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AFTERWORD

Mobile money, money magic, purse limits and pins: tracing monetary pragmatics

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[W]e know no system that functions perfectly, that is to say, without losses, flights, wear and tear, errors, accidents, opacity – a system whose return is one for one. (Michel Serres, *The Parasite*)

Purse limits. They come up from time to time as I conduct interviews with people involved in the emerging field of mobile phone-enabled money transfer and savings services – ‘mobile money’, as many inside the industry call it. A purse limit is a regulatory construct. It is the maximum amount of electronic value that can be stored in a stand-alone electronic device or in a virtual account linked to a phone number, without requiring verification of the identity of the person who owns that value. Although promoters of mobile money announce that the service will lead to the demise of cash, purse limits, as we shall see, are intimately intertwined with the materiality of the banknote. And though historically populists and other critics castigated paper money for its insubstantiality and fictionality, in the current moment cash comes to stand for substance and fact, through its brute materiality. In order to understand purse limits and why and how they matter, this afterword takes inspiration from other experts trained in the tricks of money’s matter: those who conjure with it, and those who count it. Magicians, and bill sorters.

Mobile Money

Mobile money is a rapidly growing business, propelled in large measure by the interest it has generated from people in the philanthropic and development sectors, who see in mobile money the potential to provide financial access to many ‘unbanked’ poor in the developing world. Money is expensive to store and to send to one’s friends and relatives, especially for those who lack access to financial institutions. Additionally, such financial institutions are out of reach for many people in urban slums, remote rural areas, or places lacking basic electrical and financial infrastructures. The mobile phone, by contrast, is by now globally ubiquitous. Over 75% of the world’s population has access to a mobile phone, whether their own or someone else’s, shared in a family, shared in a village, or borrowed for a small fee from a microentrepreneur who sells access and talk time (GSMA 2010).

The modal mobile is a simple device that can be preloaded with airtime minutes. Rather than having a subscription-based mobile service, in other words, most of the world’s mobile users ‘top up’ their phones with airtime which they purchase from a mobile agent as they need it. People around the world have been using airtime minutes as a *de facto* informal currency ever since the mobile telecommunications business started permitting people to send ‘minutes’ to one another over the mobile network. Sending minutes and cashing them out at their local mobile service provider’s shop allows people

to remit money home to pay a loan, to help others make purchases on their behalf, to share with friends, or to split a bill. Beginning in the early 2000s, a number of mobile telecommunications companies seized on these unintended uses of transferring minutes to allow people to buy, transfer, and now save 'money': specifically, electronic money or e-money, as the regulators and professionals call it, backed by state issued currency held in a pooled account by the mobile network operator. This e-money can be converted into cash ('cashed out') at small shops or kiosks.

By December 2010, there were 84 'live deployments' of mobile money services around the world.¹ Most are still small affairs, with clients numbering from the hundreds to the tens of thousands. However, a few have millions of subscribers. By far the most successful and widely discussed is M-PESA, a service offered by Kenya's dominant mobile carrier, Safaricom.² M-PESA was initially designed as a microfinance loan repayment service via cell phone. Launched as a money transfer service in 2007, by September 2010 it had 12.7 million subscribers. More recently, Safaricom has partnered with Equity Bank in Kenya to offer a mobile savings product called M-KESHO. While it might be a jarring comparison, this mobile savings product is imagined to function sort of like a piggy bank accessed via one's mobile phone: you can transfer value from your M-PESA account into your M-KESHO savings account via your phone. You do not have to visit a bank branch. The product is aimed at low-income clients who previously may not have had access to formal financial institutions.

My focus in this article is one small part of the emerging mobile money landscape, and how it can inflect theoretical discussions on the nature of money itself. I therefore leave to one side the intense debate and excitement around mobile money as a means of achieving 'financial inclusion' for the world's poor – the primary motivating factor for heavy investment into this industry by large philanthropic actors like the Bill and Melinda Gates Foundation. The excitement derives from the prospect of 'banking the unbanked' and thereby providing them with services they have not had before. In theory, such 'inclusion' could help the world's poor manage their savings better and contribute to protecting them against shocks like crop failures, illness, and natural disasters. It could also provide the formerly 'unbanked' with a cheaper and more secure means of sending money to others, or holding onto small amounts of money themselves, than using a wire transfer service like Western Union or burying their banknotes in a hole in the floor. The debate is many-pronged. Framing financial inclusion as 'banking the unbanked' is itself a controversial notion, linked as it is to the formal financial institutions that have precipitated crises large and small (and often on the backs of poor people who entrust their savings to such institutions).³ If one accepts the premise of financial inclusion, then the next debate is over who best can facilitate the process of bringing people into formal banking systems: banks themselves, mobile network operators, or some kind of partnership like that pioneered by Safaricom and Equity Bank.

These are technological questions, as well as legal and regulatory ones. Mobile network technology can permit carriers to lock people into their service, which has the potential to complicate a client's effort to move her money from one mobile money service to another. Banks, despite all their failings, are subject to a much higher degree of oversight and regulation than mobile carriers. There is also sometimes murkiness about where 'mobile' money actually resides, who controls it, and who can profit from the idle funds or 'float' while they are sitting in the ether, the digital cloud. It is also unclear how

'mobile money' is to be secured should there be a run on the bank, mobile operator, or hybrid mobile money service.⁴

These fascinating debates raise important questions about the nature of money, the role of financial institutions in society, and the transformations wrought by new telecommunications technologies and ubiquitous computing. They also raise less obvious but no less interesting issues, including questions in regard to the amount of capital reserves a business that 'holds' other people's money must maintain if it uses those funds for its own profit, and in what legal structure it must hold those funds. One of the most crucial (and largely unaddressed) matters in regard to these payment services – all the technological, legal and physical infrastructures that underlie the everyday act of giving over value to someone else, as cash or electronic claim through plastic card or now a mobile phone at the point of sale – is the question of 'public goods'. To wit, are these payment services public goods, at least in part, or can they be completely commodified, carved up by industry actors who make money off the fees they charge for providing such services?⁵ We are speaking, after all, of the services that allow one to transfer value, to pay, to do nothing less than that one thing that supposedly links production, circulation, and distribution in a virtuous capitalist circle. Should this fundamental act of payment itself be privatized?

As compelling as these issues are, I wish to leave them to one side for the moment, so as to approach them obliquely, through a small but significant issue in regulatory discussions around mobile money: purse limits. Purse limits point toward a nagging question in the literary, cultural, and critical engagement with money exemplified by the contributors to this issue and other issues of this journal.⁶ Unfortunately, it's a big question. Just what *is* money? What is the best way to apprehend it, to make sense of it, and perhaps to remake it and the world it has conjured into being?

In *Mutual Life, Limited* (Maurer 2005), I expressed my dissatisfaction with structuralist, poststructuralist, and critical accounts of money that circled around to the question of how money can come to represent abstract value, and how the social and intellectual process of abstraction itself works to create value from the diversity of persons, things, and relations in the world. Central to such abstraction is adequation, the bringing-into-equivalence of things mediated by money as a symbol of abstract value. This account of money reflected, in my view, an impoverished theory of value and a too-simplistic theory of signification. I turned toward pragmatist accounts of semiosis, the materiality of money and monetary practices, and the messy remainders left over after money's supposed equivalence function rendered all things calculable and convertible. I did so by borrowing some of the analytical tools of my ethnographic subjects.

I do much the same here, but hope to expand the conversation about money's pragmatics, about the traces left in and on money that are vital to remaking both money and its worlds. What does mobile money contribute to ongoing anthropological, cultural economic, and science studies claims about (and reactions to) money's own claims? In what follows, I inquire into the traces in purse limits and regulatory assumptions about the ability of money to talk, to reveal secret relationships, to indicate a personal or social history. I bring this into conversation with the ancient art of legerdemain,⁷ as well as recent moves by monetary authorities to eliminate the practice of stapling banknotes into bundles.

These juxtapositions are not as random as they seem. Money magicians explicitly invoke the ability of money to talk and the requirement, for their tricks to work, of taking

advantage of its silencing through the wear of repeated use. New machines for counting banknotes won't work if there are staple holes or pinholes in the bills, themselves indexing older methods of counting and confirming the authenticity of banknotes. Wear, the loss of originary material completeness, points toward use, thereby affording money objects the ability to speak anew. Wear allows money objects to 'exhibit something other than themselves *in* themselves' (Munn 1986, p. 74) based in part on their interactions in and with the world. These interactions affect changes in the state of money objects, and thus their transformations into value. Continual, repeated use, changing the objects-subjects each time, in each iteration, is a process of monetary action that purse limits bring to the fore, with consequences for our making-do with money, whether we are analysts, critics, everyday users or innovators of it: our money praxis.

Purse Limits

International standard-setting bodies and national regulators require banks and other financial institutions and intermediaries to verify the identity of people using their services. Such 'Know Your Customer' requirements are part of the international framework for countering money laundering and, since 2003, 'terrorist financing'. In response to the attacks of 11 September 2001, the Financial Action Task Force (FATF), a multilateral agency charged with assisting governments in interdicting financial crimes, released a complete revision of its 40 Recommendations on Anti-Money Laundering and Countering the Financing of Terrorism (AML/CFT). KYC emerged as a core component of those recommendations. Now, KYC is something banks have always done, at least in most parts of the world outside of a few bank secrecy havens like Switzerland and the Cayman Islands. If you want a bank account, you have to show some ID. In response to FATF 'blacklisting' of jurisdictions that did not comply with its recommendations, most tax havens now require that banks and other financial services providers conduct due diligence on their clients, no matter how strenuously the clients attempt to keep their identity in the shadows (see Sharman 2006, Maurer 2008).

Mobile money, however, introduces a wrinkle. Mobile carriers are not regulated like banks – why would they be? They permit communication, not financial services, at least not until recently. And mobile carriers thus have had far lower requirements for verifying the identity of their clients.⁸ In most parts of the world one can purchase a phone and, separately, a SIM card permitting access to a specific mobile carrier, all without ever having to prove one's identity. This was in fact a virtue of mobile money services: envisioned as an onramp to finance for the world's poor, mobile money is accessible not just because of the low cost and universal presence of mobile technologies, but also because anyone can gain access to mobile services, regardless of whether one has a fixed address, a national ID card, a birth certificate, or even knowledge of one's own birth date. In short, mobile money is attractive because there are few entry barriers, including the verifiable identity documentation most poor people worldwide lack. Now, however, the very regulations designed to prevent rich people from hiding their assets are potentially a stumbling block to poor people attempting to use mobile money services.

South Africa, and most recently India, adopted regulations specifically to address this issue. Other countries' banking regulators are actively discussing the matter and by the time this article appears in print will likely have adopted similar measures. The main principle is 'proportionate KYC' or 'proportionate due diligence', whereby the level of

identity verification required rises as the potential risk of a transaction increases. If, for example, the transaction is of low value, and only a small number of transactions are taking place within a specified period of time, the identity verification required of a customer would be lower than for a higher-value transaction or a higher frequency of transactions. Value and frequency of transaction thus become variables in a risk metric. In the low-risk situation, the prospective client of a mobile money service would not have to appear in person to open an account – something difficult if bank branches are far away – and the service provider could use alternative means of identity verification, including verification by a third party.

Purse limits are derived from proportionate KYC. One could devise a mobile money service such that, if the amount stored or transacted is below a certain threshold – say, US\$100 – then no KYC is required. As soon as a client crosses the threshold, then the service provider would need to obtain verification of identity. It is a simple concept. The logic is persuasive to regulators. In 2010, the Governor of the Central Bank of Haiti issued a position paper on mobile money stating that his country's new guidelines would permit fewer requirements for opening a 'small wallet' bank account (Castel 2010). He issued this report in response to donor and corporate-led efforts to rapidly develop and launch mobile money services, which they perceived as a way to alleviate the consequences of the devastating earthquake of January 2010. The idea of a purse limit or small wallet – I leave the subtle shifts in the gendering of the metaphor to one side here – is now moving through mobile money circles. In those circles, people are discussing how to arrive at the threshold for the purse limit, but for the most part no longer question the idea of a purse limit itself as one solution to the KYC problem.

Some take inspiration from revisions to the European Union's latest revision of its Electronic Money Directive of 2009. Building on the EU's Payment Services Directive and earlier Electronic Money Directives, this new revision raises the limit on stored-value, non-rechargeable electronic wallets/purses for domestic payments to €500. There are twists and turns on the road to this limit, as well as other provisions for rechargeable e-money devices. It so happens that the highest denomination banknote in circulation is the €500 note. In seeking a target for the threshold, therefore, despite all the talk about the dematerialization of money or replacing cash once and for all with electronic currency, the materiality of money in the form of the banknote asserts itself.⁹

Now, in many developing world countries, the highest denomination banknote is still worth very little in absolute and relative terms. Using the 'biggest' banknote in these circumstances will not permit one a very large or very useful purse. The threshold might be set via an assessment of other risks (money laundering, criminal financing, systemic).¹⁰ But in making their case to regulators, and in discussions among regulators themselves, the banknote gets fingered often enough for the anthropologist to sit up and take note.¹¹ In instantiating a threshold, a purse, pegged to the banknote, some participants in mobile money discussions are unwittingly creating a digital currency in the literal sense: one that deictically *points toward* material cash, containing within itself as a crucial part of itself the trace of that materiality.¹²

The materiality of cash, of banknotes themselves, the paper that changes hands every second of every day, in the billions of tiny transactions that (the neoclassicists tell us) collectively conjure¹³ an 'economy' out of people's everyday acts – this is the stuff feeding the imagination of mobile money. Historically, remember, banknotes were fake, fantastic, fictitious, fluid – not 'real' like gold or silver. Banknotes today are means of

exchange, methods of payment, and stores of value – just ‘money’, and equateable to the electronic money stored in a reloadable stored-value smart card, the sort of device envisioned in the Electronic Money Directive. By analogy the phone is just another device capable of being electronically re-loaded with value. And if the phone is a device with access to an account in the cloud, then, by extension, if that account is limited to a set threshold, with transaction limits to boot, then the assemblage of the phone and the account, together, could be considered a reloadable electronic value storage device just like a smart card.

Below the threshold, no KYC. Above it, KYC kicks in. No one would think to verify the identity of a bearer of a banknote before accepting it in exchange for an item or for payment of a fee or bill. Notes themselves frequently state that they are owned by ‘the bearer’. They are by design and definition anonymous instruments.¹⁴ It is the materiality of the highest denomination banknote here, its presence as a material object that can be handed from one person to the next to the next – without a trace – that is itself the trace of money’s materiality, and that informs the discussion over electronic purse limits. Above that threshold, another set of traces needs to be present: value needs to be stitched to personal identity, warranted through documents, themselves indices of the bureaucratic and legal constitution of the person.¹⁵ Below that threshold, however, a person’s identity is not required to underwrite money’s value. The money speaks for itself.

Money Magic

Money speaking for itself has long challenged the craft and patience of magicians. J.B. Bobo’s (1952) bible of coin tricks, *Modern Coin Magic*, repeatedly reminds apprentices to use well-worn coins, preferably of a soft metal like silver. The biggest risk in performing close-up coin magic is that the coins you’ve cleverly palmed or otherwise hidden will jangle as you manipulate them. This is referred to as the coins ‘talking’. Bobo writes:

A certain amount of care will have to be exercised to prevent the coins from ‘talking’ as they are brought together behind the thumb. The use of old, well-worn coins, such as the Liberty head half dollar, will help greatly in eliminating the noise caused by the coins sliding across each other. (p. 4)

His preferred coin was US Liberty Head half-dollars, ‘because they are usually very smooth’ (p. 214). In outlining the procedures for a number of tricks, Bobo reminds the reader to avoid using too much pressure, ‘or the coin will “talk”’ (p. 214).

In coin magic, it is the wear caused by the passage of the coin from hand to hand in innumerable transactions that allows it to remain silent when deployed in the palm of the magician. The history of the coin’s use takes its voice away, the coin’s smooth surface an index of its continuous manipulation by people until it winds up a vehicle for the conjurer’s art.

Pin Holes

As material entities, money objects get worn out. Good thing, for magicians! When they are worn beyond the point of their being accepted by another person, beyond future use, however, they become a problem for the authorities issuing them. Central banks have guidelines and procedures for retiring old currency items and replacing them with new

ones. Dealing with the materiality of money carries a price, and central banks seek to lower it by ensuring the long life – read, reduced wear – of the instruments they issue. Adding base metals to coins is an established practice in most countries, one that makes the magician’s craft more difficult and his quest for old silver coins more urgent. Making banknotes out of polymers is another, more recent innovation. Yet in some countries, there is a parallel effort to change the way that bills are counted as a means of lengthening the life of the banknote.

Any collector can tell you that banknotes from a number of countries routinely exhibit pin or staple holes. Indeed, I recently purchased some banknotes because I needed high-quality images of them for a publication – the Papua New Guinea 5 Kina note, with images of shell valuables, and various Zimbabwean notes of astronomical denominations. The invoice contained the following comment:

Thank you for your wonderful order! [...] Pinholes in some and especially older issues of banknotes of Bangladesh, Burma, France, India, Pakistan and some other countries’ banknotes are typically normal and usual. (Invoice 8/19/10)

In fact, according to the International Bank Note Society Grading Standards, a banknote can still be graded F (Fine) or VG (Very Good) with pin or staple holes. A typical sale listing of an uncirculated – note, *uncirculated* – Indian note looks like this:

INDIA 5 RUPEES P 80S W STAPLE HOLE UNC LOT 10 PCS

This translates as 10 Indian 5 Rupee notes, serial numbers in the 80s range, with staple holes, uncirculated.

How did the holes get there if the notes have not yet been circulated? Where did this damage come from if the notes have not been issued yet? Collectors know:

Words like ‘pinholes’, ‘staple holes’, ‘trimmed’, ‘ink mark’, ‘tape mark’, ‘edge tear’, ‘fold tear’, ‘hole’ etc. should always be added to the description of a banknote. It is also known that in some countries the banknote bundle is ‘stapled’ from the bank. In such case it should be indicated with ‘normal staple holes’, as not everybody know [sic] that this is normal. (<http://www.coins-and-banknotes.com/kvalitetsvurdering-av-sedler.php>)

In his essays on value, David Pedersen invokes the American pragmatist philosopher C.S. Peirce, and his tripartite account of the semiotic process. Pedersen stresses that in the creation of new signs from signifying activity, the sign represents its object always ‘partially, pulling out and capturing some aspects while neglecting others’ in the movement toward the creation of a ‘more developed’ sign at a later point in time (Pedersen 2008, p. 573).

Pulling out – a pin or staple metaphor – is appropriate in this instance: the pins or staples in banknotes pull out some aspects of money, as they connect it, pin it, to the act of counting, bundling, and clotting at value thresholds (Guyer 2004). Below such a value threshold, the question becomes: *is* it money, after all? For collectors, the presence of staple or pin holes does not detract from a note’s uncirculated status. Indeed, that presence can warrant the uncirculated status, if the holes are neat and clean, as, otherwise, through repeated use in circulation, the holes get bigger and their edges become less distinct. For people using the notes, the presence of the holes guarantees the bill’s authenticity: if everyone knows that new bills come from the central bank with staple holes, then the sudden appearance of a non-hole note is enough to raise counterfeiting

alarms.¹⁶ Pin holes also index nonmonetary relations (kinship, say – in pinning notes on the bride). These traces are available but not necessarily taken up by the next monetary sign.

Practice

My point is that there is always more going on when money changes hands than adequation, the calculation of equivalences. There is a residual, a remainder, ‘pulled out’ and through to make the next sign of value. These are material ‘memories’ in the object which afford it future value.¹⁷ Money is a motivated sign whose materiality matters – even if it is electrons/electronic – in which case it is digital in a deictic, indexical sense, as well.

For mobile money and purse limits, higher values require the traces of persons and histories of use; otherwise, there is suspicion that the money has been ‘laundered’, the traces of those persons and uses washed away. Money is suspect without those traces – just as non-hole money may be counterfeit. But lower-value money, whose value is no higher than that of the highest denomination banknote, does not require those traces to function as money. It can ‘stand on its own’ and move from person to person. Magicians can exploit that free movement from hand to hand – at least for coin.¹⁸ A well-worn coin, with a full history of interchange among humans, is content to remain silent in the magician’s hand.

What we can see in the juxtaposition of these phenomena – mobile money, money magic, and holey money – is that it is not the abstract value of money that matters here but the history of its use. We are speaking not so much of a semantics as a pragmatics of money. Money above the purse limit threshold must have a history of use attached to it, in order for it to move forward into the future. Money below the threshold can speak for itself, but only because the threshold itself points toward the banknote, owned by the bearer, passed hand to hand without restriction. And money passed hand to hand allows all manner of tricks – not because it is money defined as a representation of abstract value, *but because it has been passed from hand to hand*. It is intertwined with and inseparable from those passages, those memories, those histories of practical engagement unfolding into unplotable futures.

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NOTES

1. The number changes daily; see the GSM Association Mobile Money for the Unbanked and Mobile Money Exchange 'Deployment Tracker', at <http://www.wirelessintelligence.com/mobile-money/unbanked/>.
2. The name M-PESA is derived from the Swahili word, *pesa*, 'money'.
3. For an insightful essay on the genealogy of the concept of financial inclusion, see Manji 2010.
4. One of the principle issues faced by mobile network operator/bank partnerships concerns 'ownership' of the customer, closely tied to which party enrolls the customer. Ownership translates into revenue derived from the customer in the form of transaction fees and, in some cases, the use of the 'float', the money on deposit held against customers' mobile money accounts. Some business models and regulations require that the float be sequestered and ring-fenced.
5. I thank my colleague Julia Elyachar for prompting me to think about public goods. See Elyachar 2010 and 2011. I am also reminded of a recent discussion (fieldnotes, 1 December 2010) with Central African regulators who raised the question of whether payments infrastructure should be treated as a '*bien commun*'.
6. Purse limits also point toward a set of regulatory concerns over the risk of mobile money weighed against the risk of cash-based transactions. See USAID's important 'Mobile Financial Services Risk Matrix' (USAID 2010).
7. Synonym: prestidigitation. This term may become significant as I continue my explorations in this domain.
8. Although cell phone signals can be tracked, still mobile operators have lower identification requirements, and you can buy a mobile phone in the developing world from an informal vendor without showing any identification. The use of mobiles in crime has led to new calls to regulate them. Recent regulations in South Africa that require identity verification for mobile phone SIM-card registration are now at odds with that country's 'proportionate' KYC for low-value bank accounts. See CGAP 2010.
9. Most experts in the field as well as in AML/CFT look forward to a day when the 500 euro note is abandoned since it is a choice commodity for criminals. See Lipow 2010, who notes that some people call the note a 'bin Laden' because it is supposedly favored by transnational criminal networks.
10. I am grateful to mobile money regulation experts Leon Perlman, Claire Alexandre, Andrew Zerzan and Michael Tarazi for emails and discussions on this point.
11. As in instances where someone, feeling themselves losing an argument with a wary regulator about mobile money, parries in exasperation, 'Look, what about cash? Do you think *cash* is safe and secure?'
12. Deixis refers to a linguistic utterance wherein the meaning of a term is dependent on the context of the utterance, for example, pronouns, the demonstratives 'this' and 'that'. Philosophers and linguistics also use the term indexicality to capture this same quality of 'pointing' like an index finger to the utterance's context. Money 'uttered' by a central bank – and most central banking regulations in English use the term 'utterance'

to refer to the issuing of currency – is also always deictic, making sense within its context of use (owned by ‘the bearer’, operable within a specific set of spatio-temporal coordinates, etc.).

13. Prestidigitation!
14. And, importantly, warranted by the state.
15. Again, warranted by the state. In future work, I will explore the debate over payments systems as a public good and the questions mobile money is raising for regulators about whether and how it should be viewed as a public utility or infrastructure.
16. The Government of India launched an education campaign to discourage banknote stapling. See the video at: <http://www.indg.in/financial-literacy/anti-stapling-of-bank-notes>.
17. I borrow the term memory here from Stallybrass’s (1998) reflection on Marx’s coat: the creases in the elbows of pawned overcoats were called ‘memories’ by pawnbrokers in Victorian England and they detracted from the pawned item’s commodity value while indexing the pawned item’s history of use. To the original owner, however, those memories marked the item as (once) their own, and allow a comfortable fit if (in future) it is reclaimed – wear, for the original owner of a pawned good who reclaims it, is value.
18. There are other requisites for banknote magic, some tricks working with a well-worn bill and others depending on crispness.

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