

Project Description

In Kenya, over 6 million people subscribe to a service called M-PESA to send money to their friends and relatives cheaply and securely over their mobile phones. In the Philippines, people can remit money to family members on remote islands through a similar service called Globe GCASH, now used by 2 million people. And in India, a company called Eko is trying to use people's existing familiarity with instant messaging to provide funds transfer and financial services to the 'unbanked,' in a nation where mobile phone subscriptions are increasing at a rate of 10 million per *month*. These mobile phone-enabled "mobile money" services are proceeding often in advance of the development of regulatory guidelines or systems. And this has raised alarms: when telecommunications companies get into the business of money transfer or even banking, there is the potential for a clash of regulatory cultures as well as significant risks to consumers, banks and the financial system itself.

This project focuses on a key stumbling block that has beset the nascent mobile money industry: what happens when mobile money services are used for savings, instead of just funds transfer or payment, when a cell phone service comes to replicate the functions of a bank? In other words, what happens when money in mobile devices and networks assumes its store of value function, rather than just its means of exchange or method of payment function? The proposed research uses this stumbling block to analyze the process of regulatory change for mobile money. Based on interviews with regulatory and industry participants, archival data collection and analysis, and ethnography in industry and regulatory sites, it will investigate the impact of several key variables on the regulation of mobile money.

Although industry analysts had used the name "mobile money" in the past, it was not until the first "Mobile Money Summit" in 2008 that the term was widely applied to a variety of technological systems newly harnessed to serve as channels for financial services. The Mobile Money Summit was hosted by the GSM Association (GSMA), the industry group representing mobile network operators (MNOs). It brought together businesses developing money transfer systems using handheld devices like mobile phones, branchless banking via networks of agents in retail stores or other venues, and various silicon chip-enabled systems for making payments and transferring funds from one account to another.¹

Why should the GSMA be interested in money transfer services in the first place? After all, it is an industry group for telecommunications companies like T-Mobile and Alltel, which on the surface have little to do with things like person-to-person funds transfer. The latter has generally been the domain of wire services like Western Union. However, advances in mobile technology and the worldwide spread of the mobile phone, especially in the developing world, have encouraged industry participants to add functionality to mobile devices to increase average revenue per unit, thus placing new demands on network operators. Mobile payments or funds transfer from one phone to another is one such functionality.² This functionality is attractive to mobile providers in developing world markets where many people – even non-subscribers – have access to a mobile phone but limited access to banking and financial services, and where the premiums for entry into the latter are relatively high. Industry actors have essentially calculated that extremely high volume, low value transactions – propelled by the billions of "unbanked"

¹ Founded in 1995 as a network of interest groups and formalized with a board in 2003, the GSMA is named after the Global System for Mobile communications (GSM), the most prevalent worldwide standard for mobile telephones and other mobile devices

² These payments or transfers can be from person to person, from person to business or government (for goods or bill pay) or from government to person (for social benefits payments, e.g.).

people in the world – can become a significant revenue stream. Mobile phones could be turned into a cheaper, more efficient – and highly profitable – replacement for Western Union and other wire transfer services. The addition of money transfer service to the mobile phone could encourage people to use their phones more heavily and have more loyalty to their network provider. The phenomenal success stories of two or three early entrants into the mobile funds transfer market – particularly M-PESA in Kenya, a service of Safaricom, and GCASH in the Philippines, a service of Globe Telecom – sparked heightened industry interest. It also caught the attention of NGOs and philanthropic organizations concerned with access to financial services for poor people around the world.

In fact, development NGOs, international poverty alleviation organizations, and some prominent philanthropic foundations have exhorted mobile network operators to go farther than simply providing funds transfer and payment, and to design mobile phones that can act like piggy banks or full-fledged savings accounts. As Bob Christian, Director of the Financial Services for the Poor program at the Bill and Melinda Gates Foundation, stated to the attendees of the second Mobile Money Summit in 2009, “it’s time to meet the savings challenge,” to mobilize tiny transactions facilitated over phones into a mechanism of savings for the world’s poor and unbanked, rather than simply offering a way to send remittances or make bill payments. “Banking the unbanked” – heretofore a concern mainly of microfinance institutions and poverty alleviation programs – has become a GSMA rallying cry.

Adding savings account capability to a mobile phone, however, raises a host of significant concerns for a large number of regulatory and legal actors, from central banks to national treasuries to consumer protection agencies. Many countries have regulations for electronic money – money stored on a card, for example, to be treated exactly like cash or coin but not, technically, a form of savings. Many also have regulations in place for electronic payment services like wire transfers or internet banking. But these technologies can not be used to store value. Deposit-taking triggers national and international regulations, laws and guidelines. For example, banks must follow customer due diligence and Know Your Customer requirements to verify the identity of depositors in order to be in compliance with international anti-money laundering recommendations (AML/CFT).³ Should mobile network operators offering mobile savings do the same? What if the subscriber is a poor person without identity documents or a permanent address? What happens to one’s savings if the network operator goes out of business? How should mobile savings be defined? That is, at what point do funds held in a mobile phone subscriber’s account become “savings:” as soon as they are there, or after a set period of time? What is the nature of the threshold between money intended to be transferred and money stored? Most banking regulators restrict deposit-taking to licensed and often insured banking institutions, and require protections, not to mention a rate of return. At the end of the day, a mobile network operator is not a bank. But when it gets in the business of savings accounts, should it be treated like one?

To facilitate sharing of regulatory expertise and innovation in mobile money, the Bill and Melinda Gates Foundation and GTZ, the German government’s technical cooperation and development corporation, provided funding for the Alliance for Financial Inclusion, a multilateral organization with membership from 62 developing world countries. Its mission is to connect policymakers and regulators from these countries and support knowledge sharing through online

³ Anti-money laundering and countering the financing of terrorism (AML/CFT) guidelines are promulgated by the Financial Action Task Force. Countries that do not comply are placed on FATF’s “blacklists,” a topic of the PI’s prior NSF-funded research (SES 0516861). It was the migration of AML/CFT guidelines from global tax governance to mobile money that initially sparked the PI’s interest in the latter.

and face-to-face meetings, grants programs and other activities. It helped facilitate the first “Windsor Summit,” a key gathering of regulators in Windsor, England, in March 2009, that many now cite as an important moment for crystallizing regulatory discussion around mobile money, and that set the stage for the second Mobile Money Summit. The Summit will now be an annual event, hosted by the GSMA, and the GSMA is becoming a central node in promoting collaboration on mobile money among regulators, industry participants, NGOs and civil society groups.

Despite this recent burst of activity, and aside from the often confidential or proprietary work done by consultants on this issue, there is no comprehensive survey of the unfolding of the mobile money regulatory landscape, nor has there been an effort to assess how and why new regulations have come into being or old ones – e.g., for electronic commerce or internet banking – get tweaked or reformulated. The proposed project will create such a comprehensive survey, and will also attempt to track the movement of regulations and regulatory fixes from jurisdiction to jurisdiction and from issue-area to issue-area, focusing on savings.

Deregulation in telecommunications allowed the sector to branch into new geographic regions as well as into new kinds of services, like text messaging and money transfer. Mobile money could be viewed as an instance of the privatization (see Norton and Shams 2005 on banking regulation) or regionalization of governance (see van Gorp and Maitland 2009 on telecommunications). In the case of mobile money it appears that *trans*-regional networks of actors, many of whom shuttle between sectors, as well as prominent non-profits and NGOs, may complicate the picture. In addition, multilateral agencies and donor organizations like the World Bank are not mandating regulatory change in this case (as they have in the past regarding telecom, see Lodge and Stirton 2006). Rather, regulators, market participants, and non-profits are coming together in a process of what they call “shared learning” to create new regulations and sometimes legislation.

At the most general level, this project asks whether mobile money regulation is a case of the globalization of law and regulation. Braithwaite and Drahos have consistently maintained that globalization is not an all or nothing affair, that it “is a process of degrees” (2000:8) leading to diverse forms of regulation and regulatory capitalism, depending on whether the markets, firms, and regulations are themselves global in scope, as well as such key factors as the consolidation of epistemic communities around specific issue areas. Their account of “modeling” as a mechanism for globalization seems particularly relevant in the case at hand: modeling involves “observational learning with a symbolic content” that results in the diffusion of regulatory (and legal) models (ibid., 25). Actors in the mobile money space explicitly invoke the diffusion of regulations through such “learnings” (ibid., 25; see Levi-Faur 2006:513).

However, shared learning, like financial inclusion, is not a neutral idea or a given, but is itself an outcome of a process that this research seeks to analyze. How is it that financial inclusion and shared learning became such key tropes in the first place? Consider an analogy between financial inclusion and gender equality. Boyle shows that the now-taken for granted discourse of gender equality in the domain of global human rights was actually a “monumental global accomplishment” that involved tremendous institutional, structural and individual effort (2005:6). In this case, “financial inclusion” and “shared learning” seem to have become accepted as unquestioned goods. What convergence of local and global actors made this possible? And how is the discourse of financial inclusion and shared learning helping or hindering efforts to broaden mobile money to include a savings or store of value function?

For example: AML/CFT guidelines promulgated by the Financial Action Task Force migrated from transboundary movements of money and, especially, concern over bank secrecy and

offshore financial services, to mobile money. AML/CFT provisions requiring customer due diligence adopted by national regulators apply equally to large-scale transfers as to micro-transfers or remittances. With mobile money – and the rhetoric of financial inclusion and access to banking for the world’s poor – some regulators have been willing to loosen AML/CFT for some purposes and in some situations. South Africa adopted an innovative “proportionate risk-based approach.”⁴ Mobile money providers can now cite this example to regulators in other countries where they would like to operate. In this fashion, piecemeal, bits of regulation, policy and law have been moving around the globe, from country to country, facilitated by and further strengthening “shared learnings” and the discourse of “financial inclusion.” Table 1 lists some key regulatory instruments for mobile money to date.

The proposed research is mainly ethnographic in nature. Its guiding hypothesis is that the consolidation of a discourse of financial inclusion and shared learnings, and the vernacularization (Merry 2006) of these discourses in different contexts, depends on five key variables. These variables are: (1) the business models in play in a particular context when mobile money arrives on the scene; (2) legal constraints and enablements, including legal origin (common law vs. civil law), and existing laws and regulations about related convergences of telecommunications and banking (e-money, e-commerce, electronic payment, clearing and settlement systems); (3) prior NGO involvement and experience with microfinance; (4) professional networks that local regulators, MNOs, NGOs and mobile money begin to participate in as they start to work on mobile money, and (5) the life-course and employment history factors that led people to become involved in mobile money in the first place, such as the impact of the global financial crisis on their career choices. The relative weight of these five variables in any particular case will determine regulatory outcomes. Each variable may also involve distinct temporal cycles: it is a guiding principle of this research that the sequence in which things occur, and when things begin, pause and end, matters (Halliday and Carruthers 2007). As it describes the social field within which people make regulations, the research will attempt to assess the relative weight of each variable in driving regulatory change for mobile money that “meets the savings challenge.”

The Brief Recent History of Mobile Money

In the US, online banking and bill payment is familiar, but mobile phone based payment systems are virtually unknown.⁵ In the developing world, in contrast, mobile payment systems are growing at a rapid clip, where computers and conventional brick-and-mortar banks are far less accessible or culturally relevant than the mobile phone. Mobile phone service and devices are now within reach of nearly 85% of the world’s population (GSMA 2006). And they are not just used for talking. Even in the most remote or impoverished areas, everyday people have found remarkable ways to gain access to mobile communications and to add functionality to the phone. For example, before the formal advent of mobile money, and still to today, people use pre-paid airtime minutes as a form of currency, transferring them to one another to pay back small loans or to send gifts or remittances (Chipchase n.d.).

⁴ South Africa’s approach allows over-the-air enrollment without having to go to a bank branch, as long as the account holder has a South African identity card number (which is not verified by the service provider) and observes daily and monthly transaction caps and a maximum balance of \$2,500. More stringent requirements kick in as the amount of the intended funds transfer increases, from the verification of the ID to the provision of full name and address in person at a bank branch.

⁵ There have been several failed attempts to create mobile payment services in the US. Obopay, a Bay Area startup offering funds transfer via mobile phone, has recently partnered with MasterCard and several mobile network providers. Other companies involved in electronic payments and wire transfers are exploring mobile phone based models (e.g., Visa, PayPal, Western Union). Interestingly, within the US, the effort does not seem to have been primarily led by the telecommunications industry.

Previously, the various experiments around harnessing mobile devices, radio-frequency ID (RFID) or near-field communications (NFC) chips⁶ and other technologies for financial functions had gone under the labels of mobile payments, mobile banking, or mobile financial services.⁷ The GSMA brought these disparate approaches under one rubric. In so doing, it has attempted to claim the space as the domain of the GSMA, and may have solidified the position of mobile network operators in driving innovation and directing change in mobile money. It may also have solidified the position of mobile network operators as drivers of regulatory change.

RFID and NFC-based systems involve installing new point of sale terminals at shops and businesses, and thus higher costs. They have only really taken off in Japan, and in a few other vendor-specific arenas.⁸ Mobile phone based money systems were developed with the world's poor and emerging middle classes in mind. This was in part a function of the specific ways in which mobile phones have come to reach global markets. As scholars of mobile telecommunications have long noted, the mobile phone has become ubiquitous in the developing world not just as a means of communication, but because it does not require cables or wires to be strung from point to point, village to village, and because its use patterns in the developing world often involve sharing, informal repair, and networks of distribution agents overlaid on existing networks (Agar 2003, Burrell n.d., Horst and Miller 2006, Ito et al. 2005, Donner 2008, Chipchase n.d.). Hence, development NGOs and poverty alleviation organizations are drawn to the mobile phone as a tool for economic development.

In promoting mobile money, the GSMA has had a rather curious set of partners. The first Mobile Money Summit was co-sponsored by the Consultative Group to Assist the Poor (CGAP), a consortium of agencies organized by the World Bank to address poverty alleviation through microfinance in the developing world; the International Finance Corporation (IFC) of the World Bank, and the British Department for International Development (DFID). Each of these organizations had been working on microfinance and mobile money, as well as on branchless banking and remittance transfer.

In the interim between the first two Summits, a number of new services were launched, and others, like M-PESA, continued their track record of phenomenal growth. Some services were launched by banks; some by mobile network operators; some by third parties linking up banks with MNOs. Some services used existing technologies or capabilities of mobile devices, like USSD (Unstructured Supplementary Service Data, an instant-messaging capability of GSM-standard mobile phones) or short message service (SMS) text messages. Others added programming to the existing "toolkit" on the Subscriber Identity Module or SIM card inside some phones (as part of the SIM Toolkit, or STK). Still others essentially took internet or web-based banking or bill payment and translated them to the small screen of the cellphone through new wireless web protocols.

Each method comes with significant consequences for the subscriber – and the regulator. USSD or SMS-based systems use a functionality common to all GSM-standard phones. If the subscriber changes her mobile network carrier (from Verizon to T-Mobile, to use familiar examples), she would still be able to use her USSD or SMS-based mobile money system. STK-based systems,

⁶ The PI was involved in a collaborative research project with Intel Research on NFC payment systems; see Mainwaring, March and Maurer 2008

⁷ One also finds the abbreviated versions, m-payments, m-banking or m-FS.

⁸ RFID and NFC-based prototypes – like Visa's EasyPay service that uses a plastic card or key fob with an RFID chip inside – are available in the US.

however, are built into the SIM card inside the phone, itself essentially hard-wired so that it can only communicate with a specific carrier. Safaricom Kenya's M-PESA is an STK-based system. So if an M-PESA user decides to switch mobile network companies, he can no longer use his M-PESA account. What happens to his money in such a situation? This is precisely the kind of question that started to preoccupy providers as well as regulators and watchdogs – especially central bankers and consumer protection agencies.

At the second Mobile Money Summit in 2009 (which the PI attended), participants reported tremendous progress in adding some banking and financial service functionality to mobile devices and networks. However, despite the progress, participants cited as a barrier “a lack of a common language” and a lack of “interoperability.” Fissures were evident: between bank-led services, and mobile network operator-led services; between services using STK, which thus “live on the SIM-card” and are therefore carrier-dependent, and services that use functionality common across all phones and carriers, like USSD; between industry participants pushing RFID or NFC chips embedded in phones – which, as noted above, require a huge rollout of new point-of-sale readers to every shop and vendor that wants to accept payment in this form – and those stressing ease of access. Intriguingly, from this anthropologist's point of view, no one articulated a conflict between profitability and financial inclusion. Everyone seemed to agree that the two goals were complementary. The goal of financial inclusion was put forward as a means of convincing regulators – especially central bankers – to permit flexible regulatory frameworks for mobile money. Regulators used the language of financial inclusion, too, and they were very visible during the second Summit. But the proposition of adding the store of value function to mobile money, of allowing mobile money to be used for savings and making mobile network operators look more like banks, revealed the cracks in the consensus on financial inclusion. For some central bankers, it was a deal breaker. The proposed research will document how mobile money providers and regulators will move from deadlock to dialogue on this core problem.

Relationship and Contributions to Existing Literature

From an anthropological perspective, the regulatory challenges of providing savings accounts through mobile phones are interesting because they lay bare one of the myths of modern money. The myth is that money bundles together four or five classic functions into one medium: means of exchange, method of payment, store of value, measure of value, and unit of account. Anthropologists and sociologists have long sought to debunk that myth (see Bohannan 1959; Zelizer 1994; Hart 1999; Maurer 2006; Guyer 2004). It is this bundling that – supposedly – allows modern money to serve as a universal equivalent. For Simmel (1907), modern money could thus become the flat wash dissolving all difference and distinctions – rendering people “free,” in the process, from feudal obligations and bonds of kin and tribe. For Marx, it “commensurated incommensurabilities” (Carruthers and Espeland 1998:1400) and allowed “impossibilities to fraternize” (Marx 1844:110). For Shakespeare (in *King Lear* or in *Timon of Athens*), it degraded all things, from the kingship to a daughter's love for her father. Modern money's unification of functions has long been a subject of philosophical, critical and literary speculation.

Yet as economic anthropologists and sociologists have shown, people are continuously unbundling those functions from the objects they use as currency: people sequester and earmark money for specific purposes; they mark money religiously and ritually; they differentiate money from capital and even culturally or religiously inflect investment (see Maurer 2005, 2006). The case of mobile money to “meet the savings challenge” is an instance where money's functions are of necessity being teased apart in and through regulatory practices and guidelines, in a way that

potentially brings money to consciousness and allows for its cultural/social manipulation and reformulation.⁹

Anthropologists and sociologists of finance have also explored the social relationships, meanings, and sociotechnical arrangements that inform financial practice and the circulation of financial knowledge (Riles 2004, Miyazaki 2003, Knorr Cetina and Preda 2005, MacKenzie and Millo 2003, Elyachar 2005, Callon, Millo and Muniesa 2007, Ho 2009, Zaloom 2006, for a review, see Maurer 2004). The PI's prior NSF-supported work has explored the development of global governance systems for offshore financial services, and the implications of AML/CFT guidelines for small states (Maurer 2009a, 2010). Anthropologist Douglas Holmes (2009) has recently published on meaning-making among central bankers, drawing attention to their use of economic allegories and storytelling in the work of policymaking. Such storytelling may be key in the case at hand, as mobile network operators try to convince regulators to permit mobile money for savings using their own life stories or other anecdotes.

This project also contributes more broadly to the sociolegal scholarship on regulatory governance and regulatory capture. Darian-Smith and Scott (2009:271) refer to the recent "policy boom" in regulation and rule-based governance, noting the explosion of programs in regulatory reform nationally and globally. At the same time, they suggest, the growth of regulation invites questions about its legitimacy with respect to rights enshrined in the law (*ibid.*: 272). Regulation, they note (following Parker et al. 2004), may promote an instrumentalist as opposed to universal conception of law. Critics and supporters of "regulatory capitalism" – as a norm, as an empirically-observable phenomenon, or both – have debated the dynamics of capture, cooperation and transformation (e.g., Lobel 2007; Levi-Faur 2005; Morgan 2003; Parker 2008). Other scholars track new systems of regulation, such as principles-based or proportionate regulation (Black 2008). Rather than contribute to the normative discussion, however, this project seeks instead to track ethnographically and historically how ideas like proportionate regulation and regulatory capitalism have gotten picked up, transported and translated in the practice of the mobile money community itself. Specialists in mobile money regulation promote "proportionality," and it has been implemented in at least one set of regulations for customer due diligence in mobile banking (in South Africa). Similarly, regulation scholars have analyzed the "games of engagement" between regulated entities and their regulators (Braithwaite 1995); mobile money industry participants promote specific models of engaging with regulators, operationalize them, and teach them in role-plays and workshops.

Regulation scholars have also complicated the story of regulatory capture or cooptation by attending to instances where the combined efforts of public interest groups, industry participants and regulators may result in desirable democratic outcomes (Ayres and Braithwaite's (1991) "tripartism" thesis, or Dorf and Sabel's (1998) "democratic experimentalism"). In the case of mobile money, regulatory discussions are taking place that involve not just the telecommunications industry or mobile network operators, but also development and poverty alleviation organizations, NGOs and philanthropic actors. The example of proportionate customer due diligence for the unbanked in South Africa may be a case in point of a more democratic outcome. Of course, one might also use the same example to demonstrate yet another triumph of

⁹ There are also possible cultural and artistic ramifications of this: after all, the greenback spurred literature on counterfeits (Melville), treasure maps leading to gold (Edgar Allan Poe) or to mythical, vapoiously green cities (L. Frank Baum). Industry participants and others in the mobile money space do invoke these past cultural allusions and place the mobile phone at the pinnacle of an evolutionary chain – inspired by nineteenth-century ethnology – from barter to cowry shells to metal rods, coins and paper.

corporate values over social values (Shamir 2008), since one effect of proportionate customer due diligence may be simply the creation of a new market rather than the creation of financially and politically empowered citizens.

Resisting the temptation toward normative assessment, however, this research project will attempt to map out how the mobile money regulatory space is being constructed and formatted, and how the differently-positioned actors in that space circulate knowledge and create regulatory change. These actors' widespread use of the phrase "shared learnings" to describe the objects of their activities – frameworks, rules, ideas, concepts, actual bits of regulatory language that are shared and that actors attempt to transport elsewhere – may indicate what Rees (2008) and Wright and Head (2009) call the "pragmatist revival" based on "learning by experience" in regulatory arrangements (Wright and Head 2009:195). The mobile money community, meanwhile, has produced a good deal of grey literature on regulatory frameworks for mobile money (see CGAP 2009, Chatain et al. 2008, Dias 2009, FinMark Trust 2008, Kumar and Mas 2008, Lyman et al. 2008, Mortimer-Schutts 2007, Porteous 2006, Pyramid Research 2009, Vodafone 2007). This material forms both data and theory for this project, as the writings of those involved in the mobile money regulatory landscape are themselves often insightful contributions to current debates on regulatory innovation and reform.

In addition, this project contributes to the growing literature on the social implications of mobile communications, mobile phones and financial inclusion, and mobile activism (e.g., Agar 2003, Donner 2008, Donner and Tellez 2008, Ito et al. 2005, Horst and Miller 2006, Medhi, Gautama and Toyama 2009). To date, no scholar of mobile communications has considered how regulatory frameworks shape the sociality of the mobile phone (the only exceptions may be Jonathan Donner or Jan Chipchase, in unpublished or proprietary presentations). This project promises to fill this important gap.

Finally, this project may contribute in a small way to legal origin theory, which tries to explain legal and regulatory differences based on a country's use of common law versus civil law (on legal origin and finance, see Roe 2007; Glaeser and Shleifer 2002; Klerman and Mahoney 2007). Without wading too deeply into the debates, it is interesting to note that most of the sites of regulatory change for mobile money thus far have been common law jurisdictions, possibly – according to one potential interviewee – because it is easier to assume a practice is allowed in a common law jurisdiction if it is not explicitly prohibited. M-PESA, in its first few years, made a point of tailoring its business model specifically so that it could operate outside existing regulations.

Methodology

The proposed research relies on the collection of interview data, archival analysis, and ethnographic observation in several sites. Rather than simply chronicle the development of new guidelines, policy frameworks, regulations or legislation for mobile money, this project will examine (1) the business models, (2) legal constraints or enablements (legal origin; existing legislation and regulation related to the convergence of telecommunications and banking), (3) NGO and microfinance involvement, (4) professional networks and (5) life courses and employment histories of those involved in efforts to regulate mobile money. The PI will catalogue regulatory responses to mobile money beginning with the industry's inception, probably starting with 2003, the year of the GSMA's formalization. The PI will also interview key participants on the industry, financial inclusion/development, and regulatory sectors, mapping out their employment histories in order to help track the movement of ideas and the shifting characterization of substantive domains that have become central to this regulatory

landscape. The PI will also map out those domains and trace how they have wended their way from one place, document, regulation, or law to another. Such domains include but are not limited to “interoperability,” “risk” and “proportionate risk,” “financial inclusion,” “payment” versus “store of value,” and “additive” mobile money versus “transformational” mobile money (the latter imagined to lead to “financial inclusivity,” see Vodafone 2007).

1. *Archival data collection* The PI has already begun to collect Reserve Bank Circulars, Directives, guidance statements and principles, and legislation related to mobile money (see Table 1). The PI will also collect relevant policy documents related to payments systems, electronic banking and electronic money, consumer protection, and AML/CFT. The PI has already collected an archive of AML/CFT and KYC material issued by the Financial Action Task Force, the EU, the Bank for International Settlements, and other entities, as part of his previous NSF-supported research (SES-0516861). The PI will attempt to create a comprehensive collection of mobile money-related regulations and legislation, globally.

In addition, the PI will create an archive of policy reports, focus notes, and research papers prepared by development organizations and NGOs, multilateral agencies and organizations, foundations, industry participants and researchers, and consultants. Some of this material may be confidential and/or provided to the PI subject to non-disclosure agreements. The PI will attempt to secure permission to archive copies of such material with a commitment not to release it publicly until after an agreed-upon period of time (if possible).

The Consultative Group to Assist the Poor (CGAP) and the Alliance for Financial Inclusion (AFI) will be important resources for the PI in collecting this material, as will several consultancy firms that have worked on mobile money regulations, with which the PI has already established contact.

2. *Interviews* The PI and graduate research assistants will conduct no fewer than 50 interviews with the following categories of individuals:

- Mobile network operators (e.g., Vodafone)
- Mobile device manufacturers (e.g., Nokia)
- Banking regulators and central bankers
- Bank representatives
- Payment card representatives
- Retail electric payment network operators (e.g., Visa)
- Development NGO directors and field officers
- Interaction designers and information technology researchers (e.g., Intel)
- Representatives from various multilateral organizations (e.g., CGAP, OECD, FATF)
- Representatives from the Alliance for Financial Inclusion (AFI)
- Researchers working on mobile money in industry and academia
- Consultants working on regulation of mobile money
- Representatives from nonprofits and philanthropic foundations

Interviews will be conducted during or immediately before or after two annual events: the GSMA Mobile Money Summit (beginning with the Third Summit in June 2010), and the Institute for Money, Technology and Financial Inclusion annual conference (see below), beginning with the second annual conference in the fall of 2010.

The PI has already accumulated an extensive list of over 200 contacts that includes representatives of each of the above categories. He has been involved in collaborative research

endeavors on digital money with researchers in several locations in industry since 2006, and he has served with a consultant and/or given presentations on mobile money to several industry and nonprofit audiences. He has also developed a list of contacts based on his attendance at the second Mobile Money Summit and a Regulatory Training Workshop held at that Summit.

In addition, the proposed research will work synergistically with the PI's duties as the Director of the Institute for Money, Technology and Financial Inclusion. In 2008, the PI received a grant from the Bill and Melinda Gates Foundation to create the Institute at the University of California, Irvine (www.imtfi.uci.edu). The Institute's mandate is to support researchers working in the developing world on the use of money among the world's poorest people, and on the impact or potential impact of mobile money systems in those communities. To date, 17 projects have been funded in 14 countries. The Institute also has funding to support an annual conference of funded researchers. The first will be held in November 2009. As part of the proposed research, the PI and graduate research assistants will interview some of the funded researchers who attend these IMTFI conferences.¹⁰

Funds for the Institute are restricted *solely* to the provision and administration of grants to other researchers conducting work on money and technology in the developing world. They *cannot* be used to fund the PI's own research. The proposed NSF-supported project will thus work synergistically with the Institute and take advantage of the opportunity provided by the Institute's operations to explore the regulation of mobile money by widening the field of interviewees to researchers in the developing world exploring mobile money (many of whom are expected to become linked into the professional networks that this research seeks to delineate).

At the Second Mobile Money Summit, several participants referenced family members who only recently had opened their first bank account. One employee of a multilateral agency working on mobile money attempted to go for one year without using any cash, only cards or his phone. Others have openly told me their experience with – and sometimes reluctance about – remitting to family members living in their countries of origin. Rather than simply interview subjects on their specific areas of expertise, therefore, the PI and graduate assistants will employ the life history method (e.g., Caughey 2007; Miller 1999). This method will allow the researchers to record the stories about subjects' own early engagements with money, financial services, and/or mobile phones, and how those experiences have spilled over into their current work.

In addition, there appears to be a good deal of occupational churn in the world of mobile money, not least because of the ongoing global financial crisis: someone who one year works for a retail electronic payment network in a major US city turn up the next working for a development organization in sub-Saharan Africa; another set of people move from IT research labs, to a multilateral organization, to a philanthropic foundation. At the Second Mobile Money Summit, people joked openly about the reach of several major philanthropic foundations and how many of the participants had at one time or another been employed or hired as a consultant by one particular foundation. ("If we lined up everyone on one side of the room who had ever been funded by [this foundation], there would not be anyone left on the other side of the room except maybe the journalists," one participant told the PI). Occupational histories may also explain different informants' perception of the stakes in mobile money: those with a background in, say, public utilities may have a different conceptualization of the promise of mobile money than those whose careers have been limited to the private sector.

¹⁰ Participants in the November, 2009 conference will be interviewed sometime after the conference, either remotely or in person, if NSF support for this project is received.

Inspired by Ho's (2009) groundbreaking ethnography of Wall Street investment bankers, this research will attempt to track occupational movement and churn among people involved in mobile money. This, in turn, may help account for the constitution and dissemination of domains and categories such as "proportionate risk," "financial inclusion," and so forth. Charting out who worked where and when, in terms of the emergence of these domains and categories in the regulatory landscape, may help explain the relationship between regulatory change and "shared learnings" obtained through employment histories and physical mobility and migration.

3. *Ethnographic observation* Although the PI has been involved in mobile money for several years now, attendance at the Second Mobile Money Summit and participation in its Regulatory Training Workshop proved invaluable for gaining a deeper appreciation for participants' motivations as well as understanding some key issues that do not always rise to the surface or make it into written reports or formal presentations. References to bribery and corruption in written reports pale next to people's vivid and energetic (and hysterically funny) re-enactment or parody of such activity. And ethnographic observation provides the detail and nuance of the regulatory debates: the passion, the things that lead people to jump out of their chairs and shout at a speaker, or that result in people slumping down and growling to their neighbor.

The PI will conduct ethnographic observation in at least five conferences, workshops and summits over the course of this project, not counting those held at UC Irvine through the Institute for Money, Technology and Financial Inclusion. The PI will also seek to secure permission to conduct ethnographic observation at two locations in industry where he is already welcome as a lecturer or co-researcher.

Finally, the PI will also make site visits to the Central Banks of Kenya and of Mexico. He has already established contact and collegial relationships with central bankers working on mobile money in each of these institutions. Short visits will allow the PI to see how the regulators deal with requests from MNOs and others for changes to regulations that will facilitate mobile money, and, especially, mobile savings. Kenya is chosen because, with M-PESA, it has become the fulcrum of activity and interest internationally around mobile money. The Central Bank of Kenya audited M-PESA in 2009 and is in the process creating guidelines for mobile money. It currently allows only mobile network operator-led mobile money systems. Mexico, for now, is only allowing bank-led endeavors using agents, but is also exploring a proportional risk based approach to AML/CFT, borrowing South Africa's model. The two countries also permit a comparison between a common law and a civil law jurisdiction.

4. *Financial Diaries* Some industry, academic and foundation-funded researchers involved in mobile money have made use of "financial diaries" to help understand uptake, adoption and use patterns of new financial products and services among poor people in the developing world (see Collins et al. 2009). The PI will ask at least 10 interviewees to keep financial diaries themselves and share them with the PI in order to see how those creating and implementing mobile money – regulators, industry participants, and nonprofit employees – themselves manage and understand their own money.

Data analysis

The project treats the concepts and domains that become important in regulatory discussions and framework around mobile money not as givens, but as problems and arenas of debate and contest. Terms like "proportionate risk" and "consumer protection," are placed in quotation marks, as the specific content of each remains to be discovered through the interviews, archival work and

ethnography. The data will be analyzed to determine what discursive strategies “worked,” what concepts or domains had an impact or travelled. For example, with the case of the principle of “proportionate risk:” when and where does it work to argue that the goal of financial inclusion requires a softening of customer due diligence, in instances where people have no identity card, fixed address or are illiterate? When and where does it work to argue that if the risk of money laundering using mobile payments systems is high, the risks of money laundering using cash may be higher? For another example: when and where does “consumer protection” refer principally to deposit insurance in the event a mobile network operator-led system goes bankrupt? Or in the event of identity theft or fraud? Or, finally, in the event of theft of the mobile phone: if the risk of the loss or theft of a handset is cited, are the greater risks of loss or theft of cash cited in return?

Archival data will be analyzed especially for definitional content and changes in definitions of key terms over time. For example: What is a deposit? does it depend on time? interest earned? intermediation? insurance? What is mobility? does it depend on speed? distance? the distinction between payment and deposit? third-party acceptance? What is money? Must it involve several of its classic functions (means of exchange, method of payment, store of value, measure of value, unit of account) or can they be disaggregated by mobile money systems?

Life history, occupational mobility, interview and archival data, together with ethnographic data, will first be organized chronologically and diagrammed. Key concepts or domains will be mapped onto this chronology, and their movements through space – institutional location and national location – will be charted. Informants’ use of specific metaphors will be noted, as well as informants’ language for discussing the regulatory process and evaluation matrices for arriving at decisions. For example, one acquaintance in the mobile money world told the PI that sometimes she tells MNOs seeking to influence a regulator, “look for windows.” A central banker told the PI that “additive [mobile money] is not hard,” compared to “transformative.” These metaphors and evaluations form important pieces of the puzzle of mobile money, mobile money regulation, and mobile regulation – which pieces of regulations travel, what words, phrases, sentences or even whole paragraphs? Where do they come from and how did they move, or not?

These analyses will all ultimately inform the assessment of instances of regulatory change in specific contexts, to help understand when business models, legal constraint and enablement, NGO involvement, professional networks, and/or life and employment histories matter most in the creation, diffusion, vernacularization, and adoption of new regulations for mobile money.

Dissemination of Research Results and Significance

The proposed research will result in a sole-authored book on mobile money regulation, as well as peer-reviewed journal articles for journals devoted to sociolegal studies, information and communications technology (particularly those that publish work on ICTs and development), development policy, and anthropology. In addition, working papers addressing a specific issue in mobile money regulation, or seeking to answer particular questions as suggested by my informants, will be posted as Working Papers on the Institute for Money, Technology and Financial Inclusion website.

Chronologies of non-confidential data and relevant regulatory documents – in other words, all archival material not subject to non-disclosure agreements – will also be posted on the IMTFI website and indexed on its existing open-access database.

Mobile money has burst on the scene just in the past couple of years. While it is still a newcomer to the US, it has the potential to transform access to finance in the developing world, and also to

provide insight into ways of coping with the ever-greater numbers of “unbanked” Americans who are suffering the effects of the financial crisis. Some participants in the mobile money space openly speculate about the “reimportation” of models being developed in sub-Saharan Africa for use here.

In addition, South-South sharing and transfer of knowledge and expertise – from the Philippines to Kenya to South Africa to Mexico, for example – has the potential to impact and even obviate traditional modes of multilateral governance and regulatory guidelines issued from the OECD and other historical centers of influence. Understanding how these South-South flows of knowledge and regulation operate and are routed may serve to provide models for future cooperative regulatory activities beyond mobile money. The kinds of “shared learnings” going on between industry, regulatory agencies, development agencies and philanthropic foundations in the mobile money space may also significantly complicate scholarly accounts of regulatory governance and regulatory capture.

The “savings challenge” for mobile money has the potential to reshape the debate and the provision of services the same way that the rhetoric of “financial inclusion” seemed initially to propel mobile money to the forefront of several development and industry agendas. Meeting the savings challenge may also involve transforming the regulatory, and popular, definition of money itself. Anthropologists of money have long noted that money’s classic functions have not always and everywhere been bundled together into one object or set of relationships. The specific regulatory challenges in defining the store of value function may be important analytically for rethinking how money works and what it can and can’t do. The broader adoption of mobile money may also impact everyday consciousness of what money is and does, just as the advent of the greenback did in the late 19th century, and the credit card did in the mid-20th.

Finally, the story of the regulation of mobile money may provide an object-lesson in how, really, to build meaningful social inclusion through access to finance.

Table 1: Mobile Money Regulations (partial list)

Year	Country	Agency	Title	Topic
2000	Philippines	Monetary Board of the Philippines	Circular No. 240 of 2000	Electronic banking
2003	Nigeria	Central Bank of Nigeria	Guidelines on Electronic Banking in Nigeria	Electronic banking
2004	South Africa	South Africa Department of Finance	R. 1353 Financial Intelligence Centre Act (38/2001): Exemption in terms of the Act	AML/CFT
2004	South Africa	South Africa Department of Finance	R.1354 Second reporting exemption in terms of the Act	AML/CFT
2005	Peru	Superintendencia de Banca	Circular No. B-2147 2005 Apertura, conversion, traslado o cierre de oficinas, uso de locales compartidos y uso de cajeros automaticos y cajeros corresponsales	Agents
2005	Philippines	Central Bank of the Philippines	Circular No. 471 of 2005	Agents/KYC
2006	India	Reserve Bank of India	RBI/2005-06/288 Financial inclusion by extension of banking services - use of business facilitators and correspondents	Agents
2006	South Africa	South African Reserve Bank	Position paper - Electronic money	Electronic money
2006	South Africa	South African Reserve Bank	Banks Act Circular 6/2006 Cell Phone Banking	AML/CFT
2008	India	Reserve Bank of India	RBI/2007-08/239 Know Your Customer (KYC) Norms / Anti-Money Laundering (AML) Standards / Combatting the Financing of Terrorism (CFT)	AML/CFT
2008	Pakistan	State Bank of Pakistan	Branchless Banking Regulation	Agents
2008	India	Reserve Bank of India	Mobile Banking Transactions in India - Operative Guidelines for Banks	Security; Consumer protection
2008	Philippines	Central Bank of the Philippines	Circular No. 608 of 2008	KYC
2008	Philippines	Central Bank of the Philippines	Circular No. 624 of 2008	Branchless banking
2009	India	Reserve Bank of India	Draft guidelines for issuance and operation of prepaid payment instruments in India.	Prepaid
2009	Philippines	Central Bank of the Philippines	Circular No. 649 of 2009	Electronic money

Results of Prior NSF Support

SES 9818258, \$150,000, July 1999-2002 Alternative Globalization: Community and Conflict in New Cultures of Finance. Law and Social Science Program. Research on the Islamic banking and financial services industry as well as its relationship to alternative currency movements. Results of this project were featured in the NSF Frontiers magazine "Behind the Headlines" section, "Values and Morality in Global Finance"; available at <http://www.nsf.gov/od/lpa/frontiers/frontiers/bhcont.cfm?story_id=1526>

SES 0516861, \$124,000, September 2005-2010 Doing Due Diligence: Forms of Moral Judgment in the Regulation of International Finance. Research on the impact of multilateral organizations' effort to regulate offshore financial services through "soft law," peer review and blacklisting; research on the post-1998 anti-money laundering and countering the financing of terrorism (AML/CFT) regime's effects on financial services and financial crime and fraud investigations in the Caribbean.

Representative Publications resulting from SES 9818258

2005 *Mutual Life, Limited: Islamic Banking, Alternative Currencies, Lateral Reason*. Princeton: Princeton University Press. [Winner, 2005 Victor Turner Prize for Ethnographic Writing]

2002 Susan Coutin, Bill Maurer, and Barbara Yngvesson. In the Mirror: The Legitimation Work of Globalization. *Law and Social Inquiry*, 27(4): 701-742. [Winner, 2003 Law and Society Association Article Prize]

Representative Publications resulting from SES 0516861

2010 From anti-money laundering to... what? Formal sovereignty and feudalism in offshore financial services. In *Ungoverned Spaces? Alternatives to State Authority in an Era of Softened Sovereignty*. Edited by Anne Clunan and Harold Trinkunas. Stanford: Stanford University Press.

2009 From the revenue rule to soft law and back again: the consequences for 'society' of the social governance of international tax competition. In *Rules of Law and Laws of Ruling: On Governance and Law*. Edited by Franz von Benda-Beckmann, Keebet von Benda-Beckmann and Julia Eckert. London: Ashgate, pp. 217-235.

2008 Re-regulating offshore finance? *Geography Compass* 2(1):155-175.

2007 Incalculable payments: money, scale and the South African offshore Grey Money Amnesty. *African Studies Review* 50(2):125-138.