prioritizations and focus instead on the less glamorous aspects of mobile money and how it can help the poor manage their precarity. I also demonstrate the politics of financial inclusion and how misguided policies in its name can fail to accomplish their stated goals, or worse have unintended consequences that actually hurt the poor rather than help them. The 2016 Demonetization event in India provides the ideal research context for this. Eventually, the goal of this dissertation is to develop a more circumspect, and therefore meaningful, analysis of financial inclusion, especially when considering the persistent precarity of poverty.

CHAPTER 1

Introduction: Poverty, Precarity, and (Digital) Financial Inclusion

> "In just the past six years, 1.2 billion million people worldwide have gained access to bank and mobile-money accounts. This revolution in financial inclusion has the potential to offer a pathway out of poverty for hundreds of millions of people, and to spur broad economic growth."

> - (Bill & Melinda Gates Foundation, n.d.)

1. 'Financial Inclusion': The Emergence of a Hazardous Concept

I begin my dissertation with an ode to Leo Marx's important work on the emergence of the term 'technology' as a "hazardous concept" (Marx, 2010). In this piece, Marx systematically traces the history of the word 'technology' and how it has come to be used and referenced in public discourse, leading to its "discursive" (rather than physical) hazardous character. Marx notes that this historical semantic and conceptual trajectory exposes how we have come to attribute a seemingly rational "autonomy and agency" to technology that contributes to its continued reification (ibid, pp 983-984). This, in turn, obscures the socioeconomic and political relations that determine the use(s) of these technologies in the first place.

I do not attempt a similar historical trace in this dissertation, but I do implicate the analogous discursive hazards that the 'financial inclusion' paradigm suffers from. This paradigm "pivots on the concept of inclusion with its powerful connotations" (Schwittay 2011, p. 395). The concept of 'inclusion' with its implications of harmony, welfare, and enfranchisement imbues the word with "persuasion and allure" (ibid, p. 395). In international development, the term 'inclusion' implies a bringing in of excluded individuals, households, and communities into an external system; and with its positive, uplifting connotations, a bringing in into a *superior* system, exclusion from which would certainly be an undesirable outcome. Take a look at this sentiment expressed by James D. Wolfensohn, the erstwhile president of the World Bank, in his address to the board of governors in Hong Kong in 1997. He is referring to his visit to a World Bank funded water and sanitation project in Brazil, which, at the time of his visit, was fully self-sustaining and a successful collaboration between the local community, the local NGOs, and the private sector. He says,

> "As I walked back down the hill from that favela, I realized that this is what the challenge of development is all about – **inclusion**. Bringing people into society who have never been part of it before. This is why the

World Bank Group exists. This is why we are all here today. To help make it happen for people." (p. 205, *emphasis mine*)

Clearly, the term "inclusion" is seldom used in a negative sense, be it in our everyday conversations or in international development circles. There is this moral unassailability when discussing 'inclusion' that can easily obscure its many undesirable outcomes – outcomes that may be born of coercion and use of force to 'include' for instance, that I discuss in more detail later in this chapter. Such a tendency to obscure can lend policy legitimacy to overtly simplistic development interventions that seek to 'include' marginalized populations. Cornwall & Brock (2005) look at "feel-good" terms in international development that have evolved over time into mainstream buzzwords and that signify meanings that are increasingly divorced from their historical origins. These "fine-sounding words" (such as 'empowerment' or 'participation' or even 'inclusion') come to mean something specific (for instance, an imperative to 'include'), while anything other than these meanings become almost implausible to imagine (for instance, a willful exclusion). Consequently, buzzwords, as *words* can become critical to formatting specific one-size-fits-all solutions to poverty. Yet letting such solutions flourish without engaging with "context or culture, politics, power or difference" does more disservice to eliminating or mitigating poverty, than not (ibid, p. 19). It further naturalizes one solution as the *only* solution while claiming that no other paths need to be pursued.

'Financial Inclusion' as a concept has certainly achieved buzzword status in the international development and banking sectors while retaining much, if not all, of the positive associations of 'inclusion'. Marcus Taylor observes that financial inclusion has become a "central trope" in international development and points to the construction of a discourse that increasingly establishes it as a "global moral imperative" (Taylor 2012, p. 601). Still, discursive framing (and how meanings are contested and negotiated in different spaces) is one of the many different factors that can shape broader policy agendas in invisible ways. It is with this as a starting point, that I want to establish the financial inclusion agenda that has come to naturalize the relationship between access to the formal financial landscape and managing poverty, with the intent of challenging it through the remainder of this dissertation. I demonstrate how exclusion from being 'financially included' is considered decidedly objectionable not only because of its discursive legacy but other exercises in power and control, as well as an ongoing reliance of the international development sector on technical (and technological) solutions.

I focus my energies in this dissertation towards disabling some of this buzzword status that continues to justify simplistic financio-technical solutions to what are in fact socio-political problems. My intent is to develop a more circumspect, and therefore meaningful, analysis of financial inclusion, especially when considering the persistent precarity of poverty. But before that, in this chapter specifically, I begin with tracing the history of financial inclusion within the international development world, and how it has come to be operationalized. I then investigate the growing inextricability of financial and technological inclusion, and how mobile money has come to represent the key to accomplishing financial inclusion in the developing world. This has transformed the rubrics of how financial inclusion should be realized; namely, achieving 'formalization'

through increased digitization, effecting a growing reliance on technology and thus eliminating the 'inefficiencies' of human labor, and limiting cash usage (and improving digital cash usage) towards realizing a 'cashless' society. I question what such a formatting obscures and what it enables in policy making and governance. I conclude with the contributions that this work represents for the understanding of poverty and money management, and a summary of the next chapters and the broader research questions they will be seeking to answer.

2. Poverty & Precarity: A life of vulnerability lived by the urban poor

> "Poverty is many things, all of them bad. It is material desperation and deprivation. It is lack of security and dignity. It is exposure to risk and high costs for thin comforts. It is inequality materialized. It diminishes its victims."
>
> - Appadurai 2004, p. 64

A dissertation on financial inclusion will crash and burn if it fails to communicate the constant precarity and insecurity of poverty (or what Jerome Binde (2000) calls the "tyranny of emergency") that the financial inclusion agenda purportedly seeks to manage. The defining condition of poverty is uncertainty – an uncertainty that is chronic, rather than stochastic (Wood, 2003). Certainly, we all suffer from uncertainty, from 'precariousness', that speaks to the fragility of the human body. Where this precariousness is a universal human condition, 'precarity', on the other hand, is unevenly distributed (Butler, 2010). The critical theorist Judith Butler goes on to observe that precarity is a "politically induced condition in which certain populations suffer from failing social and economic networks of support and become differentially exposed to injury, violence, and death" (ibid, p. 25). It captures both the physical and existential fragility of these vulnerable populations that is exacerbated by an almost willful disregard by the very social and political institutions that are meant to protect them (Santos, 2001). A life of precarity then is a life without the promise of stability (Tsing, 2005).

Since the early twenty-first century, understanding poverty through the lens of *precarity* (and relatedly, through the lens of "inequality, social justice, and class antagonism") has gained a renewed traction (Korte & Regard, 2014). I focus on precarity to better analyze and communicate the chronic poverty conditions of my respondents – that is the urban poor who face very specific poverty challenges. In general, the materially poor in large cities are more prone to finding casual, rather than more long-term, employment[1]. This comes with its own transaction costs of sourcing and staying in work, which in turn affects the overall welfare of urban poor households (Ruthven, 2002). The term 'precarity' has been generally used to implicate sub-standard working conditions and

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[1] This growing casualization of labor correlates with the growing feminization of the labor market as well, specifically in India (Barrett & Beardmore, 2000).

decreasing protections for vulnerable populations under a neoliberal agenda[2] (Standing 2011; Low 2018). Labor studies research has pointed to many different aspects of work that can make it 'precarious' – a lack of permanency, power, and control (especially over hours of work and scheduling), resistance to unionization, and prone to low remuneration/wage labor (Ross, 2017). such precarity in work can bear profound social and economic consequences. Low, erratic incomes translate to an inability to save and generate lump sums, and thus find oneself mired in a tenacious debt cycle. It means procuring goods and services at a higher price (for instance, paying substantially more when buying goods and services piecemeal, rather than in bulk which low incomes do not allow for). It means constantly worrying about the stability of your current job (or jobs) and how you will meet basic and emergency expenses. It means suffering from physical and mental strain when dealing with this chronic uncertainty, that in turn impacts material and psychological welfare.

In general, the materially poor face extreme challenges in managing their income streams with their expenditures. However, this can be exacerbated for the urban poor in specific conditions. Not only do the urban poor have to manage with limited income, they also have to frequently deal with the vulnerabilities of erratic wages, often a consequence of being casually or seasonally employed in the informal economy. Collins et al refer to this commonality of low-income, irregularity and unpredictability, and the lack of suitable financial tools to overcome these, that the poor across the world tend to face, as the "triple whammy" that makes money management and generating lump sums that much more challenging (Collins et al, p. 16). This triple whammy means that the poor rarely make enough to buy food and other basics, while investing in big-ticket expenses, such as schooling for their children or accumulating capital to address emergencies, becomes considerably harder. Unplanned expenses may be incurred due to sudden emergencies. Of these, health shocks remain a particularly grievous form at the household level - not only is there a loss of income as the sick member is now unable to participate in productive work, but there may be additional costs associated with medical expenses and convalescence that need to be fulfilled. Having access to lump sums of money at these junctures, in the form of credit, savings, or insurance can be invaluable. This is known as "consumption smoothing", a term we often encounter in the literature, especially in economics literature[3], that may not lead to immediate income gains, but is critical in enabling poor households to cope with daily risks and external shocks (Taylor, 2006).

Still, it is worthwhile to take a step back and assess if the provision of lump sums to meet these consumption shocks is an adequate solution, or is it, instead, symptomatic of how poverty has been reduced to a "financial problem" (Schwittay 2014, p. 509). The financial inclusion agenda casts poverty as a problem of lack of capital, instead of the structural and political problem it really is that generates an unequal and unjust distribution of resources (financial and otherwise) across society. Such a formatting of the poor's lives as only "financial lives" legitimizes the financial inclusion imperative as

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[2] In fact, the *precariat* (a portmanteau of 'precarity' and 'proletariat') is considered a social class in Sociology and Economics that is born of the neoliberal conditions of instability and unpredictability in employment, residence, and/or citizenship (Standing, 2014).

[3] For instance, see Jonathan Morduch's 1995 paper on income and consumption smoothing.

access to "poor-appropriate formal banking instruments" at the cost of confronting and tackling the structural genesis of poverty (ibid, p. 509). Thus, the "financialization of poverty" leads to development interventions becoming *financialized* as well in a bid to solve what is assumed to be the defining condition of poverty – a lack of capital. Yet, as I argue throughout this dissertation, if we consider the defining condition of poverty to be *precarity* instead, then we can start to challenge the neoliberal agenda of financial inclusion that aims to connect the poor to 'formal' financial services, as well as accommodate the many creative ways in which the poor manage their own precarity 'informally'. Where structural solutions continue to be sidelined, the existing financial inclusion agenda, and its increasing correlation with technological inclusion, can often hurt the poor more than it helps them. I describe these financial inclusion and technological inclusion agendas as well as their dominant narratives next.

3. The Rise of Financial Inclusion in International Development: A Brief History

But first there is a need to better understand the paradigm shift in the development sector that saw practitioners and scholars moving from endorsing isolated instances of the microfinance movement around the world (especially the developing world), to supporting the growing call for building more inclusive financial sectors (United Nations 2006). Microfinance, or more specifically microcredit, is the practice of giving very small loans to low-income populations for entrepreneurial purposes. It grew out of small experiments in the late 70s and early 80s in Bangladesh and the Dominican Republic that aimed to provide small loans to low-income populations for entrepreneurial purposes, eventually burgeoning into a global industry (Roodman 2012). The "Grameen Model" in Bangladesh, under the leadership of Muhammad Yunus at the Grameen Bank, was particularly popular – its unique characteristics included lending to poor, rural women as they were less likely to default on repayments, and to small groups as a collective to enable a peer-based screening and liability process that functioned as social collateral (Hulme 2008, p. 4). In its initial days, the Grameen Bank coasted on its extraordinary success and relied almost exclusively on foreign donors to provide subsidized microcredit to its poor borrowers (Hulme 2008, p. 5). By the 1990s, the Grameen model was being exported overseas, thanks to the growing buzz in the industry and, as Hulme suggests, to the concerted efforts of experienced lobbyists. Soon, microcredit was being hailed as a "human right" in international development circles (Hulme 2008, p. 6).

Hulme lays out the evolution of the Grameen Bank, as it transitioned from a "poverty lending" approach to a more "financial systems" approach in a bid to make itself financially sustainable (Hulme also suggests that this transition went unnoticed by many). Essentially, influential promoters like the Consultative Group to Assist the Poor (CGAP)[4] pushed for the inclusive financial systems approach that "professionalized" and "commercialized" the poverty-lending approach into for-profit corporations. Thus, they could now be profitable and attract more capital, thereby moving away from its

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[4] CGAP was initially set up within the World Bank to help support microfinance institutions in providing financial services to the poor. It was eventually spun out as a consortium of donor agencies and microfinance practitioners trying to accomplish the same goals.

dependence on foreign donors. In this way, they were now able to focus on building "strong institutions" as opposed to merely lending out small volumes of money to discrete groups and individuals (Helms 2006, p. 5). Furthermore, there was a growing acknowledgement of the need of a diverse suite of financial services that extended beyond microcredit; these included not only a range of different forms of credit (from emergency loans to entrepreneurial loans as well as consumer credit), but also savings, deposits, and insurance services, which prompted a transition from "microcredit" to the more expansive term of "microfinance". Still, a United Nations report on building inclusive financial sectors found that the term "microfinance" was also inadequate (United Nations, 2006). As more and more retail financial service providers entered into the market to service low-income populations, such as NGOs, private commercial banks, state-owned banks, and credit and savings cooperatives/unions, the term "microfinance" was unable to capture the minutiae of this complex machinery that was no longer isolated to servicing small, discrete groups, but was instead gradually starting to integrate with the larger formal financial system. The United Nations report instead prefers "inclusive finance" that is described as a continuum of financial service providers offering a diverse suite of financial services and products to poor individuals and micro/small enterprises. Microfinance, and also microcredit, remains only one, although certainly the most talked about, part of inclusive financial systems as they are developing around the world today (United Nations 2006, p. 5).

Taylor suggests that the concept of financial inclusion is the "hallmark of the drive to commercialize microfinance" (Taylor 2006, p. 602). Therefore, the broad understanding of inclusive financial systems does reasonably correspond to what is understood of financial inclusion as well, in that there is a common underlying emphasis on attenuating the widespread problem of 'financial exclusion'. Yet 'financial inclusion' as a buzzword has certain cachet in the development and policy circles that 'inclusive financial systems' is unable to match. Taylor goes on to observe that financial inclusion "remains a powerful legitimizing narrative" that essentially combines two types of imperatives – the "moral imperative" to include within the formal financial landscape those that remain outside of it, and the "development imperative" that seeks to mitigate the everyday vulnerabilities of poor households and individuals as they try to balance irregular income streams with both fixed and unplanned expenditures (Taylor 2006, p. 604). This narrative, Taylor further claims, constructs an "object of development" - that is the financially excluded populations - who are denied access to suitable financial products and services that would otherwise, supposedly help them overcome the very present challenges of persistent poverty (p. 602).

This narrative of the transformational potential of financial inclusion is certainly seductive. Consider this quote by Kofi Annan, the erstwhile Secretary-General of the United Nations, in a press release in 2003 as he sets the stage for observing 2005 as the "International Year of Microcredit"[5]. He says,

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[5] This quote comes before the 2006 United Nations report that observed that the term "inclusive financial systems" encapsulated the financial inclusion drive that was underway much better than "microfinance" or "microcredit" could. Still, this vocabulary remains imprecise and the terms continue to be used either interchangeably or in ways where financial inclusion is defined entirely as

"Sustainable access to microfinance helps alleviate poverty by generating income, creating jobs, allowing children to go to school, enabling families to obtain health care, and empowering people to make the choices that best serve their needs. The stark reality is that most poor people in the world still lack access to sustainable financial services, whether it is savings, credit or insurance. The great challenge before us is to address the constraints that exclude people from full participation in the financial sector. The International Year of Microcredit offers a pivotal opportunity for the international community to engage in a shared commitment to meet this challenge."

- (United Nations, 2006)

This statement reflects some of the deep misgivings of development scholars and practitioners about the systematic exclusion of the poor from mainstream financial systems; an ostensibly homogenous condition that perpetuates poverty by denying the poor an opportunity to participate in productive activities or to better manage their financial shocks.

Thus, gaining access to appropriate financial products and services is essential in helping poor households and individuals manage risk, and the narrative of financial inclusion certainly speaks to this. Of course, the simplistic (and measurable) outcome of this narrative is pushing for the ownership of bank accounts in formal institutions. Take a look at the 2011 Global Financial Inclusion database (or the Global Findex), a set of indicators that measures how individuals in 148 countries "save, borrow, make payments, and manage risk" (Demirgüç-Kunt & Klapper 2012, p. 1). An analysis of this database by researchers at the World Bank begins with the extolling of "well-functioning financial systems" and ends up becoming a conversation on the access and use of formal bank accounts (Demirgüç-Kunt & Klapper 2012). The research paper lists out the many barriers to access that the poor face on a daily basis: these include physical, bureaucratic, and financial barriers. In general, the poor find it unaffordable to maintain bank account (financial); they must commute long distances, especially for those living in rural areas (physical); and they face eligibility hurdles, such as stringent documentation requirements (bureaucratic). Furthermore, formal borrowing and insurance is rare in the developing world (Demirgüç-Kunt & Klapper 2012).

The World Bank researchers (and the Global Findex database) do point out that poor individuals may often choose to rely on informal financial services and products in conjunction with, or even as an alternative to, formal banking. Yet, the World Bank, and many other actors in international development and policy circles, still tend to define financial inclusion as "the use of formal financial services" (Allen et al 2012, p. 2; see also Hannig & Jansen, 2010). Efforts in the space are related to mitigating the barriers to accessing these 'formal' financial services which would then (presumably) empower poor individuals and households to balance their incomes and expenses and eventually help

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access to formal bank accounts (and just that). Direct quotes from academic and grey literature will often reflect this.

them cope with the daily vulnerabilities of poverty (for instance, see Thorat, 2006; Gwinner et al, 2006). Of course, relieving these barriers to access does not necessarily translate into actual usage of bank accounts at formal institutions (Morawczynski et al, 2010). However, this nuance is being accounted for sporadically when attempting to measure "financial inclusion" (for instance, see Hannig & Jansen, 2010).

4. Financial Inclusion: A Technical Solution to a Political Problem?

Still, it is certainly worth asking this question about the financial inclusion phenomenon – is it eventually only a technical solution to what is in fact a political problem? Does this excitement around connecting the poor to bank accounts and other financial products and services relegate the more difficult conversation of why they are poor to begin with? Anke Schwittay suggests that this is indeed the case. She says,

> "In a similar vein, the rhetoric of financial inclusion and its emphasis on technical solutions, such as better savings products and delivery channels, mask the political sources of global poverty and thereby also sideline discussions about necessary structural changes."
>
> - (Schwittay 2011, p. 396).

In another paper, Schwittay argues that this financial inclusion rhetoric has reduced poverty to a "financial problem" which can now only be addressed through "financial means" (Schwittay 2014, p. 509). Schwittay briefly invokes James Ferguson's work (1995) on the technicalization of the development apparatus in Lesotho (and, as he suggests, everywhere) to support her stand. In his classic work, Ferguson argues that this development apparatus systematically reduces what are essentially structural problems to "simple, technical problems"[6] (Ferguson 1995, p. 87). He goes so far as to suggest that in the case of Lesotho the problems at hand were "invented or highlighted" for the very purpose of supplying them with technical solutions that are themselves a product of the constraints within which development agencies function. Eventually, Ferguson contends that development interventions remain a standardized operation that is profoundly apolitical in nature, thereby effecting very little real change (Ferguson 1995, p. 69). Mitchell provides a similar analysis in his compelling work that traces the American development industry's discourse of Egypt (Mitchell, 1991). He suggests that the evocative images of the Nile River surrounded by the vast deserts and the large populations crowding within its banks immediately designate the object of development as well as the apparently obvious solutions offered by the development industry; these images of an exploding population confined to a narrow agricultural area are touted as the "natural" cause of Egypt's food shortage.

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[6] Examples of technical problems include lack of education, lack of infrastructure (including technological infrastructure), lack of markets, and lack of credit etc, as opposed to political and social problems of unemployment, low wages, inequality, and political subjugation amongst others (Ferguson , pp 87).

In fact, Mitchell observes, what these images should speak to are not the limits of the happenstance of geography and nature (which justified the simplistic "technological and managerial" solutions offered by the development industry), but of systematic social inequities in Egypt. These inequities were born of the prevailing international and domestic regimes that compelled Egypt to produce cash crops and fodder for commerce instead of focusing on staple foods. Of course, the roles of the state and the international development agencies were conveniently hidden from sight in these standard, self-contained images of Egypt that further reinforced their participation in the rising food shortages and indebtedness. Mitchell concludes by implicating the self-representation tactics of the development discourse – "to present itself as a detached center of rationality and intelligence" (Mitchell 1991, p. 33). To preserve this, development agencies have to treat objects of development as self-contained objects (and thus completely external to themselves) that continue to sidelines political questions of power and inequality, and more importantly, the complicity of development organizations in this process.

More recently, Tania Li specifies the two key practices that translate the "will to improve" or development objectives into actual programs: "problematization" and "rendering technical" (Li 2007a, p. 7). While problematization is the practice of identifying deficiencies, Li notes (and Ferguson has also noted previously) that this is closely linked to the types of solutions that the development industry can offer at that point. Thus, the practice of problematization is not separate from the practice of defining the "knowable" boundaries of the problem at hand, itself limited by the expertise and techniques available, or what Li calls "rendering technical". Li goes on to say, in the same vein as Ferguson and Mitchell, that this practice of rendering technical simultaneously renders these development questions as "nonpolitical" (ibid, p. 7). Still, Li offers a balanced view for this continuing development challenge; she recognizes that development initiatives may be sincere in intention as opposed to *necessarily* being driven by hidden motivations of profit or domination. Li contends that such an analysis is narrow and shifts the focus from the potential benefits of these development initiatives[7]. Instead, she suggests focusing on the very practices that render these essentially political questions into mere technical ones.

What Schwittay (2014) is essentially arguing in her paper is similar to the above lines of thought. She observes that this recasting of the problem of poverty into a *financial* problem, that is the "financialization of poverty", inspires and legitimizes *financial* solutions. While poverty is of course a problem of the lack of income or consumption, it is not *just* that. For instance, Amartya Sen, in his important work on freedom as the primary end (and means) of development, argues for the need to look beyond income

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[7] Stuart Corbridge provides a similarly sympathetic view in his account of development studies and its need to strike a balance between critical analysis and a strong commitment to public policy decisions (Corbridge, 2007). One of the points he makes about post-developmentalists (more specifically, the highly influential work of Arturo Escobar (1995)) is that this view of development as "mal-development" discounts the many advances that were accomplished during the "Age of Development" – these include improvements in global life expectancy and the rise of industrializing countries. He concludes this thought by calling the outright rejection of developmentalism as "naïve" (pp 190).

analysis when studying poverty (Sen, p. 72). Real incomes, he continues, is only a limited guide to welfare and quality of life. Schwittay further notes that this financialization process reduces poverty to a homogenous, universal condition that enables specific interventions of a "financiao-technical nature" (Schwittay 2014, p. 510). In a separate article, Bill Maurer echoes this argument by pointing out that the financial inclusion paradigm frames the world's poor as undifferentiated, homogenous "consumers"[8] (Maurer, 2012b). In other words, financial inclusion and profitability are inextricably linked. Thus, the stage is set for the "financialization of development", that is the practice of integrating low-income populations into global financial markets (Schwittay 2014, p. 510, citing Roy 2010, p. 31). This practice of financialization is not merely restricted to offering financial services to the poor and thus generating wealth, it is also intimately tied with the practice of reproducing knowledge about poverty alleviation within the development industry[9]. This is reinforced with every *financial* intervention and thus eventually emerges as legitimate and unassailable (Roy 2010).

5. "The Antinomies of Financial Inclusion": Reassessing the promise of 'inclusion'

I borrow this section header from Marcus Taylor's insightful piece on the legitimizing narrative of financial inclusion that continues to obscure some of the critical contradictions emerging from its practice (Taylor, 2012). Taylor provides a useful history of the rise of financial inclusion in the international development sector alongside the advent of contemporary commercial microfinance. Rather tellingly, Taylor's paper turns out to be a paper on microfinance more than it is about financial inclusion – just another instance where the discourse on microfinance ends up overwhelming the discourse on financial inclusion, something Taylor acknowledges in his paper. Indeed, microfinance is the poster child of the financial inclusion movement, even as development institutions, NGO networks, policy makers, and academic circles continue to work towards a variety of poor-appropriate financial services and delivery channels to include the "excluded" in the broader financial landscape. However, few other poverty-alleviation *financial* tools and services have received as much widespread attention as microfinance, and especially microcredit, has. As I have described previously, the microfinance discourse has normalized over time by creating a self-contained object of development, that is the "financially excluded" (Taylor, 2012); through the efforts of an active lobby that led to its commercialization over time (Hulme, 2008); by integrating into the international development community's favored economic and social model of development (Bateman & Chang, 2013) that in turn recycles simplistic "financio-technical" interventions (Schwittay, 2014); and by ignoring the growing critique that is antagonistic to the "magic bullet" narrative of microfinance (Bateman, 2012).

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[8] This, of course, is in the aftermath of C.K. Prahalad's revolutionary formatting of the poor at the "bottom of the pyramid" as active consumers, that has so greatly influenced the international development community ever since (Prahalad, 2009).

[9] Roy further notes that microfinance as a development idea was conceived in the Global South, which was eventually appropriated by development institutions in the Global North (particularly, CGAP). This is a rare development phenomenon where knowledge (about microfinance) is produced in equal measure by the World Bank in Washington DC as it is by the Grameen Bank in Bangladesh (Roy 2010).

Indeed, microfinance has been at the receiving end of extensive critique over the years. While the success stories of microfinance in women's empowerment and in poverty alleviation through encouraging small business have established its positive reputation in the development industry, there have been conflicting reports about whether or not it actually "works" (Roodman, 2012). Of course, Roodman does observe that the diversity of poor populations around the world makes it impossible to provide a simple yes or no answer to that question (ibid, p. 172). Still, critics have pointed out that many "entrepreneurs" born of microfinance have little or no specialized skills and often use their credit or savings for consumption purposes instead (Kalpana, 2005). Further, they have called into question the "collective solidarity" of the microfinance model which eventually remains just another form of top-down financial disciplining (Taylor, 2012; Karim, 2011). They have also questioned the simplistic gendering of microfinance; that is the making of the "bad men" that waste their money on alcohol and other irrational pursuits and the romanticized "good women" whose nurturing ways enable them to launch successful microenterprises and thus lift entire families out of poverty (Young, 2010; Rankin, 2001; Karim, 2011). Perhaps, some of its most severe criticism has been levied at the intimate relationship between neoliberalism and the microfinance model that pushes for individual entrepreneurship rather than state or cooperative-led economic activity (Bateman & Chang, 2013). In another paper, Bateman contends that "the basic microfinance concept has effectively now been debunked" (2012, p. 595).

Despite these growing criticisms, Bateman (2012) points out that sympathizers of the microfinance movement continue to be rewarded in a bid to preserve its position as a poverty alleviation tool in the international development community. As the beloved financio-technical solution in equipping the financially excluded with appropriate financial products and services, the microfinance narrative is thus conflated with the financial inclusion narrative. Tropes that are specific to microfinance, such as the "repressed entrepreneur" (Taylor 2012, p. 603) and the "moral woman" (Young 2010, p. 207), overwhelm the broader financial inclusion discourse. This obscures the many other initiatives that are happening in the name of financial inclusion in the international development community. Therefore, in attempting to (re)define and better understand financial inclusion, it is imperative that we consider not only the diversity of financio-technical interventions that are aimed at including the financially excluded (including the hoary behemoth that is mobile banking which I discuss later) but also aim to construct a more nuanced and specific critique of it. To this end, Marcus Taylor does attempt a critique of financial inclusion (before focusing almost entirely on microfinance) by problematizing the core dichotomies on which the financial inclusion paradigm is built: these are the inclusion/exclusion and formal/informal dichotomies.

5.1 The Inclusion/Exclusion Dichotomy

I have mentioned earlier that the financial inclusion rhetoric is legitimized by its construction of an "object of development" – the "financially excluded" (Taylor 2012, pp 601). This condition of exclusion is homogenized and demonized to the extent that

"inclusion" suddenly seems like the panacea for the problems of the poor. Such a homogenizing narrative misses the advantages of exclusion or the perils of inclusion. For instance, Burrell (2016) notes that being "included" brings low-income populations into relationships with monolithic banking institutions where "long queues and red tape" significantly diminish their use. Similarly, Taylor (2012) notes that the poor (or the so-called "repressed entrepreneurs") are often pushed into entrepreneurial ventures, despite the lack of skills or techniques to manage them successfully, in order to gain access to lump sums of credit. Taylor further observes that the notion that the unbanked are necessarily "excluded" if they do not participate in the formal financial landscape is disingenuous. He points to households in rural South India that are in fact "comprehensively included in credit/debt relations through a variety of sources, ranging from family and kin to moneylenders, merchants, landlords and formal sources" (ibid, p. 604). He argues that understanding the workings of these concentrated debt relations is a far more relevant problem to ponder for the financial inclusion paradigm. Unfortunately, normative assumptions of financial inclusion reject these "informal" credit/debt relations. I turn to the formal/informal dichotomy next.

5.2 The Formal/Informal Dichotomy

As mentioned previously, the financial inclusion narrative is frequently reduced to access to *formal* financial services. Normative assumptions about this lead to simplistic metrics that attempt to calculate the extent of "financial inclusion" by counting the number of bank accounts opened or the amount of loans taken out by unbanked, low-income populations (Burrell, 2016). These assumptions celebrate the "ordered rationality" of formalized financial services and reject the "particularism" and "arbitrariness" of informal financial relations and practices (Taylor 2012, p. 608). Yet there is a growing call for these crude categorizations to be revised (Guha-Khasnobis et al, 2007). Certainly, these constructed opposites of the formal-informal dichotomy have been a source of debate in the development discourse for a long, long time. It was Keith Hart who first coined the term "informal economy" which he defined as an ecosystem of self-made economic activities and casual labor that mostly operated outside of the legal infrastructure (Hart, 1973). This was likely in response to analogous, although pejorative, terms that were used to describe these activities previously – terms such as "underground", "hidden", and the "black economy". Indeed, the informal sector has long been criticized for being "chaotic" and "unstructured", thus enabling policy makers to defend their formalizing interventions that sought to correct these alleged characteristics (Guha-Khasnobis et al 2007). Often this had disastrous results (for instance, see Ives and Messerli's 1989 book on the nationalization of the forests in Nepal that eventually backfired; also see Ostrom's 1990 book for an account on how communities can successfully self-organize and mutually monitor access to common-pool resources without the formalizing rules imposed by state intervention).

Lipton (Guha-Khasnobis et al 2007, p. 3, citing Lipton, 1984) defends the informal sector by debunking the many reasons that have been put forward to discredit it. He calls the forced binary of formal and informal as a "misplaced dualism", arguing that such clear a

demarcation does not in fact exist in practice. If anything, in reality, there is a formal-informal continuum (of course, Lipton is quick to acknowledge that this contrived binary can nevertheless be extremely useful for analytical purposes). Further, he observes that the relationship(s) of the informal sector with the larger economy is seldom investigated. Finally, he points to the continuing confusion around what exactly the characteristics of the informal sector (or for that matter, the formal sector) are. It has been argued that "formal" and "informal" might be better conceived of as "metaphors that conjure up a mental picture of whatever the user has in mind at that particular time." (Guha-Khasnobis et al 2007, p. 3).

The financial inclusion discourse has contended with these themes as well. Informal financial practices have long been criticized for pushing the poor deep into generations of debt at the hands of usurious moneylenders. While partially true, this limited narrative nevertheless claims that where the formal financial system has been unable to address their needs, the poor have been forced to resort to informal means that have been thought to be "unreliable, insecure, expensive, and prone to relations of dependency and potential violence" (Taylor 2012, p. 603). In contrast, formal financial services have been extolled as reliable and regimented with clearly established means of legal recourse if necessary. Indeed, Clifford Geertz predicted, as early as in the 60s, that the rotating credit association (a type of informal credit service that he calls an "intermediate socializing institution") would eventually be replaced by "banks, cooperatives, and other economically more rational types of credit institutions" (Geertz 1962, p. 263). Instead, they continue to be used extensively in the developing world. There continues to be growing evidence that low-income populations use informal financial services *alongside* formal financial services (for a comprehensive account of the formal and informal financial practices of the poor, see Collins et al 2009). In fact, Taylor argues that formalized arrangements may conceal certain disquieting practices that are yet justified through their representation of being "rational" (Taylor, 2012). Taylor points to the "formalized" microfinance model in India that obscured the prevalence of wanton coercive practices, eventually precipitating the microfinance crisis in Andhra Pradesh (ibid p. 608). In much the same way, informal financial practices may develop norms and rules over time that can lend structure and predictability to their forms, thereby making them less "social", more "rational", less "solidary", and more "individualistic" than is assumed of them (Maurer 2012a, p. 418). A more nuanced understanding of these multifaceted financial practices would recognize the challenge in strictly isolating the characteristics of formal financial practices as well as of their alternatives. Bill Maurer acknowledges this complexity by stating:

> "People do not "do" one mode of finance or another mode of finance;
> they productively engage in and perform a plurality, thus blurring the
> line between alternative and dominant, formal and informal,
> embedded and disembedded, or any of the other familiar dichotomies
> that have animated so much critical scholarship on economy and
> finance." (Maurer 2012a, p. 415)

More and more scholars are beginning to reject these false dichotomies. Instead, they are recognizing that different types of institutional arrangements work in different contexts,

and that this is imperative in ensuring workable solutions in our development efforts. Consequently, one-dimensional strategies that forcefully impose formalized rules on informal arrangements, financial or otherwise, can have catastrophic results.

6. 'Digital' Financial Inclusion: The Birth of the *Magical* Mobile Money Narrative

> "Mobile money is changing mobiles, money, the people who use and transform both, the people and institutions that set out to foster financial inclusion and, possibly, the paradigm of financial inclusion itself." (Maurer 2012, p. 600)

It is impossible to expound on financial inclusion for so long without bringing in the explosive phenomenon of mobile money into the conversation. Mobile money is a technology that allows people to store and transact money using a mobile phone. While it is fast gaining popularity the world over, I focus on mobile money in the developing Global South where its design, goals, and implementation is decidedly different than that in the Global North. Mobile money first entered the larger public's consciousness in 2007 after Safaricom, Kenya's largest mobile network operator, piloted an "innovative payment service for the unbanked" with encouraging initial results (Hughes & Lonie, 2007). M-Pesa registered over 20,000 customers within the first month of testing – far more than that was anticipated. The uptake did not stop there – today M-Pesa is used by at least one member in 96% of the households across Kenya (Suri and Jack, 2016). Initially conceived of as a microfinance repayment tool, Safaricom redesigned M-Pesa as a remittance pool based on user feedback; these users were mostly economic migrants who came to Nairobi to work and regularly remitted money back to their hometowns/villages. In the absence of robust brick-and-mortar banks, leveraging an existing network of airtime retailers for cash-in/cash-out, and basic feature phones for transacting was a great opportunity for bringing formal financial services to under-served areas[10]. Although often presented as the first of its kind digital financial service in the developing world, M-Pesa actually debuted around the same time in 2007 as six other similar services across four countries in the East Asia and Pacific region (GSMA 2017). However, M-Pesa's unprecedented success was so dramatic that it was, and still is, frequently presented as unassailable evidence of mobile money's transformative effect on the "unbanked", especially in the aid sector. The excitement around mobile money has steadily escalated since then, itself a product of the rapid diffusion of mobile phones in the developing world and their potential in achieving social and economic development (Maurer, 2012).

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[10] To elaborate, the conversion of cash to digital currency (cash-in) and vice versa (cash-out) happens via an agent network. This agent network is generally comprised of local mom-and-pop stores whose primary business is often selling airtime, small grocery items, lottery tickets etc. Once the digital currency is in their wallets, mobile money users can now transact from the comfort of their homes.

However, as Mas & Morawczynski (2009) point out, M-Pesa has had a somewhat unique run in this space with its early competitors (such as the Tanzanian M-Pesa and South African Wizzit) lagging far behind in terms of uptake and adoption. They point to an almost perfect combination of factors that led to its stunning success. For starters, Safaricom's dominant market presence in the Kenyan telecom sector and thus its branding and signage fostered an institutional trust that helped initial uptake. Moreover, Safaricom also closely monitored the M-Pesa customer experience at the retail agent points which helped amplify this trust and confidence in the service. Kenya's regulators also took a rather progressive stance and relaxed a lot of their guidelines in order to let M-Pesa flourish. Furthermore, Kenya witnessed post-election violence in 2007 that greatly restricted the movement of people and goods around the country for a couple of months as arterial roads were blocked and parts of the railway system were vandalized (Morawczynski, 2009). Many M-Pesa agents chose to keep their shops open even as banks and MFIs remained closed. Its services were thus tested – successfully – during a time of insecurity and turmoil which further strengthened its position in the market. Clearly, M-Pesa was fulfilling a very real need within the Kenyan context. Yet its spectacular success led to similar solutions being designed and deployed around the developing world in a bid to fulfill the needs of the homogenous, undifferentiated 'unbanked'.

The international aid sector has been invested in mobile money from the very beginning. Hughes & Lonie (2007) note that the M-Pesa pilot was funded in part by the U.K. government's Department for International Development (DFID – now UKAid). As similar solutions started cropping up the world over, other key players in poverty alleviation, such as DFID, but also the Consultative Group to Assist the Poor (CGAP), the World Bank's International Finance Corporation (IFC), and the Bill & Melinda Gates Foundation, started actively supporting mobile money research and development (Maurer, 2012). Major international industry consortia of telecom and high-tech companies like the GSM Association (GSMA) also followed suit. In fact, the term 'mobile money' was first claimed by the GSMA to "describe services that connect consumers financially through mobile" (GSMA 2009, p. 7). Of course today, amongst a plethora of similar terms such as 'mobile banking', 'mobile transfers', 'mobile payments' etc, it has almost exclusive ownership on the phenomenon of bringing financial access to unbanked and under-banked populations in the developing world[11]. In fact, as Anke Schwittay observes, 'mobile money' has become a catchall phrase for capturing this trend of formatting the poor as not just financial customers, but also "technology consumers" in the developing world (Schwittay 2011, p. 387).

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[11] One way to broadly differentiate between these terms is to check if they are 'additive', that is if the tool is a supplementary platform for conducting financial transactions, or 'transformational', where the tool makes an entry into unserved regions as the one of the few platforms for conducting financial transactions (Porteous, 2006). 'Mobile money' immediately indicates *transformational* tools – a term with many positive, dramatic undertones that further propagates the perceived, magical possibilities of mobile money in the developing world.

Slowly and steadily, a nascent mobile money industry was born that today has become almost indistinguishable from the broader financial inclusion industry as innovation in mobile money has expanded to include savings, credit, and microinsurance options as well (GSMA credit/insurance report). Meanwhile, the aid sector's stalwarts continue to promote the claim that digital delivery channels (including the humble mobile phone) can bring financial inclusion to the unbanked around the world. The Gates Foundation claims that digital platforms are "the most effective way" to achieve this (Bill & Melinda Gates Foundation, n.d.); The IFC (in a joint statement with the Mastercard Foundation) lauds mobile money as "revolutionary" because it brings banking to one's fingertips via the mobile phone (International Finance Corporation, 2018); CGAP observes that more digitization (such as developing open APIs and fully digital delivery models) is the way forward for overcoming the many challenges in the mobile money domain, such as achieving scale in financial services like savings and loans that otherwise require significant interaction between customers and providers (Consultative Group to Assist the Poor, n.d). Such claims when taken out of context only aggrandize the role of the technology in helping the poor access suitable financial services. Of course, the international development community is aware that technology alone cannot accomplish the goals of financial inclusion. For instance, the 2017 Global Findex Database[12] report observes that the poor can only benefit from digital financial services when there is also a "well-developed payments system, good physical infrastructure, appropriate regulations, and vigorous consumer protection safeguards" (Demirguc-Kunt et al 2018, p. 10). Still, these details often get lost in the reproduction of success stories amongst the elite, technocratic circles of the aid sector for a variety of reasons. For starters, the aid sector is prone to rapidly scaling "successful" solutions, like it was quick to do with M-Pesa that the numerous (less successful) copycat solutions around the globe have demonstrated. This pursuit of generalizability often obscures the particularities of a given context, lending itself well to a parsimonious representation of the real world. These representations (or rather, misrepresentations) are especially well-received by policy-makers and donors because they are seemingly more actionable (Srinivasan & Burrell, 2015). In general, development discourse, especially that which leads to 'actionable' policy, benefits from a degree of ambiguity to appeal to diverse audiences (Cornwall, 2007). It also benefits from a process of de-politicization where, as I described earlier in this chapter, the problem of poverty is no longer a structural or political problem, but a "financial" one that can directly benefit from "technical" solutions, such as better delivery channels for financial services (Schwittay, 2011). This process of depoliticization not only speaks to the constraints within which the international development industry must function, but also continually justifies its existence (Mitchell, 1991; Ferguson, 1995).

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[12] The Global Findex database collects data on financial inclusion around the globe, and was launched in 2011 by the World Bank with funding from the Gates Foundation.

Year	Event
2006	•CGAP enters its third phase, promoting a diverse range of financial services for the poor.
2007	•DFID expands support to financial sector deepening, including through funding of the African Enterprise Challenge
2008	•The GSMA establishes Mobile Money for the Unbanked Programme with funding from the Gates Foundation. • Omidiyar Network adds financial services for the poor as a new area of investment.
2009	•Release of *The Portfolios of the Poor,* a book documenting the financial diaries of low-income households - informing the efforts of the financial inclusion community.
2010	•The G20 establishes the Global Partnership for Financial Inclusion (GPFI) alongside its Principles for Innovative Financial Inclusion.
2011	•The Gates Foundation Financial Services for the Poor (FSP) - a program area since 2005 - ramps up investments in digital finance and global advocacy.
2012	•The UN establishes the Better than Cash Alliance (BTCA) to advocate for digitization of cash payments, in partnership with multiple donors.
2013	•The Center for Financial Inclusion at Accion launches the Financial Inclusion 2020 campaign to chart a course to make full financial inclusion a reality.
2014	•UN Capital Development Fund launches Mobile Money for the Poor (MM4P) to scale branchless and mobile financial services.
2015	•The World Bank announces coalition of public and private sector partners for the Universal Financial Access 2020 initiative.
2016	•World Economic Forum launches 'Principles on Public-Private Cooperation in Humanitarian Payments' •UN Sustainable Development Goals (SDGs) launched. Mobile Money poised to contribute to 11 of the 17 SDGs.

Figure 1: The Rise of the Mobile Money Community[13]

As the past ten years of mobile money are celebrated as "incredible" because "more than half a billion accounts were registered as of the end of 2016, with more than 170 million active accounts around the globe" (GSMA 2017, p. 6), we need to take a step back and consider what this really means. With money being poured into mobile money initiatives at the cost of targeting the more structural reasons behind poverty and inequality, we have to know and reproduce faithful accounts of how mobile money, and financial inclusion in its current form, actually works on the ground. Formal bank accounts can serve as a reasonable yet an imperfect proxy for what is expected of financial inclusion goals – that is to help the poor in managing their cash flows in the face of unpredictable earning patterns (Morawczynski et al, 2010). Accomplishing this requires human work that remains largely missing from the dominant narratives on mobile money. For instance, a recent article published in *Science* finds that access to mobile money lifted 2% of the Kenyan population out of poverty (Suri & Jack, 2016). This was a remarkable finding and was predictably reproduced everywhere (GSMA, 2017; Innovation for Poverty Action, 2016; Dawson, 2017). However, very few of these reproductions mention that the authors determined the causal effect of M-Pesa on the economic well-being of households by measuring the change in access to M-Pesa agents, not just adoption of the M-Pesa service or access to a mobile phone itself. That Kenya's dense network of agents contributed to the goals of financial inclusion was often lost in the more pithy, catchy claims that "one connected handset can transform the life of not just its owner, but also the lives of his or her family and the broader community." (GSMA 2017, p. 6).

7. Dissertation Outline

With mobile money becoming the new poster child of the financial inclusion movement, the main objective of my dissertation then is to highlight and challenge some of the paradoxes that beleaguer this paradigm as it becomes increasingly indistinguishable from technological inclusion. The remainder of the chapters in this dissertation will be dedicated to revealing how these paradoxes come to be within the context of the broader financial inclusion rhetoric, and why they might not always help the poor in managing their precarity.

But before that, in chapter 2, I describe some of the methodological tensions that any ethnographer is wont to experience, especially if they are doing a multi-sited ethnography like I did. I confronted some of the simplistic notions of being a 'native' ethnographer in my home country of India while simultaneously recognizing that my insider-outsider status (that adjusted according to the context) shaped my access to my field sites and its inhabitants, and consequently my analysis and conclusions.

In chapter 3, I continue to challenge the formal-informal (false) dichotomy by asserting that mobile money access does not necessarily 'formalize' all financial transactions. As I

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[13] Adapted from GSMA's State of the Industry Report on Mobile Money ("The Decade Edition") that demonstrates how the international aid sector discusses mobile money and financial inclusion in the same breath (GSMA 2017, pp 27).

described earlier in this chapter, people tend to engage in a plural mode of finance where they rely on a range of 'formal' and 'informal'[14] financial tools in their daily financial lives. The materially poor may often show a marked preference for informal tools because they are generally more accessible, convenient, and flexible. Insofar as informal financial tools help the poor manage their precarity, informal finance must and should remain an integral part of any conversation on 'financial inclusion'. As I demonstrate in chapter 3, when people engage in what is considered "informal" financial practices, they often do this in a way that mitigates their inherent risks and costs. This is not to say that informal finance cannot be affected with fraud or high costs[15] – it most certainly is, just like formal finance but to varying degrees. What we need to focus on when developing and reinforcing the financial inclusion rhetoric is to better capacitate those features of informal finance that make them particularly attractive to the poor, instead of advocating for a wholesale embargo.

More specifically, I describe interest-free informal loans in chapter 3, tracing out why they remain largely cash-based and are conducted in person. This heavy reliance on cash is generally considered "troubling for the long-term viability of mobile money and for greater financial inclusion" (CGAP, 2013). Yet, cash still plays an indispensable role in the daily financial lives of the poor where it works best in proximate and in-person economic interactions. Where mobile money is expected to eliminate the inefficiencies of informal finance and of cash as well as enable its movement across distances, the evidence in chapter 3 shows that these practices can continue without any disruption, even when mobile money is widely used to complete other forms of financial transactions (uni-directional remittances to distant family members, for instance). Therefore, people will leverage mobile money's affordances where they see fit in their complex financial lives – it cannot be expected to 'formalize' their financial practices in a wholesale manner. In other words, people will continue to engage with a rich, multimodal suite of financial tools and services – both formal and informal, digital and non-digital. This is especially true of the poor where a complex negotiation of options needs to be performed in order to manage their precarity and survive. Short-term interest-free loans remain resistant to the 'formalizing' opportunities of mobile money, at least for the time being in the context that I studied. Chapter 3 will describe why.

In chapter 4, I refocus the disproportionate visibility afforded to the mobile technology in mobile money to its human work that helps the poor in managing their precarity. Dominant narratives around mobile money bring the technology into sharp focus at the cost of discounting everything else that goes into making mobile money work. While it seems obvious, mobile money is not just the mobile phone as a delivery channel, it is an entire *infrastructure* that brings financial services to the unbanked. Infrastructures are

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[14] I use quotes to highlight the futility of saying 'formal' and 'informal' when in fact they exist on a spectrum, as I described earlier in the chapter. Still, I will continue to use these terms through the remainder of this dissertation to denote what they conjure up when used which is analytically very useful.

[15] As Ruthven (2002) points out, the high costs are often *willingly* paid out in order to access more readily available and flexible financial tools. The impetus then should be geared towards making such tools available at reduced costs.

often presented as invisible substrates that are relegated to our peripheral awareness; where in fact different components of infrastructures will suffer from a kind of differential invisibility (Larkin, 2013). Therefore, even in understanding mobile money as an infrastructure, the dominant narratives around it prime us first and foremost to the mobile phone and its ability to bring formal financial services to the unbanked. But to truly understand how mobile money helps the poor manage their precarity, we need to restore visibility to the oft-ignored pieces of the broader infrastructures.

Why do I say 'infrastructures'? It is because the mobile money infrastructure does not operate as an isolated, standalone infrastructure. I discuss this in more detail in chapter 4 where I demonstrate that what appeared on the surface to be a standalone 'mobile money infrastructure' is in fact a complex organization of at least two interacting infrastructural systems (for at the very least, the mobile money infrastructure needs to plug into the mobile telephony infrastructure). These infrastructures work in tandem to make their services both usable and useful for its users – something that a standalone mobile money will likely be unable to achieve on its own. I also privilege the human work of what is otherwise often considered an exclusively technological infrastructure. Mobile money remains a favorite topic of interest for development scholars and practitioners and in the emergent conversations the focus continues to remain on the technological innovations that allow for branchless transactions to complete in the first place. Thus, the human work that enables mobile money transactions continues to get obscured. Bringing attention to these sidelined human workers is a central concern in chapter 4, as I demonstrate that the role of intermediaries in this context may be invaluable in helping the poor manage their unique, precarious cash flows. Eventually, I argue that we need to move away from a more static and immutable understanding of mobile money and how it is expected to achieve 'financial inclusion', even as international development professionals and policy makers scramble to replicate the glorious success of M-Pesa. This often tends to get lost in reproducing narratives, representations, and knowledge about mobile money in the elite, technocratic circles of the international aid sector. In studying these 'boring' things (Star, 1999), I aim to restore visibility to those invisible aspects of the mobile money infrastructure that in fact make 'financial inclusion' happen.

In chapter 5, I reveal the politics of financial inclusion through describing a unique case where the sudden imposition of 'cashlessness' bore calamitous effects in a cash-intensive economy. Since transformational mobile money generally targets those markets that tend to be cash-intensive economies, its proponents are quick to focus on cash's risks (its fragility, the ease with which it gets spent, its anonymity that support illegal/illegitimate activities etc) rather than its benefits (its materiality, its tangibility, the same anonymity that can represent freedom etc). Consequently, its risks get overestimated even as cash continues to endure in the developing world, especially in its informal sectors. Thus, the ideal of cashlessness, as I describe in more detail in chapter 5, begets a vision of modernity and progress that becomes an almost unassailable development goal.

More specifically, I was able to experience and study a unique event during my fieldwork that led to an overnight implementation of cashlessness. In chapter 5, I describe the

Demonetization event in India where the state withdrew all 500 and 1000 INR[16] notes, or 86.4% of the total value of all banknotes in circulation, forcing everyone across the country to (i) interact with the formal banking infrastructure, whether they were previously banked or not, in order to deposit and withdraw the new denomination notes, and (ii) rely on digital payment systems to complete financial transactions where notes were scarce but mobile phones were relatively ubiquitous. This was an imposed cashlessness that, as I demonstrate, proved to be a serious welfare shock for the poor. Demonetization negatively impacted the earnings of those employed in the informal sector. It subtly but surely changed consumption patterns, thus generating more debt. Digital payment systems had to be learnt rapidly, their use was challenging, and recourse seemed distant. It is little wonder then that cash reappeared slowly and surely in the economy, while the initial heavy use of digital payment systems started dwindling as I was exiting the field. Through describing the early days of Demonetization, I argue that a blind pursuit of cashlessness can be a problematic ideal to follow. Thus, I reveal the politics of financial inclusion, where top-down state-backed policy decisions can be forces that disproportionately affect the very populations that these are expected to serve.

In the concluding chapter, I revisit some of the tensions born of the new financial inclusion paradigm that seeks to connect the poor and the unbanked to not just formal bank accounts, but also mobile money accounts. This digitization of the financial inclusion agenda brings with it some new paradoxes that I have challenged throughout this dissertation. The concluding chapter ties my findings together to speak to the financial inclusion paradigm at large.

8. Conclusion

My overarching goal in this dissertation is to challenge the dominant narratives of financial inclusion. These dominant narratives assume that access to the formal financial landscape can help the materially poor manage their consumption shocks successfully without slipping deeper into poverty. Such an unchallenged vision then necessarily assumes that 'informal' financial practices that the poor engage in will be insufficient to help them manage these shocks in the best-case scenario, and propel them further into a tenacious cycle of debt and exploitation in the worst case. Simultaneously, it discounts the hazards of interfacing with the formal banking infrastructure. A more comprehensive financial inclusion narrative should certainly acknowledge where informal financial practices are robust and can be suitable for meeting the poor's specific needs, while also recognizing the limits of formal banking.

Moreover, as the financial inclusion narrative starts becoming indistinguishable from the technological inclusion one, and brings with it new versions of what 'formal' and 'modern' look like, there arises a need to further interrogate these. The mobile money discourse prioritizes its technological innovations and its ability to create and sustain a cashless society while sidelining the broader infrastructure(s) that makes it usable and

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[16] As of 13th December 2018, 1 INR = 0.014 USD.

useful in the first place. This discourse also renders invisible the human work that goes into making financial inclusion work for the poor. My findings challenge these prioritizations and help refocus some of this attention on the less glamorous aspects of how financial inclusion is made to work. Where more structural solutions for managing their poverty receive little or no attention, and we must rely on the more technical solution of 'financial inclusion' (because at least it is something), I argue that we need to reset its discourse to focus on *how* we can enable the poor to manage their precarity, instead of focusing on simplistic measures like access to formal and digital financial tools. If the financial inclusion agenda can help the poor cope with the enduring uncertainty, the "tyranny of emergency" in their lives, then it would be truly effective.

CHAPTER 2

On Methods and Constructing the Field

1. Introduction

When asked about my data collection for my dissertation, specifically, I will immediately locate the temporal beginning of my ethnography as June of 2016 when I joined Microsoft Research in Bangalore, India for a summer internship. This continued until September 2016, at which point I moved to Delhi, India and continued with fieldwork there. But did my ethnographic research, and especially the process of immersion, really begin then? Perhaps it began in the August of 2010 when I did an internship with the Grameen Foundation in Uganda. I was research lead on a mobile banking project that rather serendipitously sparked my interest in the daily financial lives of the materially poor and how digital technologies could fit into this picture. Perhaps it began even earlier as I grew up in Delhi and then spent my early adulthood in Bangalore where I had my first job, thus kickstarting the immersion process in what would be my fieldsites years, even decades, later. In general, ethnographic fieldwork presumes complete immersion that is determined by a "singularity of focus and engagement" (Vered 2003, p. 5). The very understanding of immersion immediately qualifies the "field" as bounded with clear entry and exit limits, both spatially and temporally. Still, for a scholar who returns to the same context again and again, and is also essentially returning "home" for doing fieldwork, as I was, such clear frontiers are easily dislocated. How does one then reconcile these tensions into their ethnographic analysis and writings?

I encountered these tensions continuously both in and outside the field. I was purportedly an ethnographer conducting fieldwork in the Global South, where the theory that I brought to the field was informed largely by development studies. While grappling with the seemingly natural, almost inevitable categorizations of the "Global South" and "Global North", "developed" and "developing", the "center" and the "periphery", "us" and "them", I constantly wondered about my own positionality in the field, that is the unique perspective shaped by my race, class, gender, nationality, sexuality, and other identifiers, and how this influenced how I viewed and interpreted the world, and how it logistically helped shape my fieldsite. I had grown up in India, a "developing" country in the "Global South" – in fact, my family still resides there, prompting me to make at least one annual trip across the seven seas (well, maybe two seas) back home. Yet technically my residence at the time of my fieldwork was the United States, very much a part of the "Global North", where I was training as an ethnographer at a university in California. Essentially, I was collecting data from the Global South and subjecting this to a process of theorization that was born, as many would argue, of the hegemonic ideologies of the Global North. Was I then engaging in a type of information retrieval that is, according to Gayatri Spivak, akin to resource extraction and thus another form of Western imperialism

(Spivak, 1988)? Or was I perhaps exempt from the politics of knowledge production because I was "them", I was the "others"?

Methodologically too I constantly struggled with these classifications. Was my ethnographic fieldwork in India as an "insider" considered a "native ethnography"? As opposed to "regular" anthropologists, it was traditionally assumed that "native" anthropologists already possessed an intimate knowledge of the everyday experiences of another culture which, when coupled with the rigorous disciplinary training they received, enabled them to present a more faithful position to the larger anthropological community (Narayanan, 1993). Did this mean I could get away with spending a shorter amount of time in the field because somehow I became exempt from the process of absolute social and cultural immersion? I spend time unpacking the answers to these questions in this chapter.

2. Revisiting the field

2.1 Locating the Field: A Multi-sited Ethnography

> "(Yet) in a world of infinite interconnections and overlapping contexts, the ethnographic field cannot simply exist, awaiting discovery. It has to be laboriously constructed, prised apart from all other possibilities for contextualization to which its constituent relationships and connections could also be referred. This process of construction is inescapably shaped by the conceptual, professional, financial and relational opportunities and resources accessible to the ethnographer" (Vered 2003, p. 6)

Over the course of my as yet young career, I have been fortunate enough to go into the field on multiple occasions, although mostly during the three month summer sojourn every year when I did not have classes or teaching/research commitments. As a broke graduate student with limited resources, and with limited access to external funding, owing to my status as an "international" student and all the constraints that that particular visa comes with, I applied relentlessly to any options that were advertised. Sometimes these worked out, and sometimes these did not. Still, the logistics of fieldwork, especially the constraints of time and funding, are not often spoken about, likely because they imply some degree of compromise on locating the field based on a purely theoretical or analytical bend. Burrell (2009) does discuss some of the challenges of the logistics of fieldwork, especially for multi-sited ethnographies. She observes that studying "parts" instead of "whole cultural processes" is one way of negotiating these logistical constraints, especially when social encounters may be transitory (p. 187). Burrell also points out that fieldwork often comes to a hard stop when time and money runs out. Regrettably, this again implicates a (seemingly) trivial reason for ending fieldwork rather than the more established approach of "meaning saturation" (although, to her credit, Burrell pretty much equates both factors as "natural conclusions" to fieldwork). Yet these logistical constraints (of time, money, access) certainly contributed to the construction of my ethnographic field(s) for this dissertation. While writing up my dissertation proposal

in early 2016, I wrote that my dissertation research fieldwork would happen in Bangalore, in South India, where I was going to do a summer internship at Microsoft Research for three months, and then in Delhi, in North India, which is where my family resides, for another three months. Financial constraints certainly guided this decision to a great degree – the summer internship was a paid one and my costs of living would be drastically mitigated if I lived with my family. And, of course, the timing worked out for me professionally as well as personally (and as the reader will discover in chapter 5 on the politics of financial inclusion – rather serendipitously!). However, locating my field was not quite as cursory as that.

Almost by a lucky accident, the narratives around mobile banking and financial inclusion were starting to explode around the time I started my Master's degree in 2008[1]. It was being discussed in my classes, by my then advisor, by the international media. I could not help but be intrigued. Eventually, I decided that mobile banking is what I would explore and analyze for my Master's thesis and this culminated in an internship with the Grameen Foundation in Uganda back in 2010. I went in with the same optimism and excitement about mobile banking as much of the international development community, but returned a mellower person. Successive fieldwork visits (in India, Uganda, and Ghana) were thus spent as exploratory exercises in trying to better understand the daily financial lives of the materially poor, the financial products and services, including informal and semi-formal options, that were available to them or that they themselves shaped and participated in, as well as how mobile banking fit within this landscape. As Burrell (2009) points out, there can be a cohesion to cultural processes even if they are occurring across vast distances (and, of course, time – a cohesion that started to come into sharp relief as I entered and re-entered the field, engaged with theory, and analyzed and wrote up my fieldnotes. Thus, I was engaging in perhaps what Michael Burawoy (2003) has called the "rolling revisit" even though on the surface these field visits seemed like discrete events (p. 668). When it comes to reflexive ethnography (which I discuss later on in this chapter), Burawoy observes that each field visit is in conversation with the previous one. Eventually, all fieldwork becomes a running interaction between the ethnographer and the participant(s), and the fieldnotes produced a running dialogue between observation and theory (ibid, p. 669).

It was during the course of my preliminary, exploratory fieldwork that I started to question the dominant narratives around financial inclusion and the centrality of digital solutions, such as mobile banking, to these narratives. Every successive fieldwork opportunity was thus used to gain a deeper understanding of this, emboldened by the theory that I was engaging with when I was away. When the Microsoft Research opportunity in Bangalore first materialized, I negotiated with my future mentor about how my research agenda could be accommodated within the project she wanted me to work on. Luckily, it was an easy fit – in studying loan repayments over the mobile platform, I could easily incorporate my primary research questions around the dominant financial inclusion narratives. Further, I reasoned, contrasting the specific particulars of this cultural process in Bangalore with Delhi in India, and then Kampala in Uganda,

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[1] As a marker, Safaricom launched M-Pesa in Kenya in 2007.

would constitute for a good comparative ethnography. Another reason, both Kampala and Delhi were particularly attractive as field sites was because I had already spent three months in both places in the summers of 2010 and 2013 respectively, studying the daily financial lives of the poor and locating the value of mobile technologies within these. I had been able to construct a fairly nuanced representation of the financial portfolios of those employed in the informal sector, and I believed that returning to this same context (but not necessarily, the same informants) would only advance my understanding of how they were able to, if at all, financially 'include' themselves. Of course, my research agenda in Delhi had to undergo some modifications when Prime Minister Modi announced the Demonetization scheme in 2016 that I describe in chapter 5. Still, returning to the same context certainly helped me make sense of the financial inclusion narrative in that specific setting, despite the recalibration of some of my research questions. Eventually, this dissertation relies on nearly six years of prior research which includes work in Uganda on building and piloting mobile banking platforms (Ghosh, 2012), work that looks at the role of the mobile banking agents in India (Ghosh, 2013), intermediated use in India and Ghana (Ghosh, 2016), and the persistence of paper in microfinance in Ghana (Ghosh et, 2015). However, the fieldwork that I conducted in Delhi (India) and Kampala (Uganda) in the summer of 2013 for three months, and then followed up with the fieldwork in Bangalore and Delhi over the latter half of 2016 speaks *specifically* to my primary research motivation – that is, to offer a critical analysis of the dominant financial inclusion narratives. Therefore, the data here will be drawn from these four field visits. To that end, this dissertation is based on a multi-sited ethnography where I located continuous themes in non-contiguous spaces.

The reason for my multi-sited ethnography was logistical to begin with. Summers afford the perfect time to conduct fieldwork in the academic year, and thus field visits tend to become more discrete – a result of the social sciences becoming increasingly institutionalized into mainstream academia (Bélanger-Vincent, 2011). Moreover, as I described earlier, funding opportunities largely determined where I would be doing fieldwork. Still, I was also acutely aware that I wanted to study something broadly about a global system (that is, the global financial inclusion system and how it comes to be realized for marginalized populations) through its articulations by its local subjects across space and time[2]. As George Marcus (1995) observes, a cultural formation of any kind is produced across several different locales – the global then is an "emergent dimension of arguing about the connection among sites in a multi-sited ethnography" (p. 99). Marcus goes on to observe that when doing multi-sited ethnographies, one needs to be constantly aware of "being within the landscape" even as we are moving across sites (ibid, p. 112). This inevitably requires a constant renegotiation of the ethnographer's changing identities in the multi-sited field. In other words, in doing multi-sited ethnographies the tensions of

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[2] Miller & Slater (2001) very convincingly explain why they chose to focus on Trinidad specifically when attempting to study the "Internet" – which most of us would consider a global phenomenon. The Internet, they claim, is hardly a "placeless cyberspace" (ibid, p. 1); instead, the Internet only becomes consequential when it exists in specific places. Moreover, such ethnographic particularity becomes the foundation for broader abstractions, thus setting the stage for good, solid comparative ethnographies. Financial inclusion, in much the same way, becomes meaningful when it is realized in specific places and contexts.

'immersion" versus "detachment', being an 'insider' versus an 'outsider' are constantly negotiated across sites. These tensions were often exacerbated for me, a purported 'insider' in the field in India (and not in Uganda), where it may be easy to assume that I will be spared from time and effort-intensive periods of immersion. I discuss this next.

2.2 'Regular' Vs. 'Native' Ethnography

The site choices of Bangalore and Delhi were, to some extent, a conscious decision, in that I actively chose to be in India for the final leg of my fieldwork during the course of my doctoral studies, whereas my internship and other logistical factors determined the exact research sites within the country. Of course, having been born and brought up in India, and in Delhi specifically, one would be tempted to call this a sort of "native ethnography". Certainly, I will be considered (and to some degree, I consider myself) as an "insider" in both Delhi and Bangalore. Yet, this remains a rather simplistic understanding of not only my own personal identity but also of my respondents in the field. These fixed binaries of "outsider" and "insider" within the specific confines of my research sites calls for a more thoughtful analysis. To this end, I briefly turn to anthropological literature.

In traditional anthropology, there was a clear demarcation made between "real" and "native" anthropologists (Narayan 1993, p. 671). Narayan (1993) further notes that this fixed binary of "real" and "native" anthropologists was the legacy of the colonial era during which time the discipline of anthropology took shape – that is, in traditional anthropology, the "other" was unquestionably the colonized (Chawla 2006). Real or regular anthropologists entered a bounded fieldsite as participant observers, often in a distant and disconnected part of the world, and began the process of immersion and thus, enculturation. This propelled the researcher from the position of an outsider to an insider, at least until s/he was able to acquire and interpret everyday experiences, much like an insider would. Yet at the same time the regular anthropologist was expected to stop just short of an absolute transformation; it was critical that s/he be able to analyze the data as an outsider in order to make any meaningful inferences about the social processes unfolding within the fieldsite[3] (Burrell 2009, p. 182). In contrast, it was assumed that native anthropologists already possessed an intimate knowledge of these everyday experiences (Narayan 1993). Over the years, however, both anthropologists and ethnographers have critiqued this conventional understanding of the fieldsite as a strictly bounded space (Gupta & Ferguson 1997) as well as the purist notions of what an authentic "insider" or "native" really means, or if one even exists (Aguilar, 1981)[4].

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[3] And of course, to not lose sight of other motivations or considerations. I had to, for instance, complete my dissertation and thus could not afford to "go native".

[4] Of course, the two critiques are connected. For instance, both Akhil Gupta and Arjun Appadurai observe that bounded spaces were thought to contain entire cultural, economic, and moral universes, and that natives were "incarcerated, or confined, in those places" (Gupta & Ferguson 1997, p. 5; Appadurai 1988, p. 37). In that sense, these conceptualizations of space and the "other" in classic anthropological tradition assumed a physical and ecological immobility of the natives who belonged to one place, or, if one was being more liberal, to a "pattern of places" (Appadurai 1988, p. 37).

Eventually, these, as well as other commentators, have observed that global flows of trade, politics, and mass media in the modern world today has collapsed these erstwhile conceptualizations of the bounded fieldsite, and with it the understanding of what authentic culture means[5] (Marcus & Fischer 1988; Appadurai 1990; Clifford 1992). Furthermore, each one of us now, more so than ever, assumes "multiple planes of identification" (Narayan 1993, p. 676). Therefore, our relationships with our respondents in the field are complex and constantly evolving, and certainly not limited by static binaries. I might be a "native" in India, even though I live in the United States, but whether or not I identify as an "insider" or an "outsider" cannot merely be based on these (somewhat) sweeping categories that align with the designs of modern nation-states[6]. For instance, even to the rank outsider there was a very visible distance between me and my respondents, who were often materially poor, despite us looking rather homogenously similar as "Indians". This distance likely arises from differences in such factors as socioeconomic class and education, and signals that exactly indicate these, such as our attires, the way we speak, and even the language we are comfortable speaking[7]. Of course, I consciously reined in much of these visible indicators – by wearing traditional clothes[8], speaking in the local language whenever I knew it (which was Hindi in Delhi), and repressing other aspects of my "modern" personality, which is almost always used as a pejorative when describing non-traditional women in India – in a bid to seem non-intimidating and garner easier access in the field.

Moreover, my "Indian-ness" was perhaps more complicated to someone who is familiar with the geographical and cultural landscape of India. They will know that since I was born to Bengali parents (who themselves grew up in the city of Kolkata in Western India) but was raised in Delhi, a largely cosmopolitan city yet, at the same time, demonstrating

Consequently, it would be awkward to talk about (or critique) these purist notions of "natives" without talking about bounded spaces in the same breath.

[5] Burrell (2009) points out that this opposition to what had been standard anthropological practice for a long time was not merely an effect of rapid globalization, but also of more sophisticated theoretical developments in the field (p. 183).

[6] This is perhaps reminiscent of what Watts (1992) calls an "identity failure" - he describes the efforts of (socialist) East Germany as a nation-state to strategically construct a national identity by underscoring their differences from those of (capitalist) West Germany – an action that was destabilized by the levity and good humor of their citizens in describing the differences between their motorcars.

[7] For instance, in India, well-spoken, grammatically correct English with a hint of the colonial accent immediately betrays your lineage. It is telling of the fact that you were educated in an English-medium school, likely private and accessible to, unfortunately, a privileged section of the population. Even if you were to choose to speak in Hindi (the language most spoken in Delhi) or Kannada (the language most spoken in Bangalore), the noticeably different accent would most likely give you away. This is especially obvious when speaking English which most of my respondents in Delhi and Bangalore did. Even though I sought consent from them in English, I then proceeded to conduct the interviews in a mix of English and Hindi/Kannada in a bid to equalize our positions somewhat.

[8] In her evocative piece, Devika Chawla (2006) talks about consciously wearing Western, non-native clothes in the field in India to enforce a "material creation of distance" (p. 17). This only reinforces an ethnographer's deliberate choices in the field depending on the context – is gaining access more important or creating distance that is necessary for analysis?

the dominant culture of North India, that I will likely be considered an "outsider" in Bangalore in South India. This will further accumulate more nuance to someone who is deeply familiar with the growing unrest amongst the local population of Bangalore as people from all over the country – the "outsiders" – flock to what is described as the "Sillicon Valley of India" in search of better employment opportunities (for instance, take a look at this newspaper piece "The Revolt of the Native" (David, 2005) that describes some of this growing resentment). In this way, the rather approximate categorizations of "insider" and "outsider" start to become more unstable and complex, shifting as and when the context itself changes.

Even demographic factors such as age and gender can immediately muddy such static categorizations, especially when they must interact in the field. And this is something that we need to remember both when entering the field as researchers, as well as when encountering the researched themselves and their complex, diverse lives. Eventually, one's identity can hardly be pinned down to a commonality across "culture, community, or place"; if anything, identity "emerges as a continually contested domain" (Gupta & Ferguson 1997, p. 14). Instead, focusing on "shifting identities" that may be determined purely on the basis of our relationships with our respondents (and vice versa) in the field, as well as the specific questions we seek to answer and represent may be a more worthwhile enterprise (Narayanan 1993, p. 682). Thus, inevitably, every researcher and researched will demonstrate "multiple subjectivity" that is linked with the "non-universal, non-essential, historical and relational notion of positionality" (Sato 2004 citing Rosdaldo 1997 and Alcoff 1988, p. 102). Needless to say, sometimes I was an 'insider', sometimes a 'partial insider', and sometimes a complete 'outsider', just as, I imagine, any other dedicated 'non-native' ethnographer or anthropologist would be when doing fieldwork in the same fieldsites as me. Eventually, being considered a "native" does not in any way ensure that I will be treated as a complete insider in the field (Jankie, 2004). Neither can I possibly be expected to know everything about these societies even if I choose to conduct fieldwork in India, or more specifically in Delhi where I grew up (Narayanan, 1993). My tryst with ethnographic fieldwork in my native country and city has certainly revealed new facets of these societies that I myself had been completely unaware of. As I am often known to say to family, friends, and colleagues who ask me how fieldwork is progressing, doing it in my own city, my own country has given me a chance to navigate places, people, and relationships that I probably would have never encountered otherwise.

Of course, being an insider, complete or partial, had its distinct advantages in the field as I was able to gain access to potential respondents because some degree of similitude and familiarity helped engender trust, and thus confidence, in my solicitations in the field. Still, at other times, it made them more assertive in refusing me. Moreover, my knowledge of certain colloquial nuances in the local language or specific local references enriched my understanding of my respondents' narratives. At the same time, being an insider, such as when I was interviewing domestic help in my residential community in Delhi, or people in particularly precarious positions such as illegal immigrants, might have made my respondents wary of revealing too much. Therefore, maintaining some degree of outsiderness was always preferable and thus I was at no point exempt from extended periods of immersion. As I briefly mentioned previously, contemporary

ethnographic methods will also advocate for some degree of outsiderness such that any social processes can be analyzed from the purview of an external observer. Nevertheless, I came to realize eventually that enforcing and enacting this outsiderness in the field becomes almost inevitable. Devika Chawla, perhaps, encapsulates it best when she says:

> "I have become most comfortable with the idea that any ethnographer, whether native or other, (re)enters her field ensconced in degrees of outsiderness created by temporal, geographic, demographic, intellectual, or emotional distance from the field, or it might be a deliberate stance taken by the anthropologist. Whatever the type, these distances occasion identity transformations, thereby making ethnographic sites fecund for the mingling, multiplying, and disappearance of various self-identities: those of the ethnographer as well as her participants. Thus, ethnographic locales are necessarily liminal, becoming spaces where others, natives, and another's intersect. As a result, our ethnographic encounters and our writing of them become experiences of shared subjectivity and multiplex subjectivity." (Chawla 2006, p. 14)

Since I was doing a multi-sited ethnography, the "mingling, multiplying, and disappearance" of my various self-identities were constantly negotiated across my field sites. As I describe my sites in the next section, I will focus on these negotiations of my 'subjective self' in the field as it relates to field site access. Eventually, who I was able to interview/observe (and who I wasn't), what I was able to observe (and what I wasn't), and how it may have been performed for me as an audience predictably shaped my analysis and the knowledge I created during the course of my fieldwork

2.3 Locating my positionality & privilege: Of "hyper-reflexivity" in the field

But before that, I want to briefly but emphatically reflect on the obvious power disparities between me and my respondents who constituted a largely marginalized and disenfranchised demographic. In school we are instructed that writing up an ethnography is never a value-free process. It is inevitable that how the "researched" end up getting portrayed in ethnographic text is informed by the complex positionality of the author, and that these representations may not align with how our respondents might choose to represent themselves. Mullings observes that "a researcher's knowledge is therefore always partial, because his/her positionality as well as location in time and space will influence how the world is viewed and interpreted" (Mullings 1999, p. 33). In light of this, we are taught to be reflexive which is much more than mere reflection; it is a "theoretical, ethical and political stance where ethnographers consider their position within their research, their relationship to their field subjects and their wider cultural context." (Scott-Jones & Watt 2010, p. 8). We are encouraged to write ourselves in to our ethnographies yet, at the same time, urged to strike a balance so as to not overwhelm the voices of our respondents – a slippery slope that Thrift (1995) argues may easily descend into "narcissism and solipsism" (p. 16). Yet when it comes to development work where the power disparities between the researcher and the researched become exceptionally

palpable, Illan Kapoor's call to action (itself based off Gayatri Spivak's urgings) for "hyper-self-reflexivity", that is a form of "heightened and radical self-reflexivity", may be particularly valuable (Kapoor, 2004). Kapoor argues that while we cannot escape the power asymmetries around us that inevitably position us in deterministic ways, we can be exceedingly scrupulous in our encounters with and the narrativization of the "Third World" [30]. Furthermore, these narratives must adopt an ethical stance, as Kirin Naryanan (1993) urges us to do, in order to etch in our own hybrid selves (that is, both our personal and professional selves[9]) as well as our respondents and their "vivid humanity" into our ethnographic texts (p. 682). Narayanan notes that it is absolutely imperative that we acknowledge our informants as *people* instead of "theoretical puppets" in our texts. In observing that their narratives are not literal translations of what actually transpired in the field, but that they are imbued with purpose and represent specific perspectives, Narayanan asserts that these become inherently analytical. Thus, good, compelling narrative need not be separate from analysis or oppose theory.

Of course, having interacted with methods and theory *before* I entered and revisited the field (and also, during and after), I responded to the calls for reflexivity in doing my research – and even more so, Ilan Kapoor's and Kirin Narayanan's calls to action that only exaggerated this self-reflexivity. This made me hyper-aware of my own privilege (despite identifying as someone who is from the Global South) and made me attentive to power disparities in the field while doing data collection and analysis, and especially after while writing up and presenting my work across different venues (that were mostly situated in the Global North). One way I managed this was by incorporating the "language of everyday life" into my analysis (Abu-Lughod 1991, p. 151). By revealing my findings through the language of my respondents wherever possible, I hope to preserve the humanity of the people I worked with (Narayan 1993). This was a decidedly ethical stance that I hope I am able to demonstrate as we proceed through this dissertation.

3. The Fieldsites

> "The term field site refers to the spatial characteristics of a field-based research project, the stage on which the social processes under study take place. For ethnographers, defining this space is an important activity that traditionally takes place before and in the early stages of fieldwork. It involves identifying where the researcher should ideally be located as a participant observer. Once fieldwork concludes, an ethnography cannot be written without at some point defining this spatial terrain where the social phenomenon under study took place. This is both an act of

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[9] Vered (2003) talks about this tension between our personal and professional selves in the field where as we develop an intimacy with our informants, they transform into "friends", "neighbors", "advisers" etc. (p. 3). While on the one hand, this closeness allows ethnographers to encounter and inscribe their informants as complex, multi-dimensional individuals, on the other, as I discussed previously, a measure of distance is thought to be imperative in order to maintain "professionalism" in the field. Part of the ethical dilemma of doing ethnographic work, especially when working in development, is to reconcile with the brutal fact that creating this intimacy is part and parcel of our investigation strategies (Vered, 2003).

exclusion and inclusion, indicating what the research does and does not cover." (Burrell 2009, p.182)

3.1 Kampala & Delhi: The sites for understanding the daily financial lives of the materially poor

3.1.1 Fieldwork in Kampala: An exercise in simultaneous physical immersion and remote ethnography

I was part of a research project in the summer of 2013, that was being overseen by my advisor, where we were interested in understanding if and how the mobile phone played a role in the daily financial lives of the materially poor. Our first site of choice was Kampala in Uganda – both my advisor and I had prior research experience in Uganda (although in rural Uganda) and therefore had some contextual understanding of the country. Moreover, the third researcher on our team was from Kampala who helped us overcome the local language (Luganda) barriers.

I spent a month in Kampala with my co-researcher, where I relied on her knowledge of Kampala in locating our informants in some of its larger slums (namely, Kamwokya, Kisugu, Kibuli, Katanga, and Buganda Road) as our primary inclusion criterion was to seek out the materially poor. Preliminary recruiting was conducted by approaching people of interest - that is anybody who was obviously working in the informal economy - and requesting an initial interview. In general, we tried to ensure a balance across gender and age when constructing the initial sample. Thereafter, we selected a smaller sample from these initial respondents for multiple weeks of in-depth interviews and call-logs tracking. Essentially, we would check in with our respondents once every week for an interview that lasted anywhere between 30 minutes to an hour. These interviews focused on their financial inflows and outflows, and decisions made around them, in that past week. Furthermore, we would request them to take us through their phone records and recount what the content of these conversations had been in a bid to discover their most intimate social networks[10], especially those that they relied on or provided financial assistance to. These follow-up interviews also involved detailed conversations of our respondents' financial lives, including a methodical documentation of the various (formal and informal) financial instruments they had used/were currently using.

We conducted 30 initial interviews, following which we narrowed down our pool to 15 respondents whose interviews had particularly intrigued us in terms of the complexities of their daily financial lives, their social networks, and their use of digital technologies. I remained in Kampala for the preliminary interviews and some of the follow-up ones, but then left for Delhi after a month to continue fieldwork there. In total, we conducted a total of 116 interviews that included the 30 preliminary interviews and 86 follow-up interviews with 15 respondents over a three-month period. I draw some of my findings in

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[10] Jonathan Donner (2005) uses this call log analysis method in his paper on mobile phone use by microentrepreneurs in Kigali, Rwanda. Donner too notes that using this method can help reveal the business and social networks of one's research participants during the course of fieldwork.

this dissertation from the interviews and observations that happened after I exited the field, or when my immersion had physically ended. Ethnographers aim to achieve a state of deep immersion in the field through 'participant observation' – a process which has traditionally required one's physical presence to eventually start experiencing a social world from its member's perspective (or a close approximation of it anyway). Yet as my bodily immersion ended abruptly, although willfully, I now had to make sense of the field notes that were being produced remotely.

Jenna Burrell, who is my advisor and was overseeing this project, writes thoughtfully about the challenges of doing a remote ethnography in modern times of "near ubiquitous connectivity and the capacity for immediate, inexpensive, and media-rich communication across great distances" (Burrell 2015, p. 135). Although the sharing of fieldwork, and of the material produced of it, is not new, the hyper-availability of new communication technologies to enable such remote, shared fieldwork "alter(s) the research terrain in some way" (ibid, p. 133). This may lead us to, rather temptingly, consider a research future that foregoes bodily immersion to capture an ethnographer's experience of a social world. However, physical immersion solidifies memory wherein not all aspects of a conversation or observation are inscribed into field notes, although they remain in our memories (such as the specific intonations of a person, or how they gesticulated during an interview, or their subtle interactions with other actors and objects in their physical space), thereby securing recall as we visit and revisit our field notes. In other words, these unwritten details can be "remembered long after the event is impossible to comprehend without them" (ibid, p. 147). At the same time, our field notes, no matter how comprehensively or faithfully recorded, will always be incomplete not least because they capture *one* point of view. Allowing for disruption, even if it is the disruption of a remote co-researcher trying to make sense of your field notes and asking you related questions, can help make meaning out of observation (although, as Burrell points out, at other times they can be distractions).

My advisor and I grappled with these tensions of making sense of the data that our third researcher was producing in the field in Kampala. However, I was able to reconcile some of these tensions because (i) I had already spent some time in the field and had thus accomplished some degree of physical immersion, (ii) in choosing to return to the same informants for recurring interviews, my recall of them was secured even when I was absent from the field, and (iii) I was simultaneously conducting immersive fieldwork in a similar context (that is, understanding the daily financial lives of the urban poor employed in the informal sector) although in a different country. Thus, through our regular Skype calls, and then in-person conversations once we all returned to Berkeley in the fall, I was able to recreate, extrapolate, and clarify a lot of the detail of the in-person interviews that were conducted when I was not physically present in Kampala. These were not always instrumental conversations; often we recalled a humorous or peculiar characteristic of a particular informant over a cup of tea that then led to the sharing of a new anecdote by the third researcher. This eventually helped me fill in much of the detail of an interview or field experience that I was not actually present for. This surrogate fieldwork experience of sorts, although reinforced by my brief physical immersion, helped secure my mental index for recall when analyzing the corpus of field notes. It was

likely not as 'authentic' as being physically present, but the pursuit of authenticity was never my primary concern, given that all ethnographic experience is eventually subjective and partial.

3.1.2 Fieldwork in Delhi: The paradox of doing 'insider' research

Once I moved to Delhi, I located my informants in the southern part of Delhi – the most affluent part of the city apart from the political center of the capital otherwise known as "Lutyen's Delhi". Logistically, this part of the city made sense for me as I was living there. Delhi, or the National Capital Region, spans 573 square miles in area (with a population close to 20 million!) and distance was certainly a major factor in bounding my site for this study. Another significant factor was safety. Delhi has a notorious reputation of being unsafe for women, and sticking to neighborhoods I was reasonably well acquainted with made me (as well as my family and friends) feel safer. Personal safety is very seldom addressed as a methodological issue when doing fieldwork, especially in potentially dangerous or volatile social settings. Prioritizing it (as one rightly should) often translates into lost or restricted fieldwork opportunities. At the least, it defines field site access and the knowledge the researcher will end up producing (Williams et al, 1992).

I followed the same methods as the ones we were using in Kampala – a combination of observations, interviews (both one-time and recurring), and call logs tracking. In terms of respondents, I was specifically seeking out people who were employed in the informal sector and relied on my prior knowledge of labor (both from reading the relevant literature as well as an intimate understanding of the local economy) that I knew to be generally working in this sector – such as domestic help employed in people's homes, cobblers on the streets, flower vendors that opened shop on the main roads right by the busy traffic, ice-cream sellers who moved across neighborhoods with their mobile carts, and so on. Such labor was also often materially poor, although this was a specific inclusion criterion in my initial sampling. In total, 20 preliminary interviews and 46 follow-up interviews (with 10 selected respondents) were conducted over a two-month period. Of course, this study did not have a clear, bounded site with any sense of cohesive spatial meaning (even bounding to just South Delhi is too heterogeneous a space to accommodate this). For starters, recruiting had been particularly hard in Delhi, given that I was looking to understand people's financial lives and its intimate details – a proposition that, perhaps understandably, immediately sparked fear in people's hearts[11].

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[11] My co-researcher and I did some reflection on why recruiting hadn't been as challenging in Kampala even though we were looking to understand people's daily financial lives even there. We arrived at two conclusions through our own impressions, through speaking with other researchers who had chosen Kampala as their field site, and through reading some relevant literature. First, mobile money was particularly popular in the slums we visited because they generally housed rural immigrants. Given the excitement around studying mobile money, these slum dwellers had likely already been interviewed/surveyed about their mobile money use and were thus more amenable to questions about their financial lives. Second, my obvious status as a "foreigner" might have generated a more favorable response to recruiting efforts since I was immediately perceived to be someone with more resources and therefore less likely to exploit them.

This fear lived on the edge of my similarities with my respondents, where I was *theoretically* well equipped to exploit them if I so desired (I understood their context), and also on the obvious social (such as class and gender) differences between us which necessarily purged me of any solidarity with them (I did not understand their context). This "diversity in proximity" remains an absurdity of 'insider research' that equally draws attention to similarities between the researcher and the researched as well as the social divisions between them (Ganga & Scott, 2006). In addition, social protocol (stigma?) that generally treats conversations around money as unbecoming especially with strangers, and the nagging anxieties/embarrassment around revealing unwise decisions around money made recruiting that much harder. Eventually, I ended up finding informants across a fairly large span of area even within South Delhi. Even though there was little proximity, at least physically, there were common patterns in the financial lives that my informants described and that I observed over the course of my study. Certainly, being materially poor while being employed in the informal sector offered a layer of homogeneity to their complex lives. Thus, much like what Marcus (1995) advocates, there was a cohesion to the social phenomenon that I wished to observe even though it was happening across diverse neighborhoods and contexts.

To highlight some of challenges in recruiting participants in Delhi and how this shaped my field site, I will present some examples. Providing wrong numbers and refusing to answer calls was common and thus some of my chosen respondents did not convert into my sample of repeat interviewees. However, I will focus here on those examples that reveal the complexities of doing a native ethnography. But first, I want to highlight those factors that made recruiting a breeze as an insider. Speaking a common language (Hindi) was helpful[12], as was demonstrating a familiarity with the neighborhoods potential respondents worked/lived in. Still, logistical constraints meant that many of my interviews happened in a public space in broad daylight. Meeting in a private space was not always possible as my potential respondents had tight schedules and thus I could only interview them at their place of work (so outside a bank, or on a busy street etc.). This led to a couple of dropouts. For instance, a male respondent who worked as a security guard at a bank in a busy market dropped out of the repeat interviews mid way. He claimed that his speaking to an obviously more affluent, urbane woman in plain view of his colleagues and friends (we generally spoke outside the bank) was being misconstrued. The truth, that I was merely conducting a series of in-depth interviews with him, would be largely ignored as people tried to rationalize this obviously unusual interaction in public. Eventually, I had to give up on him as a potential respondent. Another respondent confided his fears to me during my fieldwork – his friends had watched him speak with me and had warned him to not sign anything that I handed over to him, claiming that I, a "smart, city person", could easily swindle him of his flower shop or other assets. I needed him to sign a receipt for the financial incentive I was giving him for his time, and this became a long, drawn-out, complicated process. While this wasn't a recruiting challenge,

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[12] One of my respondents was from Bangladesh and worked as a domestic help in multiple houses. Her Hindi was predictably not very good, but luckily I was able to interview her without the help of an interpreter because both of us could speak Bengali fluently. My parents are from the state of West Bengal in India (culturally very similar to Bangladesh, including the language) and therefore I grew up speaking Bengali at home.

I observed a distinct withdrawal and reticence in our final interviews where he started offering vague responses to my usual questions about his incomes and expenditures (that he had answered enthusiastically even a few weeks before). This lack of data, so as to speak, was still data. Not only did it help inform my positionality in the field with respect to my respondents, but also his sudden fear of losing his flower shop despite the rapport we had built spoke to the precarity of poverty and the chronic distrust it helps manifest.

3.2 Delhi: The broader site where demonetization unravels

On the 8th of November 2016 at 8 PM, the Prime Minister of India, Narendra Modi, announced that all 500 and 1000 INR notes would cease to be legal tender at the stroke of midnight. At the time 500 and 1000 INR banknotes together constituted 86.4% of the total value of all banknotes in circulation (Reserve Bank of India, 2017). The Prime Minister assured his viewers that everyone would be given the chance to exchange their old 500 and 1000 INR notes until the end of the year, but this came with its own set of restrictions. These restrictions, in the chaos and confusion that followed, continued to change on a day-by-day basis as banks across the country struggled to smoothly transition to the new 500 and 2000 INR notes. I discuss this in detail in chapter 5.

Demonetization and its immediate aftermath happened during the time I was in the field – a rather serendipitous event for me. My proposed research plan was temporarily scrapped as I realized that this seemingly temporary disruption would let me gain a unique insight into the financial lives of the materially poor as their tenuous cycle of cash flows adjusted to this shock. Furthermore, as the cash became more and more scarce in the days after Modi's announcement, people around the country were forced to use digital currency in order to perform basic financial transactions. This overnight transition into becoming often first-time, digital users helped me witness their lived experience of 'going cashless'. As the initial motivations of the Demonetization announcement (fighting corruption and the menace of black money) slowly and surely melded into the 'cashless is good' narrative, I gained a unique opportunity to observe how the 'unbanked' were faring with the forced interfacing with formal banking and technology adoption – both mainstays of the financial inclusion narrative.

To this end, I chose a large, well-known and well-frequented marketplace in South-West Delhi as my primary site for understanding Demonetization and its immediate aftermath. Understandably, the informal sector that conducts most of its transactions in cash was the worst hit. This marketplace was not exactly 'informal' although it had three broad categories of shops that exhibited a range of formality/informality – a perfect site for drawing comparisons. These included (i) the brick and mortar shops that were recognized by the local municipality, (ii) the partially covered shops (most often with tarp or plastic sheets) that were also recognized by the local municipality (but with a history of non-recognition for a while) and that were built directly across from the brick and mortar shops, and (iii) the completely makeshift shops that vendors marked for themselves on the ground – often the size of a bed sheet or two, on which they then spread their merchandise, circumscribed their established area in the marketplace. These makeshift

shops demonstrated an interesting duality, in that their spots were marked out in the market – all their colleagues, including the formal shops, were aware of them - which afforded them some legitimacy. Moreover, years of working alongside the brick and mortar shops, as well as the partially covered shops helped generate a strong sense of camaraderie that further reinforced this recognition, and thus legitimacy. Yet the slightest whisper of a policeman coming their way, or a representative from the local municipality sneaking up to confiscate their merchandise, resulted in elaborate theatre where wares were quickly wrapped up in the bed sheet and a dash was to be made for safety, bundled bed sheets in hand.

Figure 1(a): A 'formal' brick and mortar shop accepting digital payments (via Paytm – a popular provider) in a Delhi marketplace

In fact, I was a participant even outside of this market. If I took an Uber (or an Uber-equivalent on-demand taxi), I would often be requested to make the payment in cash, which I was in short supply of myself, thereby prompting a longer conversation with the driver. If I went to the bank to exchange/withdraw cash, I would find myself standing in long, snaking queues for hours at end. Of course, the bank that I primarily banked with would afford me some privileges which in turn drastically reduced my waiting time – a privilege that those with no bank accounts or significant credit histories would be denied. Still, I was privy to the immediate chaos in an unusually intimate, immersive way (through detailed conversations with my friends and family) that led me to consider vast swathes of Delhi, perhaps even the entire country, as my field site, rather than the marketplace I mostly (physically and intellectually) confined myself to.

Figure 1(b): An 'informal' makeshift shop accepting digital payments (post Demonetization) in the same Delhi marketplace

I also reached out to my informants from my fieldwork in Delhi in 2013 and my informants in Bangalore from earlier that year in 2016 (that I describe in more detail next). After establishing initial contact (wherever I was able to since switching out SIM cards and numbers is fairly common in India) I revisited five of my informants in person in Delhi for weekly repeat interviews over a period of two months to check in and see how their lives had been impacted by demonetization. Meanwhile, I conducted repeat phone interviews with my respondents in Bangalore as travelling at that point was not an option. I had certainly developed an intimate understanding of their daily financial lives. However, my understanding of the financial lives of my Delhi respondents was somewhat compromised as it had been punctuated by a gap of three years which I tried to make up with an in-depth initial interview, and revisiting my field notes and interview transcripts from 2013. In general, Demonetization was an unprecedented consumption shock and I was able to witness its effects on their precarious financial lives in real time. Of course, remote interviews are very different from face-to-face encounters. However, when conducted on the foundation of a strong rapport and a visual/spatial understanding of their lives that I had developed in person over the course of three months, I was able to continue collecting rich and contextually situated data, even over the phone.

3.3 Bangalore: The site for the mobile money-loan management infrastructure

The context and site for this field study (that I discuss in more detail in chapter 4) was a loan management and collections social enterprise, called Three Wheels United (TWU) that operates out of Bengaluru, a large city in Southern India. TWU's main agenda is to help the drivers of the ubiquitous mode of transport, the auto-rickshaw, to buy their own autos[13]. Surveys typically classify Indian auto drivers as urban poor (based on housing and income) (Natarajan & Abdullah, 2014). More notably, perhaps, is the fact that auto drivers earn money in small amounts daily which makes generating lump sums challenging. Moreover, banks are typically wary to lend money to auto-drivers as they are classified as high-risk borrowers. Thus, many auto-drivers will rent their vehicles from an informal moneylender, somebody commonly known as "*seth*" - an agreement that requires a fixed daily rental fee to be paid out, generally around 200 INR per day.

TWU, in a bid to empower these auto drivers who otherwise lose a percentage of their daily earnings to rental fees, stands in as a guarantor on behalf of the drivers and secures a loan for them from a formal bank. Thus, TWU now becomes responsible for these individual loans. To mitigate some of the inherent risks associated with this, TWU partnered with local NGOs that perform the bulk of the work when it comes to loan collections. These NGOs work in auto-driver communities and recruit potential borrowers from within these based on familiarity and driver recommendations in lieu of a formal credit history. TWU and the NGOs push for more frequent collections of money to match the auto drivers' income streams; in fact many collectors from the NGOs go the drivers' homes or the auto stands (which is where autos generally collect in their neighborhoods) on a regular basis to collect the repayment money from them directly. Otherwise, cash collectors hold meetings regularly, typically once a week, where auto drivers are given a 3-4 hour window to come and make their payments. In most cases, TWU has fixed this to be 200 INR per day (for six days a week) in a bid to maintain the regularity of the auto-drivers' financial expenditures from when they rented out autos from the *seths*. The loan tenure runs to three years at the end of which time the auto will now belong to the driver[14]. TWU was convinced that if they used a mobile money platform for the loan repayments, the workload for the cash managers would be reduced. This prompted the partnership with two different mobile banking providers, details of which I discuss in chapter 4. All costs for making the mobile money transactions were absorbed by TWU as an operational overhead – the benefits of offloading the work of collection to the digital money intermediaries, as well as the work of managing the cash and back-end accounting seemed worthwhile to TWU.

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[13] Auto rickshaws are especially popular in South Asia and are a motorized three-wheeled rickshaw that can be publicly hired to go between places. They are generally cheaper than taxis, but more expensive (and arguably more convenient!) than mass public transit systems such as the bus or train.

[14] Over and above the principal amount, TWU also charges interest and service fees. Other than that, TWU collects some money that goes into a separate savings account for the auto drivers which becomes available on completing the loan. Finally, since most auto drivers are unable to pay the upfront security deposit amount, they take out another, smaller loan, which is paid over 18 months.

I ended up using a combination of interviews and observations to better understand the mobile banking infrastructure at play. I would approach both TWU as well the mobile banking partners to ask them to refer me to potential informants. Yet I also recruited on my own during training sessions as well as during my observation sessions every Sunday during my time in Bangalore. These observations occurred at a mobile banking retail agent's shop that a loan collector from TWU would visit every Sunday from 3-6 PM. His primary purpose was to help the auto-drivers transition over from a paper-based, in-person loan repayment process to a wholly digital one (although this did not quite work out to be such a straightforward transition, as we will see in chapter 4). My role as an observer started out as a "passive participant" where I occupied the role of a "spectator" or a "bystander" with minimal engagement with the collector, auto-drivers or other actors in the setting (Spradley 2016, p. 59). However, my level of involvement increased to moderate and then, to some degree, active participation over the course of my fieldwork.

I was clearly an outsider when I started out – my lack of knowledge of the local language (Kannada), and the language (Hindi) and the accent in which I spoke immediately established me as a "North Indian". I had hired the services of an interpreter who served as a mediator in many of our interviews (some of our respondents did speak Hindi so I was able to conduct those interviews myself), which further diminished my participation in my field interactions. However, my status as an "active participant" was afforded to me by the auto-drivers themselves as I spent more and more time in this setting. Evidently, I had no use for an auto-loan and therefore could only seek to understand the loan process of sourcing and repayment as an outsider. Still, as the auto-drivers continued to watch me every week sitting next to the loan collector and chatting with him, they started to (mistakenly) assume that I was more than just a student researcher as I had claimed – I must have an insider's view into the loan selection and granting process! As time went on, I was often approached to make a request for a loan on behalf of their family and friends who had otherwise sketchy credit histories, or to negotiate on behalf of a delinquent one. Therefore, despite not having taken out a loan myself, I often found myself consulting with the loan collector, albeit as a sympathetic surrogate, about these specific requests and thus gaining much more intimate, specific detail about the loan acquisition and repayment process.

As far as interviews were concerned, I conducted a series of informal conversations, and in-depth interviews. I also reverted to the recurring interviews method that I had previously relied on in Delhi in 2013. This method involved purposive sampling where an initial in-depth interview was conducted. These initial interviews helped me draw out a smaller, more focused sample of informants whom I would continue to interview once or twice a week over a period of three months – wherever consent was granted. This method helped me gain an insight into the financial inflows and outflows of my informants over time, making me privy to specific consumptions shocks and windfalls, and how their financial lives revolved around these. To this end, I initially interviewed 24 prospective informants in Bangalore, eventually narrowing my repeat interviews to 10 informants with whom I conducted 45 repeat interviews.

Figure 2: Retain agent's shop where an auto-driver (on the extreme left) is making his loan payment via mobile banking

4. Conclusion

This chapter was dedicated to describing some of the methodological tensions that I as an ethnographer experienced across the different field sites in my multi-sited ethnography. I confronted some of the simplistic notions of being a 'native' ethnographer in my home country of India to realize that my insider/outsider status was adjusting constantly as I navigated my field sites and its inhabitants (Narayanan 1993; Chawla 2006). Even if I found myself experiencing a social world as any of its members would – as I did during the Demonetization event – the very obvious power disparities between my respondents and me effected enough of a distance between us that, on the one hand, created the right conditions for me to make meaning of my observations, but on the other hand, positioned us in deterministic ways where we would be unable to escape these power asymmetries. To this end, I responded to calls for being 'hyper-self-reflexive' in the field, where I needed to be exceedingly scrupulous in my encounters with and narrativization of my participants, especially those that inhabit 'exotic' locations in the developing world (Kapoor 2004, Spivak 1988).

In describing the communities that I engaged with and the people that inhabited these, I set the context for the remainder of this dissertation. Going forward, wherever possible, I use my participant's words to describe their lived experiences. Where this is not possible, I am careful about inscribing their vivid humanity into my text. However, doing any fieldwork involves stepping into a positioned space, and thus I have positioned myself within this context through describing how my gender, class, race, language, privilege intersects, and often collides, with those of my participants. This in turn shaped my

access to my field sites and its inhabitants, and consequently my analysis and conclusions. Eventually, an acute recognition of reflexivity and postionality as research process is what differentiates observations from ethnographic scholarship. I aim to demonstrate this through my findings in the following chapters.

CHAPTER 3

The Informality of Financial Inclusion: Interest-free loans and how the poor 'include' themselves

> "(S)imply formalizing people's finances onto the mobile platform falls short of meaningful financial inclusion."
>
> - (Donovan 2012, p. 71)

1. Introduction

That people engage in informal financial practices is well known and understood. Collins et al (2009) comprehensively demonstrate in their book that informal financial transactions actually dominate the financial portfolios of their sample of poor households across Bangladesh, India, and South Africa. Orlanda Ruthven (2002) too finds that informal financial options are overwhelmingly attractive to the poor. In general, the convenience and flexibility of informal financial options is hard to beat. The poor often need money at a moment's notice and cannot possibly (i) commute long distances to reach a formal banking institution or (ii) engage in long drawn out negotiations and consultations where their poor credit histories and a lack of high-value deposits/collateral makes them unattractive customers. However, informal financial tools are often seen as a sub-optimal means of managing the poor's precarious cash flows because they are part of a larger network of social relationships that come with their own (difficult to measure) costs (Ruthven, 2002). Informal finance is often seen as unreliable with little recourse in the event of loss or fraud. Further, informal credit sourced outside of familial relations is considered expensive as moneylenders can be usurious.

Countering this, Ruthven finds that through "social leverage and the assurance of a convergent lifestyle" informal lenders are often able to mitigate the perceived riskiness of their borrowers and thus avoid charging high interest rates (ibid, p. 263). In other words, informal finance is shaped by the "intimate, affective, changeable, and idiosyncratic" (Maurer et al 2018, p. 151) quality of human relationships that far from being a liability, offers instead ways in which trustworthiness is built and maintained for successfully completing financial transactions. Formal financial institutions are often inaccessible in terms of distance, cost, eligibility, or ease of use for the materially poor. Yet, this inaccessibility is not necessarily the driving motivation for the 'unbanked' to engage in informal finance. Informal finance, regardless of the negative connotations of the word 'informal' itself, develops norms and rules over time that can lend structure and predictability to its forms. This in turn makes them frequently competitive, if not superior, options for managing precarious cash flows.

Yet this understanding gets frequently lost in the financial inclusion rhetoric where the push to 'formalize' remains firmly entrenched. As the financial inclusion narrative becomes indistinguishable from the digital inclusion one, digital technologies have become the preferred medium to extend formal finance and its purported benefits to the unbanked. This over-simplifies two things: (i) it assumes that all informal finance needs to be 'formalized' to achieve financial inclusion, and (ii) it assumes that digital technologies are somehow intrinsically equipped to 'formalize' (or 'modernize') by replacing "affective sensibilities with systemization" and "fuzzy personal judgment with documentation and unassailable proof" (Burrell, p. 151). For instance, the role of the mobile phone in supporting rich interpersonal communication often gets lost in its formalizing/modernizing formatting (Burrell, 2014). Consequently, the financial inclusion agenda in its current form discounts the many comprehensive and creative ways in which the poor participate in their local economies, as well as the unintended consequences of disrupting existing financial practices by mapping them to new technological tools and infrastructures (Maurer et al 2018). As I described in chapter 1, mobile money has seen success in enabling remittances and micropayments. The affordances of a long-distance remittance that is typically unidirectional – from city (sender earning more money) to the village (recipient back home who relies on this money) – and over some distance made it the perfect candidate for completion using mobile money. Its local infrastructure, its real-time transaction fulfillment, and its attractive rates (that are cheaper than comparable services such as Western Union) have made remitting money over the mobile money platform that much easier. However, as excitement around mobile money and its potential to support a full suite of financial services grows (for instance, see some of this relevant discussion in CGAP 2013, Mckinsey 2018), there is a need to recognize that not all financial practices will digitize – or map to mobile money more specifically – as easily.

My aim in this chapter is to I describe one type of an informal financial instrument that the poor rely on extensively to make ends meet on a daily basis – the interest-free informal loan. When looking at the financial lives of the materially poor specifically, Ruthven outlines six different types of relationships in the slums of Kalibasti in Delhi that broadly encapsulate the range of financial roles as well as services that they engage in. These span *social security relations* that provide unconditional, but limited, support; relationships of *shared origin and circumstance* that provide reciprocal support in recognition of shared needs; *sponsor relations* that constitute a source of certain support between a wealthier provider and a poorer beneficiary; *formal family relations* that are typically obligated to provide substantial support, especially for life cycle events; *tied economic relations* that connect providers and beneficiaries through distinctly financial relations; and *professional relations* that operate within the explicit rubrics of a given commercial transaction (Ruthven 2002, p. 267). Of these, social security relations, relations of shared origin and circumstance, sponsor relations, and formal family relations are most likely to become sources of interest-free loans and gifts. Ruthven (2002) goes on to observe that interest-free loans were the most frequently used financial instrument amongst Kalibasti's members; in fact the poor were effectively borrowing more than they were saving through the duration of her fieldwork. Similarly, Collins et al find that the

poor more often transact with their neighbors without the presence of any formal contract, instead of with formal institutions such as banks (Collins et al 2009).

My aim in this chapter is to reveal the work that people do in sourcing, maintaining, and repaying these loans, and in doing so revealing the affordances of this widespread practice that makes them particularly resistant to being digitized. In doing this, I caution against both a homogenous, broad strokes understanding of financial instruments – such as savings, loans, and insurance – as well as a unilateral push to digitize these. To illustrate what I mean by a "homogenous understanding of financial instruments," or indeed to disambiguate between them, I point to the discussion of two different types of credit services in this dissertation itself: (i) I discuss the interest-free informal loan in this chapter that (as I will demonstrate) is resistant to digitization, and (ii) I discuss a microfinance-sourced loan in chapter 4 whose repayment is successfully completed over a mobile money platform. Both of these financial practices qualify as 'credit/loan instruments' yet demonstrate vastly different affordances in how they are sourced, maintained, and repaid[1]. Still, the 'informality' of the interest-free loan, and thus its 'burden' of sociality, makes it particularly suitable for 'formalizing' through digitization (thereby transforming it into a less 'social', and more 'individualistic' and 'rational' instrument). However, it is this very sociality that leads to the development of norms and rules over time that lends structure and predictability to the practice of the interest-free informal loan (although at other times, the rigid protocol around hierarchy and status imposes its own burdens as we will see later in this chapter).

Before proceeding, I want to caution against a cursory read of this chapter that may tempt the reader to align themselves with the dominant narratives around the 'impersonal' and 'individualistic' quality of technology, especially the mobile phone. This reinforces the pervasive but over-simplistic dichotomy of formatting the mobile phone as necessarily an instrument of 'formalizing/modernizing' wherein it cannot support informal practices (Burrell, 2014). The evidence I present in this chapter speaks to the many motivations that make both borrowers and lenders keep their interest-free informal loans as intentionally *proximate*. This in turn moderates the role of the mobile phone that is often thought to be most useful in collapsing distance (Donner, 2008). The mobile phone's utility (or lack thereof) in this context does not and should not contribute to the

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[1] I wanted to point here to some of my observations from my fieldwork in Delhi in 2011 that speaks to the analogous affordances of different financial instruments. As a migrant in Delhi, who was originally from the state of Bihar, told me, "I send what I save to my family." This begs the question: does this count as a remittance or savings practice? This same user sent money to his wife in Bihar 2-4 times a month on average. However, instead of using a remittance service to transfer money to his wife's account, he was actually depositing money into his own savings account at a lesser fee. He had left his ATM card (and the PIN) with his wife back in Bihar, who could now go to the nearest ATM machine and withdraw money directly. I met another user who had a regular savings account that was registered in the state of Madhya Pradesh. Unfortunately, he was incurring a severe penalty for making deposits out-of-state with his particular bank. To prevent the fee, he was using the remittance service to send money into his savings account at a lower cost. He then used his ATM card to withdraw money from the many ATM machines around the city. These examples demonstrate that users may use the savings service as a remittance service, and vice versa. This is something that providers and scholars must remain mindful of while designing financial products and services for the 'unabnked' (Ghosh & Bajpai, 2013).

"reification of the mobile phone as modernity in material form" that predetermines how it should be adopted and used, especially in the developing world (Burrell 2014, p. 2). Instead, this evidence should serve as a cautionary tale against the wanton digitization of existing financial practices in a bid to connect the 'unbanked' to 'formal' financial services, where informal financial practices may already be serving their needs in comprehensive ways.

2.   Context: The Interest-free Informal Loan in Kampala and Delhi

In the summer of 2013, I undertook some exploratory fieldwork in Kampala, Uganda and Delhi, India to better understand the daily financial lives of the urban poor and the role that the mobile phone played in these. As I discussed in chapter 2, I conducted call log analysis that helped reveal the social networks of my respondents, and thus their source and recipient of interest-free loans. Still, many of my respondents in Kampala and Delhi took issue with the term "loans" when often these transfers of money are devoid of any interest, and may rarely transform into a "gift" as the circumstances of the lender and borrower change over time, thereby eliminating any immediate requirement to return the original sum[2]. I certainly do not intend to present these interest-free informal loans as a homogenous financial instrument. On the one hand I observed a request by a florist on the side of the road to his fruit seller friend standing next to him for a 1500 INR loan so he could pay the guy who was delivering his stock, with a promise to pay his friend back before the end of the day as soon as he had made some sales. On the other, I observed longer-term loans being negotiated for more substantial expenses – such as a child's wedding or their school fees. In general, this type of loan whether for a small or larger amount, or for a short or longer tenure, was the first course of action when money was urgently needed (where savings were not immediately available). The immediacy of these loans as well as their lack of interest made them particularly attractive, yet relying on the same source time and again can induce lending fatigue. As we will see in this chapter, people are continually assessing who their potential lenders might be as their situations continue to evolve, and thus these loans cannot be depended on at all times especially for larger loans.

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[2] Brandt & Hosios (2010) observe that much of the literature that discusses informal credit generally positions it as strictly segmented. That is, households will borrow from family and friends at zero interest for consumption purposes; yet they will borrow at positive interest from moneylenders for investments. However, the authors point out that this may in fact be a false dichotomy. I generally observed households/individuals borrowing from their family and friends with no expectations of interest in my sample of participants. Sometimes though, the borrower would supplement the repayment with some extra money, or possibly a material gift, in lieu of interest or for maintaining social niceties. For instance, one of my respondents - Rajesh, an auto-rickshaw driver from Delhi – was actually borrowing from his family members with "interest". He said that since he was the poorest amongst his extended family, they almost expected him to knock on their doors constantly for monetary help. Anticipating a kind of weariness and hostility from his relatives, Rajesh ensured that he added in a little bit of money to the principal amount whenever he was returning it, even though it wasn't explicitly expected. Rajesh claimed this helped keep any ill feelings at bay – a kind of work he did (around maintaining social norms and niceties) to help preserve his informal credit line source from his more affluent relatives.

My ethnographic fieldwork in the cities of Kampala and Delhi has reinforced the reality that interest-free informal credit and gifts are relied on widely by poor households where formally regulated options are woefully inadequate to help meet their specific financial needs. State actors often lack perfect information about localized communities that are at a significant geographical and cultural distance from the political center; instead situated local actors themselves have access to the most precise knowledge about their state of affairs (for instance, see Ostrom's work on *Governing the Commons,* although she acknowledges that local knowledge might also suffer from many deficiencies). Furthermore, in generating these informal, ad-hoc solutions to meet income deficits, the materially poor are in fact configuring their own development agenda without the sponsorship or the disciplining tactics of external authorities. This is not to say that the reliability of formally regulated solutions, or the protections that they provide, is to be discounted. Instead, if anything, it sheds light on how the materially poor skillfully utilize the resources at hand to address the very real gaps in universal access and governance and generate workable, if not superior, solutions on their own. In light of this, Ruthven (2002) recommends that instead of building competing formal financial options, new entrants to the market can explore building up the capacity of thriving, sustainable informal financial options, especially where these informal options have figured out efficient, reliable, and cost-effective access and supply.

Previous work has shown that mobile money can help mitigate the transaction costs of risk-sharing across geographic distance and income diversity (William & Suri, 2014). Indeed, urban-rural remittances via mobile money have continued to uphold the 'dual system' wherein urban migrants in various African countries remain connected in this way to their villages even years after they first left (Morawczynski, 2008). These unidirectional remittances are frequently gifts from the more affluent urban residents that help households improve their incomes and cope with consumption shocks. However, as my fieldwork in Delhi and Kampala shows, the materially poor actively rely on their local networks to source interest-free informal loans as a coping strategy. In general, the spectacular dissemination and uptake of the mobile phone in the developing world has been associated with improved information access and productive efficiency, of expanding business and social networks, and of collapsing distance (see Donner 2008, for an early review of mobile phone use in the developing world). More significantly, it has also become a hallowed device with which to conduct money transfers and thus connect unbanked and under-banked populations to 'formal' financial services. In this way, mobile money is formatted as a formalizing solution that can eliminate the transaction costs and inefficiencies of informal finance. The rest of the chapter unpacks the overly simplistic assumptions of such a formatting.

3. Background: Socio-Financial Relations and Mobile Phone Mediation

3.1 The Embedding of Economic Action in Social Relations

It was in the 90s that economists began to observe that despite the erratic household incomes in the developing world, consumption was relatively smooth. Fafchamps &

Lund (2003) note some of this literature (e.g. Townsend (1994), Morduch (1991), Paxson (1992), and Jacoby & Skoufias (1997)), although they go on to observe that these studies provide little detail as to *how* risk was being shared across households. Still, these studies point to the presence of informal arrangements to help households cope with income shocks where formal insurance options were largely absent. Gifts and informal credit made up the bulk of these informal arrangements that enabled households to share risk with their networks of family and friends (Fafchamps & Lund, 2003). In other words, these 'informal' options were acting as 'formal' insurance substitutes (Udry, 1994; Townsend, 1994). Where both markets and the state were failing to help the poor cope, individual households relied extensively on friends, relatives, and neighbors to survive (Cox & Fafchamps, 2007). Thus, much of the relevant economics and sociology literature has operationalized interest-free informal loans as a form of informal insurance driven by reciprocity. Money is lent out or "gifted" in the hope that when a similar need arises for the lender, the borrower will be able to reciprocate, thereby setting in motion a mitigation strategy for future risk.

Still, these accounts suffer from what Granovetter (1985) describes as the problem of "undersocializing" or "oversocializing" human interactions. He observes that economics scholarship treats any economic action as (i) only minimally affected by social relations, that is an undersocialized account, or as (ii) dictated by a generalized morality, that is an oversocialized account. Here, Granovetter argues that in fact the undersocialized and oversocialized accounts are similar in their treatment of individuals as atomized actors in performing "action" and making "decisions" – undersocialized actors submit to the logic of idealized markets and oversocialized actors submit to generalized morality with little agency of their own. Instead Granovetter suggests that economic action is "embedded" in ongoing structures of social relations which forms the basis of trust that in turn presents a lack of malfeasance/fraud amongst market actors. He makes the convincing argument that we inherently trust our most intimate relations where we can predict behaviors, even in unanticipated situations. This becomes especially relevant when one considers the bad reputation that informal finance suffers from where accounts of malfeasance and fraud are often overstated in comparison to formal finance.

Geertz (1978) too (in his more economistic argument) finds in his study of a bazaar economy in Morocco that ongoing social relationships influence economic transactions. Geertz observes that buyers seek out maximum utility while sellers seek out maximum profit. However, these transactional processes are shaped more by "information flows" rather than the standard economic principles of demand/supply and utility balances. This is especially critical given the nature of the bazaar – it cannot boast of "perfect information". If anything, information here is scarce and unreliable. The search then for quality information in such an ecosystem is a resource-intensive, expensive process. Geertz presents two such search procedures in his paper: (i) clientelization and (ii) bargaining. Clientelization is the process of establishing ongoing relationships between buyers and sellers which greatly mitigates the need for navigating the bazaar market every single time. This is a reciprocal relationship where the buyer and seller conform to the same terms of agreement. Once a trustworthy buyer-seller relationship has been established, it maintains over time thereby ensuring that interim search procedures are

eliminated. Bargaining, on the other hand, reduces the search problem, not to one seller, but to a handful of sellers who are then appraised with great detail before a mutual relationship is agreed upon. Bargaining essentially serves as a communication channel between buyers and sellers who will eventually be involved in a long-term, intimate transactional relationship. In this way, Geertz inverts - actually invalidates - the notion of an idealized market, while simultaneously pointing to the importance of initiating, developing and establishing enduring, trustworthy relationships between buyers and sellers, or analogously for this chapter, between borrowers and lenders.

The intimate detail of such trusted relations, especially in informal finance, is often captured by more qualitative and deeply immersive methods (Collins et al, 2009; Ruthven, 2002) where economists too often lament that such informal arrangements become hard to quantify and measure. If we depart for a moment from the financial lives of the materially poor specifically, we must consider Viviana Zelizer's (2000) work that seeks to understand how people, in general, connect intimate relationships with financial transactions. Zelizer finds that people constantly differentiate amongst intimate social relations (she focuses specifically on sexual relations), each marked by a distinctive pattern of payment. People in fact spend inordinate amounts of time deliberating the nature of their social relationships and which payment mechanism – such as *compensation, entitlements*, and *gifts* etc – they best accommodate. In other words, different forms of payments "mark the character and range of the social relationship people are currently enacting." (ibid, p. 842).

3.2 Mobile-mediated Communication

Yet, Ruthven and Collins and her co-authors focus almost exclusively on the types of relations that both engender and sustain these sources of informal credit and gifts, and what the nature of these financial tools themselves are – that is, what their terms and consumption patterns are. They offer little detail on how these informal transactions are initiated, conducted, and completed and thus how, if at all, the mobile phone is able to mediate these processes (the latter is not something their papers were concerned with at all, but this dissertation certainly is). Certainly, asking such questions becomes an exercise in isolating the characteristics of in-person versus mobile-mediated communication, especially that which pertains to money-related communication. Indeed, computer-mediated communication (CMC) scholars have long noted the lack of contextual cues that disrupt, or even attenuate, the quality of interactions that occur over a CMC platform when compared to in-person interactions. In general, a hallowed body of scholarship has established that face-to-face communication is an "information-rich medium" (Nardi & Whittaker 2002 citing Doherty-Sneddon et al 1997, O'Conaill et al 1993, Short et al 1976, Daft & Lengel 1984, Clark & Brennan 1990, Clark 1996). Some of the factors that benefit face-to-face interactions are audio-visual feedback, contextual, nuanced cues, and natural language (Daft & Lengel, 1986), as well as co-presence, that allows for participation in a shared environment, and visibility, that can signal non-verbal and physical cues (Clark & Brennan, 1991). Still, by focusing exclusively on the *information* that is exchanged in any communication event, the social processes that in

fact scaffold these events may be too easily obscured (Nardi & Whittaker 2002). Nardi & Whittaker focus instead on these very social processes, arguing that in-person interactions lead to more effective social bonding through simple actions such as "touching, eating and drinking together, engaging in mutually meaningful experiences in a common physical space, and showing up in person" (ibid, p. 86). The authors in fact point to the "body work" that we must constantly engage in, where the use of our bodies as a "trading currency" in face-to-face communication becomes necessary to demonstrate our commitment to a particular relationship and/or communication event (ibid, p. 93). Often, this is accomplished by just "showing up". This is not to say that fully-mediated communication cannot sustain meaningful relationships; instead the authors find that early face-to-face interactions can successfully establish relationships and thus prime all parties to future mediated communication.

In addition, other research has found that in-person interactions, as opposed to mobile phone mediated ones, are critical in engendering and reproducing trust in social as well as business relationships, especially in the informal sector in the developing world. For instance, Molony (2006) finds that trust generally requires face-to-face interactions that can in turn bolster and build a relationship (both social and business) over time. This pattern is briefly mentioned in Slater & Kwami's (2005) work as well. In other work, Duncome & Heeks (2002) find that poor microenterprise owners tended to trust information that was delivered directly via personal contact. Therefore, any ICT-intermediated information had to be delivered to them in person – an evidently expensive proposition. Particularly for those microenterprises that were offering informal credit arrangements, transacting with customers who were familiar and trusted, and within their proximate environments, was preferred (Duncome & Heeks, 2002).

4. Informal Credit and Proximate Social Relationships

4.1 Keeping Social Networks Proximate

When broadly considering the urban poor, and their high reliance on informal loans, we have to also better understand the process of the determination of potential lenders. Horst & Miller (2006) describe an analogous process, that they call "link-up" (p. 95), in their detailed account of cell phone use in Jamaica. Link-up is a hyper-networking process where an extensive list of contacts is developed and maintained meticulously over time such that they might be called upon in times of need, although this is not absolutely essential. Since international migration is far more common in Jamaica, and foreign-based contacts presented a promising source of monetary gifts, a large part of the networking was actually conducted over the mobile phone (the authors are careful to state that the mobile phone itself did not cultivate this link-up culture; indeed it already existed, and the mobile phone then found its own place within this larger phenomenon). Contacts abroad are presumed to constitute a more affluent, and therefore a more realistic source of credit/financial assistance, but making similar deductions about domestic contacts, who are likely making ends meet in similar ways, requires a little more detail.

Therefore, this may not map as well (as the phenomenon of link-up did) to mobile telephony.

I found that within my sample there is a continuous assessment of who might constitute a reasonable lender at a given point in time, which requires access to salient and timely information. This type of information is greatly benefitted by proximity. For instance, indicators such as the purchase of a new bike that was suddenly standing outside a neighbor's house, or observing extended visits from relatives (and thus their food costs) communicated a healthy financial well-being. Meeting up with your neighbors for a cup of tea every evening at the neighborhood stall (if you are a woman) or a drink at the local watering hole (if you are a man) and exchanging light gossip about the neighborhood was very common. In Kampala, as women often worked in close proximity in the local markets, any periods of downtime were punctuated with similar conversations[3]. Moreover, local savings groups were always a good place to gather information, especially women's savings groups that often dedicated a half hour at every meeting for discussing familial, financial, or work troubles. In general, proximity helped determine when a fellow Rotating savings and credit association (ROSCA) member or neighbor receives their scheduled payout. This signaled their sudden solvency, and thus the possibility of becoming a potential lender if sought out[4]. Similarly, one would become privy to the fact that their neighbor lives with only their partner and no other family members, and thereby assume, perhaps realistically, that they have fewer expenses and thus a higher capacity to lend. Constant assessments such as these are necessary in maintaining a list of potential lenders who can be called upon in times of need[5]. Since,

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[3] As such, my research reveals that day-to-day coping strategies for the poor are inextricable from the cultivating and preserving of social relationships, much like what Granovetter (1985), Geertz (1978), Collins et al (2009), and Ruthven (2002) have found before. These are decidedly instrumental objectives that are operating within the realm of sociality that need not be objectionable when explicit. Still, reducing social relationships to *just* instrumental concerns in a bid to be theoretically committed (for instance, to the theory of "generalized reciprocity") would be purging these relationships of their rich, complex, messy detail (Horst & Miller, 2006). In general, building and maintaining these social relationships benefits greatly from face-to-face interactions (Nardi & Whittaker, 2002).

[4] Interestingly, Baland et al (2011) find from their field observations of credit cooperatives in Cameroon that the presence of a formal or semi-formal loan can be used effectively to reject requests for informal loans. This is because the presence of a loan implies privation(s) of some sort that signals an inability to lend. Still, ROSCA payouts may be construed as a savings device where its members deposit a fixed amount on a regular basis to receive scheduled lump sums over time; therefore they may not signal a dire need. This is perhaps why our respondents considered a ROSCA payout as indicative of the ability to lend out further.

[5] Work was also often done to prevent money from accumulating at home so that one wouldn't be obliged to lend it out (or tempted to spend it). For the most part, my respondents in both Delhi and Kampala felt immense responsibility towards helping out friends, family, and neighbors in need. They had multiple motivations for this – (future) reciprocity, empathy, compassion etc. However, many of them, especially those whose households hasn't suffered a serious financial setback in a while, felt that the requests for financial help were a constant, and therefore they kept their money with local money guards so that refusing somebody in need, or loaning only a partial amount, did not make them feel guilty.

Mobile banking in India has not quite achieved the same popularity as that of mobile banking in Kenya and Uganda, mostly due to differences in the regulatory and infrastructural setup. See Porteous (2006) for a more thorough account.

this list of lenders is, for the most part, curated from one's immediate social network with similar income levels and life circumstances, it needs to be updated constantly. If one hears of some financial hardship or misfortune that befell a neighbor or community member, they will be excluded from the list, at least until such time that their situation improves. This also means that any informal loans taken from one's immediate social networks may need to be returned at a moment's notice if there is a sudden and urgent requirement. As Jamal, an airtime and mobile money agent from Kampala, points out, he prefers to borrow from friends who live within a kilometer of where he lives. This way if his friend suddenly calls him up and asks for the money, he can immediately go over and repay him. Moni from Delhi echoes this sentiment, although her "interest-free" loan may be somewhat disingenuous. Noni saves money by purposefully deferring her monthly wage payments from her employers so that she can be paid her 4-5 months worth of lump sum wages together. Therefore she doesn't always have money on hand for expenses other than rent and food. Meanwhile, she has been guarding some money for her close friend for the past six months; her friend leverages their proximity and comes and hands over her money to Moni whenever she has some extra on hand to avoid spending it or have her husband find it (who might then use it for things that she disapproves of). In that time, whenever Moni has needed some money to get by, she has dipped into her friend's ever-growing stash of money with the intent of replenishing it at a later time when she gets her lump sum wages. There seems to be no active deceit at play here, and Moni's trustworthiness is not noticeably disrupted as she continued replacing the money during the course of my fieldwork (I spoke to her friend separately and without disclosing Moni's actions.) Still, operating locally and completely through cash has enabled this arbitrage of money across time without any explicit requests for loans that can otherwise produce embarrassment and fatigue for the borrower if done persistently (as Moni often needs to). Such possibilities become constrained when conducting transactions with a digital trace.

In general, I found that my respondents in Kampala and Delhi were relying on informal loans that were generated from their proximate social networks. More often that not, their distant social networks comprised of their families that lived in their native villages or towns, and who were likely to be remittance recipients than donors. Such remittances were common, both in Kampala and Delhi. However, respondents in Kampala used mobile banking to remit money, whereas respondents in Delhi relied on bank transfers or on microtransfer services such as Western Union[6]. Quick calls on the mobile phone were used to bookend these transfers in both cities – once before the transfer was initiated to inform the recipient that a transfer was being made, and then again after the transfer had been completed. The recipient would typically confirm the receipt with another phone call, either immediately, or whenever they are able to make a withdrawal. Such urban-rural remittances are almost always unidirectional, with the roles of sender and receiver firmly established, seldom to be changed. Moreover, these transfers are typically gifts, in that there is no expectation of having this money returned.

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[6] Mobile banking in India has not quite achieved the same popularity as that of mobile banking in Kenya and Uganda, mostly due to differences in the regulatory and infrastructural setup. See Porteous (2006) for a more thorough account.

Of course, when this microtransfer is a loan, albeit interest-free, but money that needs to be paid back, then mobile banking poses a small problem. There is a fee for both, sending and withdrawing money off the service, which is usually a small percentage of the actual remittance amount. It is a significant enough charge that lenders might be upset about losing when withdrawing; yet it is simultaneously small enough that asking your borrowers to add that on top of the repayment amount to make up the difference would seem impolite, especially when they are already paying a small premium to remit the money in the first place[7]. Unfortunately, this becomes more aggravated when it is the lender remitting money to the borrower. As Patricia from Kampala observes, it is not "humble" to ask your lender to add the withdrawal charge over and above the loan amount. This effectively means that the borrower then receives less money at the time of the emergency that prompted the loan request in the first place, but that he has to return the exact amount requested at the time of repayment. Furthermore, if the lender is very particular about receiving this exact amount back, then he might ask the borrower to add in the withdrawal fee as well. In this way, the borrower would bear the service fees twice Such a transaction cost will only be borne if money was being transferred over some distance. However, none of our respondents demonstrated a need to do so, instead accessing interest-free informal loans within their immediate social networks itself. We found only one instance in Anil, from Delhi, who was repaying a loan, that he had taken from his uncle in Bombay when he used to live there five years ago, using money transfer services. Until then, his uncle had not asked him to add in the withdrawal fee, but Anil feels that he wouldn't worry about such a trivial amount anyway because he is richer than Anil is, and much older. Older people generally tend to give some leeway to the younger family members, he muses. This is the only outstanding loan that Anil has to repay remotely; in general, he prefers conducting all his money matters privately and in-person because *"money talks are important."*

4.2 In-person Interactions Vs. Phone Interactions

Still socio-economic class may collapse this reliance on immediate social networks for informal credit, largely in part due to the growing stratification of the urban rich and the urban poor. Given the frequent incidence within the informal sector of wage advances from one's employers, or even the foregoing of one's wages for a few months as a form of savings (Collins 2009, Ruthven 2002), I imagine that employers do make up a 'distant' social network that can be called upon in times of crises. Moreover, given their more affluent status, surely they constitute a realistic credit line in such times? Yes, agrees Leela, who works as a domestic help in Delhi and travels over 20 kilometers everyday to get to her employer's home. But then again you cannot call up your employer and ask him for money just like that! Leela explains this form of social etiquette:

> Leela: If I take money from my employers, I ask in person only. If I ask over the
> phone, what if they are offended? Let me tell you one thing, I might be illiterate but
> this is a matter of common sense, which needs to be there. Let me tell you another

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[7] In similarly observing that transaction fees can be expensive, Donovan notes that mobile money will therefore not easily replace cash for petty purchases (Donovan 2012, p. 71).

thing, let's take you as an example. You are somebody with resources. I call you up from my home and say, "Sister, I need some money". You won't like it very much.

Interviewer: Why?

Leela: Ok let's not take you as an example. Your mindset might be different, "No Leela needs money, she must be having some real trouble. Let me give her some money." This is one kind of mindset. Others might not like it so much. "Aah!" they will think, "Calling me up like a minister from her home. Why should I give her any money?" They will wonder why I am not coming and asking in person. This is why I like to ask for money face-to-face only.

Figure 1: An urban sprawl in the southern part of Delhi, that I visited frequently to speak with respondents, where homes exist cheek by jowl.

Leela starts to point at the power imbalance between her and her employer, somebody who clearly has "resources", which, to some extent, had been mitigated between her and me as we developed a friendship during the course of the study. The insinuation of this power imbalance is further reinforced with Leela's use of the term "minister" which in India, and especially in the political capital of Delhi, conjures up a picture of a wealthy and powerful (and often tubby) political representative who is too apathetic or too contemptuous, or both, of existing social norms to pay them any attention. This role is

one that Leela is in no position to rightfully occupy with her employer, if even provisionally. What Leela implies, and in fact goes on to confirm in subsequent interviews, is that when asking one's employer for money, one has to do so with the right amount of self-effacement and gratitude. There is a certain expectation of *effort*, of "body work" (Nardi & Whittaker, 2002) to actually commute some distance and to present yourself in person, that should justify the (likely) largesse of the lender. Indeed, Urry (2004) in his study of the mobilities of social networks implicates this power imbalance as one of the many forces that engender such "mobility burdens". Such a burden is exacerbated by the socioeconomic chasm between Leela and her employer; in maintaining the tacit rules of social interaction (that is a sort of subservience on the part of Leela) they, in fact, continue to reinforce the gaping socioeconomic disparity.

> Interviewer: But if somebody calls you up and asks you for money over the phone, how would you feel?
>
> Leela: I will feel good only. I will feel that just like when I had a need, I went and asked for money. Now this person is calling and asking for money, he must have some real need. So if I have money, I say as much. And if I don't have any money, I will tell him that - this is my difficulty and this is why I cannot give you money.
>
> Interviewer: Don't you feel offended that they called instead of asking in person?
>
> Leela: No. No.
>
> Interviewer: Why?
>
> Leela: Because I am poor.

Leela says that, being poor herself, she has a deep empathy for the daily, pressing needs of the poor. She understands that a phone call may be made in lieu of an in-person visit if the person is unable to come due to some "problems". Thus, she demonstrates an implicit understanding that transaction costs are significantly reduced when requesting an informal loan over the phone, even when your network of potential creditors are in your immediate vicinity. Calling up your potential creditor to check if they even have the money at hand is a good way to ensure that you save both time and money on what would otherwise have been a futile trip. Such a call with an intention of soliciting money would begin with some general pleasantries, eventually leading up to the specific request[8]. However, once the potential lender confirms that he or she has the money, the more specific details, such as when and how to repay the amount, are almost always negotiated and settled in person. Even if these more important details are discussed over the phone, the money handover will most certainly happen in person, where these details will be

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[8] We found that the calls placed specifically for an informal loan request are typically extended to avoid seeming impolite. This is rather unlike the conversations described in Horst & Miller's book (2006). These conversations launched abruptly and immediately into the real purpose of the call which was mostly to seek out some form of financial or material assistance, or else to check in briefly with an extensive list of contacts. Horst & Miller find that longer calls were usually only placed to a romantic interest or for the purpose of general commiseration.

reiterated. Apart from the practical consideration that one might run out of airtime thereby ending an important conversation rather brusquely, there were two recurring narratives around this[9].

First, our respondents described how they were able to access more authentic and reliable information in person, which is otherwise purged from a telephonic conversation or SMS. One may be able to lie indiscriminately over the phone, that would be otherwise impossible to claim in-person, and there is little recourse to verify this. Faith, from Kampala, has been faced with this rather disagreeable situation for a while now. She is 23 years of age and manages a small shop on Buganda Road to make a living. She wants to get an undergraduate degree instead but cannot afford the fees. She has been looking for a sponsor for her education and had found a man, named Kevin, who promised to help her with her search. Faith borrowed money from a family friend to pay his fee. It has been months now and Faith thinks that Kevin has decamped with her money without any sponsor in sight. Still, she will regularly reach out to him in the hope that maybe he will return her money. She tried calling him recently but on receiving no response, eventually texted him asking for her money. She received a message from Kevin's number claiming that he was not in town. Even though the message is purportedly from someone else, Faith believes that it might be Kevin pretending to be away just to buy more time. There is no way for her to verify this as she has no idea where Kevin lives. Faith now wishes she had noted down his address so she could go and meet him in-person.

Still, Faith is battling with what she believes is an out-and-out misrepresentation. Phone interactions may lack more subtle information as well, that in-person interactions can accommodate in unique ways. Such quality of information becomes critical, both, for lenders who want to establish the credit-worthiness of their debtors, even (and perhaps especially so) if they request for multiple loans over time without any formal contracts or collateral, as well as for borrowers who want to determine if the lender is genuine in their reasoning when rejecting the request for money. This rejection, more so if based on reasons that are determined to be insincere, may cause the lender to be eliminated from the list of possible financiers in the future; a process that, as we observed earlier, is continuous and dynamic. Asking for money is, in and of itself, a potentially awkward experience for the borrower. Indeed, many of our respondents declared their distaste of seeking money from family or friends, fearing the outright embarrassment of rejection, or ridicule and gossip if timely repayments are not made. In-person interactions did reveal, or so our respondents believed, the "intentions" of both the borrower and the lender to the extent that it determined the fate of the transaction at hand as well as any future transactions. Leela gives the example of her "rich" friend who has been helping her out with small informal loans from time to time. This friend always insists on meeting in person a few times before lending money out even if she knows the borrower well, more

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[9] Molony (2005) finds that the leader of an informal construction workers group in Dar es Salaam refuses to discuss the financial details of a new contract with his group members over the phone as he considers it "bad manners" (p. 76). Although I did not observe any explicit instances of this in our sample, it still constitutes a reasonable explanation for why one would prefer discussing financial matters in person, especially given the general themes of social etiquette and protocol regarding money conversations that I otherwise found and discuss here.

so because she rarely ever asks for collateral. Asking for collateral is yet another way of moderating the riskiness of lending that both formal and informal arrangements will seek out. The materially poor can often only present small pieces of precious jewelry or their home ownership papers as collateral. They are particularly wary of providing their home ownership papers as collateral given how tenuous the urban slum settlements in big, dense cities like Delhi and Kampala can be – these papers serve as their only links to remediation (if at all) in case they are forcibly evicted or resettled. Where people are distinctly uncomfortable to provide such valuable collateral towards sourcing loans, their options become limited. In these cases, in-person interactions can provide clues to establish their trustworthiness as well as communicate their distress more powerfully.

In-person interactions do help inject some gravitas into conversations. As Leela continues her narrative of seeking financial help from her employers, she observes that requesting her employer for an informal loan in person will almost always be successful. Once she has told him about her sorrows and challenges in person, she knows that her employer will be too embarrassed to refuse her. Over the phone he might have been able to, but seeing her in person, with her troubles writ large on her face, he would feel compelled to accept her request. Meanwhile, in Kampala, Henry's ex-mistress uses the same tactic by showing up unexpectedly at his home with their child in tow on the pretext of making father and son meet. Henry seldom visits them, as he has his own family to look after, and therefore their communication is predominantly limited to the mobile phone. His ex-mistress had called him recently to ask for money, but Henry had been unable to fulfill this request. Ever since, he had been avoiding her phone calls. However, when she came over with their son, he felt compelled to give her whatever money he had on him as well as some other small household items, such as soap, that were lying around. Even though she didn't explicitly ask for any money in person – she came on the pretext of their son spending some time with his father – Henry surmised that he could hardly let them leave without "gifting" them something. Henry only ever tries to pay his son's school fees. Still, if and when he does give money to his ex-mistress, it is considered a gift with no manifest expectation for repayment. Eventually, a plea for financial assistance, that went unheeded when requested over the phone, was fulfilled when Henry's ex-mistress showed up on his doorstep. Therefore, the phone may mute affect that an in-person interaction is quickly able to escalate.

The same holds for lenders looking to retrieve their money; asking in person may induce a more forceful reminder for when and how to return the money. Rooma, from Delhi, tells us that she is very particular about discussing such details in person when lending money. She is generally very shy about asking for her money if a friend or family member is dithering on their repayments, but the face-to-face discussion right upfront helps in underscoring the importance of a timely return. Asking in person may also communicate an unequivocal urgency that cannot be flouted or ignored, at least not easily. For instance, Leela recounts an incident where she lent 500 INR to a neighbor who was supposed to return the money to her the very next day. However, Leela called her up after three months of no contact, asking for her money because she had some unexpected expenses coming up. Her neighbor said that she would pay her back the following month. After following up over the phone a few more times, she finally went

over to her neighbor's home, an event that she definitely considered an escalation. Her neighbor recognized this and offered her 100 INR as an installment that Leela politely refused. There is no visibility in small amounts of money, Leela explained to us. She preferred having her 500 INR back as a lump sum that she could then use for a substantial purchase, instead of taking 100 INR for the time being, spending it on a sack of potatoes, and then not even missing it. Eventually, after Leela kept returning to her neighbor's home at regular intervals, she got her money back in a lump sum.

This example demonstrates that an in-person appeal can exert pressure on the borrower for repayments, even if it is a partial repayment, which may be easier to disregard when made over the phone. Still, we heard many of our respondents lament the very presence of the mobile phone in their lives, especially around the time that their loan repayments were due. Fatima, from Kampala, says that having a phone on your self at all times makes it harder to dodge your creditors; one is harassed with constant calls if even one payment is missed. Fatima remembers the times, before mobile phones became commonplace, when a creditor would have to come to her home to ask for her money, an action that was far less frequent than the multiple calls that she is subjected to these days. Fatima has been finding it hard to accumulate enough money to pay for her daughter's school fees and every time she gets a call from her unsympathetic creditor, she says that she feels like collapsing. In this example, Fatima is referring to a loan that she took out to help meet her expenses. And sure enough, her creditors and moneylenders will indulge in persistent calling, amongst other things, as a means of exerting pressure on their defaulters. This is, however, uncharacteristic of one's immediate social networks that generally tend to be more empathetic and understand the challenges faced in making repayments if expenses overwhelm income streams. Moreover, it is considered impolite to harass a friend or family member persistently for a repayment unless, of course, one needs the money urgently or if the borrower is being particularly delinquent in returning the money. Furthermore, while one may deliberately choose to leave a friend's or a family member's call unanswered (that, all the more, will prompt an in-person visit), it is harder to do so with a formal creditor's or moneylender's call. The latter constitute a larger and more reliable line of credit and estranging oneself from such a source can be potentially detrimental. Therefore, phone conversations and in-person meetings may both be used to exert pressure on defaulters, but the latter is more often chosen as a conscious form of escalation where informal loans between peers is concerned.

Finally, it is worthwhile noting that both face-to-face and mobile-mediated interactions offer unique forms of access to a person that dictate the nature of the communication event. For starters, the sharing of mobile phones is commonly observed and recorded in the developing world (see Burrell 2010 for a comprehensive account), which can get in the way of sensitive discussions around money. Rajnath, who sells roasted corn on the cob in a busy street in Delhi, tells me that neither he nor his wife (who lives in his home village in a neighboring state with his parents) has a phone. He states multiple reasons for this decision – phones are expensive to buy and then repair (he talks about purchasing a "China mobile" that is relatively inexpensive but is not a very sturdy or durable phone[10]);

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[10] Kumar & Parikh (2013) observe this in their fieldwork in Northern India as well. They go on to state that the ubiquity of mobile phones leads to the emergence of specific metaphors, such as the

moreover, he feels that phones may "corrupt" his children by exposing them to objectionable content. Therefore, having phone conversations with his wife over borrowed phones (where he borrows his brother's phone and his wife borrows his father's whom she lives with) becomes tricky, especially when they want to discuss personal finances. Rajnath says that to avoid having his father listen in on their money conversations - lest he feel offended or rejected by their decisions - his wife first starts off with general small talk while doing small chores around the house, and seamlessly moves into another room, out of earshot of her father-in-law, to discuss money matters. Rajnath is able to borrow his brother's phone and move out of earshot immediately but the power dynamics around gender and age (and thus an expectation of complete obedience) prevent his wife from doing the same. Of course, such dynamics come into play in in-person interactions as well, but the work done in overcoming them will be decidedly different where the channel of communication doesn't need to be shared.

Moreover, in-person interactions offer physical access to a person that can offer more contextual, nuanced information but can also present opportunities for physical improprieties. Goffman (2005) discusses situational improprieties in his book on face-to-face behavior where he notes that when one comes within the immediate presence of another person, there arises the opportunity for physical indiscretions; from more serious forms of assault, to waylaying and engaging in unsolicited interactions, and to violating one's physical space to the extent that it may become confrontational. Henry, when discussing a neighbor who had recently called him to ask for money, offers us a glimpse into just such a scenario.

> Interviewer: Why did she call you?
>
> Henry: She wanted me to lend her money, because her landlords were demanding rent from her. She called me when I was busy and I told her to call me later when I am back from work. She was asking me to come over to her place so we could discuss the loan but I did not go.
>
> Interviewer: Why?
>
> Henry: I did not go to her home because she seems to be having other personal issues that are not related to money.
>
> Interviewer: Such as?
>
> Henry: For example, she is my secret admirer. Going to her place to check on her would be a way of giving her a chance, given that she is not married and has no husband. She has called me up some time back as well, but from my analysis and observation of her behavior, I decided not to meet her. She is just using the excuse of having no money to get to me in person.

Henry claims that the lady in question had beckoned him over to her house many times, but seeing that she was unmarried, Henry chose to reject these offers for fear of the wagging tongues of their neighbors. There are two things worth noting here. First, as we have discussed previously, the procedure of asking for money over the phone and then requesting for a follow-up in person to discuss the remaining details is a fairly routine

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"China mobile" that is shorthand for cheap, flimsy yet feature-laden mobile phones from different brands – Chinese or not.

one. Second, using this as a lure to gain physical access to a person for completely tangential purposes may be yet another motivation to conduct such transactions in person. Of course, it is very possible that the intent was not entirely tangential – initiating an intimate relationship helps build a reliable source of assistance, financial and otherwise. It is also possible that this could just be Henry's over-active imagination at work. Still, the fact that he believes that this lady might be able to corner him in an undesirable situation if he is physically present in her home goes to show that an in-person encounter does present certain unique opportunities as well as constraints to all parties involved, that just cannot be realized in much the same way over the mobile phone.

5. Conclusion: Can the mobile phone 'formalize' the interest-free informal loan?

I consider the interest-free informal loan in this chapter that the materially poor rely on heavily to help tide over income shortfalls and meet consumption shocks, and question if their affordances allow for an easy digitization. Kevin Donovan (2012), in cautioning against a gratuitous mapping of existing financial practices to digital tools, points to the potentially disruptive disintermediation created by mobile money that may have undesirable outcomes. For instance, new mobile money users who could now easily remit money drastically cut down on physically visiting their hometowns or villages thereby leading to familial distress. Or loan repayments made via mobile money could potentially disrupt the social pressures exerted through face-to-face group meetings, which in turn could lead to higher default rates (Donovan 2012, p. 71). I make a similar argument in this chapter – in revealing the work done in sourcing, maintaining, and repaying informal credit from intentionally proximate family and friends, I show how completing these transactions via mobile money can potentially disrupt the very processes that ensure their consistency, reliability, and trustworthiness. In general, the stage seems set with the rapid dissemination and uptake of mobile phones, as well as mobile banking, that low-income populations should be able to solicit and complete all informal credit transactions remotely. One imagines a quick, convenient phone call to request for money that can (almost) immediately be fulfilled through a mobile money transfer, especially in Uganda where the mobile banking market is more mature than that in India. However, as I demonstrate in the chapter, keeping the network of informal loans proximate is an attempt in keeping this immediate source of credit predictable, manageable, and recoverable. This constrains the role of the mobile phone in the case of the interest-free informal loan, whereas it might map well in other types of loan instruments (as I demonstrate in chapter 4).

In general, keeping these loans proximate largely alleviates information asymmetries. One gains access to timely and salient information that implicates the solvency or the hardships of a friend or family member. Such information is also extremely valuable in the face of no written contract; it constitutes a type of informal credit history for both lenders and borrowers that can be relied on to prevent counts of mismanagement and fraud. Thus, the actors in this informal arrangement subscribe to tried-and-tested practices of mitigating the inherent riskiness of these transactions. This requires constant work that cannot be accomplished in much the same way with mobile technology. I also

discuss the enduring importance of face-to-face interactions when dealing with matters of money. I find in my research in Delhi and Kampala that both lenders and borrowers prefer conducting financial conversations and transactions in person, despite the rapid uptake of mobile phones as well as mobile banking in the developing world. In general, I find that the mobile phone may attenuate the quality of information that is being communicated that will only reinforce the risks of an informal transaction. Moreover, the mobile phone may also mute affect that is otherwise critical to generating an encouraging response, both from potential lenders and borrowers, over the course of a transaction. Finally, as the urban poor continue to rely on their immediate social networks for informal credit as a coping strategy, the service fees of mobile banking do not always justify a remote transaction. Both lenders and borrowers would rather complete the transaction in person.

Therefore, despite the popularity of mobile money, especially in Uganda, interest-free informal loans were still largely cash-based and conducted in person amongst my respondents and their social networks. An enduring concern amongst mobile money practitioners is that mobile money services remain largely cash-based where users will not transact via their digital wallets in digital currency but will instead hand over cash to mobile money agents [11]. This heavy reliance on cash is considered "troubling for the long-term viability of mobile money and for greater financial inclusion" (CGAP reference, 2013). At the same time, mobile money is popularly touted as our savior from the ills of cash that allegedly "perpetuates the poor's marginalization from the formal economy" (Gates Foundation 2012). Yet, cash still plays an indispensible role in the daily financial lives of the poor where it works best in proximate and in-person economic interactions. Moni's resourceful use of her friend's money, to avoid exhausting a potential source of credit at a later time, is a particularly evocative example of how the anonymity and untraceability of cash can enable such creative arbitrage. The explicit logging of financial transactions, despite its purported benefits of building credit history and maintaining transparency, can sometimes be counterproductive[12]. It is important to recognize that cash does in fact help the materially-poor manage their precarious cash flows, despite CGAP's and the Gates Foundation's anxieties around it impeding 'greater financial inclusion' (CGAP reference 2013, Gates Foundation 2012).

This is not to say that the mobile phone has *no* role to play in the cash-flow management of the urban poor. The mobile phone is deployed to reduce transaction costs wherever possible, generally at the very beginning of the informal credit cycle between peers, or during the repayment phase between formal/semi-formal creditors and their borrowers.

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[11] I discuss this in more detail as well in chapter 4.

[12] During my fieldwork in India during the latter half of 2016, I was interacting closely with a design consultancy firm that was interested in building a credit-history system for the auto-rickshaw driver community I was working with. This credit-history system was supposed to document and track interest-free informal loans within this community. This was an attempt at "formalizing" this informal practice. Initial trials were deemed unsuccessful because, like I point out in this chapter, asking for money is an awkward and discomfiting experience. Making a ceremonial documentation of this was, as I predicted, not well-received. At this time, I am unaware of how that project has progressed.

Still, its role is certainly not transformational, at least not in a way that would have run counter to the broader notion that for those individuals in frequent proximity, the mobile phone somehow becomes a less relevant or less impactful tool when matters of socioeconomic development are considered. As far as informal arrangements are concerned, proximate and in-person access will continue to provide the most situated and accurate information, as well as induce a form of urgency in the proceedings, that remains critical to the success of these arrangements. Whether or not the mobile phone is eventually able to renegotiate these informal institutional arrangements will be an interesting line of research to pursue in the future.

CHAPTER 4

Mobile Money as Infrastructure

1. Mobile Money as Infrastructure: *Not* Standalone & *Not* (just) Technological

The mobile phone as a platform for delivering financial services to unbanked and under-banked populations in the Global South has become a shorthand for its own *transformational* potential in accomplishing financial inclusion. In fact, the term 'transformational' m-banking has been used to refer to the use of mobile phones for connecting these marginalized populations to formal financial services, as opposed to "additive" m-banking where populations with access to formal bank accounts use their mobile phones as a supplementary mode of access (Porteous, 2006). Consider the following quote made in an article by the Brookings Institute:

> **"Technological innovations have now made it possible** to extend financial services to millions of poor people at relatively low cost. A case in point is mobile telephone money transfer services that allow mobile phone users to make financial transactions or transfers across the country conveniently and at low cost. Kenya's mobile payment service, known as M-PESA, provided by the main mobile phone company, Safaricom in conjunction with Vodafone, represents a good example of how **low-cost approaches that use modern technology can effectively expand the financial services frontier.**" (Kimenyi & Ndungu'u, 2009, *emphasis mine*)

As I discussed in chapter 1, the transformational mobile banking or mobile money narrative is often reduced to these wonders of "modern technological innovations" that unduly accords greater visibility to the mobile phone technology. It is not uncommon to hear some of the known names in the international aid sector echoing this sentiment. For instance, the Gates Foundation claims that digital platforms are "the most effective way" to achieve financial inclusion (Bill & Melinda Gates Foundation, n.d.); The IFC (in a joint statement with the Mastercard Foundation) lauds mobile money as "revolutionary" because it brings banking to one's fingertips via the mobile phone (International Finance Corporation, 2018); CGAP observes that more digitization is the way forward for overcoming the many challenges in the mobile money domain, such as achieving scale in financial services like savings and loans that otherwise require significant interaction between customers and providers (Consultative Group to Assist the Poor, n.d). To counter this trend of depicting a rather disingenuous version of how mobile money actually works on the ground – that is by claiming mobile money is a money transfer 'product' or 'tool' – Kendall et al (2011) draw out an analogy between mobile money and "network infrastructures", such as canals, railroads, and telecommunications that have

historically transformed the ways in which people, goods, energy, and information have been moved around (p. 49). While the authors are quick to observe that mobile money still displays the characteristics of a 'platform', much like other network infrastructures, it is in fact reconfiguring retail finance and how cash is moved around, especially in low-resource settings in the developing world (Kendall et al 2011; Mas & Morawczynski 2009).

The terms of a mobile money 'ecosystem' (Jenkins, 2008; Kendall et al, 2011) or 'environment' (Porteous, 2006) have been used to capture its variety of stakeholders, that is the financial institutions, regulators, and agents, in the past. Any of these terms may provoke us to think beyond the delivery platform, but I propose that thinking about mobile money as an *infrastructure*, as Kendall et all (2011) propose, is particularly valuable because it allows us to focus on approaches that specifically foreground infrastructural studies and thus provide us with a theoretical vocabulary to capture and articulate these. This is particularly relevant to this paper as I attempt to refocus the disproportionate visibility afforded to the technology platforms in mobile banking to its more invisible aspects, such as the human work that is invested in building and maintaining these systems[1]. Furthermore, infrastructures are now, more accurately, understood to be evolving instead of being static and irrevocably constructed to a plan (Edwards et al, 2009). Still, it is desirable for infrastructures to outwardly demonstrate a state of "relative stasis" in order to signal a state of order and stability (Mathew and Cheshire, 2017). Such inherent tensions only reinforce the need for tools that can facilitate an *in situ* understanding of infrastructures. The literature on infrastructures privileges its otherwise invisible state (or specific aspects of its invisible state), which helps us trace its consequences, makes visible the emergent roles that are associated with them, and brings its politics into sharp relief (Bowker et al 2010). This literature tells us how infrastructures are made, maintained, and repaired, including how they fit into installed bases and their myriad of artifacts, human habits, norms, and roles; what the transformation to a new infrastructure entails (including shifts in power relationships and consequent conflicts); how we can capture exceptions or divergences from established standards; and how to look beyond the mere functional goals and execution of infrastructures to capture detail about its intrinsic tensions, contradictions, and conflicts (Edwards et al 2009).

I started out with a plan to conduct a comparative study of two different mobile money systems, examining their design, organization, implementation, and potential impact on financial inclusion. Having chosen to do an ethnographic study, I was of course expecting to encounter the technological mobile platform, as well as people, practices, and norms.

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[1] Larkin's claim diverges from the more dominant understanding of infrastructures and their invisibility. Much of the academic literature notes that infrastructures are invisible to us in our daily lives unless a breakdown exposes us to its many components and organized, embedded practices (Star 1999, Collier 2011). However, Larkin (2013) argues that such predominant notions of infrastructures breaking down to reveal their invisible parts are "fundamentally inaccurate" because some aspects will always remain more invisible than others and it is worth asking why. In other words, Larkin advocates for examining "how (in)visibility is mobilized and why" (ibid, pp 336).

Still, as data collection and analysis is intimately (and iteratively) tied up in an ethnography, I soon realized that my analytic approach would determine my understanding of what was happening on the ground even during the data collection phase. In studying mobile money, while the 'technology', the 'platform', the 'material object' becomes immediately obvious to the senses (not least because of the dominant narratives around it that likely predisposes us in specific ways), the practices that it engenders, the relationships that it fosters, and the norms that it generates is often relegated to our peripheral awareness. Thus, analyzing mobile money from an 'infrastructures' perspective is one way of preventing the unduly privileging of the technological object. Still, Larkin points to the 'productive instability' of infrastructures as a basic unit of research (ibid, p. 339); a statement that far from being discouraging actually compels us to explicitly acknowledge the imprecise boundaries of an infrastructure. Thus, what we choose to isolate and study as an infrastructure then becomes a conscious decision in demonstrating our epistemological, methodological, and political allegiances – certainly a constructive endeavor while doing and writing up an ethnography.

To this end, I studied a mobile money infrastructure in Bangalore in India, that was in fact two different infrastructures operating in tandem connecting auto-rickshaw drivers to mainstream bank loans. I especially privilege the human work that goes into making and sustaining this mobile money infrastructure. In doing so, I engage in a 'categorical act' of streamlining the potentially infinite number of things, people, and networks that can be mobilized at a given point in time to understand infrastructures (Larkin 2013, p. 330). This intellectual exercise of selecting which parts of an infrastructure will be studied, and which ignored, is itself a reflection of my disciplinary and epistemological allegiance, and of the limits of my methodological choices. I focus my attention on the complexities of the mobile money infrastructure and all the messiness that comes along with it, even as the ideal of cashless/electronic payment mechanisms is touted to be 'modern' and 'efficient'. Thus, I answer the following broad research questions in this chapter. What is the mobile money infrastructure, and can it be isolated as a standalone substrate over which financial transactions are conducted? Who are the people, organizations, and networks that constitute a mobile money infrastructure? And, how are they arranged and aligned in order to accomplish the human work that supports this system, otherwise primarily understood as technological? In answering these questions, I complicate the seeming naturalness, the ready-to-hand texture of the mobile money infrastructure. More importantly, I complicate notions of its 'efficiency' and how it is expected to magically simplify what are otherwise considered as non-digital financial infrastructures. I further question if we can truly understand the scope and scale of mobile money, and how it is expected to accomplish financial inclusion goals, without first studying the human work involved in building, maintaining, and repairing its infrastructures on the ground.

I make two main contributions here. First, I demonstrate that what appeared on the surface to be solely a 'mobile money infrastructure' is in fact a complex and, often, visibly seamless organization of at least two interacting infrastructural systems. These come together in an intricate, layered way to enable mobile money to be used for loan repayments in this low-income setting – something that a standalone mobile money was

unable to achieve without the existing loan management infrastructure, as I demonstrate later. I call this overarching infrastructure the *"loan management-mobile money infrastructure"* throughout the rest of this chapter for the sake of clarity. In presenting the multi-layered infrastructural organization of what is generally thought of as a "mobile money infrastructure", I echo what the literature on infrastructures already tells us - that an infrastructure is not in fact an isolated substrate with a clear beginning and end. Still, it becomes especially important to emphasize that an infrastructure is not always organically built or spontaneously galvanized in order to challenge the dominant narratives around mobile money where an insulated infrastructure is thought to enable all digital transactions and thus achieve financial inclusion. Instead, new infrastructures will plug into existing infrastructures to truly become usable and useful.

Second, I privilege the human work of what is otherwise often considered an exclusively technological infrastructure. Mobile money remains a favorite topic of interest for development scholars and practitioners and in the emergent conversations the focus continues to remain on the technological innovations that allow for branchless transactions to complete in the first place. Thus, the human work that enables mobile money transactions continues to get obscured. Bringing attention to these sidelined human workers should certainly be an immediate concern.

2. Background: The Study of Infrastructures and its Invisible Workers

> "An infrastructure is an underlying framework that enables a group,
> organization, or society to function in certain ways, such as the series
> of pipes, drains, and water sources that comprise a water system."
> (Lee, Dourish, and Mark, 2006[2])

This is a useful, common-sense point to begin thinking about infrastructure as it confirms our most fundamental understanding of infrastructure as something that is just 'there', 'ready-at-hand', as a 'substrate' that props up working systems (Lee et al, 2006). Still, by virtue of it being an 'underlying framework', our consciousness and subsequent understanding of infrastructures are often limited. Susan Leigh Star articulates it evocatively in her paper on the ethnography of infrastructure – 'this article is in a way a call to study boring things' (Star, 1999). These 'boring things' often get relegated to the peripheries of our awareness, which in turn impedes our ecological understanding of sociotechnical systems as the very interactions, networks, and arrangements that enable them continue to remain invisible. This invisibility is deliberate in order to maintain a façade of relative stasis (Mathew and Cheshire, 2017). Yet this invisibility not only obscures the many ways in which infrastructures fundamentally support a system, but it

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[2] It is, however, noteworthy that this paper uses a broader definition of infrastructure in their paper; that is they attempt to provide a relational understanding of human and technological infrastructures, and in doing so firmly establish 'human infrastructure' as an 'analytical lens with which to magnify the social' of an infrastructure whose social and technical properties are anyway, otherwise, firmly intertwined (Lee et al, 2006).

also fails to bring out the many variances in practice that cultivate an infrastructure *in situ*, further obscuring its sociopolitical consequences (Star & Ruhleder, 1996). Thus, practicing 'infrastructural inversion', or the foregrounding of the infrastructure(s) in question, becomes necessary (Bowker, 1994). Such a foregrounding cannot merely focus on an infrastructure's material and social components – for that matter, how do we ascertain what is infrastructure and what is not? Instead shifting this focus to understand infrastructures as a fundamentally relational concept is more useful. It becomes infrastructure in relation to organized practices. It becomes infrastructure when it is when it is connected to activities and structures. Therefore, a more pertinent question may be *when* is infrastructure (Star and Ruhleder, 1996).

Further, when thinking about how an infrastructure is made, maintained, and repaired, it is necessary to think about how the enduring tensions between the social and the technical, and the local and the global are resolved (Bowker et al 2010). These tensions also determine the range of support mechanisms (social? technical? both?) that sustain an infrastructure in different ways at different points in time. In essence, infrastructural work, to develop, sustain, and mend itself, is ongoing, and very often performed by unrecognized workers thus rendering it as invisible as well. Steven Shapin (1989), when discussing the work of the mostly undervalued technicians and assistants (as opposed to the more celebrated 'reflective individual thinkers') in the laboratory of Robert Boyle, argues that as long as their work remains invisible any understanding of scientific practice will be impoverished. Susan Leigh Star (1991) further argues that by privileging 'expensive, elitist institutional arrangements' we run the risk of obscuring the very work (and the workers) that supports them. Restoring this work, she continues, enables us to better understand not only the nature of the invisible work, but of the work organization as a whole.

Lee et al (2006) quote the director of the National Partnership for Advanced Computational Infrastructure and the San Diego Supercomputing Center who recognizes that when determining the success of a cyberinfrastructure, the human infrastructure consisting of 'hundreds of researchers, programmers, software developers, tool builders, and others' is unquestionably the most critical element; a detail that is very often lost in the extensive narratives on hardware resources and software tools, that is the technological infrastructure. Larkin (2013) terms this enduring condition as "the unbearable modernity of infrastructure" (p. 332) – a condition that reveals the inextricable link that is presumed between 'technologies' and 'modernity', and that further sidelines the less glamorous human work that goes into building and maintaining these infrastructures. Such an "unbearable" condition only begs for more light to be shed on these underreported and underappreciated human workers, as I attempt to do in this chapter.

3. Inextricably inter-tangled infrastructures to achieve financial inclusion

I started out by examining two different mobile money infrastructures – Novopay and Airtel Money. Both were designed to include low-income populations but used different approaches to do so. Airtel Money connected users to a mobile money wallet using which

they could potentially conduct a whole host of transactions (including loan repayments) on even the most basic of feature phones directly. Users had to go make a visit to an Airtel Money outlet for loading money on to their wallets, but once this was done they could conduct any transaction themselves from even the comfort of their own homes till their balance ran out. However, Novopay provided no digital wallet, only a platform for conducting transactions. Users went directly to the Novopay agent retail outlets to physically hand over cash to the agent who acted as an intermediary and completed all transactions on his smartphone.

Very soon into my fieldwork it became apparent that these mobile money infrastructures and the existing loan management infrastructure (that I describe next) were inextricably inter-tangled – in other words, I would learn nothing about financial inclusion in this setting if I focused only on the mobile money infrastructures. I started out by asking, what *is* the mobile money infrastructure? The answer, as I came to realize, differs from context to context. The immediately apparent infrastructure for mobile money invokes imagery of mobile telephony and electronic currency that can now facilitate financial transactions across distance. The retail agents who enable the cash to electronic float conversion round up this imagery of the infrastructural backbone of mobile money. However, in this context it was the interaction of two different infrastructural systems which enabled mobile payments – (i) The immediately apparent mobile money infrastructure of mobile phones, digital currency and retail agents, and (ii) a loan repayments infrastructure of cash, paper ledgers, loan officers and cash-collectors. As I will describe, it is the *grouping* of these that constitutes the overarching infrastructure enabling mobile money to work in this setting and do 'financial inclusion'.

Of course, within these infrastructures, one can mobilize many other material technologies, social networks and relations, that form their own sub-infrastructures that can help us better understand the broader mobile money infrastructure, but, I engage in what Larkin (2013) calls a "categorical act" of scoping out what I choose to, and what I can, study as infrastructure here. What I actively privileged were those infrastructural components that could come together to help the poor manage their precarity. I will now describe the different infrastructures in play, that is, the loan management infrastructure and how it interacts with the Novopay and Airtel Money infrastructures, before moving on to describe the human work that make these infrastructures work.

3.1 Three-Wheels United: The Loan Management Infrastructure

Surveys typically classify Indian auto drivers as urban poor (based on housing and income) (Natarajan & Abdullah, 2014). Moreover, auto-drivers are employed in the informal sector and earn small amounts of cash daily. This poses a fundamental barrier to generating lumpsums to meet bigger expenses such as rent, medical expenses, or purchasing an auto-rickshaw. Of course, banks are typically wary of lending money to auto-drivers as they are classified as high-risk borrowers. Thus, many auto-drivers will rent their vehicles from an informal moneylender, somebody commonly known as "*seth*"

in Hindi - an agreement that requires a fixed daily rental fee to be paid out, generally around 200 INR per day.
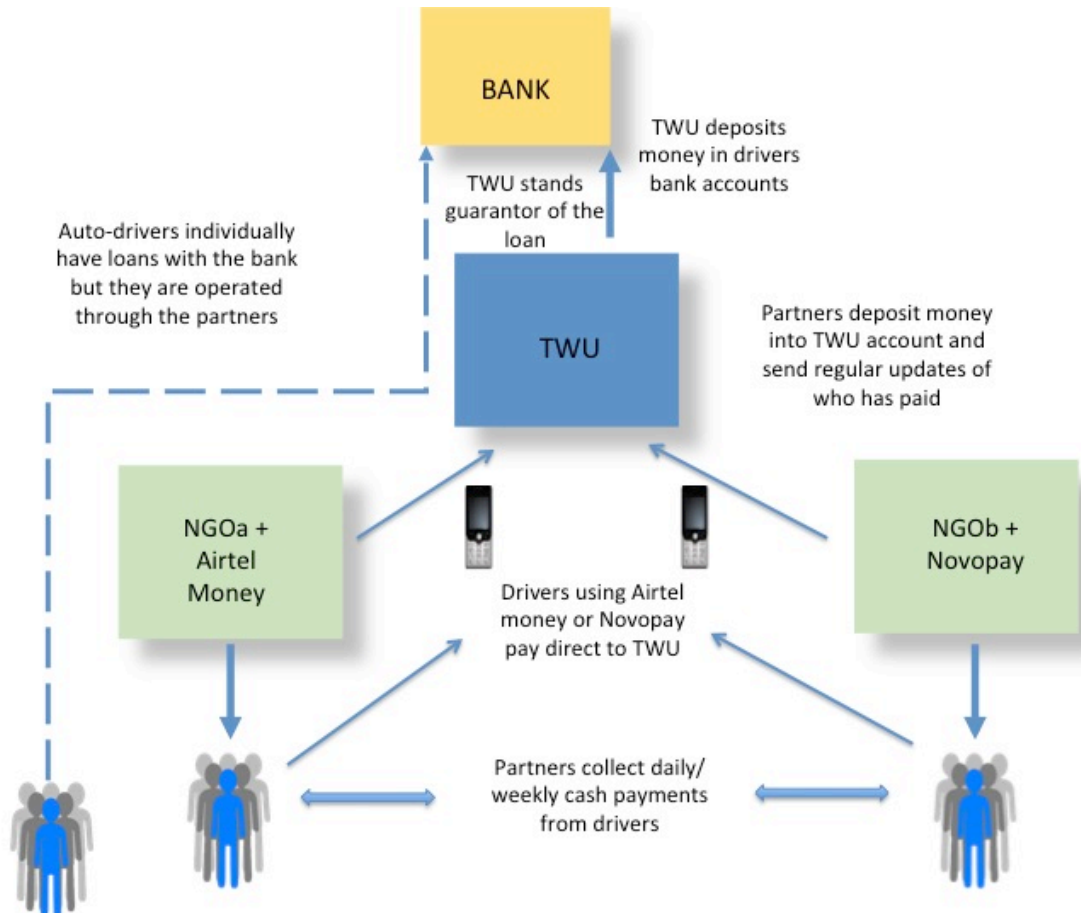
Figure 1: The Loan Management Infrastructure of Three-Wheels United

Three-Wheels United (TWU), in a bid to empower these auto drivers who otherwise lose a percentage of their daily earnings to rental fees, stands in as a guarantor on behalf of the drivers and secures a loan for them from a formal bank. Thus, TWU is now responsible for these individual loans, a risky endeavor to say the least. However, TWU has a risk mitigation strategy in place. For starters, they have partnered with local NGOs who work in auto-driver communities and recruit potential borrowers from within these based on familiarity and driver recommendations in lieu of a formal credit history. TWU also uses these NGO partners to collect payments from the drivers at the time of the study. Whilst repayment to the banks is on a monthly basis, collections typically take place more frequently to match the auto drivers' income streams. Each NGO has a different method of collecting from the drivers - either going to the drivers' homes or the auto stands (which is where autos generally collect in their neighborhoods) on a regular basis to

collect the repayment money from them directly; facilitating a drop-in service where drivers can drop by an office anytime to pay, or holding weekly meetings where auto drivers are given a 3-4 hour window to come and make their payments. Payment due is around 220 INR per day (six days a week), thus similar to the typical rental expenditure. The loan tenure is for three years and TWU factors in a small charge over and above the cost of the auto and interest[3]. This overpayment provides a buffer for the missed payments, which are almost inevitable in a long-term loan to such a financially vulnerable community. At the end of the loan, the auto belongs to the driver.

Of course, cash collections are a notoriously labor-intensive task. If auto-drivers are paying on time and in full, then collectors' work becomes a little easier. However, most drivers struggle to make the payments in full and collectors must chase them, talk to them, commiserate, and negotiate with them. They often accommodate them after-work and on holidays, even suffering the odd misbehavior once in a while. Collectors maintain meticulous and detailed documentation of each individual transaction, entering the transaction details in their ledgers, filling out a (carbon-copy) receipt for the drivers as well as filling in their yellow TWU log books. An SMS confirming this transaction is sent to TWU where it is recorded by their internal I.T. system, and an SMS receipt returned to the drivers. Moreover, there is the added responsibility of managing and handling cash. Collectors hold on to cash payments until they have collected a reasonable lumpsum, before making a trip to the bank for a deposit. This prevents multiple trips to the bank as well as multiple deposit fees (charged per transaction). Before making a trip to the bank, a cash payment list is prepared. At the bank, cash managers fill out a deposit slip, get this signed and sealed by the bank, and bring this back to the office where it needs to be scanned and emailed to TWU, if the collectors are working for the NGO, or taken directly to TWU's office if they are employed by TWU.

To reduce the burden of cash collections, TWU experimented with two different mobile money systems – Novopay and Airtel Money - designed with low income users in mind. Mobile money has the potential to considerably reduce the workload, in theory at least. Collectors no longer need to go out and meet the drivers to collect money from them. Drivers should be able to make more regular payments – whenever they have money to hand. The risks and costs of handling physical cash are completely alleviated. It is little wonder then that TWU was pushing for more repayments over mobile money. In fact, all costs for making the mobile money transactions were absorbed by TWU as an operational cost – the benefits of offloading the work of collection to the digital money intermediaries, as well as the work of managing the cash and back-end accounting, seemed worthwhile to TWU. Furthermore, the back-office processes for the NGO partner using Airtel Money were vastly reduced since Airtel sends one monthly report that provides the cumulative amount that each auto-driver has paid that month towards their loan. Rather than having to update her records each time a payment is made, issuing a receipt, updating the log book and sending the SMS, the collector, who also manages the back-office processes, only needs to make one entry for his or her own records.

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[3] This includes TWU's service fees. Additionally, since most auto drivers are unable to pay the upfront security deposit amount, they take out another, smaller loan, which is repaid over 18 months.

I now describe the mobile money infrastructure that plugged into this loan management infrastructure to facilitate the loan repayments.

3.2 The Mobile Money Infrastructure(s)

Before I describe the specific details of the mobile money infrastructures that we studied during our fieldwork, I describe the ideal infrastructure, one that researchers, designers, and policy makers in the mobile money space have been advancing for a while now. To begin with, mobile money users should be in possession of a digital wallet that can keep money digital as stored value, yet also enable the movement of money for payments and transfers. This storage of value is especially crucial to jumpstarting the ideal infrastructure that can support a host of different financial services across multiple vendors. Further, to cater to unbanked and under-banked populations, especially in the developing world, most of whom are likely low-income, transacting with this digital wallet should be possible on a basic, feature phone. Ideally, this mobile money infrastructure will be dense, much like how ATM networks, with an agent on every corner. This moderates the dependency on one, or a few, outlets, especially if agents are not able to manage their electronic float (for customers to top up their digital wallets) and/or their physical cash store (for customers to cash out), or if they are facing server issues. The agents themselves will not merely be cash-in/cash-out agents; instead, at the very least, they should be able to seek out new customers, provide on-the-spot assistance and light troubleshooting, and manage any system downtime in a way that does not terribly inconvenience their customers.

I worked with TWU, and two of their NGO partners (henceforth referred to as NGOa[4] and NGOb) over the course of three months in 2016, building on a previous study in 2014 (O'neill et al, 2017). TWU was already using Airtel Money in 2014, but by 2016 they had added Novopay to their mobile money suppliers. NGOa used Airtel Money and NGOb used Novopay. The mobile money infrastructures of Airtel Money and Novopay were broadly similar, and they plugged into TWU's infrastructure in much the same way. However, there were some notable differences that speak to my broader findings. Thus, here I describe each NGO and its mobile money infrastructure separately.

3.2.1   NGOa and Airtel Money

TWU chose to partner with Airtel Money, a digital wallet service owned by Airtel that allowed for a host of different actions (such as money transfer, payments, recharges etc.), as a way of reducing collection costs and risk. However, only the drivers from NGOa adopted Airtel Money. Although NGOa had been offering Airtel Money since early 2014 only one driver had adopted it and most drivers paid cash by visiting NGOa's offices during office hours. However, a series of interrelated events changed this – NGOa was due to move offices 15km away; two months or so before this they began a major training

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[4] NGOa is NGO2, and NGOb is NGO3 in previous work on this (O'neill et al, 2017).

drive to encourage adoption tying it in with their upcoming office move; as drivers began using Airtel Money successfully word of mouth persuaded others to adopt it. Moreover, after the office move, drivers taking new loans had to sign up to Airtel Money. Although they were free to pay in cash at the office, the aim was to encourage them to use Airtel Money. At the time of my study, around 80% of their auto drivers were using Airtel Money to make their repayments. This is a substantially high proportion, given a customer base with little or no familiarity with digital money tools. The office move was critical to the auto-drivers' enthusiasm in shifting to repayments over Airtel Money – locating a more proximate service center and making their payments there was, in many cases, more convenient than commuting the extra distance to make the payments in cash. Furthermore, drivers brought into the 'sell' of anytime, anywhere payments (O'neill et al, 2017)

Airtel is one of the largest telecom providers in the country, and therefore had an existing retail infrastructure that they could leverage for their mobile money services. This was, seemingly, a huge advantage as auto-drivers most likely already recognized and trusted the brand. Moreover, they were either already familiar with existing Airtel outlets (especially if they were already using an Airtel SIM) or, if not, they could seek one out of the many strewn across the city on their commutes through the day. In many cases, NGOa's auto-drivers were asked to get an Airtel SIM if they did not already own one.

Only a few of NGOa's drivers owned smart phones and none of those had data packages, so most of the drivers were using Airtel Money on their feature phone. Since setting up Airtel Money on a feature phone is a little complicated, especially for drivers who largely used their phones only for calls, NGOa helped them set up their accounts and taught them how to make payments – a simple process over the USSD[5] platform, involving just a few steps. However, it turned out that although the actual process of making payments was relatively easy, getting money into the account so that those payments could be made was less so. This is because the Airtel Money network is considerably smaller than the Airtel network and often drivers had to go to service centres to recharge, of which there are around only 20 in Bangalore (O'neill et al, 2017).

3.2.2   NGOb and Novopay

In 2016, TWU entered into a partnership with Novopay, a retail payments solution provider like Airtel Money but without the well-established retail agent network. Novopay is a relatively new entrant to the fintech scene in India, and at the time of my study, had very few agents across Bangalore. NGOb was the first one to start using their agent network, with NGOa also following suit towards the end of our study. During this time, Novopay was aggressively looking to expand and any exclusive partnerships, such as the one with TWU, influenced the search for new agents. For instance, most of the auto-drivers affiliated with NGOb lived in the Tilak Nagar neighborhood in Bangalore,

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[5] Unstructured Supplementary Service Data (USSD)is a communications protocol used by GSM cellular phones. Most mobile money services in the developing world (excluding M-Pesa in Kenya actually) use USSD for users to communicate with their financial platforms.

and thus TWU was able to convince Novopay to find an agent in that neighborhood. They eventually appointed a cyber café as their agent in Tilak Nagar which offered internet and scanning/printing services – this cyber cafe became a focal site for us during the course of the study. It is worth noting that agents born out of such exclusive agreements are often guaranteed a minimum stream of income because Novopay, in this case, can largely predict the inflow of cash transfers coming in through NGOb.

All the auto-drivers affiliated with NGOb were asked to start using Novopay immediately. Any resistance was met with a reassurance from NGOb that their cash collector would be present during scheduled hours every week to help them make the transition smoothly. What this meant was that auto-drivers could expect to meet with the cash collector at the cyber café in Tilak Nagar every Sunday between 3 and 6 PM and make their repayments then. While some auto-drivers slowly and steadily started making their repayments outside of this scheduled 3-hour window, for the most part, the auto-drivers remained committed to making the repayments in person to the cash collector. Thus, he remained an integral part of the proceedings during the course of our study, even after the initial training and familiarization process was complete. In the absence of regular, scheduled meetings in the case of NGOa-Airtel Money right from the time of the office move, auto drivers were far more independent in conducting mobile money transactions, whereas in the case of NGOb-Novopay, the continuation of the affordances of the previous, non-digital payment infrastructure, even if conceived of as temporary, greatly hindered this.

4. The human work of the mobile money infrastructure

On beginning to unpack this mobile money infrastructure, I uncovered the crucial role that TWU, and its loan management infrastructure, plays in making the mobile money infrastructure work for these drivers. Further, I privilege the human work in these interdependent infrastructures – focusing more on the agents in the mobile money infrastructure, and the cash collectors in the loan management infrastructure who might seem like analogous actors embedded in their respective infrastructures but who play very distinct roles in the overarching loan management-mobile money infrastructure. I also reveal the work that is done by the service providers and the auto-drivers to build and maintain this infrastructure.

4.1 The human work of the mobile money agent infrastructure

The mobile money infrastructure imagines a disruption in the predominantly cash-intensive daily economies of the unbanked and under-banked populations. Retail agents are indispensable to this process as local stores become the points-of-service where physical cash can be converted to digital money (deposit) and vice versa (withdrawal). Any further movement of money occurs digitally to service remittances and micro-transfers/payments. Of course, there is another round of conversion of digital money to cash (and back again) that is happening, invisibly to users, in the background at the Airtel

Money/Novopay source. Generally, the bigger retail agents (often known as super-agents) will take all deposited cash to pre-established banks at which point the equivalent electronic value will be transferred into their agent accounts. These super-agents will also, in many cases, be responsible for getting the cash off the hands of the smaller agents, for which they will be incentivized separately. In other cases, local distributors, wherever available, will go to each agent's shop and collect the cash in person, and then take this back to the bank or the service provider's office. As more and more retail agent outlets join the network, any combination of these interactions, that is most suitable, will determine the cash-electronic float conversion process. The stage is thus set for using digital currency to conduct a host of financial transactions that were previously completed using cash. The mobile money infrastructure can now disrupt how money is stored, exchanged, or expended in what was previously a cash infrastructure.

Still, this is not the extent of the human work of the agent infrastructure – building and maintaining it is a time and labor-intensive process that often escapes its prescribed bounds. We document this here.

4.1.1 Building the agent infrastructure

> "My suggestion to that typically is to have a range of outlets not just one. So that if not one guy, then the other guy does the transaction. But in the case of TWU we saw that the auto drivers are not yet at point where they are motivated enough to go wherever. I am going to give him over a stretch of 10 kms some 20 outlets or 30 outlets. But TWU has not been able to go talk to those guys and do that piece. So they would probably once in a while face this problem that the agent runs out of (digital) balance so they are going and giving the TWU collector their money. It is all dependency on one outlet which is not really our code model. Our model was to disperse so that the market forces would decide what each retailer will do. If the retailer feels he needs the business, he will need to have (digital) balance, otherwise somebody else in the neighborhood is going to take away his business."

> \- Interview with senior representative, Novopay

Infrastructural density, in terms of opening agent outlets, remains crucial to building the dream mobile money ecosystem where dependency on one outlet is moderated. However, building and maintaining the agent infrastructure to achieve this is an endless task, and not quite as easy as Novopay would have you believe. Seeking out potential agents in localities or neighborhoods of promise, convincing them to make an initial investment[6],

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[6] This initial investment amount can vary, but Novopay argues this is only a nominal amount and is expected as a sort of guarantee to ensure that agents will focus on their specific business. However, when agents do not see the kind of business they were expecting, they will lament this initial investment – money that can be withdrawn at any point for a small cost but money that is locked

running a quick background check by assessing their government-issued IDs, the scope and longevity of their business, and then further spanning out in their neighborhoods and making casual inquiries about them, ratifying them, and finally appointing and training them, itself takes some time and effort. After they have been appointed, service providers need to routinely assist them in marketing efforts. Any regulatory changes or dictates require a new bout of training and ramping up. Of course, in the case of Airtel one would imagine that leveraging their existing agent network to double up as mobile money agents would be an easier task. However, whereas Airtel offers good incentives to agents for mobile phone top-ups and trade is brisk, the uptake of Airtel Money in Bangalore to-date was much slower than Airtel had wished for[7] so they were not investing in building the agent infrastructure through good incentivization. Therefore, few of the local small shops offered Airtel Money services, and many that did charged for it.

Another way of appointing agents is when service providers enter into exclusive corporate agreements with individual vendors, as Novopay did with TWU. TWU required agents in very specific neighborhoods with very specific requirements, thereby initiating an entirely different kind of search and ratification process. Such agents will generally be assured a steady stream of business which makes it easier to convince them about any upfront investments, and offers some predictability around how much digital balance to maintain at any given points in time. Of course, maintaining a substantial balance means investing the equivalent amount in cash into the business – a barrier that automatically excludes the smaller agents. Sourcing these richer, more successful agents, who are willing to make the initial investment, and then doing a thorough background check to limit cases of fraud or theft, is again a time and labor-intensive job. The Novopay agent outlet in Tilak Nagar, as we mentioned previously, is a successful cyber café that sees many footfalls throughout the day. TWU had initially hoped that Novopay could provide multiple agents in driver communities around the city, so that drivers could just drop in their cash to pay the loan, in an ideal world, on their way home from work. However, this never materialized and there was tension between Novopay and TWU about who's 'fault' this was. As is evidenced in the quote above, Novopay is placing the blame firmly on TWU and the unmotivated auto drivers, whereas TWU blamed Novopay for not being able to find the right agents in the right location. The result is something of a chicken-and-egg situation, with the mobile money provider unwilling or unlikely to be able to develop the infrastructure without more customers and the customers unlikely to come without the infrastructure[8].

It is also worth noting that corporate agreements, such as between TWU and Novopay can result in significant tweaks to the existing product or process, to suit the needs of the

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away nevertheless. This is particularly consequential when we remember that agents working in the types of areas where auto-drivers live are also by and large going to be running cash businesses with a limited turnover, making the initial investment more burdensome.

[7] From personal communication between TWU and Airtel Money.

[8] Interestingly, this is similar for Airtel Money, who lamenting the lack of uptake of Airtel Money do not invest in their infrastructure, but without the infrastructure to make Airtel Money usable by low income communities, enthusiastic take-up of Airtel Money becomes ever more unlikely. This might be conceived of as a sort of Catch-22 of market forces!

mobile money customer. For instance, in the case of the TWU-Novopay partnership, the digital wallet was not offered to the auto-drivers, in a bid to circumvent their usual pricing structure where both deposits into the wallet and transacting from the wallet were charged (unlike Airtel Money, where only transacting is charged). By eliminating the wallet, Novopay was able to eliminate the deposit charges, this reduced the cost to TWU by half, but altered the affordances of the mobile money infrastructure in a significant way.

Of course, the human work of building and maintaining the agent infrastructure is not merely restricted to the service providers. Often, recharge agents or local mom-n-pop storeowners will approach service providers or their local representatives directly and sign up to become agents; generally, they are convinced by observing a friend's or colleague's agent business or through the repeated requests of their existing customers. While certainly some of the auto-drivers in our study had persuaded local shops to become Airtel Money agents for them, by and large we did not observe this effect, presumably because the auto-drivers from one social enterprise did not form enough of a market to create that agent demand. Of course, once they have become agents, the bulk of the responsibility of acquiring new customers rests squarely on their shoulders. Their service providers will help them out with painted signboards and posters, but mobile money agents are rarely ever *just* mobile money agents. They handle multiple businesses at a time[9] and thus receive multiple providers and vendors on a weekly basis who come loaded with flyers and posters to stick to their inside and outside walls. Therefore, the visible information at these outlets is constantly changing. A more reliable way of ensuring business is to seek out customers yourself. Generally, every retail outlet will have a steady stream of loyal customers who will be introduced to the agent's range of products and services over time. Otherwise, agents are expected to go out into the field and acquire new customers through door-to-door canvassing.

4.1.2 Repairing breakdowns in the agent infrastructure

Sometimes, mistakes will be made, breakdowns will occur, and when this happens, the "relative stasis" of the mobile money infrastructure will be disrupted, if even temporarily. Indeed, a desirable feature of infrastructures should be to retain a façade of stability even through a breakdown. Yet, the human work expended in achieving this is often unseen and unheard.

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[9] In fact, service providers prefer that agents manage multiple businesses at a time so that the burden of sustainability is not just borne by the mobile money business – if anything, the mobile money business is driven by volumes and can seldom be the primary business for a small shopkeeper. The only situation in which it becomes the primary business is when super-agents are able to invest in a big space and mobilize a steady stream of migrant customers (generally, in a neighborhood that is almost completely made up of immigrant communities) who remit money back home on a frequent basis. Loan repayments do not quite offer the same margins or value proposition.

Figure 2: A typical agent's shop in Bangalore with the different types of flyers/posters outside

For instance, sometimes agents at the Novopay outlet in Tilak Nagar were overloaded with their cyber café customers or other business. Or, at other times, they would run out of digital balance or the Novopay server would be down. Thus, the auto-drivers would be unable to make their digital loan payments directly. If the payment was being made at a time when the TWU cash collector was not present, the agent would keep the money and make a note in their notebook, and fulfill the transaction when they had recharged their accounts or the server was up again. If the cash collector from NGOb was present, he would start collecting the drivers' cash and then making the entries into his ledger. Later, when the problem at hand resolved itself, the agent would come by and sit beside the cash collector with his phone, and open up the Novopay application. The cash collector would then refer to his ledger, mention the name of the auto driver, his phone number, and hand over the appropriate amount to the agent, who would then fulfill the mobile money transaction. At this point, the auto-drivers would receive an SMS confirming their transaction. Sometimes, the money would not add up, and would thus force a careful examination and recalibration of all the auto-drivers who came in that day, the amounts of money they had deposited, and the amounts transferred on the Novopay application. Another time, on a long weekend, the Novopay outlet store was shut when we reached it. Like us, neither auto-drivers nor cash-collector had been informed of this. The cash collector sat down inside a driver's auto and started collecting cash and marking this in his ledger. Midway through these transactions, one of the Novopay agents showed up and joined the collector in the auto, fulfilling all subsequent transactions on the Novopay application. Eventually, the shop owner came and unlocked the shop and the agent was able to complete the earlier transactions. However, the cash collector had to stay behind to take care of this. This exercise of allowing auto-drivers to make their repayments even when there was a provisional breakdown in the infrastructure could last anywhere from a

half hour to a couple of hours, and both the agent and the cash collector worked relentlessly each time to provide a makeshift solution on the spot. This only goes to demonstrate that breakdowns in the agent infrastructure are not handled by the mobile money infrastructure alone – instead, the existing loan management infrastructure often steps in to repair and manage these as well.

Figure 3: Cash collector sitting in the auto-rickshaw and completing the transactions

4.1.3 Going the extra mile: the 'informal work' of the agent infrastructure

Agents will often engage in informal practices that subvert the prescribed rules, but that nevertheless facilitates, and in some cases simplifies, both access and use of the mobile money infrastructure for its users. In articulating this range of informal work, we reinforce the analytical construction of infrastructures as something that becomes infrastructure in relation to organized practices; in other words, infrastructure can never be studied as a "thing stripped of use" (Star & Ruhleder, 1996).

A common informal practice that agents engage in is keeping their shops later than usual to accommodate the occasional auto-driver. Auto-drivers who want to get their day's earnings, that they have earmarked for their loans, off their hands as soon as possible, will call to make this request if they are on their way to the agent's shop. Agents will often comply with this request and keep the shop open for a half hour or even longer. If these drivers come to the Novopay agent outlet, they are handed paper receipts by the mobile money agents to mark these transactions. Indeed, this was a common practice that we observed where informal paper receipts were issued to those drivers who came in to

the shop outside of the scheduled hours on Sundays to make their repayments. These paper receipts generally had the name of the auto-driver, their mobile number, and the amount they deposited, while a "paid for TWU through Novopay" message was added in from time to time. Auto-drivers collected these receipts until they were able to come in on a Sunday and have their transaction details entered into the ledger by the cash-collector. In general, paper receipts remain a trusted, time-honored artifact to confirm financial transactions. Thus, NGOb and the Novopay came together to plan and issue these paper receipts to mimic the affordances of loan repayments that auto-drivers were traditionally accustomed to, despite the presence of the "formal" SMS receipts that auto-drivers otherwise received on completing a transaction[10]. The persistence of the affordances of the non-digital infrastructures for loan repayments (the paper receipts and the ledger for recording transaction details, despite the presence of digital receipts and reports) is symptomatic of this unique situation where two infrastructures are running in parallel, and where often a reliance on existing, trusted artifacts and workflows becomes necessary for managing access and use of new systems.

Finally, the nature of this informal work could intensify depending on how intimate the agent-driver relationship is. I observed one case where an Airtel Money agent and auto-driver were very close friends. On occasion, when the auto-driver was unable to make his monthly repayment, he would ask his agent to deposit the amount that he was due to pay to TWU into his wallet so that he could make the loan repayment, in effect borrowing that amount from the agent. TWU would register the auto-driver as having made his repayment on time, and he would repay his agent later at his own pace. The auto-driver was quick to clarify that he did not take indiscriminate advantage of this source of informal credit to manage his auto loan. However, the agent trusted him not only because they were friends, but also because he was privy to his repayment patterns over Airtel Money which made him more confident that he would eventually be repaid.

4.2 The human work of the loan management-mobile money infrastructure

I now focus on the overarching loan management-mobile money infrastructure which reveals the human work in training and tracking users once the decision to go digital was made. As I observe, the bulk of this burden is taken over by the cash collectors and administrative staff at the two NGOs – that is, this human work was done almost exclusively by the existing loan management infrastructure.

4.2.1 Training users within the loan management-mobile money infrastructure

A core part of on-boarding auto-drivers onto the mobile money infrastructure for loan repayments is training them, to overcome barriers to adoption, such as concerns about

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[10] See also previous work (Ghosh, 2013; Panjwani et al, 2013) that has recorded the use of these informal paper receipts in mobile banking transactions where their real legitimacy, especially in the event of any transgressions or lapses, remains limited.

technical ability and change in process, as well as to give them the methods and skills to perform loan payments on this new mobile money infrastructure. The mobile money agents will seldom have the bandwidth, skill or trusted status necessary to accommodate the intensive training that new, low-literate users might require. Instead the cash-collectors from the loan repayment infrastructure first familiarize themselves with mobile payments, then train the drivers to conduct them on their own.

When customers have to conduct transactions from their digital money wallets, as in the case of NGOa and Airtel Money, the affordances of their transactions change. However, in the case of NGOb and Novopay, customers have to hand over their money, ideally, to the Novopay agent, but generally they interface with NGOb's cash collector. Thus, apart from the location change, there is no discernible shift in the affordances of their loan repayments. Therefore, one might expect that there will be no immediate requirement for training customers on how to use mobile money. However, as we found, the cash collectors remained an integral part of the loan repayment proceedings even when mobile money was introduced.

For instance, the cash collectors tried to familiarize their borrowers with the new entity in the picture – the Novopay agent. Once borrowers walked into the shop, they almost immediately turned to the right towards the cash collector, who would invariably redirect them to the front of the shop where the agent sat. The collector generally issues two quick instructions to the borrower – "Give him your mobile phone number and hand him your money." Borrowers would do this and then head to the collector with their passbooks to have it filled in and signed. Often, borrowers who were familiar with this routine would still head to the collector first, perhaps because they were better acquainted with him. In fact, on days when the collector was delayed, borrowers would wait outside in their autos until he arrived before making their repayments. Thus, this kind of "training" requires a gradual habituation to handing over money to a, generally, less familiar, less sympathetic intermediary.

In the case of NGOa-Airtel Money however, borrowers now have to be introduced to the concept of a digital wallet. This requires intensive training since they have to conduct the micro-transfer all on their own once they have loaded money into their wallets. To begin with, the loan managers/cash collectors accompanied the auto drivers to the Airtel Money centres where they were shown how to load money into their wallets. Then, they were asked to conduct transfers of small value in the presence of the loan managers/cash collectors so they could get some practice under supervision. The loan managers/cash collectors entered the USSD number that needs to be keyed in to initialize Airtel Money and saved it as '**NGOa**' on the drivers' phones. Interestingly enough, dialing this number took auto-drivers directly to the loan repayment option in the application, bypassing all the other available service options such as bill payments or remittances – a feature that at once streamlines yet constrains this digital money infrastructure. Further, for those drivers who have limited English or general print literacy skills, the collector provided instructions in writing. This may seem counterintuitive but having a step-by-step list that mimics the text that pops up on your screen followed by a 'Press **OK**' or 'Enter **1234**' becomes a helpful guide. Moreover, they are encouraged to bring in their children or

other family members who are better educated. Here, the loan manager gives us an insight into how she trains the auto drivers.

'But I will tell them, sir here you write down the amount. Here ID no. is required, you input it here. If you don't know, you ask someone in your house. You bring your children, I will teach (them). Means some auto drivers will be uneducated but their children will be SSC[11] no? Because they have studied till the 10th standard, they can do it. We will teach them. See first, it will come like this, don't press Ok[12]. Enter amount, you should put 550 rupees (as an example). You put Ok. Then, you put in the confirmation. Then press ok. Then send. Then again it will ask for the PIN number, I will write the PIN number, I will write 1234 (as an example), then press Ok. Then money will go, message will come. Confirmation. That's all. Those who are educated, they don't want this in writing, we will tell them practically. Those who are uneducated, we will teach them practically plus give the instructions in writing. If they forget also, they can see and know they can do this.'

- Cash collections Manager, NGOa

Of course, loan managers/cash collectors will often know the PIN of the auto drivers – in this case since the money is going to TWU, this is not much cause for concern. In fact, the written instructions provide great reassurance to auto drivers. One auto driver told us that when he lost his written instructions, he went back to the NGO to get them written out for him again - this despite the fact that he had been using Airtel Money on his own for a few months without any complications. Therefore, introducing new users, especially those that have had limited access to, and thus aptitude of, the digital money infrastructure necessitates an intensive time and labor investment.

4.2.2 Monitoring & tracking within the loan management-mobile money infrastructure

It is expected that auto-drivers will find it easier to make repayments digitally at agent outlets that are located within their neighborhoods, or if they spot a service center on their daily commutes. This is true to some extent, where the proximity is certainly helpful in getting any money off the drivers' hands before it can be spent elsewhere or lent out to a needy friend or neighbor. Still, to imagine that digital repayments alone can stem default rates is optimistic and precludes any understanding of the challenges that daily wage earners face. Monitoring auto drivers, especially those who are routinely delinquent, is a time- and labour-intensive task even within the digital money infrastructure. Cash collectors keep a track of non-payments, and over time, based on drivers' repayment

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[11] The equivalent of high school in the local schooling system.

[12] This is just a generic welcome message that pops up before the Airtel Money transaction menu begins.

patterns, have an approximate sense of the conscientious borrowers and the habitual defaulters. During the cash collection rounds, the collectors will make quick calls, between receiving payments and updating their ledgers, to those auto drivers who haven't shown up to make their repayments. Often, expectedly, these calls will go unanswered, which will prompt the cash collector to try sourcing unfamiliar numbers (for instance, a friend's or colleague's number) from which to make these calls. If this fails, in-person visits to the drivers' homes or the auto stands where they congregate becomes necessary.

Generally, monitoring & tracking involves some commiseration, some negotiation, and, at times, aggressive warnings. This is seldom a one-time activity - auto drivers who start to fall behind find it harder and harder to catch up to their regular repayment cycle. Thus, once identified, cash collectors will go the extra mile to keep an eye on these auto drivers in order to help them get back to a payment schedule they feel comfortable with. For instance, cash collectors will part with their home address, if it is closer to the auto-driver's home or daily route, and accept payments there. They will even accept payments late into the night, generally after an auto-driver has worked all day to earn some money. In general, regularly delinquent drivers will be asked to make a lump sum payment every few months, so that they are compelled to clear off some portion of their loans in less frequent, but larger value payments. Of course, transitioning to a digital repayments infrastructure has its own limits. For instance, due to the Reserve Bank of India's stringent KYC[13] rules, there is a repayment limit of 10,000 INR per wallet per month. Sometimes, auto-drivers will use this as an excuse to explain any delay in their lumpsum repayments, making it necessary for cash collectors to insist on an immediate cash repayment. The following excerpt from an interview with the cash collections manager at NGOa provides an insight into the negotiations and decisions made with a delinquent driver.

"See again today Narendra (name changed) has come. He makes his repayments through Airtel Money. Suddenly, he didn't pay for three months. He had 18-20,000 INR pending. Then we confiscated his auto, because we said you have to pay immediately. He refused and said he will make the payment to his regular Airtel store. We said you have to pay cash immediately. Then immediately he had to pay 18,000 INR, and only then we let go of his auto. After that, he started paying to Airtel Money again. We said that's fine as long as you pay regularly. Then 1-2 months again he didn't pay. Again, we caught his auto and again he paid 10,000 INR. Today morning at 6 o'clock we went to his house and caught (him) again. What? Again, 30,000 (INR) pending? Then I said no, you pay the 30,000 amount, only then you go. See, in Airtel Money only 10,000 INR you can pay per month. Per month, he can't pay more than that. So, that is the excuse they will take. I said, no need, don't worry, you come here and pay cash. So then he came today morning, we caught him, and we took

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[13] KYC or Know Your Customer regulations are imposed on banks and other financial institutions to prevent money laundering and fraud.

5500 INR from him and we said balance amount pay weekly through
Airtel Money only. Because he is an Airtel Money customer."
-   Cash collections Manager, NGOa

The NGO will sometimes confiscate an auto, a far less serious eventuality than if the bank itself sends debt collectors after the auto-drivers, in order to compel drivers to clear at least a part of their pending balance. As this excerpt shows, there remains a clear advantage of the cash infrastructure - payments are direct and transactions are sealed on the spot. During the particularly sensitive time of negotiating with defaulting auto-drivers, any delay in payments, no matter how small, can become a missed opportunity and propel auto-drivers further into more debt. Thus, even for those auto-drivers who were exclusively repaying through Airtel Money, making that critical lump sum payment in cash, immediately, just made more sense.

4.3 The human work of the auto-drivers to sustain the loan management-mobile money infrastructure

No conversation on infrastructures can be complete without revealing the human work of its users in building and maintaining it. Let us revisit the case of the auto driver who is close friends with his agent, and from whom he borrows money from time to time to maintain his loan repayments. Here is a quote from an interview with him:

> "We are daily wage earners. For daily wage earners, there needs to be daily rotation (of money). If I have paid off my share for today, then I have no tension. Even the auto repayment has to be like this. Minimum is 6000 right? Without the 4 Sundays, it becomes 5200-5400. If I have to pay that lump sum once in a month, it will be very problematic for me. I am not able to hold on to that money for an entire month. Instead if I make the payments daily, it becomes easier for me. Whatever amount it is, minimum 100-200, if I pay every single day, then that daily amount is cleared and I have no tension. Our money is through daily rotation, right? If I earned a monthly salary, I could have paid the amount once a month. For me money is coming in every day, if I can pay every day then I have lesser tension."

This auto-driver was very cognizant of how easily he could fall behind on his loan repayments if he is unable to get the money, that he has earmarked towards his repayment, immediately off his hands. The auto-driver described how he went around searching for an Airtel Money agent outlet that was close to his home. This way, he mused, he could stop by the shop every night on his way back home and deposit the earmarked amount from his daily earnings into his Airtel Money wallet. At the end of the week he could transfer the lump sum to TWU. After much searching, he found one shop that was 2 kms away from his home, a significant enough distance that he felt he would be tempted to forego on the nights he was feeling tired or lazy. Eventually, the auto-driver approached his close friend whose shop was only a few meters away from his home. He was already an Airtel agent, but for recharge cards. The auto-driver requested

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him to become an Airtel Money agent, citing his specific anxieties and promising a steady Airtel Money customer in himself. The friend, as we know, complied.

This is a specific example of how auto-drivers can build their mobile money infrastructure bottom-up. Still, auto-drivers worked towards sustaining the infrastructure as well. They brought in prospective new borrowers. They negotiated on behalf of their family and friends who were falling behind on their payments, or who needed trusted intermediaries to vouch for their unique circumstances. We observed auto-drivers making an effort to spend time with the collectors in order to build and maintain a relationship. Those auto-drivers affiliated with NGOb would often insist on buying tea and/or a cigarette for the cash-collector, a thoroughly social activity filled with light-hearted banter that provided a quick break for the collector as well. Some auto-drivers who were falling behind on their payments would actually show up anyway to tell the collector their reasons in person; the in-person affect was considered evidence for the sincerity of their delinquency. Eventually, their work in building and maintaining the mobile money infrastructure, even as users, cannot be overlooked.

5. Discussion: The Mobile Money Infrastructure and Financial Inclusion

> "Our main argument will be that a social and theoretical understanding of infrastructure is key to the design of new media applications in our highly networked, information convergent society." (Star and Bowker 2005, p. 230)

I have followed this line of argument by Star and Bowker very seriously in this paper. In laying out the mobile money infrastructure, and not 'product' or 'platform' that dominant narratives tend to provoke, often inadvertently, I attempt an improved understanding of this sociotechnical infrastructure. In doing so, I reveal the tremendous work needed to not only build, repair, and maintain it, but also to accomplish its financial inclusion goals – the very reason, purportedly, for its existence. Through ethnographic fieldwork, and a conscious analytic lens of infrastructure studies, I became privy to the quotidian, invisible labor that the cash collectors, the agents, and the auto-drivers have to do in order to make mobile money work in this specific context. Yet when speaking to the 'generalizability' of qualitative work of this nature, I find that my findings in this specific setting can address the materialities, the socialities, the practices and processes of mobile money infrastructures everywhere. As interest and investment in mobile money continues unabated, and it is poised to contribute to the U.N.'s 'Sustainable Development Goals', I believe that my findings complicate the easy association made between mobile money (with a disproportionate focus on the 'mobile') and the realization of financial inclusion goals, where the poor are better able to manage their cash flows in the face of unpredictable earning patterns. To this end, I will be able to present some design implications for mobile money in this chapter.

5.1 The Mobile Money Infrastructure: When is it and Who sustains it?

Infrastructure is never absolute. It is relational to working conditions, and organized practice and use. Therefore, to ask *what* is mobile money infrastructure is a futile exercise. Instead, asking *when* is infrastructure is more useful (Star & Ruhleder, 1996). What immediately comes to mind when we begin to think of mobile money as an infrastructure, as Kendall et al (2011) insist we do, is the mobile phone, the retail agent network, banks, payment card firms etc. (Donovan, 2012). Such an elementary understanding of the mobile money infrastructure is nevertheless very helpful because it immediately does two things: i) it provokes us to think beyond the mobile phone delivery platform when imagining how mobile money works, and ii) it makes obvious that at any given point in time the mobile money infrastructure is at the least interacting with the mobile telephony infrastructure, the banking infrastructure, payments infrastructure etc. In fact, where one begins and where one ends is hard to isolate until we begin to identify the practices around mobile money. It is within these, that a more specific infrastructure begins to emerge.

This is important because dominant narratives in the international aid sector assume a homogeneity of mobile money infrastructures, which then bolsters their confidence in replicating 'success stories'. Yet very few spin-offs of the Kenyan M-Pesa, if any at all, have seen similar success (GSM Association, n.d.). This is further complicated when one moves from financial services like remittances to offer savings and credit as well. In general, remittances tend to be discrete, ephemeral and of smaller value unlike savings or credit which are of higher value and require a long-term relationship with the financial service or institution. Therefore, trust plays a huge part in facilitating these services (Ghosh & Bajpai, 2013). In this chapter, the perceived trustworthiness of institutions (such as of Airtel) and interpersonal trust that is generated of ongoing social relations (such as with your cash collector) were important in making the mobile money infrastructure usable. Frequently though, these social relationships and modes of interaction shaped a mobile money infrastructure whose format deviated from what is assumed of a standardized mobile money infrastructure. For instance, the mobile money agents within the Novopay-NGOb infrastructure were unable to offer the same kind of training, monitoring, and tracking experience that the cash collectors of NGOb could. Consequently, this mobile money infrastructure only became usable for the auto-drivers because the cash-collectors remained an integral part of the process. In discussions about the importance of retail agent networks in mobile money (for instance, see Suri and Jack, 2016), the role of intermediaries outside of these 'mobile money agents' is seldom acknowledged. However, when designing mobile money infrastructures, we need to identify the right intermediaries who can assist users in using its services. And where the right intermediary is inaccessible, time-honored modes of interaction can make mobile money usable. The use of paper receipts, which has no legitimacy in a digital financial services infrastructure that confirms completed transactions through SMS, was rampant and gave auto-drivers the necessary confidence to transact with the mobile money agents instead of their cash-collectors.

As I watched these mobile money infrastructures in action, I began to appreciate their constantly evolving nature, moving away from a more static and immutable understanding of not only infrastructures but also of mobile money itself. In the field, it was challenging to isolate *just* the mobile money infrastructure - as the dominant narratives around it had told us to expect - without actually engaging with the (supposedly separate) loan-management infrastructure that made it usable for the auto-drivers. Of course, at any given point in time the 'standalone' mobile money infrastructure is interacting with many different infrastructures to make it usable (the mobile telephony infrastructure being the most significant). Still, within the limits of my epistemological and disciplinary allegiances, and my logistical constraints, I bound my study to focus on the i) loan management-mobile money infrastructure, and ii) the often undervalued and invisible human work of building, maintaining, and repairing this.

Both of these have important design implications. In demonstrating the intimate interacting of the mobile money infrastructure with the existing loan management infrastructure, I am revealing that in this context, and by extension in other contexts, although perhaps in differing ways, a standalone mobile money infrastructure cannot possibly accomplish the very challenging task of helping low-income users manage their unique, precarious cash flows – a task that requires dedicated, intensive attention and work. As I demonstrated above, much of the labor-intensive tasks of training and monitoring are undertaken by the agents/collectors within the loan management infrastructure. Of course, mobile money agents also went over and beyond their prescribed duties to keep the system familiar and make it usable for the auto-drivers. For instance, they replicated artifacts and workflows from the existing non-digital loan management infrastructure. Or in the one example I described, an auto-driver relied on his agent friend to pay his loan repayment amount as a kind of short-term, informal loan – an act that certainly helped the auto-driver manage his cash flows without expensive penalties. Therefore, faithful accounts of how mobile money works on the ground cannot ignore the human work of its many actors. These supposedly 'technological infrastructures' were made usable only because they were embedded within the loan payment infrastructure, with all its associated embedded human work towards building financial inclusion. It is important to note that this human work is often hidden but still necessary to understand if we are thinking about how to make mobile money work for low-income communities.

5.2 The Unbearable Modernity of Mobile Money

I borrow the title of this section from an excerpt in Brian Larkin's thoughtful paper on the unbearable modernity of infrastructures (Larkin, 2013). Larkin observes that this condition reveals the inextricable link that is presumed between the technological materialities of infrastructures and 'modernity', rendering invisible the less glamorous human work that goes into building and maintaining these infrastructures. This excerpt resonated with me as I was studying and thinking deeply about mobile money infrastructures. The dominant narratives around mobile money, especially in the international aid sector that cultivates and maintains the hype around it, also privileges its

technological features at the cost of sidelining the less glamorous human work in what are essentially socio-technical infrastructures. New technologies and delivery channels are presumed to unilaterally improve efficiency through automation and by 'offering more convenient access and reduced cost to the end-consumer' (International Finance Corporation n.d., p. 10). Yet if the advocates for mobile money want their systems to be usable and achieve financial inclusion goals, they need to recognize the work needed to make this happen. For instance, monitoring and tracking auto-drivers so that they do not fall off the repayment cycle and deeper into debt – something that should certainly be a part of any financial inclusion program – was a decidedly labor-intensive process. Repairing breakdowns and maintaining infrastructural stasis required human work. Even seemingly standardized job functions were constantly confronted and flouted as cash collectors and mobile money agents both went over and beyond their prescribed duties. Moreover, the human work of mobile money infrastructures can alter its very affordances. For instance, top-down decisions at Novopay eliminated the digital wallet altogether that essentially eliminated an easy, relatively secure place for auto-drivers to store money in. Moreover, NGOa trained the auto-drivers affiliated with them to take a shortcut to the loan repayment option directly. Thus, entire steps to unlock the broader potential of these wallets were bypassed, effectively denying any interaction with a larger suite of digital financial services. This had important consequences for financial inclusion goals – in these cases the human work was actually diminishing them. It is therefore important that we privilege conversations on what financial inclusion is and how we can help support its goals through mobile money. Thus, assuming an easy correlation between technology, modernity, and financial inclusion needs to be constantly challenged.

6. Conclusion

I set out to understand how two different mobile money systems were being used by a low-income community as part of a financial inclusion program. This program targeted auto-drivers who traditionally had trouble acquiring a loan to purchase their own auto-rickshaws. Essentially, the program helped them in securing and repaying mainstream bank loans, and used two different mobile money services for the repayment process. These mobile money systems served low-income populations in quite different ways: while Airtel Money provided a digital wallet to its users and could be accessed by users on the most basic of feature phones, Novopay serviced all transactions through the agent's smartphone and had thus eliminated the digital wallet altogether. This distinction became the primary motivation for my interest in this program as an academic project – I was interested in understanding the consequences of these two different mobile money systems for the auto-drivers and how they did (or did not) help them in managing their daily cash flows.

I soon realized that what I was contending with were not standalone mobile money platforms, but entire infrastructures. Therefore, I turned to the well-established infrastructures literature to ground my analysis. This literature helped me recognize the broader infrastructure around the immediately visible mobile money delivery service, and

how to articulate this. Of course, in doing this, one can isolate an infinite number of technologies, social networks, and relations, which becomes untenable to study after a point. Therefore, within the limits of my methodological and logistical choices, as well as my epistemological and disciplinary allegiances, I bound my study of the mobile money infrastructure to focus on (i) the interactions of two seemingly distinct yet inextricably interlinked infrastructures that enable this specific context of mobile money enabled loan repayments, and (ii) the often undervalued and invisible human work of building, maintaining, and repairing these supposedly "technological" infrastructures. In continuing to advocate for mobile money services to be understood as an infrastructure (Kendall et al, 2011), I am refocusing the dominant attention away from its technological features, and thus circumventing any attention that may be directed to the technological infrastructure exclusively. And in demonstrating the intimate interacting of the mobile money infrastructure with the existing loan management infrastructure, I am revealing that in this context, and by extension in most other contexts, although perhaps in differing ways, a standalone mobile money infrastructure cannot possibly accomplish the very challenging and labor-intensive task of helping low-income users manage their unique, precarious cash flows. To this end, faithful accounts of how mobile money works on the ground cannot ignore the human work of its many actors, and where financial inclusion goals are achieved, it is crucial to understand how much that achievement came out of the human work, rather than the technology per se.

CHAPTER 5

Demonetization as Forced Formalization: The Politics of 'Inclusion'

> *"Yes, we'll be the victims, but still it will be beautiful."*
>
> - Evicted fisherman from Kinshasa describing the new settlement
> built on what used to be his home (de Boeck, 2011)

1. Introduction: Demonetization is announced

On the 8th of November 2016 at 8 PM, the Prime Minister of India, Narendra Modi, announced in an unscheduled live televised address that all 500 and 1000 INR notes would cease to be legal tender at the stroke of midnight. In the same address, he declared that new 500 and 2000 INR notes would be issued to replace these. To give a sense of the enormity of this announcement, appreciate, for a second, that as of the 31st of March 2016, 500 and 1000 INR banknotes together constituted 24.4 % of the total banknotes in circulation, and 86.4% of the total value of all banknotes in circulation (Reserve Bank of India, 2017). Of course, the Prime Minister went on to assure his viewers that everyone would be given the chance to exchange their old 500 and 1000 INR notes until the end of the year, but this came with its own set of restrictions. These restrictions, in the chaos and confusion that followed, continued to change on a day-by-day basis as the government and banks around the country started to realize how ill-equipped they were to smoothly transition to the new notes overnight. This was exacerbated by the shortage of the new 500 INR banknotes, even as banks continued to receive cash in the new 2000 INR notes in the early days after Demonetization – the higher denomination notes were frequently being rejected in the marketplace without the usable breakup provided by the next smaller denomination of 500 INR[1].

What was the justification given for this audacious move? The Demonetization narrative in its early days was deemed a "surgical strike" on black money, counterfeit currency, and terror funding. The widespread use of the military term "surgical strike" to define the objectives of Demonetization was not an accident; the memory of the surgical strikes that had been carried out on the 29th of September 2016 by the Indian army against suspected militants in Pakistan-administered Kashmir, itself a retaliation to the Uri attack[2] that had occurred 9 days before that, was still fresh in people's minds. Much of the country welcomed the military surgical strike and conversations around "patriotism" or

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[1] The next denomination was 100 INR which was too small to break 2000 INR into usable change.

[2] The Uri attack occurred in the town of Uri in India-administered Jammu and Kashmir where heavily armed militants, allegedly from the Jaish-e-Mohammed group that wants to free Kashmir and merge with Pakistan, attacked the Indian Army brigade headquarters near the Line of Control.

"nationalism" dominated everyone's imaginations and living room banter. The earliest Demonetization narratives sought to "strike" corruption by dealing a devastating blow to those who hoarded black money in cash; in addition it targeted other unlawful activities such as trading in counterfeit notes or laundering money to finance anti-social elements. In keeping with the general sentiment of the times where tough (although, often controversial) measures were being hailed for the betterment of the country, the Demonetization narrative was also spun as doing good for the country despite the hardships that many Indians would presumably have to face in the immediate aftermath and perhaps even afterwards. For instance, take a look at this translated excerpt from Prime Minister Modi's speech announcing the Demonetization of the 500 and 1000 INR notes:

> "Brothers and sisters,
>
> In spite of all these efforts there may be temporary hardships to be faced by honest citizens. Experience tells us that ordinary citizens are always ready to make sacrifices and face difficulties for the benefit of the nation. I see that spirit when a poor widow gives up her LPG subsidy, when a retired schoolteacher contributes his pension to the Swacch Bharat[3] mission, when a poor Adivasi[4] mother sells her goats to build a toilet, when a soldier contributes 57,000 rupees to make his village clean. I have seen that the ordinary citizen has the determination to do anything, if it will lead to the country's progress.
>
> So, in this fight against corruption, black money, fake notes and terrorism, in this movement for purifying our country, will our people not put up with difficulties for some days? I have full confidence that every citizen will stand up and participate in this 'mahayagna'[5]. My dear countrymen, after the festivity of Diwali, now join the nation and extend your hand in this Imandaari ka Utsav[6], this Pramanikta ka Parv[7], this celebration of integrity, this festival of credibility."

- Narendra Modi, 8th November 2016
(Wall Street Journal, 2016)

As most convincing politicians and orators are wont to do, Prime Minister Modi appealed to his citizens' emotions, their sentiments, even as complete chaos unfolded around the country in those early days. People scrambled to exchange their old notes and withdraw money to continue participating in the cash economy – banal activities like buying groceries from the local mom-n-pop stores that dominate every street corner, paying for a

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[3] From Hindi, this translates to "Clean India".

[4] A minority, indigenous group of people that live in India, Nepal, and Bangladesh.

[5] A Hindi word that translates to "grand devotion" or "grand sacrifice".

[6] From Hind/Urdu this translates to "the festival of honesty/fidelity".

[7] From Hindi this translates to the "festival of authenticity".

ride on the popular auto-rickshaw, or even just paying your domestic help's wages were suddenly hard to complete. While emergency service providers such as hospitals were expected to continue accepting the old notes, the lack of accurate information and general panic led to an unstandardized response - for instance, look at this quartz article (Vora, 2017) about a couple losing their newborn because their hospital refused to accept their old notes). Even banks were often unsure as to what exactly the rules were, even as the rules continued changing on a daily basis. Here's a look at a timeline of the first month of Demonetization (Firstpost, 2016):

8th November 2016: Demonetization is announced. Prime Minister announces that citizens had until the 30th of December to exchange their old 500 and 1000 INR notes with their banks. The Reserve Bank of India (RBI) announces that citizens would have to go to their specified offices after the 30th of December to exchange notes.

9th November: Banks and ATMs remain closed on the first day of Demonetization. Some major banks decided to waive all ATM charges. Toll charges (predominantly paid in cash) were suspended on national highways until midnight of 11th November.

11th November: ATMs across the country open for the first time after Prime Minister Modi's announcement, but they start running out of cash within a few hours of opening. The government agrees to extend the use of the old 500 and 1000 INR notes until the midnight of the 14th of November. Toll waiver on national highways extended until the midnight of 14th November.

13th November: The cap for cash exchange (of old notes to new notes) at one time was increased from 4000 INR to 4500 INR. The cap for ATM withdrawals was increased from 2000 INR to 2500 INR. The weekly cap of 20,000 INR cash withdrawal from banks was increased to 24,000 INR. The maximum cap of 10,000 INR cash withdrawal from banks was removed.

14th November: The government agrees to extend the use of the old 500 INR and 1000 INR for public utilities and fuel payments until the 24th of November. The weekly cap of 24,000 INR cash withdrawal from banks for current account holders[8] was increased to 50,000 INR. All ATM charges were waived until the 30th of December.

15th November: The government asks banks to put indelible ink (like the one that is applied during voting in India) on the right hand finger of all those who were exchanging the old 500 and 1000 INR notes.

17th November: The cap for cash exchange (of old notes to new notes) at one time was decreased from 4500 INR to 2000 INR. Cash withdrawals of 2,500,000 INR were permitted for individuals who were hosting weddings (evidenced through wedding

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[8] That is akin to checking account holders in the United States.

invitations cards[9]). Toll waiver on national highways extended until the midnight of 24th November.

21st November: Farmers are permitted to use the old 500 INR notes to buy seeds.

24th November: Toll waiver on national highways extended until the midnight of 2nd December.

1st December: The government says that the old 500 INR notes will be valid until 2nd December for fuel and air tickets purchase, instead of 15th December as was announced earlier.

3rd December: Toll collection resumes.

3rd January 2017: RBI states that only Indians who were abroad during the 50 day Demonetization window and non-resident Indians can exchange old notes at their specified offices[10].

Amidst this chaos, the prime minster addressed the nation on the 27th of November through his monthly radio program *Mann Ki Baat*[11] and urged the citizens of the country, especially the youth who are presumably more technology-savvy, to navigate the country towards the ideal of cashlessness – a goal that Prime Minister Modi believed would especially benefit the "poor people of India",

> "But, the great task that the country wants to accomplish today is the realisation of our dream of a 'Cashless Society'. It is true that a hundred percent cashless society is not possible. But why should India not make a beginning in creating a 'less-cash society'? Once we embark on our journey to create a 'less-cash society', the goal of 'cashless society' will not remain very far. And I require your physical help, your own time, your own resolve and I am sure that you will not disappoint me because we are the ones nurturing the desire to change for better the life of the poor people of India.
>
> - Prime Minister Modi, *Mann ki Baat* (Modi, 2016b)

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[9] Even non-banal activities took a hit. I was attending a friend's wedding and the band that plays loud, frenzied live music for a couple of hours straight while the guests dance away was visibly low-energy. Their enthusiasm is sustained through regular offerings of tips in cash (apart from their lump sum payment of course) and with no cash to go around, the wedding party was decidedly dull. For a country that takes its weddings seriously, having Demonetization occur during the busiest wedding season of the year meant that many couples and their families were embarrassed at having to offer a diminished wedding experience to their guests. To accommodate this, the government ended up raising the caps for maximum cash withdrawal for those individuals who could show that they were hosting a wedding in their families.

[10] The RBI specified only 5 branches for this in Delhi, Mumbai, Kolkata, Chennai, and Nagpur. There were media reports (Doshi, 2016) of people travelling long distances to come to these offices only to be turned away as they realized this extension was not for them.

[11] This loosely translates to "Conversations from the Heart."

The timing of the address was no coincidence. Amidst widespread media reports within the first couple of weeks that the Demonetization move to curb corruption was in fact not successful[12], Prime Minister Modi suddenly shifted the narrative for his Demonetization move. Demonetization was now expected to accomplish a "less-cash" society that would purportedly benefit the "poor people of India". As I discuss in more detail later in the chapter, the ideal of cashlessness begets a vision of modernity and progress that becomes an almost unassailable goal. Eliminating a big chunk of cash imposed a forced cashlessness on citizens around the country, and in its wake, mass forced adoption of digital wallets. This is where the Demonetization event starts to become relevant to this dissertation. In general, the Demonetization event disrupted the daily lives of the materially poor disproportionately and proved to be a welfare shock. But as the Demonetization narrative assumed the 'cashless is good' tone, a mainstay of the financial inclusion narrative that purportedly seeks to help the poor, it provided an excellent opportunity to observe how the unbanked were faring with the forced interfacing with banks and technology adoption. In doing so, the Demonetization event helps reveal the politics of inclusion, that is the differential exercise of power and the experience of citizenship when one is forced to participate in the formal, state-regulated landscape.

Figure 1: Long queues outside the Punjab National Bank (Indian Express, 2016)

Therefore, in this chapter I describe a unique event that led to an almost instantaneous implementation of the goals of the financial inclusion narrative – that is, accessing and using the formal banking and digital banking infrastructures – and how this played out on

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[12] This was confirmed in the RBI's 2016-17 annual report where they noted that 15.28 trillion INR had made it back into the system as of June 30, 2017 through legitimate means. This was almost 99% of the withdrawn currency in the old notes (RBI 2017). Of course, many innovative means were used to convert black money into "white" and thus their owners avoided paying any back taxes on it. In this chapter, I describe my own participation in such an act of *jugaad* ((Rangaswamy & Sambasivan, 2011).

the ground, especially for more vulnerable populations. To this end, I begin with a brief history of monetization (and thus, demonetization) and how these processes are inherently political. I then return to describing the Demonetization event and how the state built up its legitimacy by vilifying black money and extolling 'cashlessness', I then reveal how Demonetization affected the lives of the materially poor, especially those employed in the informal sector, much more than that of the rich, even as its dominant narrative claimed to accomplish the opposite. Further, it disrupted their financial lives by affecting the delicate balance of their income and expenditure streams. Finally, I demonstrate how the forced adoption of technology maintained this pattern of disproportionate disruption for vulnerable populations. As the financial inclusion narrative becomes increasingly indistinguishable from the technological inclusion narrative, this chapter demonstrates the immediate effects of the forced adoption and use of technology on the very populations that these narratives claim to serve.

2. (De)Monetization as a State Policy: A Brief Interlude

National currencies (often also known as 'territorial currencies' to demonstrate their spatial boundaries) operate as both a "condition for and instrument of nation-state building" (Truitt 2003, p. 176). Of course, creating a national currency made possible a national market, and to a large degree industrial capitalism[13] as well by bringing in the poor, who were (and in fact still remain) invested in subsistence economies outside of the money system, into the national market economy. It also made possible novel instruments of state fiscal control such as taxation, and public budgeting and accounting by mitigating its transactions costs. These state fiscal systems that could only be realized with the creation of the territorial currency suddenly allowed the nation-state to monitor and regulate the money circulating within their borders. More specifically, the nation-state could now *potentially* police, willfully steer the domestic economy, and influence macroeconomic conditions (Helleiner, 2003). In general, governments are the primary drivers of territorial currencies and most formal economic theories will model government decisions around national currencies based on "four elements of power": political symbolism, seigniorage[14], macroeconomic management, and monetary insulation (Cohen 1998b, p. 47). Less commonly, territorial currencies have also been seen as a means to cultivate and bolster national identities (Helleiner 1998b). The idea of national identities emerged in the 19th century, at the same time as national currencies did, as a way of linking members of an imagined, sovereign, spatially-bound community. Where strong national identities had not already been cultivated, policymakers created territorial currencies to engender a more coherent political identity. And where national identities already existed, national currencies could be part of an arsenal to further reinforce this (Helleiner, 1998b). Perhaps, especially interesting to this work, is the fact that a shared national currency leads to a shared monetary experience, despite other

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[13] Industrial capitalism also made possible territorial currencies by supplying the necessary technology and infrastructure to support the mass production of standardized coins and notes (Gilbert & Helleiner, 1999).

[14] Seigniorage refers to the revenues generated by the state in issuing currency by capitalizing on the difference between the cost of printing currency and its nominal value.

(social, cultural, political) diversities within the same country – what Benedict Anderson calls "the community of shared fate" (Anderson, 2006). Also interesting is how national currencies, particularly fiat currencies, are wholly dependent on the "trustworthiness of the state and the community that issues and accepts it" where they lack any intrinsic commodity value of their own (Gilbert & Helleiner 1999, p. 226).

In general, if the creation and continued relevance of national/territorial currencies cannot be separated from that of state-building, then this process must inherently be a political one. Questions around political ideologies and power dynamics become relevant when considering the (de)nationalization of money. While economists are wont to treat money as i) a medium of exchange, ii) a store of value, and iii) a unit of account, a political lens accommodates how money is also an "instrument of power" (Gilbert & Helleiner 1999, p. 14). David Woodruff, in his article on the politics of (de)monetization, encapsulates this well:

> "As an aspect of state building, the process of monetization cannot be free of political conflict. Control over a unified currency and monetary policy is a powerful instrument in the hands of national authorities and thus inevitably becomes entwined in struggles over the degree of national economic and political integration." (David Woodruff 1999, p. 83-84)

To put a contemporary twist to this, the politics of the denationalization of money comes into sharp relief as conversations around digital currencies emerge and become more common. The idea that these new digital currencies are "democratizing" money/finance and thus upholding the values of a democracy and in effect challenging state power and control is quite pervasive in mainstream media (Zerlan n.d., Roos, 2017). However, Eric Helleiner believes that this threat to domestic monetary policy may easily be overstated mostly because central banks believe that the size of digital currency balances are unlikely to ever hit worrisome levels that can challenge the quantum of hard cash in the system, at least immediately (Helleiner 1998a). This claim might seem a little dated but what Helleiner goes on to observe which is especially relevant to this chapter (and indeed, dissertation) is that new forms of digital currencies challenging state authority and control over its monetary policy has very "little to do with anything intrinsic in the technology of this money" (ibid p. 408). Helleiner rejects the deterministic stance that these new technologies themselves are what gives rise to "free" or "democratic" money that can now suddenly pose a strong threat to nation-states. However, their emergence has certainly raised critical questions about the relationship between states (and their monetary policies) and markets.

If anything, encouraging and enforcing the use of digital currencies may in fact bolster state authority and control. Using cash and coin is inherently anonymous – there is no immediately observable way to trace their history of ownership and use (Maurer, 2012). In contrast, the use of digital currency is traceable and provides opportunities for state surveillance akin to "panopticism" that sees a renewed and invigorated application of novel surveillance practices in the political economy (Gill, 1995). This type of surveillance of course invokes the Foucauldian "micro techniques of discipline that target and treat the body as an object to be watched, assessed, and manipulated" – in the

panopticon citizens are constantly aware of being watched although with the uncertainty as to when exactly this is happening (Foucault 1979, p. ix). This idea is not wholly unreasonable to imagine given that two of the most ambitious and audacious policy moves that India has enforced in recent times– (i) *Aadhaar* or the unique biometric national ID that would serve as the exclusive portal to all public and most private benefits and services[15], and (ii) Demonetization – has raised some concerns in mainstream media about the potential for state surveillance opportunities (Chakrabarti 2016, Venkatesan 2016, Kolachalam 2017, Economic Times 2017). Of course, Demonetization has been touted as a crusade against "black money" by the Indian government – a motivation that requires all anonymous and untraceable cash to be converted into "white money" or money that has been brought into the formal system where it can be tracked by the state. In other words, the watchful eye of the state has been peddled with decidedly good intentions – to tackle the black money menace and to redistribute this wealth equitably. This was purportedly a wholesale "economic" benefit of Demonetization, especially for those whose daily lives were disrupted the most from it – that is, the materially poor whose already limited assets were suddenly compromised in terms of their fungibility and free exchange; the unbanked or under-banked who were suddenly forced to navigate the unfamiliarity and red tape of the monolithic banking institutions (the inaccessibility of which was only exacerbated in the immediate aftermath of Demonetization as we will see later on in this chapter); and those employed in the informal economy where businesses abruptly halted or were constrained due to the lack of cash. In other words, that citizens' basic rights (for instance, their constitutional right to property) were being disrupted, if even provisionally, became a sidelined discussion in favor of the wholesale economic advantages that would purportedly benefit the poor more than the rich (it didn't, as I demonstrate later in the chapter). As much as the Indian government tried to separate the economy from the polity by spinning the Demonetization move as purely "economic" (reference wire article), these spheres can hardly be segregated. The economy is inherently political and any attempts at depoliticizing it are itself a result of some political conflict (Zizek, 2010).

3. Pursuing the 'Cashless is Modern' Ideal: Or building legitimacy around Demonetization

Demonetization was a decidedly political move by Prime Minister Modi's administration. In its early days, Modi waxed eloquent about the ills of black money and how Demonetization was going to banish this menace. As I discussed previously, this soon devolved into the ideal of a cashless nation, even as Demonetization was slowly proving to be a failure in reclaiming black money[16]. This ideal of cashlessness has long been

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[15] Incidentally, the UID program was also born of the motivation to assign unique IDs to people in border districts (especially those bordering Pakistan and Bangladesh) to prevent infiltration and weed out illegal immigrants (Mathew, 2014). In the case of UID though, this motivation to target illegal/illegitimate actors and their actions was not pushed as hard as it was for the Demonetization move.

[16] As economists and policy makers have observed before, targeting black money only targets its reserves, and not its generation. Moreover, black money remains only a small proportion of black wealth generated, which is often routed into unmovable assets. In general, the proportion of black

associated with modernity, just as cash used to be at some point in time. Consider, for instance, this quote from the economic anthropologist Bill Maurer:

> "Mobiles and money both represent modernity. Mobiles index technological savvy; their use marks a person as part of the modern world, as fashionable, hip, urban, important, connected. Modern money does much the same: flashing banknotes instead of or alongside gold, displaying coins as jewellery, elaborate means of counting bills and coins or dramatic means of secreting the counting – under a cloth, say. These kinds of counting practices make the counting itself a symbol of a person's importance, wealth, and standing in the community, all conveying connection to the modern world and distance from land, livestock, and manual labour." (Bill Maurer 2012, p. 308)

Of course, Maurer goes on to observe that mobiles and money can just as easily represent tradition – both mobiles and money can be used to access, uphold, and preserve family and community ties (considered the mainstay of traditional values), and traditional rituals, strictures, and religious practices (ibid). This might be especially true of cash. In fact, as far back as 1963, cash was already deemed to be dead. In an ironic obituary of sorts that was written for cash, the executive vice president of Diners' Club observed that cash "simply hasn't become modern" because it could not interoperate with the rapid (physical and informational) infrastructural development of the time (Swartz quoted in Simmons 2017, p. 86). These rapid infrastructural developments were making people more mobile than their cash, thereby cementing the demand for credit cards. Credit cards were now deemed to be far more 'modern' than cash as they embodied a "technology of movement" while being at the same time a financial instrument (ibid, p. 87). Suddenly, conversations about cash's risks and pitfalls became very relevant. As cash remains very much alive today, advocates for a cashless society, that includes credit/debit card companies, and now mobile money providers as well, focus on cash's risks (its fragility, the ease with which it gets spent, its anonymity that support illegal/illegitimate activities etc.) rather than its benefits (its materiality, its tangibility, the same anonymity that can represent freedom etc). A cashless society necessarily presumes an ecosystem driven by digital currencies and a supporting technological infrastructure that is deemed 'modern' and that consciously sidelines the less glamorous aspects of our daily financial lives – the informality, the seeming arbitrariness of it, the preference to use cash and coin, and so on (for instance, refer chapters 3 and 4).

India has not been immune to these persuasive (though I would argue, simplistic) narratives. These narratives around science and technology suggest that the development and adoption of innovative technologies are watershed moments in history, although neatly separated from the often rife with conflict social histories of a given context (Philip 2016). The development and adoption of these innovative technological systems

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money "stock" relative to black money that is "circulating" (that is, being invested and re-invested, being converted to "white" and back again etc) in the market is quite small (Roshan, 2016). Therefore, the vivid imagery of 'hoarded black money' that was painted by Modi's administration may have been an overstatement.

then is neatly, deterministically associated with that of 'modernization' where developing countries want to follow in the footsteps of the more developed, industrialized countries via the process of technology transfer (Akpan, 2003). From the excitement around e-governance projects in the early 2000s (Thomas, 2009), to the more recent, comprehensive *Digital India* flagship program that accommodates the ambitious *Aadhaar* initiative (Khanna & Raina, 2012), and the cashless motivation for the Demonetization move, changing political establishments in India have argued that technological innovation can enable access and bring greater transparency and efficiencies to public sector/state services in a way that will be transformative for the ordinary citizen. The *Digital India* program under Prime Minister Modi's aegis especially champions this narrative. A look at an excerpt from his speech at the launch of *Digital India Week* demonstrates a predisposition to redefine inequalities across the nation that arise from structural causes as problems of access instead – the problems of the lack of government services can be conveniently rectified by providing access on mobile phones, any lack of engagement with the state can be remedied through active use of social media, formal financial services can be accessed via mobile banking, healthcare via e-healthcare, and so on (text from Prime Minister Modi's speech, 2015). The dream of a "Digital India" then is one in which Modi imagines the "netizen" to be an "empowered citizen" (ibid).

"Empowerment through digital access," Modi addressed the Global Conference on Cyberspace in November 2017, "is an objective that the Government of India is especially committed to." In the same speech, the prime minister further claims that the *Digital India* program is the world's largest, "technology-led transformative programme" that could provide a more level playing field for the most disadvantaged sections of society – a claim that is again not unique although certainly far from being unassailable. The cashless motivation for Demonetization neatly fits into this ongoing *Digital India* narrative. Around three weeks after the first announcement of Demonetization, Prime Minister Modi addressed the nation through his monthly radio program *Mann Ki Baat* and urged Indian citizens, especially the youth who are presumably more technology savvy, to go cashless, or at any rate work towards a "less cash" society. *"A cashless economy is secure, it is clean"* he claimed, urging the youth to help transform the nation into a "digital economy" (reference). He further went on to say:

> "All youth of India can do it very quickly and within a month the world can see a **modern India** (emphasis mine). Be a soldier of change and bring it on. We will fight the black money and corruption. We know it is you who can bring the change and revolution."
>
> - Prime Minister Modi (Modi 2016b)

While the motive of tackling black money and corruption was presented consistently even through the cashless narrative of Demonetization, there was the ideal of a "modern India" that was now being offered as well. Becoming a "less-cash" (or "cash-lite", as is more popularly known) society was desirable – a state that was accomplished almost overnight due to Demonetization, but that Modi spun as a long-term, futuristic goal for the nation. But for a cash-intensive economy, this less-cash/cashless state came at a cost,

especially for its most vulnerable populations who remain the most dependent on this cash economy. As the financial inclusion narrative becomes inextricably intertwined with the technological inclusion narrative, going "cashless" is peddled as the obvious route to being 'included'. Yet, as Demonetization imposed this cashlessness on Indians and forced them to interface with the formal banking institutions as well as digital banking – arguably the mainstays of the financial inclusion narrative – the poor were disproportionately affected. I demonstrate this next.

4. The Immediate Aftermath of Demonetization

4.1 Demonetization as disruption

"I heard on the 8th that Prime Minister Modi had banned the notes. At the time I thought what difference will this make to me – I was poor yesterday, and I remain poor today. So it made no difference to me. The rich who actually have money in these notes, they will suffer. I don't have any money so what difference will it make to me. The owners of the sweetmeat shop there approached me asking me to deposit their money into my account. But I told them this will only increase my troubles. I said please spare me, I was happy before and I am happy now."

- Moin Khan, Ice-cream seller

I met Moin, who has a mobile ice cream cart but sells ice cream from a fixed spot in Delhi, one week after Demonetization was announced[17]. Moin confidently announced that Demonetization had zero impact on him, since he had no 500 or 1000 rupee notes and was therefore spared the inconvenience of going to the bank to exchange them. He surmised that the rich – the ones who actually dealt with these notes - would be the ones to be the most affected. Moin said that his business had been down for a while anyway, even before Modi announced Demonetization. In his case, the sudden sprouting of more fancy ice cream parlors all over the city had an immediate impact on his humble ice cream business – something he had been adapting to for a while now by becoming more frugal and investing in his children's education as "savings" instead of actually building up lump sums for a rainy day. Moin barely had any 500 or 100 rupee notes on him because his ice creams typically cost between 20 to 75 rupees and he was used to dealing with smaller notes. Therefore, the Demonetization announcement did not seem to affect him in any way, except for his friendly, affluent sweetmeat shop neighbors offering him money to deposit some of their "black money" into his account. Given Moin's extreme unease of interacting with banks - he had never taken out a formal bank loan for fear of losing his house or other assets - he rejected this offer, assuming that there would be

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[17] Moin was also one of my original informants from my 2013 fieldwork where I conducted repeat interviews with him every week.

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greater scrutiny and more severe consequences of any wrongdoing during Demonetization.

This is not to say that Moin wouldn't be affected by it a few months hence. However, at the time of our interview, he was certainly aware of how Demonetization was affecting others. Moin read the newspaper every day assiduously and told me of the many stories he was reading about. A couple had committed suicide in West Delhi, he said, after they had failed to withdraw any money for many days on end. Moin was also clued in to what was happening in the private banks in the neighborhood where he worked. His friends had told him that the tellers inside were succumbing to generous bribes offered by the more affluent customers in order to withdraw larger sums than the caps that had been imposed by the RBI. Therefore, cash was running out in these banks within an hour or two of opening. Moin claimed that only the first 10-15 customers who had stood in the snaking queues patiently for hours were able to withdraw any money at all – the rest had to go back home disappointed.

Obviously, the Demonetization announcement was a disruption in some way to everyone's daily lives in the country. However, it had almost instantaneous effects on many of those working in the cash economy – a sector that is disproportionately inhabited by low-income workers – as cash suddenly dried up. Business suddenly halted, payments were deferred, and wages were delayed. Cash suddenly became useless which meant that one's purchasing power was abruptly compromised, often with catastrophic consequences (Vora 2017, Al Jazeera 2016, Ashraf 2016, The Hindu 2017). In many cases, daily-wage earners were let go temporarily. Still, as many of my daily-wage respondents noted, there was no dearth of day-laborers in the city. Even when seeking employment through long-term brokers[18], there was no guarantee that they would find employment again, let alone be re-hired in the same job.

Personally, I was spared a lot of the inconvenience because I was, after all, a short-term visitor to India who didn't have much of the same expenses as its residents did. Moreover, the kind of transactions I was making (eating out in restaurants, shopping in malls) was of the type that could be completed using credit/debit cards. I just wasn't transacting enough in the cash economy – like buying day to day groceries for instance – and therefore was spared the immediate disruption that Demonetization brought to everyone else's lives. Still, I was affected in my own way. A close family member had only recently sold one of his properties for which he had accepted 60% of its market value in cash. This had been a fairly standard practice in the country for a long time. State governments in India typically assign a minimum price for a property, known as 'circle rates', for registration and taxation purposes. While these circle rates are purportedly based on market dynamics, the actual market price of these properties have far exceeded their circle rates for years. The declared values of sold properties were, thus, as close to the circle rates as possible (if not exactly equal) to avoid the higher registration charges

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[18] These brokers are instrumental in organizing and bringing migrant workers from all over the country, but especially the Hindi-speaking states of Uttar Pradesh and Bihar, to Delhi and helping them secure daily-wage jobs for a commission. Almost always, the broker will try to source workers from his own home town/village or state.

and taxes. The differential was paid out in cash, making it harder to trace. This particular family member had participated in what was business as usual in the real estate market. However, when two weeks later Prime Minister Modi announced Demonetization, he was suddenly stuck with a large sum of money in the old 1000 and 500 rupee notes. Panicked, he started calling up his family members and enlisting their help in depositing this money into their bank accounts. Of course, only those family members could help out who were not expecting to hit the caps imposed by Prime Minister Modi. Eventually, he had to rely on 22 different family members to bring his now defunct cash into the formal system and make it legitimate. I was one of them. I went and stood at the bank for 2 hours, patiently awaiting my turn, and then managed to deposit the money. In the larger scheme of things, this wasn't so bad. There were dozens of media stories of people spending long hours in queues at banks and ATMs (cbs news), losing precious working hours and wages (al Jazeera article), and some even collapsing and dying from the strain (Financial Express, 2016).

In any case, I was banking with one of the better-known private banks in India. I had a substantial enough bank balance (relatively speaking) that bank officials were eager to assign a personal "wealth manager" to my case so I may invest my money wisely in their products and services. This immediately influenced my experience at the bank during the days of Demonetization. Even in those initial chaotic days, I was certainly given some priority over others who did not have an account with my bank or enough balance to warrant any privileges. For instance, as soon as we reached the gate of the bank after waiting in the single queue outside, the guard advised us to go to any one of the three queues inside the bank – two queues for bank customers that were handling deposits and withdrawals separately and a single, consolidated queue for those who weren't customers[19][20]. Once I reached the counter to transact, my interactions with the teller was markedly different from those who were obviously poorer and lesser educated (and non-customers). Everyone's, including the tellers', patience levels were running low and requests for additional information or assistance, especially by those who were unbanked

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[19] I should note that this segregation of customers versus non-customers was not standard practice across all banks. In general, banks were handling the immediate, chaotic aftermath of Demonetization in different ways, at least in those aspects that weren't being regulated by the RBI, that just further added to the initial confusion. For instance, in an informal interview with an official from a Public Sector Undertaking (PSU) bank – that is a state-owned bank – I learnt that they couldn't practice this division of customers versus non-customers for fear of violent protests. Their bank was situated in a peri-urban area where the demographic was mostly low-income, a class that was disproportionately affected by Demonetization as I demonstrate in this chapter. To enforce such a division, especially by a PSU bank that was perceived to be for and of the people, would be inviting acts of dissent, either as an aberration or as a more organized demonstration of solidarity, something the bank was keen on avoiding. Private banks on the other hand were perceived to serve the rich and thus were better able to get away with such divisions, as the many interviews with my respondents indicated.

[20] If they were not customers, they were likely unbanked as well. People with bank accounts tended to go to their own bank branches because of the familiar environment and procedures, or because they were expecting some degree of preferential treatment.

or inexperienced in navigating the banking bureaucracy, was met with some impatience[21].

Unfortunately, these materially poor customers were often daily wage earners whose immediate friends and family were also likely to be employed in similar jobs, as social stratification often dictates[22]. Therefore, they did not have the luxury of sending someone to complete the transactions on their behalf. This practice was very widespread in the days of Demonetization as people who could have rushed to send in proxies to either 'legally' deposit their surplus cash to circumvent the individual caps imposed by RBI (as I was doing for my relative), or to escape the inconvenience of standing in queues for long hours. Many people, who could so afford, were able to pay a small fee to willing participants to stand in queue in their place. On getting a call when their turn was approaching, they would hurry to the bank to complete their transaction (for instance, refer the Guardian article). One such daily wage laborer named Roli who had been working in a construction site told me that he had been "temporarily" suspended from his job due to the cash crunch and was thus trying to earn some money to cover his expenses in the city by offering to preserve people's turn in the long queues. Roli would generally arrive at the neighborhood bank branch early in the morning before it opened. There he would ask people if they wanted him to take their place in the queue for 100 INR. Such soliciting generally earned him between 1-2 customers on most days. Therefore, he was able to make ends meet for the time being although he wasn't sure when, if at all, he would be called back on the construction site.

Roli was able to convert the waiting in interminable queues into an economic opportunity; for most day-laborers this meant losing their day's wages. Even for those who were employed in more long-term jobs, taking a day off was not always easy. Ongoing power dynamics with one's employers often impeded this. For instance Jahnavi, who we will meet again later in this chapter, was unable to take any time off from her job as a domestic help because of an ongoing credit relationship that she had developed with her employers – any time that she might have hoped to take off would be perceived as a potential threat to the salary advances they had put forth. Similarly, Anjana, who was also employed as domestic help in Delhi, spoke of the sympathy that her employers were showing her during the days of Demonetization, but only to an extent. Her employers

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[21] Such experiences were not necessarily unique to Demonetization, although certainly exacerbated during this time. Many of my low-income respondents felt intimidated by their interactions with the tellers in a formal bank. One respondent mentioned going to the bank and getting the deposit slips beforehand to fill them out at his own pace in the comfort of his home (or the home of his more educated neighbor if he needed some help in parsing the slips). In the bank he generally felt rushed and was met with constant impatience – an unsympathetic experience that he tried avoiding as much as he could.

[22] I don't intend to present social stratification as a universal condition here. Of course, we see an unequal distribution and enforcement of resources and rewards in societies across the world. However, as Tuden and Plotnicov (1970) observe, assigning such universality to social stratification oversimplifies and creates a sort of confusion between "stratification, ranking, and individual differences within societies." (p. 4). Still, social stratification, as most relevant literature notes, does indicate relatively permanent positions in societal hierarchies and thus varying degrees of control over economic and political power (ibid).

were understanding of her taking a day's worth of leave to go and sort out her matters, but more than that, they became a little hostile. They refused to recognize the increased barriers that Anjana had to face at the banks, in opening and accessing accounts, and assumed the worst, that is that she was just playing hooky from work. Therefore, Anjana had been able to go to the neighborhood bank only twice. The first time she waited in the queue for four hours before she abandoned her position to go and tend to her children who were returning from school. The second time she was able to reach a teller, but was told that she was missing one document and was thus unable to open an account. She predicted that she would need at least another couple of days to source the document, open an account, and then deposit her money into it. Her husband was unable to help her, she said, as he was working as a supervisor on a construction site – a relatively prestigious and hyper-competitive job that he stood to lose if he missed even a day. Anjana wasn't sure if her employers would grant her any more leave to get her bank work done.

Further, Anjana and her husband had been doing a side business for a few months now. They ran a small eatery for 2-3 hours in the evenings – essentially frying up small savories for the men who gathered to drink in a common space and commiserate every day. As this business started to gain momentum, Anjana and her husband had been able to expand it. Their hope was to expand enough so that Anjana could quit her job as a domestic help, a more grueling and less prestigious job, and focus on their entrepreneurial venture full time. Demonetization was a definite impediment to their plans as their customers disappeared overnight without any cash to spend. The few who did stop by asked for their savories on credit, but every rupee that Anjana and her husband were earning from this business was needed to buy the ingredients for the next day – the wages from their other jobs went towards their household expenses and existing loans – and thus they were unable to offer any credit. Anjana was worried that the slim edge that they had managed to accomplish in serving their evening treats would slip away as many others had recognized the potential for catering to the evening regulars after watching their brief run of success. If any of them had the capacity to extend short-term credit – a relatively risk-free undertaking in their small community where everyone knew everyone else – then they could easily take over. Anajana and her husband stood to lose not only their clientele, but also the money they had invested in setting up their small eatery. Demonetization was thus disrupting their plans for the future, perhaps in irrevocable ways, because they were unable to generate a lump sum directly. Certainly, their capacity of sustaining their still nascent business was more constrained than somebody with more resources[23].

Still, Anjana and her husband shared a relatively open dynamic regarding their finances. This isn't always the case as the Demonetization announcement suddenly exposed

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[23] It is not just their capacity to accomplish their goals that is more constrained. As Arjun Appadurai has observed, even the "capacity to aspire" is unevenly distributed in society (2004, p. 68). He is quick to clarify that the poor can in fact "wish, want, need, plan, or aspire" not as an expression of desire, but as a capacity to identify the pathways for accomplishing these aspirations. However, their diminished power, dignity, and material resources will greatly moderate these practices and thus these will remain relatively under-developed (ibid, p. 69).

women all over the country who were secretly stashing money away from the eyes of their husbands (for instance, look at this scroll article). Women do this for all kinds of reasons - they do it to spend money on things they know their husbands will not approve of, to squirrel some money away as household savings that their husbands or children will not be tempted to spend, and to build their own personal reserves in the event their husbands are abusive, leave them, or pass away. As I spent time talking to my own family and friends, as well as my more materially poor respondents, I realized that women from different social classes were engaging in this practice[24], but to different ends. Therefore, the forced revelation of this secret stash had different implications for different women. For the more privileged, that is the more educated and wealthy women, who were also likely to be in more equal partnerships, this revelation often translated to an awkward conversation with their husbands. But for many of my poorer, lesser-educated respondents, whose husbands continued to control the household finances and retain sole access to formal bank accounts, this secret stash represented their only means to exert their financial independence, especially in times of peril. Its sudden disclosure was a disclosure of this independence that these women had been cultivating for themselves in secret – something that suddenly threatened the status quo with their husbands. Thus, not only did these women lose the money they had so carefully accumulated over time, but they also had to contend with the antagonism of their husbands in the wake of Demonetization.

I certainly do not intend to present the gender imbalance in marriages or common-law partnerships as something that is exclusive to those who are poorer and less educated. Certainly such power imbalances exist in the partnerships of more affluent people as well. Still, the resources and relative power available to more affluent, educated women just equips them to better handle any fallouts. In general, women have disproportionate access to the formal banking infrastructure (for instance, the 2015 UNDP Human Development Report claimed that 80% of Indian women remained "unbanked" at the time), but this tends to be skewed heavily towards women who are poorer. Therefore, more affluent women just have better access to banks that made converting their cash to legal money easier. Moreover, as I noted before, they were better placed to delegate this task to others without the fear of losing out on work hours or wages. The materially poor faced greater barriers in converting their hidden cash to legal tender. However, these barriers were often exacerbated for women, even as they had to grapple with losing their financial independence or facing violence. Uma, who we met in chapter x, spoke of the fear she felt when Demonetization was announced:

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[24] Viviana Zelizer (1989) provides wonderful detail in describing the social meaning of domestic money, specifically the money available to married women in the United States in the late 19th, early 20th centuries. She reports accounts where both rich and poor women alike "stole" money from their husbands who continued to own and control household finances. However, the techniques through which they built their personal reserves often varied – where poorer women often rummaged through their husbands' trousers for loose change, and more affluent women claimed that the flour or sugar had run out (even when it had not) to earn some extra money.

"When I first heard about Demonetization from a friend, I did not believe it. But after watching the announcement on the television, I could no longer ignore it. I remembered how angry my husband had gotten the last time he had discovered I was hiding money from him. This time also, after he learnt of Demonetization, he taunted me and said that it was a good thing I had disclosed all my money to him before itself. He didn't know I had secretly started saving money again. He will get very, very angry if I tell him. But if I deposit the money into my bank account, he will know because he checks my passbook from time to time. I might have to take the money to the local moneylender – he said he will give me 800 rupees for every 1000 rupees I give him in old notes. I am trying to see if I can find a better rate in the market."

Uma's husband is a generally suspicious man in. He had discovered Uma's secret stash years before Demonetization by accident and had assumed that she was planning to leave him for another man, perhaps one who could offer her better prospects. Uma was able to pacify him but did not want to repeat a confrontation like that again (I asked her if she feared violence but she denied this vehemently – whether sincerely or not, it was at least certain that the confrontation would be decidedly unpleasant). The only way she could think of salvaging her secret savings was to pay a hefty fee for exchanging it.

This remained an ongoing theme in those early days of Demonetization where vulnerable populations such as the materially poor, women, and the elderly were disproportionately affected by it. As I detail in this section, the lack of job security, the lack of information or resources to navigate the banking bureaucracy, and the inability to outsource the administrative burdens of Demonetization are just some of the reasons as to why Demonetization had more immediate impacts on the poor. The potential loss of jobs and wages, security and independence propelled them into an almost immediate state of precarity. However, it could also demonstrate more long-term effects as a potential welfare shock. I describe this next.

4.2 Demonetization as a welfare shock

Rajith, who makes an appearance in chapter 4, is an auto-driver based out of Bangalore. If we quickly recall, he had taken out a loan for his auto for which he needs to save at least 200 INR a day to make his weekly payments. Generally, on an average day Rajith makes anywhere between 500-700 INR per day, of which he has clearly demarcated proportions for specific purposes – 200 INR goes towards gas for the auto, 200 INR for the auto loan, and 100 INR for food expenses for his household. Any extra money goes towards his savings to later pay for his children's school fees or to make a payment on the lease on his home. This income-expenditure balance is quite fragile – even small shocks can send Ranjith scrambling to make ends meet. Demonetization has certainly been a shock as business has been slow due to the abrupt lack of cash to pay auto drivers. Therefore, with less cash to go around since the Demonetization announcement, he has been able to make only 300 rupees a day which just about pays for his gas and groceries. He has started defaulting on his loan payments, an event that he recognizes can have

catastrophic consequences since the auto is his only source of income. Rajith recalls how on one particular day he had agreed to take old notes from a customer – something that many in the cash economy were doing in those early days to get whatever little business that they could – knowing that the government had mandated that fuel stations should continue to accept the discontinued notes until a later date. Rajith was given an old 500 rupee note for a ride that cost 150 rupees, and thus he had to part with his precious 100 and 50 rupee notes to make change for the customer. When he went to the petrol pump to buy gas, they refused to sell him gas for less than 500 rupees as they were running out of precious change. Consequently, Rajith had to buy gas for the entire amount, with no money left over for basic food supplies or his loan repayment. That particular night, Rajith had to borrow some rice and lentils from his brother for food at home.

For auto-drivers like Rajith who often make ends meet on a day-to-day basis, even one outlier day in their cycle, especially when their earnings have already taken a hit, can propel them into a deep cycle of debt. Although, Ranjith describes an instance above where he had to rely on his brother's help that one time, it is easy to imagine how in aggravated conditions – such as an abrupt reduction in business or a sudden shift in the exchangeability of legal tender as was the case during Demonetization – such reliance may become recurring. Salman, another auto-driver from Bangalore, observed that his existing debt was starting to spiral out of control. He had taken out the same loan as Rajith for his auto and had never defaulted on it in the past year. Before the surprise Demonetization announcement in November, Salman had managed to save up 3000 rupees in the old denomination notes towards the loan repayment. The loan collector refused to accept this, and Salman ended up using this money at the bus station, that was still accepting the old notes, to buy tickets for his wife to visit her native village. On the face of it, it seems easy enough for Salman to move his money around and make the loan repayment once he gets the new notes (perhaps ones that were earmarked for the bus tickets in the first place), but consider the effort expended in generating this lump sum for a need that does not seem immediately critical. Building a lump sum for repaying a loan, the object of which is already at your disposal (that is the auto), can be challenging, as opposed to a more pressing need that requires immediate attention (such as bus tickets to go meet your ailing parents). Therefore once the money has been saved up for a less motivating need, getting this off your hands immediately becomes absolutely critical. Salman attempted to do this, was unsuccessful, and eventually ended up spending the money at the bus station that was still accepting his money as legal tender. In its immediate wake, Demonetization gave rise to a provisional infrastructure that was utilizing the old denomination notes in differential ways as they remained in circulation in the informal cash economy. Consequently, the poor had to abruptly adjust their consumption patterns in ways that upset their delicate prioritization of money, even as they continued to accept old notes in a bid to maintain any momentum of business.

In general, employment within the cash-intensive, informal economy tends to correlate with low-income levels. For an economy that still remains one of the most cash-intensive

economies in the world, even when compared with other developing nations[25], and that employs a vast majority of its population within the informal sector[26], this encompasses a significant population of low-income individuals that were directly affected by Demonetization. While the media documented the very visible trials of the poor as they attempted to navigate the abrupt contraction of the cash economy since Modi's announcement – stories of standing in bank queues for hours at the cost of bodily peril and lost wages, or being forced to take lumpsum payments/wages in the old notes by opportunistic employers (Biswas, 2016) – there was relatively less focus on how this move can disrupt, often in catastrophic ways, their fragile economic lives in the short and long terms. A welfare shock measures the change in consumption per capita that in turn provides a useful metric for vulnerability to poverty. This metric accommodates a vast majority of those on-the-edge, that is those households or individuals that move in and out of the poverty line, or a comparably defined minimum level, when they suffer from a shock such as an illness (especially of a productive family member), theft, or a natural disaster. It is hard to overstate the nature of this fragility as what seems like a one-time discrete event can rupture the very tenuous cycle of daily cash flows – an event that can make recovery challenging if not impossible.

The materially poor, especially those who are daily wage earners and often employed in the informal sector, are faced with a unique financial context. Given their smaller, often irregular income streams, they find it harder to generate lump sums that can accommodate bigger expenses such as rent, tuition, or medical fees. Such an endeavor requires constant attentiveness and effort to avoid expending whatever little money has been saved up thus far. In general, being able to get these small savings off your hands almost immediately, or imposing a trivial barrier between you and your money, can help in protecting this money. At the same time, the precarity that pervades the poverty condition means that having immediate access to this money at critical junctures is important as well. Therefore, achieving that delicate balance of distance from your savings, but not too much distance, is absolutely essential in helping the poor manage their daily cash flows – a principle that many informal and formal financial arrangements will attempt to realize.

Demonetization in a predominantly cash economy disrupted, in many cases, this delicate balance between distance and access. Jahnavi, who we met earlier and who works as a domestic help in Delhi, had no bank account at the time of the announcement. Moreover, she was unable to immediately go and open an account because this would entail taking time off from work. She presumed that the process of opening an account and then depositing the 1500 rupees that she had in the old denomination notes would take at least 2-3 days based on what she had heard in her neighborhood and the long snaking queues she had seen outside banks and ATMs on her way to work. If we recall, Jahnavi relies on a fairly common informal credit practice where she borrows money from her various

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[25] For instance, the ratio of money held in bills and coins to the money that is held in bank accounts in India is 51%. As a comparison, the same ratio is 29.3% in Egypt, 8.9% in South Africa, and 8.7% in Mexico (Institute for Business in the Global Context, 2015).

[26] A 2012 report by the Indian Economic Service noted that more than 90% of the country's workforce was employed in the unorganized or informal sector (Indian Economic Service, 2014).

employers, who then adjust these loans against her monthly salary over time. This complicates Jahnavi's position - she is unable to take any time off from work for the fear that her employers will think she is using Demonetization as an excuse to flee with their money. In desperation, she ended up giving her money to her son's friend who deposited it into his own bank account as a favor. However, he had been unable to take time off from his own job as a chauffer to go stand at a bank or an ATM for long hours to withdraw money. The couple of times that he had managed to withdraw money, he couldn't afford to part with any of it to pay Jahnavi. He claimed that because of the caps imposed in those initial days on withdrawals and deposits, he needed whatever money he was able to withdraw for his own household and personal expenses. Jahnavi was sympathetic to his plight yet was starting to get anxious about her own situation. She needed to immediately pay the interest on a loan that she owed a local moneylender and without any access to her 1500 rupees, she would now have to borrow more money from her employers, a prospect she was not entirely happy about given that she already owed them money.

Furthermore, Jahnavi was unhappy about the new 2000 rupee note that had been introduced, especially in the immediate aftermath of Demonetization when it was in more supply than the new 500 rupee note. She was paid December's salary, after the adjustment of her loans, in the new 2000 rupee notes. She used these notes to shop for food and other small utilities and was consequently stuck with a sizeable amount of money in small change that generally tends to get spent faster and more easily than higher values notes – yet another impediment in generating lump sums. Jahnavi suddenly found herself spending an extra 20 rupees for a packet of wafers for her grandson or another 50 rupees for a stack of pretty bangles. These are expenses she probably would have thought twice about if she had a 1000 rupee note on her instead of ten 100 rupee notes, not to mention that she likely would have used the bigger notes to pay off her interest to the moneylender (who demands repayments in "mota paisa" or lump sums as well). Thus, with Demonetization, Jahnavi's money had at once become harder to access yet easier to spend, but in ways that were affecting her consumption choices in, perhaps, perilous ways.

Eventually, the sudden contraction of the cash economy had immediate effects on those who were employed in the cash-intensive, informal economy. In general, many traders, shopkeepers, auto-drivers, and other market players in the cash economy reported lower earnings in the immediate aftermath of the Demonetization move (for instance, look at these media articles – scroll, hindu, washingtonpost articles) – a welfare shock in and of itself. To add to this, the subtle, often invisible ways in which Demonetization was affecting the consumption patterns of the poor also qualifies as a welfare shock that can create deeper cycles of debt where critical expenses such as medical costs or school fees may be sacrificed, further cementing their precarity.

4.3 'Kindness is Cashless': Demonetization as forced technology adoption

Arguably the ones to immediately benefit from the Demonetization announcement were the digital payments and online wallets vendors. As cash became more and more scarce,

digital transactions surged and even those who had never used these services before were forced to suddenly adopt them. Paytm – a shorthand for "payment through mobile" – and perhaps the most popular digital payments service in use at the time immediately published a full page advertisement lauding the prime minister for his "bold" decision (figure 2). It also broadcast the catchy *"ATM nahin, Paytm karo!"* that translates to "no ATM, use Paytm!" Visa, similarly, began its social media campaign of "KindnessIsCashless" – the main message being that small acts of kindness on the part of the more technologically savvy (such as the young) could propel the country more swiftly and seamlessly towards becoming perfectly cashless.

Such messages overlook the many barriers to adoption and use of technologies even if access is presumed to be reliably consistent - which it almost never is especially in rural areas (Burrell (2018) refers to this as the "instability of the network" where connectivity remains in a constant state of fluctuation). Eszter Hargittai was one of the first scholars to challenge the simplistic dichotomy of the "digital divide" as haves and have-nots, observing that that there was a need to look at several different dimensions of access and use (Hargittai, 2001). These dimensions reflect inequalities in *equipment, autonomy of use, skill, social support, suitable content,* and *purpose of use* of technologies (DiMaggio & Hargittai, 2001). Specifically, with respect to Demonetization, Masiero observes that a cashless India may impose a new form of a digital divide that is framed as access to digital modes of transaction. Failure to materialize this access can result in a new (and precarious!) form of economic exclusion (Masiero, 2018). Certainly, Paytm use skyrocketed in those early days – some media reports claimed that Paytm was clocking a record five million transactions a day in the days following Modi's announcement (livemint). These numbers accommodated a spectrum of users and thus digital experiences that establish the inequalities across the different dimensions of access enlisted above. But as I demonstrate in this section, they also reinforced the inequalities in *power* between the designers/policy makers/power users and the less-privileged users.

As Modi (and in quick succession, the digital payments service providers) continued to exhort the youth of India to help those who were novice users of digital wallets and mobile banking ramp up their digital use, it became increasingly clear that the burden of adoption and use fell on the *individual.* Dourish (2010) notes that this transfer of burden almost always erases the responsibilities of other social actors – most notably, of the state and of corporations. Modi's paeans to Demonetization solving the "festering sores" of "corruption, black money, and terrorism" (Modi, 2016a) were very persuasive indeed – it rendered the overnight disappearance of cash, and consequently the adoption of digital payment solutions under duress, as an obvious outcome that required pain and perseverance on the part of every individual for a seamless transition. Consider the following excerpt from an interview that I conducted with a tailor named Bardhan who sits with his sewing machine and materials on the side of a road in Delhi:

> Me: Has the lack of cash post Demonetization been an inconvenience to you in
> any way?

Bardhan: Yes it has. I have lost some longtime customers who chose to go to the bigger tailoring shops in the malls as they are accepting credit cards. Maybe they will come back once all this is over.

Me: Do you then think that Demonetization was a good decision on the part of Prime Minister Modi?

Bardhan: Of course! If I had to get my house in order and my household members had to suffer through some inconvenience because of it, wouldn't that still be a good decision? I think Mr. Modi is doing the right thing.

Me: Still, is there anything he could have done during this time that might have prevented you and others from losing business?

Bardhan: No, this had to be a surprise. Learning how to use credit cards or Paytm and offering them to my customers should have been my responsibility from the beginning.

Figure 2: Paytm's front-page advertisement in leading national dailies

Evidently, Modi's narrative arc of 'no pain, no gain' was so persuasive that it erased the role of the state completely in the chaos that followed[27]. As I spent more time amongst vulnerable citizens who were the most affected by Demonetization, I realized that this remained the dominant opinion amongst them. Of course, there was an immediate impetus to want to learn digital payment solutions, and in the absence of state support, the corporations took up the heavy lifting of training new users. For instance, in the early days, I observed Paytm representatives seeking out informal business owners in Gram Nagar – the kind that were unlikely to host and use credit cards – and convince them to try their app out in the absence of cash. Unlike the intensive training and onboarding assistance that the auto-drivers received in chapter x, these Paytm representatives were only able to spend 15-20 minutes per new customer to show them how the app worked. Sometimes Paytm was able to locate new customers who sat right next to each other with their wares and therefore these quick training sessions accommodated multiple users in one session. As Paytm recognized this opportunity to onboard thousands of new users across the country, they incentivized their field sales representatives to seek out as many new users as possible, rather than investing in the more time-intensive processes of training and retaining customers. Consequently, a quick walk around the Sarojini Nagar market (a popular, almost legendary bazaar that hosts a range of shops – from brick and mortar ones to sellers displaying their wares on a sheet in the bylanes[28]) now offered multiple sightings of the standard cardboard placard with the Paytm logo.

Figure 3: A Paytm sign outside a clothes shop in Gram Nagar

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[27] I did encounter some people (for instance, Prakash who I describe next) who had suffered atypical losses, that is losses that were disproportionate to the baseline inconveniences that one assumed everybody else across the country was facing. In this case, Prakash mentioned that since the government was forcing them to adopt digital payment solutions, that they should hold the digital payment companies accountable for any losses to the customers. Even here, the expectations of the state's accountability were rationed.

[28] I have described the bazaar in more detail in chapter 2.

Figure 4: A Paytm sign displayed over the linen ware being sold in one of the bylanes of Gram Nagar

Did this mean that Modi's cashless dream was being realized, especially amongst the more low-literate populations? It is true that most of my respondents who were working in the informal economy ended up signing up for Paytm almost immediately to ensure that some business would keep coming their way. And in fact, I did observe that Paytm use was atypically high in those early days of Demonetization. The only exceptions were those who were employed in steady jobs, such as domestic help, who could rely on their employers, to some degree, to source the new notes and pay them in cash. Still, despite the sudden removal of cash and its subsequent inaccessibility, cash did manage to find its way back into the daily economic lives of people within weeks as I have described throughout this chapter. People acted as proxies in queues to get cash into the hands of more people (such as Roli did), new notes were easily available on the black market (as Uma indicated), and so on and so forth. No doubt, people were paying a hefty fee for improving their accessibility to cash, and as I continue to argue, the poor paid disproportionately more than the rich. This seems counterproductive but in a cash-intensive economy, Modi and his administration can best be described as highly optimistic if they thought they could disrupt this overnight.

Cash's many benefits stem from its materiality and ease of use, its abstraction and anonymity, and its fungibility and flexibility (Iazzolino & Wasike, 2015). These characteristics make it particularly indispensable in the informal economy where transactions are often competed using cash. Of course, cash also has many drawbacks – the same anonymity can be problematic, it can damage easily, and its hyper-liquidity means that it can be available at all times to anyone. Still, its time-honored fixture in the informal economy meant that the cash economy recovered quickly from the abrupt shock

of Demonetization. When I called up my respondents, who had signed up for Paytm, in April of 2017 (that is five month after Demonetization) they all stated that they were back to using cash with some intermittent use of Paytm. When I asked them why, most simply stated that cash had come back into the system and they found no further need to use Paytm regularly[29].

Further probing revealed the many reasons for this. Of course the training was lightweight at best, and many of my respondents found themselves asking their neighbors or other vendors in the market – often the ones in the more formal shops who had already been using Paytm and were considered the "expert" users – about how to complete a transaction on multiple occasions. Some of them did get the hang of it pretty quickly but faced other difficulties. For instance, a fruit seller, named Prakash, overshot his transaction limits without realizing. Paytm had imposed, what they assumed, were reasonable transaction limits for the vendors in the market (Paytm fixed this at 10,000 INR per week). Prakash was unaware of this and had helped out a couple of security guards who he had known for many years. He had given them cash after the security guards had transferred the same amount over Paytm to him. The security guards were desperate for cash as their long hours made it impossible for them to stand in the queues outside the banks and ATMs, and Prakash sympathized. He gave them 2000 INR each. A few days later, he opened up his Paytm application and realized that some of the payments that he had assumed had completed had actually failed (refer figure 5). On calling the Paytm representative who had recruited him into using the application, he learnt that he had crossed his transaction limits – something the representative had never explicitly mentioned to him, perhaps assuming that Prakash would never exceed them. Prakash was able to retrieve some of the failed payments in cash from his regular customers once he alerted them about the discrepancy. However, some of the bigger payments were from new customers who Prakash had no hope of seeing again. He said that repeated calls to the Paytm representative were going unanswered ever since he had told him about his situation.

KYC[30] rules for low-income populations are often relaxed, especially when these populations are less likely to furnish legitimate documentations towards identification or residence proof. This, however, means that their transaction volumes must be capped, something that richer populations who have improved access to working institutions and systems (and can thus source legitimate identity and address proof) need not worry about. In Prakash's case, what seemed like a natural act to him, that is helping out members in his community, turned out be very costly. In other words, his existing membership in a vulnerable community, that often relies on its members for informal loans and other forms of assistance, worked against his use of a digital solution. The same thing happened to Dharmendra, an Uber driver in Delhi, who was using Paytm to pay for fuel at the petrol pumps. Before Demonetization happened, Dharmendra would

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[29] This return to cash after the initial few weeks of chaos has been documented elsewhere as well (Pal et al, 2018; Chari, 2017).

[30] KYC or Know-Your-Customer rules is the process of identifying and verifying your customers' details. KYC rules are especially stringent for the banking sector in a bid to prevent money-laundering.

generally request a customer to pay their fare partially or completely in cash so that he could buy fuel. Dharmendra would explain to them that if they had selected to pay digitally before getting on the ride, a quick explanatory phone call would reverse these charges. Generally, his customers understood his position and indulged him. But during Demonetization, his customers were unsympathetic as cash became harder and harder to source. Moreover, the long queues outside the ATMs were daunting and would mean a loss of wages for Dharmendra (he claimed that he would lose anywhere between 2000-3000 rupees if he spent an entire day at the bank or ATM). Dharmendra then resorted to using Paytm at the petrol pumps but hit his limit within a couple of days. His Paytm transactions started failing and Dharmendra had to resort to using his bankcard which incurred a 1.5% fee for every transaction. This, cumulatively, was no small amount but was better than waiting in queues at the ATMs, Dharmendra mused. He had only 39,000 rupees in his bank account and needed to make a payment of 32,000 rupees towards his children's school fees the week after we spoke. Thus, every time he paid the transaction fee, he said his anxiety over his impending meager savings just compounded.
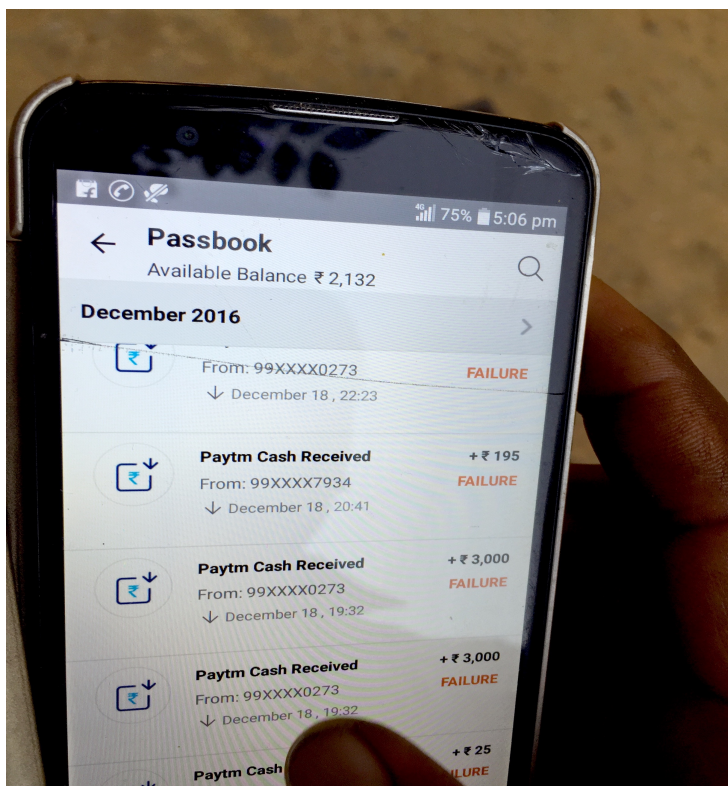

Figure 5: Screenshot of Prakash's Paytm Dashboard

Dharmendra and his fellow Uber drivers across the city (and maybe even country as I observed similar practices in Bangalore as well) had devised a way to get cash into their

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hands even as Uber promoted itself as a cashless rideshare option[31]. Procedurally, cash would only become available to the drivers a couple of days after the digital payments were posted. However, the drivers seldom had any buffer cash to pay for gas and thus they had to appeal to their passengers to help them out. This was certainly an act of *jugaad* – a Hindi term widely used in India that indicates the practice of ingenuity amidst scarcity or converting adversity into opportunity (Rangaswamy & Sambasivan, 2011). Yet even this had its limits during Demonetization. As digital solutions are designed and top-down assumptions made about the needs of its users, their reality is often ignored for the sake of convenience (like in the case of Paytm where it was just easier to adhere to the KYC norms than try and work around them) or for the more valuable consumer (such as incentivizing the rider rather than the driver in Uber[32]). Aiming for a perfectly cashless society requires a critical assessment of why and how people continue to use cash (especially in non-intuitive ways). This lack of understanding on the part of product designers, content distributors, platform builders, and policy makers unfairly penalizes the participation of the materially poor in their existing social and economic lives. Till such time this oft-ignored aspect of the 'digital divide', that is these asymmetric power relations, is prioritized and overhauled, achieving a cashless state, whether by force or more organically, or whether through indoctrination or careful training, will remain a distant dream.

5. Conclusion

> "Demonetization in its broader context was more than just an initiative aimed at impacting economic behavior. It came at a moment when the pragmatics of cashless transaction were wrapped into the aspirational discourse of a digital economy with a spokesperson in a tech-savvy leader, which filtered down to a citizenry slowly adapting to its new found digital identities and low-cost personal devices." (Pal et al, 2018)

In this chapter, I describe the Demonetization event in India that afforded what can perhaps be described as the perfect opportunity for the Indian state to rapidly enforce the goals of 'financial inclusion', although not exactly intentionally. Demonetization, or the abrupt removal of the most commonly used notes from the economy, forced everyone across the country to i) interact with the formal banking infrastructure, whether they were previously banked or not, in order to deposit and withdraw the new denomination notes, and ii) rely on digital payment systems to complete financial transactions where notes were scarce but mobile phones were relatively ubiquitous – both mainstays of the financial inclusion narrative. Through describing the early days of Demonetization, I

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[31] Of course, it is worth noting that India is one of the few places where Uber provides an option to riders to pay the driver with cash. The drivers enjoy it particularly when riders choose the option to pay in cash. The Uber fares are very precise, odd amounts and riders will almost always ask the Uber drivers to keep the change. This is not the case when riders choose the cashless option.

[32] Burrell (2018) points to a similar tension between Internet users at the network centers (generally in urban centers) versus those at the periphery (generally in rural centers). The asymmetric power relations lead to an almost standardized expectation in connectivity that is imposed from these network centers.

reveal the politics of top-down policy decisions that can often disproportionately affect the very populations that these state-endorsed policies are expected to serve. We can see the political effect of Demonetization in the (largely) acquiescent spirit of Indian citizens even as the most vulnerable populations (that is, the materially-poor, the unbanked, the digitally illiterate or semi-literate) were thrust into a politically-induced condition of precarity. Cruelly enough, the Indian government managed to largely absolve themselves of any responsibility in the state of affairs that ensued. As people suffered across the country, some much more than the rest, the air was still thick with a sense of desire and possibility. Their suffering was expected to lead to better, more 'egalitarian' and 'modern' outcomes, just like Prime Minister Modi kept loudly proclaiming across all TV and radio channels.

Unfortunately, I did not spend enough time in the field to truly assess the long-term effects of Demonetization. Instead, what I describe in this chapter is the immediate aftermath of Demonetization that disrupted the daily economic lives of everyone within the country, but particularly of those who were employed within the informal economy and had limited access to power and resources to navigate this abrupt shock. I will however argue that even these immediate effects can prove to be catastrophic in the longer term knowing what we do know about the limited capabilities of the poor and disenfranchised to cope with such shocks. Demonetization negatively impacted the earnings of those employed in the informal sector – business suffered, cash was scarce, and accessing the banking infrastructure to source cash meant further losing wages. Demonetization subtly but surely changed consumption patterns, thus generating debt even as I observed in my time in the field. Women had to suddenly reveal their secret financial assets, and thus compromise their financial independence. Digital payment systems had to be learnt rapidly, but their use was far from unproblematic even as recourse seemed distant. And despite all this, almost all of the cash that was out in notes came back into the formal banking infrastructure, thereby invalidating the clampdown on 'black money' argument. Furthermore, cash reappeared slowly and surely in the economy, while the initial heavy use of digital payment systems like Paytm started dwindling even as I was exiting the field.

Therefore, this forced formalization did little to help those who were active participants in the informal cash economy. While the purported motivations for Demonetization were not explicitly speaking to the financial inclusion agenda, it still presented me with an opportunity to investigate its objectives albeit within a very specific context. Still, it helped expose some problematic aspects of the financial inclusion agenda and the policies that are often made in its name. Until we are able to recalibrate what we mean by and expect of 'financial inclusion' and its holy trinity of state-backed support, formal banking infrastructure, and technological empowerment, misguided policies and solutions will continue to be designed and implemented, often hurting rather than helping the very populations it claims to serve.

CHAPTER 6

Conclusion

1. Rethinking 'Financial Inclusion' through the lens of Precarity

> "Life amidst indeterminacy, precarity certainly involves hardship and pain. But it also calls upon and calls forth deep resourcefulness and imagination. In this precarity—in the ways people are responding, adapting, and also refusing by remaking the conditions of precarious existence—is changing the lived world, both for and beyond human existence."
> (Allison, 2016)

To write a dissertation on financial inclusion meant that I first had to address the defining condition of poverty itself – its precarity – that often gets lost in its dominant narratives. Precarity is a structurally induced condition that imposes a chronic instability on some populations more than others, where a lot of this instability stems from the precarity of labor and finance. In other words, precarity is a differential distribution of the precariousness of all human life (owing to such factors as class, caste, citizenship, gender etc) that is disproportionately concentrated amongst the poor. Unluckily, the precarity of poverty is animated by a continued invisibility from the very social and political institutions that are expected to help the poor (Low, 2018). Where structural solutions are required to tackle the problem of poverty, this invisibility contributes to it being treated as a *technical* problem that can be easily solved with *technical* solutions. Poverty should be about social justice and wealth redistribution. Yet by transforming it into a problem of bank accounts and mobile phone based finance, we continue to forego the political action needed to level the playing field for the poor (Schwittay, 2011). As long as this remains missing from the conversations on poverty – that the financial inclusion agenda in its current forms most certainly contributes to – the poor will continue inhabiting a socio-political world that is not built for them or their needs. I begin and end my dissertation with the disclaimer that where financial inclusion is promised as a salve for the problem of poverty it is necessary to understand how it works on the ground to evaluate its intended and unintended consequences for the poor.

From the very beginning, the financial inclusion narrative has been forged on some assumptions that have gone vastly unchallenged. For starters, the financial inclusion narrative assumes that the poor around the world are a homogeneous population that suffers from a universal condition of 'financial exclusion' (Maurer 2012, Taylor 2012). This condition is expressed in terms of a lack of access to formal financial services which purportedly "undermines their ability to engage in productive activities and restricts their ability to manage external shocks" thereby trapping them into a poverty cycle (Taylor

2012, p. 602). Such a conceptualization of financial inclusion ignores the vastly different poverty conditions and contexts that the poor manage on a daily basis. In fact, the precarity of poverty is such that many households will slip in and out of poverty (insofar as it is defined by the poverty line) as they cope with welfare shocks. As Peter Edward (2006) observes, the World Bank's global poverty line perpetuates this "mono-dimensional conception of 'extreme poverty'" as a lack of income or consumption[1]. Unsurprisingly, such an understanding of poverty ignores the gross violence of specific historical and political factors that renders some populations as more vulnerable than others (Taylor, 2012).

Harnessing the poverty narrative so inextricably to money (or lack thereof) ensures a complete "financialization of poverty" for which financial inclusion becomes the natural solution (Schwittay, 2014). This solution of access to the formal financial landscape is the other assumption that the financial inclusion narrative rests on. Like many other keywords/buzzwords in international development, 'financial inclusion' too becomes both problem (that is, an exclusion from the formal financial landscape) and solution (that is, access to this formal financial landscape) (Donovan 2018 citing Pritchett & Woolcock 2004). However, throughout this dissertation I have tried to challenge both – that is (i) *if* financial exclusion is necessarily always a problem, and (ii) *if* financial inclusion is necessarily always the appropriate solution. This requires a reformatting of what financial inclusion's goals should be. If the dominant narratives around financial inclusion continue to preserve the false dichotomy around formal/inclusionary ("good") and informal/exclusionary ("bad") financial practices, then we will continue to sideline what in fact should be the core financial inclusion goal – that is to help the poor manage at least some of the precarity of their poverty. I focus on financial precarity in this dissertation as I try to confront the central rhetoric around financial inclusion.

Is financial inclusion – that is the lack of formal financial services – even a problem? It can be where suitable financial tools are absent. For instance, if informal finance is solving specific financial needs of the poor (as the interest-free informal loan that I discuss in chapter 3 does) then financial inclusion, at least in the way its dominant narratives positions it, ceases to be a problem. The question is not so much if these financial tools are 'formal' or 'informal', but really if they fulfill the specific needs of the poor in a robust and reliable way. Paradoxically, financial *inclusion* can be a problem where access to the formal financial landscape ends up hurting the poor by demonstrating a marked obliviousness to their needs. The Demonetization event in India clearly speaks to this in imposing a forced formalization and cashlessness on its citizens that affected the poor disproportionately. Instead of helping them manage their precarity (as it claimed to do), Demonetization was a perfect example of a state-induced condition of precariousness that was differentially distributed amongst those employed in the informal, cash-intensive economy and those that had no access to the formal financial landscape. This lack of access to the formal financial landscape only manifested as a problem once Demonetization forced its citizens to build this access with little or no support. Thus,

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[1] The global poverty line defines those who live under $1/day as extremely poor, those who live under $1.90/day as poor (World Bank).

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financial inclusion in this context became a case 'exclusionary inclusion' as it largely aggravated the precarity of the poor.

Is financial inclusion the solution? It is certainly not a comprehensive solution to tackling poverty which, as I have discussed before, needs structural solutions. As far as mitigating some of the financial uncertainty of poverty goes, financial inclusion, as its dominant narratives positions it, *can* be the answer. For instance, the robust mobile money infrastructure that I describe in chapter 4 demonstrates how a formal financial solution can help the poor manage their uncertain income streams to make fixed loan repayments. However, this is less to do with mobile money being a 'formal' solution, but more to do with its hyper-local infrastructure – in terms of both physical and social distance to its human agents –that supports the materially poor auto-drivers in staying on top of their loans and thus managing their precarity. If anything, it is the decidedly 'informal' aspect of the formal mobile money infrastructure that helps the poor in specific ways. This is not to say that those aspects of a formal financial tool that purportedly make it 'formal' cannot support the poor in managing their financial lives. It can, even though I do not support it with evidence in this dissertation because it certainly does not need more visibility. Instead, I refocus our collective attention to *what* about a financial practice or instrument makes it work for the poor in the first place that can help us design better products and policies for them. Eventually, my overarching goal in this dissertation is to challenge the dominant narratives of financial inclusion, especially as it starts to become more and more indistinguishable from technological inclusion. To this end, I revisit my broad findings and address the renewed antinomies of a digital financial inclusion agenda. I discuss this next.

2. The Digitization of Financial Inclusion

> "Financial inclusion is a key part of (the) renewal of development, and, in turn, the deployment of information technologies is a key part of financial inclusion." (Roy 2018, p. 20)

The mobile phone is now an almost indistinguishable part of the financial inclusion narrative. The runaway success of M-Pesa in Kenya, that had the international aid sector involved from its very inception in 2008, created and continues to sustain the excitement around achieving financial inclusion goals – that of connecting the poor and unbanked to the formal financial landscape. Thus, access to the mobile phone has now suddenly become critical to poverty alleviation (Schwittay, 2011). In fact, The United Nation's Millennium Development Goal number 8 explicitly asks for making "available the benefits of new technologies" to the poor (UNDP). In light of this, mobile money, that originally saw success in enabling the 'velocity of money' or moving money over some distance, is now actively seeking to expand the range of financial services it can support over the mobile phone. In this way, it is seeking to connect more and more unbanked populations to more and more formal financial services.

What makes mobile money 'formal'? It is of course regulated to varying degrees by the banking and telecom sectors, although where it has seen most success has been where regulators have relaxed their prescriptive rules (Porteous, 2006). For instance, the Central Bank of Kenya (CBK) worked closely with Safaricom and Vodafone to develop M-Pesa. The CBK was particularly supportive in evaluating the opportunities and risks involved where a telecom operator was taking the lead in handling payments and deposits, and 'formalized' the regulations around mobile money much later (Mas & Radcliffe 2010, pp 173). This moderation of formal regulations was therefore crucial in driving innovation in this space and enabling workable solutions for the poor. However, the mobile phone itself and the promise of cashlessness that it brings with it also contribute to the formalizing/modernity narrative of the mobile money phenomenon. The mobile phone, as a technological tool that went from the West to the rest of the world, becomes a "carrier of modernity" that supposedly enables impersonal exchange relationships amongst atomized market actors (Burrell 2014, p. 2). It asserts "technological savvy" where any person using it becomes a part of the "modern world" and is thus "fashionable, hip, urban, important, connected" (Maurer 2012, p 308). With this colonial legacy, the mobile phone is expected to eliminate the transaction costs and inefficiencies of informal finance. Similarly, cashlessness and the 'ordered rationality' it produces by eliminating the inadequacies of cash (that is, its fragility, the ease with which it gets spent, its need for co-presence to complete transactions etc) is thought to modernize cash-based (that is often considered informal) finance.

Yet assuming that formalizing people's finances onto the mobile phone will suddenly enable the poor to better manage their precarity is over-simplistic at best (Donovan, 2012). Such an understanding homogenizes the affordances of different financial practices and how they might map to digital tools. While the movement of digital money across some distance in real-time has proven to be successful via the mobile platform, the same success might elude other financial practices that continue to be completed in co-located spaces. Even for broad financial instruments, like loans, mobile money may support different types in different ways. For instance, the 'informality' of the interest-free loan that is sourced from intimate relations, and thus its 'burden' of sociality, makes it suitable – supposedly – for formalizing through digitization (thereby transforming it into a less 'social', and more 'individualistic' and 'rational' instrument). However, it is this very sociality that leads to the development of norms and rules over time that lends structure and predictability to the practice of the interest-free informal loan. In revealing the work done in sourcing, maintaining, and repaying informal credit from intentionally proximate family and friends – as I demonstrate in chapter 3 – I show how completing these transactions via mobile money can potentially disrupt the very processes that ensure their consistency, reliability, and trustworthiness. On the other hand, the semi-formal loan repayment service that I describe in chapter 4 is well-supported by mobile money to some degree. It was expected that once the initial loan had been set up, the borrowers (that is, the auto-drivers who had taken out loans for their auto-rickshaws) would be able to use mobile money services to complete the routine task of regular repayments. However, this worked well in only one of the two NGOs – NGOa that had moved its office further away, which made routine visits to make repayments that much harder for its auto-drivers. In the case of NGOb, the cash-collectors continued to show up in person for

repayments even though their presence was superfluous to the actual loan repayment using mobile money. Still, the cash-collector's presence not only helped skeptical auto-drivers transition to the new mobile money service, it also continued to preserve the sociality of this loan process. As I described, auto-drivers and cash collectors worked to build a relationship that accommodated commiseration, compassion, and friendship, as well as a firm hand when delinquent auto-drivers needed some help staying on top of their loans.

Therefore, mobile money was able to eliminate the cash collector as the human intermediary (but not the human mobile money agent, obviously) where distance became a consideration. As it stands, mobile money continues to work very well where the quick and efficient bridging of physical distance is needed to complete financial transactions, at least for a demographic that is often overlooked by the state and social/political institutions. Such populations turn to their social relations for surviving in a world that is not built for them, and these social relations are very often strengthened by physical proximity (Nardi & Whittaker, 2002). Even when using supposedly 'formal' money services – such as mobile money – they often build relationships with the agents who then help them in ways that fall outside the prescribed rules of mobile money. For instance, as I describe in chapter 4, mobile money agents kept their shops open till late to help auto-drivers get their money earmarked for their loans into a safe space, or made a payment on behalf of the auto-drivers with an expectation of receiving it at a later time. This then speaks to the invisible informality of a supposedly formal infrastructure which, as I discussed in the introductory chapter, rejects the hard dichotomy of 'formal' versus 'informal'. Thus, instead of spending time pursuing the promise of what a supposedly 'formal' financial service can offer, it makes sense to pay attention to what makes a financial practice or service work for the poor. If this is something that is decidedly 'informal' then building on these to better capacitate them makes more sense, rather then trying to 'formalize' them or 'modernize' them by automating them (Ruthven 2002).

3. The Mobile Money Infrastructure

Still, mobile money can help the poor manage their financial precarity, and not *just* where it helps collapse distance to enable certain types of financial services (such as remittances and micropayments etc). One of the crucial ways in which it can help the poor manage their unpredictable finances is by offering them a safe space to store their money in (Morawczynski & Pickens 2009, Ghosh 2012). In general, the poor find it challenging to build lump sums not only because they earn less and erratically, but also because they often earn on a daily or weekly basis. Earning in smaller amounts but more frequently hinders generating lump sums more than if the poor earned in larger amounts but less frequently. This is because money on hand tends to get spent faster. Therefore, imposing some trivial distance between you and your money is essential towards building larger amounts of money. This distance can take many forms – it can be physical distance

where a trusted neighbor or a local money guard keeps your money safe for you[2]; it can be temporal distance where a weekly wage may be deferred for a few weeks or months at a time; or it can be a punitive distance where there is a cost for accessing your money which ensures you access it *only* if you really need it[3].

Building lump sums is hard enough, but generating these for specific expenses can be even more challenging. As I described in chapters 4 and 5, auto-drivers often found it difficult to build lump sums towards their outstanding loan, the object of which was already at their disposal (that is the auto), when compared to a more pressing need that requires immediate attention (such as buying groceries for the home or paying rent). Therefore once the money has been saved up for a less motivating need, getting this off your hands immediately becomes absolutely critical. Mobile money was the perfect answer. As I described in chapter 4, some auto-drivers who were affiliated with NGOa used their local mobile money infrastructure to deposit money on a daily (or regular) basis which helped them specifically earmark money towards their loan repayments and get this off of their hands before it could be spent somewhere else. Since deposits were free, there was no cost to this process. Once they had accumulated enough money or it was time to make the repayment, they completed the mobile money transfer[4]. This process of ensuring that money was prioritized, accumulated, and segregated without distraction certainly helps the poor in managing their precarity.

Unluckily, the dominant narratives on mobile money tend to overstate the role of the mobile phone in this process. While the mobile phone certainly enables quick and efficient transfer of information that can facilitate financial services, it is the hyper-local mobile money infrastructure that enables this form of intermediation of money. Where formal brick and mortar bank branches tend to be fewer and more dispersed, the mobile money retail agent outlets can be much more accessible. As I described in chapter 4, the

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[2] One auto-driver that I interviewed in Bangalore told me that he kept any money that he saved towards repaying his loan in a locked compartment in his auto itself. Then, as a precautionary measure, he tied his dog to the auto at night while he and his family slept. Even this insignificant physical distance (but perhaps a significant conceptual distance) deterred him from spending this "auto" money on anything else but his auto.

[3] Some types of ROSCAs and of chit funds utilize this punitive distance very well. Essentially, a group makes regular deposits to generate a large corpus which is then disbursed to one member at each meeting. However, the earlier you want to access this lump sum, the more it will cost you, in order to incentivize other group members for accessing their lump sums later. Money guards will also often release money only if a small fee is paid which ensures that people will access their money only when they really need to.

[4] I want to point to some of my earlier fieldwork in Uganda where I observed urban slum dwellers depositing any extra money they had into their mobile money accounts at regular intervals towards building their savings. Once the amount in their mobile money account had grown to a reasonably large amount (that differed from respondent to respondent), they then made a trip to their banks which was further away to deposit the entire amount in to their savings accounts. The reasoning was that they needed to get extra money off their hands immediately if they wanted to build any savings for which their mobile money wallets worked just fine. However, for larger amounts, they trusted the banks more. In the case of the auto-drivers I mention above, the context of using mobile money was so firmly entrenched in the auto-rickshaw loan process that the auto-drivers were seldom using it for other purposes (I discussed this in more detail in chapter 4).

relatively larger presence of Airtel Money outlets around Bangalore ensured that auto-drivers could make deposits or repayments even if they suddenly spotted an outlet while on their daily commutes. In one case, an auto-driver was able to build his own local infrastructure ground-up once he recognized the need for segregating his money towards loan repayments on a daily basis. He requested his friend who sold airtime and other small items in a shop near his home to become an Airtel Money agent in order to help him out. The friend complied and in fact went over and above his role as an agent (but perhaps stayed within the rubrics of his role as a friend) by making the loan repayment on his behalf when he was short on cash.

Thus, paying attention to the mobile money *infrastructure* refocuses the disproportionate visibility afforded to the technology platforms in mobile banking to its less glamorous aspects, such as the human work that is invested in building and maintaining these systems. This is key to diffusing the excitement around mobile money that generates copycat solutions – that is easier to do if we ignore the complexity of the broader infrastructure but then don't work – and gaining an authentic understanding of what makes it usable for the poor in the first place. While the challenges in setting up a reliable and usable retail agent network is fairly well understood, it still sidelines what this retail agent network needs to plug into or work with. Therefore, part of my intention in this dissertation has been to demonstrate that a mobile money infrastructure is in fact a complex organization of at least two interacting infrastructural systems (for, at the least, it is interacting with the mobile telephony infrastructure). For instance, the loan management and mobile money infrastructures come together in an intricate, layered way in chapter 4 so that mobile money can be used for loan repayments by auto-drivers. This is something that a standalone mobile money infrastructure would have been unable to achieve as much of the human work that helped the auto-drivers adopt and use it came from the cash collectors of the loan management infrastructure.

This is the other key aspect of the mobile money infrastructure that often gets lost in its dominant narratives – that of the human work that goes into making 'financial inclusion' happen. The mobile money infrastructure is built, maintained, and repaired through human work. As I demonstrated in chapter 4, both the cash collectors and mobile money agents ensured that auto-drivers could access their services even outside of the prescribed hours as well as during breakdowns. Furthermore, it was through commiseration, gentle encouragement, a firm stance, or completing informal requests that the cash collectors and mobile money agents were able to help the poor intermediate their money and thus manage their precarity. Ignoring this human work in the dominant mobile money narratives provides an inauthentic understanding of how mobile money actually works on the ground. More often than not, financial tools and technologies cannot possibly accomplish the very challenging and labor-intensive task of helping low-income users manage their unique, precarious cash flows on their own. Thus, faithful accounts of how mobile money works cannot ignore the human work of its many actors and interconnecting infrastructures.

4. The Politics of Financial Inclusion

Of course, this human work can sometimes inhibit the poor in their efforts to manage their financial precarity, or worse, actually thrust them into precarious situations. Often, this will be a result of the differential exercise of power that then affects the poor in ways that they are then unable to control or influence. For instance, we saw in chapter 4 that in the case of the TWU-Novopay partnership the digital wallet was not offered to their affiliated auto-drivers in a bid to circumvent their usual pricing structure where both deposits into the wallet and transacting from the wallet were charged. By eliminating the wallet, Novopay was able to eliminate the deposit charges. This reduced the cost to their client TWU by half but altered the affordances of the mobile money infrastructure in a significant way. The auto-drivers no longer had access to a digital wallet where they could store money to possibly intermediate their finances in useful ways, nor did they have any control over reinstating this. Similarly, their cash collectors trained them in a way where entire steps were bypassed that could have given them access to a larger suite of financial services. Thus, the cash collectors leveraged their knowledge and position as intermediaries to enable mobile money access for the poor but in a very limited way (Bailur & Masiero 2012, Sambasivan et al 2010). These decisions were likely not born of malevolent intentions; instead these decisions were made for greater convenience and ease of use. Yet they impacted the future possibilities for the poor and their ability to manage their financial precarity.

More egregiously, the Demonetization event that I describe in chapter 5 is an example of how policy decisions that align with the core financial inclusion agenda can actually push the poor into a state of precarity. As the Demonetization event unfolded, the most commonly used notes were eliminated from the economy overnight, the Indian state forced everyone across the country to (i) interact with the formal banking infrastructure to deposit and withdraw the new denomination notes, and (ii) rely on digital payment systems to complete financial transactions where notes were scarce but mobile phones were relatively ubiquitous. Consequently, not only did those employed in the informal sector lose business as cash became scarce, but accessing the banking infrastructure to source this cash meant further losing wages. Furthermore, as larger value notes were made available while smaller value notes remained in short supply in a colossal failure of implementation of such an ambitious scheme, the Demonetization event subtly but surely changed the poor's consumption patterns in (likely) perilous ways. It forced women to reveal their financial assets that they had cultivated in secret. It drove people to learn and use digital payment systems overnight without the promise for adequate recourse mechanisms in those early, chaotic days – a state of affairs that affected new digital users disproportionately. Thus, more vulnerable populations were thrust into a politically-induced condition of precarity.

Eventually, the evidence in this dissertation helps reveal the politics of top-down policy decisions that can often negatively impact the very populations that these financial

inclusion policies are expected to serve[5]. This leads to a differential experience of citizenship amongst the poor, the unbanked, and the digitally low-literate as their more privileged counterparts are able to navigate the formal financial landscape – that is built for them – to their advantage. This, in turn, exposes the more problematic aspects of the 'financial inclusion' agenda and the policies that are often made in its name. Unless we recalibrate this agenda and its holy trinity of state-backed support, formal banking infrastructure, and technological commitments, misguided policies and solutions will continue to be designed and implemented, often hurting rather than helping the very populations it claims to serve.

5. Concluding thoughts

To conclude a dissertation that forces its readers to take a step back from the simplistic association made between 'inclusion' in the 'formal' financial landscape and the welfare of the poor and the unbanked, I cannot avoid invoking the "living fence" metaphor that Taylor & Horst (2018, citing Mintz 1962) raise in their work that illustrates how Haitians simultaneously navigate the restrictions as well as the advantages they encounter at the border with the Dominican Republic for accomplishing economic and social mobility (despite the border being a construct of 'exclusion' – especially for the Haitians as they are separated from their more affluent/powerful neighboring country). This analytical metaphor complicates the inclusion/exclusion dichotomy by "demonstrating the contingent nature of power relations embedded within the economic and social relations formed across the living fence" (ibid, p. 24), and in doing so liberates us from having to "prove exclusion or justify inclusion" (Roy 2018, p. 20).

Much like how Roy advocates for paying attention to the "living" in the 'living fence' (ibid, p. 20), which in turn implicates ethnographic methods for capturing the rich detail of everyday practices, I do the same in this dissertation. Through investigating and analytically retelling the richness of my respondents' behaviors, I am able to question the simplistic dichotomies of not just inclusion/exclusion, but also formal/informal. In doing so, I caution against a wanton digitization of informal practices that assumes that this becomes a natural path to 'formalization' and 'modernization' which in turn is considered a decidedly good thing (which it may not be). Where digitization lends itself well to the affordances of existing financial practices, I urge my readers to acknowledge the broader infrastructure beyond the mobile phone itself, and then pushing themselves to acknowledge the infrastructures outside of the standalone mobile money infrastructure that help accomplish the challenging task of managing the poor's unique and precarious cash flows. Finally, I point to the politics of financial inclusion and how misguided

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[5] I say "expected" because sometimes the ground reality is exactly the opposite. The TWU-Novopay partnership was initiated to purportedly help their low-income auto-drivers. Yet, in the ongoing negotiations between the two, Novopay became more concerned with reducing the costs for their direct client (that is, TWU), rather than consider the needs of their client's clients (that is, the auto-drivers). The organizational structures of mobile money, where we see multiple providers and vendors (the telecom companies, third-party vendors, banks, retail agents, users etc), influences its economic incentives in differential ways that can then marginalize its end users.

policies in its name can have devastating consequences for the poor. Where an ever-growing reliance on technical solutions to solve complex development problems like poverty is present, there is a need to assess these incomplete solutions lest they fail to accomplish their stated goals, or worse have unintended consequences that actually hurt the very people they are trying to help in the first place.

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