Money Resolutions, a Sketchbook

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Introduction

Of resolutions and sketches

Poor people are constantly making money resolutions. The term *resolution* is variously used to mean the process of increasing the visual sharpness of individual objects (e.g., with microscopes), of working out complications (e.g., in film plots), and finally of making determinations (e.g., by judges). These are all apt metaphors for how people organize their money matters, as they go about crystalizing some goals, separating out different money spheres around them, and finally making decisions on spending and nonspending.

In this paper I explore the underlying logic for how money resolutions are made. I do not aim to understand—much less evaluate—the actual decisions that people make, only *how* they may have approached them. At the very least, I need to explain what makes some decisions seem mundane and some loom large; why some are made seemingly unthinkingly and some are agonized over; and why it turns out that some are fleeting and some really stick.

Fear not, I will not depict the process of resolving money matters as an algorithm. Instead, I will collect a bunch of loosely sketched out ideas, each representing a partial, simplified depiction of common decision rules and behaviors. The collection of these sketchy ideas—thus the sketchbook reference in the title of this paper—is like the cast of inner characters tugging at people´s pockets, each one with a mind of its own. In this melee, outcomes are impossibly hard to predict, but at least we can identify some of the inner tensions and harmonies that people confront daily.

The value of predictability in money management

Collins et al. (2009) define two broad financial needs. First, "day-to-day money management, [which is about] manipulating small and irregular incomes to ensure that cash is available when needed, so that there is food on the table every day, small but unpredictable needs like a visit to the doctor are met, and low-value but recurrent outlays, say for school fees or books, can be provided for." Second, putting together "larger sums that are needed to deal with major life-cycle events, big purchases, and emergencies."

Morduch and Schneider (2014) note "the high level of financial uncertainty and unpredictability that [households in the U.S. Financial Diaries research study] face. […] When asked whether `financial stability or `moving up the income ladder´ is more important, 77% of the participants chose ´financial stability´…."

Household money management is therefore a balancing act between resource maximization and risk minimization. It is not only about earning more income, it is also about stabilizing it. It´s not only about acquiring a greater number of useful things and services, it´s also

about being able to hang on to them subsequently. This balancing act turns into a hard struggle when you are poor, not only because your income is low but primarily because no one is guaranteeing you any income and you face health, weather, or crop risks (and some unknown ones, too) that can easily overwhelm your means.

Krishna (2010) argues that, "by and large, people do not become poor or remain poor for reasons of their own making. The events that have contributed to the largest numbers of descents have occurred for reasons beyond most individuals´ control. […] Discrete events rather than any particular household characteristics influence households´ economic trajectories over time." He finds that ill-health and high health care costs are associated with more than 60 percent of all descents into poverty recorded in all the communities he studied, and deaths of income earners were "importantly implicated in the cases of another 35% of descending households." Other important factors are incurring onerous "social and customary expenses, especially expenditures associated with marriages and funerals"; income shocks ("crop diseases, irrigation failures, pest infestations, commodity price crashes, land erosion"); and high-interest debt.

Krishna emphasizes that the ability to handle even relatively small events, or at least to manage their consequences, is key not only to the ability of households to rise above poverty, but also to prevent them from falling back into poverty once they have escaped it. He reports that 11 percent of the households in the 398 communities he studied "were not poor in the past. […] Relatively few people get plunged into poverty precipitously. Most descents are played out over extended periods of time. Chains of events, rather than any single calamitous event, are involved." He finds that "the interaction of […] health care costs and high-interest debt [is] most significantly associated with descents into poverty."

So how do poor people cope with these circumstances? How do they invest in new opportunities while ensuring a modicum of stability?

Rationality versus rules of thumb

One thing poor people do not do is turn every money question into an explicit, rational decision. Instead, they seem to rely quite extensively on rules of thumb, conventional wisdoms, and habitual practices that feel more like automated than deliberate decision-making. It might seem surprising that poor people, for whom making good money decisions with what little they have can be so critical to their future, often appear to be less deliberate about financial decisions than richer people. But there are good reasons for that, and those reasons do not necessarily have to do with education levels.

The crucial distinction is that richer people tend to have much more regular and predictable income. They face risks that are easier to assess and insure and risks that are, in any case, smaller in proportion to their income. They can plan ahead based on the salary they expect

to earn over the next few months; there is little new information that comes in day-by-day that would materially affect how they wish to manage their money.

But poorer people face uncertainty over when and where the next dollar will come from, and they face a broader range of unpredictable shocks.[2] For them, every dollar earned and every day lived without incurring a shock constitutes new information, and as a result they must decide what to do with their money as and when they earn it. For poorer people, as Zollmann and Collins (2010) explain, "financial decisions are relentless, unavoidable, and urgent; […] decisions that affect family living standards are small, daily, […] requiring discipline more than analytical skill."

Psychologists and behavioral economists emphasize the *decision fatigue* that comes with having to revisit similar money questions over and over again; each new decision is an opportunity to "undo" an old one (i.e., to break prior commitments). In this context, relying on rules of thumb—that is, automating some decision processes—can produce more discipline. Kahneman (2011) documents how the mental shortcuts that people take to avoid decision fatigue often let them down. Individual decisions people make may not be the best ones, but at least they can stick to them better (Bargh and Chartrand 1999).

Gigerenzer (2014), in contrast, emphasizes that in a context of greater uncertainty rather than risk, it is often pointless to apply fully rational decision-making processes based on all the information available because by definition we cannot grasp the nature of the problem. He therefore argues that decision-making based on gut feeling working on a deliberately limited set of data inputs yields better decisions more often than not.

So in the end, richer people may seem more deliberate about their budgeting and money management simply because they can afford to do it less often and have a better sense of the risks they must take into account. Forcing this kind of deliberate financial planning on poorer people through financial education campaigns can be counterproductive, as it need not result in better decisions and may result in less discipline. In other words, it may be entirely rational to rely less on deliberate analysis and more on rules of thumb that seem to result in reasonable decisions often enough.

These rules of thumb are usually not applied consciously, and people may even have trouble identifying those they rely on. Instead, they are encoded in a set of values they hold and behaviors they apply instinctively, guided by a number of social practices and norms that have evolved through generations.

The role of imagery in expressing people´s financial decision-making practices

[2] Knight (1921) introduced the economic distinction between risk and uncertainty. Risk is present when future events occur with measurable probability, whereas uncertainty is present when the likelihood of future events is indefinite or incalculable.

The purpose of this paper is to identify those broad behaviors and mental ideas that commonly underpin people´s money management practices. I will sketch out a metaphorical image to each of these behaviors and mental ideas to make them come to life more strongly.[3] The aspiration is to depict them in a way that poor people themselves could understand and relate to.

I purposely avoid expressing these behaviors with reference to specific or even broad financial instruments (saving, debt, insurance) because these are merely the means through which the behaviors I wish to capture are played out in daily life. This paper is therefore positioned differently to now-classic works, such as Rutherford (1999) and Collins et al. (2009), which describe mainly why and how poor people choose among available (informal and formal) financial instruments, and how these instruments are well suited or not for the needs of the poor. Here I wish to describe how they think about higher-level decisions that precede the choice to engage a financial instrument.

Like them, though, this paper "aims at clarity, [tries] to avoid jargon, [and] academic machinery such as footnotes and references is used as sparingly as possible" (here´s one: Rutherford 1999). But unlike them, I rely on previously published research sources to validate the images I put forth. The literature review for this paper covered research reports relating to people´s money management practices from the past 50 years—a humbling experience for anyone who might think there is much originality in current thought.[4]

My hope is that, by sketching out some new imagery around money management, readers will be able to identify and understand behaviors that they may have overlooked otherwise—to connect the dots, to use modern tech-speak.[5] Often we only find what we are

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[3] This paper is a continuation of earlier work by Mas and Mukherjee (2013) on trying to come up with metaphors that describe people´s informal financial practices. The idea then was to capture the essence of people´s financial management with a vivid metaphor expressed visually and artistically; here I have a more modest ambition of describing how people manage their money with reference to a few mental images.

[4] Reading the older material underscores how difficult it is to attribute ideas; therefore, here I take the approach of attributing quotes that express certain ideas lucidly and cogently, rather than seeking attribution for the ideas themselves. To quote the very quotable Parker Shipton (2011): "Scholars of culture and economy seem at times to move in recursive schools, shifting the emphasis, never all at once or quite predictably, but certainly in patterns, never randomly—and try as some might to integrate polar opposites, theory never settles to equilibrium. […] Half-forgotten movements seem ever to be reborn with stylish new names and interpretations." Yes, that is unashamed purpose of this paper: to bring new names and interpretations to well documented ideas. There may be no new "discoveries" in this paper.

[5] I do not analyze the behaviors with an academic interest to trace them to psychological or sociological first principles. The aim with the images developed here is more to describe than to explain. As a result there is no—there cannot be—pretense of completeness or universality. I pitch the images at a sufficient level of abstraction that they can be taken as being relevant for most people, though not a precise description of how anyone operates. In fact, the metaphors are likely to apply to affluent people as well, though they may play a smaller role in their own financial

looking for; hopefully this paper will shed a different light through which we might pick out new insights. The standard by which this paper should be judged is simply whether it distills enough of the findings in the literature, and whether it tells a sufficiently coherent story in a refreshing, engaging way.

Organizing the sketches

I structure the sketchbook around three key household money handling concerns: *(i)* carefully managing liquidity sources so that they can *scramble* for money as and when it is needed; *(ii)* quickly disposing of or *mopping up* any surplus liquidity that may arise on a day-to-day basis, while ensuring that it is put to good use; and *(iii) hardening* goals and the moneys that are set aside against them, so that they don´t become a source of ongoing temptation. I look at each of these concerns in turn in the next three sections. These three concepts are depicted in Figure 1.

Each section contains two sketches that represent distinct though related mechanisms to deal with these higher-level concerns. Figure 2 is a sketch of the idea behind each of the resulting six decision-making mechanisms developed in this paper. For each sketch, I describe the key concepts behind the metaphor in the body of the paper and a review of the literature pertaining to these concepts in a box. The latter is done through liberal quoting of a couple dozen papers and books rather than through a synthesis, since the main purpose is to hear how other authors have described similar concepts in the past. I have given each sketch a metaphorical name, and the choice of name is motivated at the beginning of each sketch with a brief reference (in italicized text) to what the name is meant to convey in broad terms.

management for the reasons explained above. The key differences across markets are likely to lie in the concrete expressions that these metaphorical images take, and the relative weight attached to each.

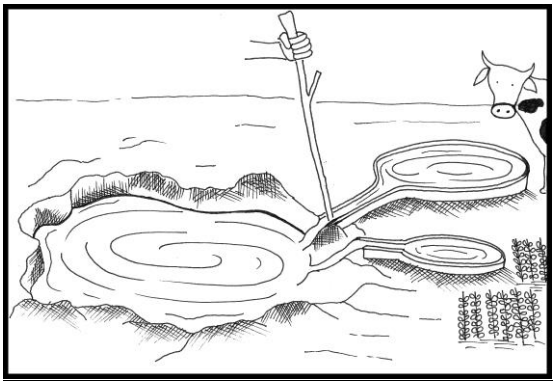
Figure 1. Scrambling for, mopping up, and hardening money

(Original art by Kim Wilson)

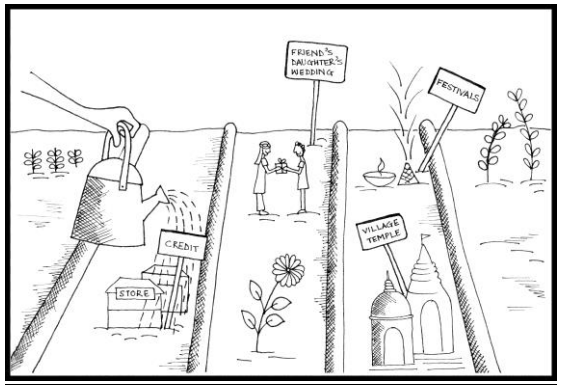
Figure 2. Sketches of the six decision-making concepts

(Original art by Samira Jain)

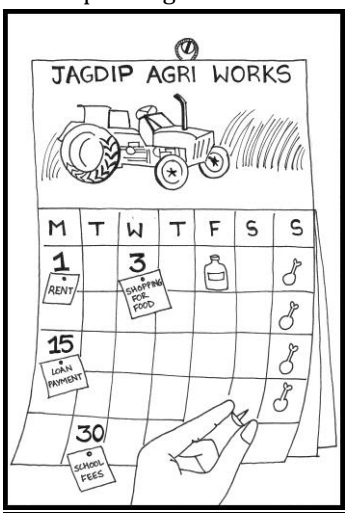
Income shaping



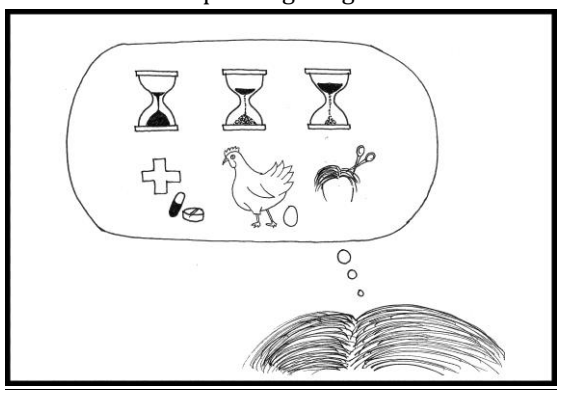
Liquidity farming



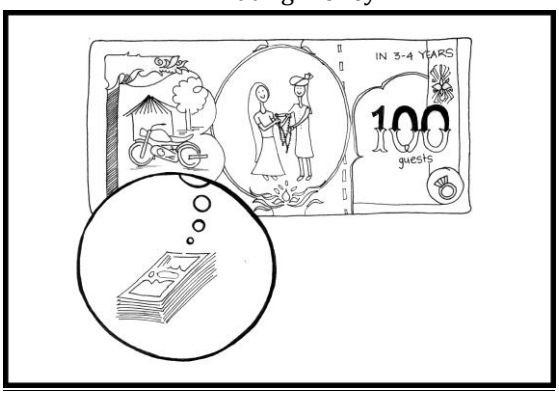
Spending routines



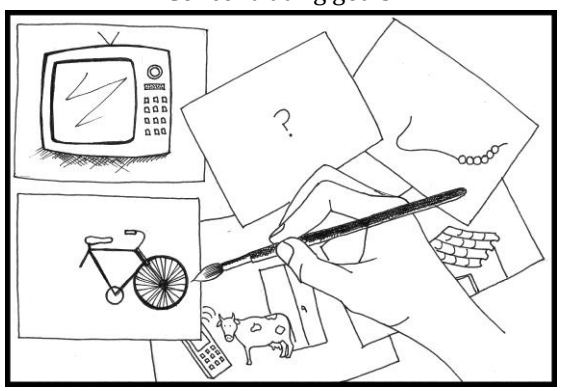
Spending triage



Animating money



Concentrating goals



Scrambling for liquidity

> *One scrambles to collect or organize things, to move forward or upwards on a path, or to compete with others for a possession, often in a hurried and disorderly manner. Scrambling results in a confusing or indecipherable mix.*

For poor people, financial management is as much, if not more, about planning how to get money than it is about planning how to spend it. They don´t manage liquidity as much as scramble for it.

People employ two fundamental mechanisms to make money appear on cue, as and when it is needed or, more precisely, *as* recurrent expenses come due, and *when* one-off needs and emergencies arise. First, they *shape their income* to make it match the size and timing of their recurrent expenditures more closely. The resulting expected pattern of liquidity allows them to commit to certain routine expenditures that create stability in their lives. Second, they *farm liquidity* by maintaining a range of social and business relationships that they feel they can call on in case of special need.

These just-in-time liquidity mechanisms reduce people´s reliance on savings to bridge between expected monetary inflows and outflows and constitute their main form of insurance against the unexpected. I look at each of these two mechanisms separately in more detail below. But it should be noted that they can overlap as in the case of remittances, which can be construed equally as a stipend between social relations or a regular harvesting of the liquidity farm.

Income shaping = Scheduling liquidity

> *Shaping or sculpting is the process of deliberately changing the profile of a surface so as to achieve a particular desired effect. It usually entails dedication and artistry.*

The majority of low-income people live on a diet of irregular and often unpredictable income flows. From this, they need to extract enough money to pay for a routine set of expenditures, as well as some occasional larger expenses. I shall describe later how larger expenditures are generally provided for by converting them into a stream of smaller recurrent expenditures. Thus, most of their mental space around money revolves around how to drum up enough income to meet the next round of routine payments (for daily food, monthly rent, quarterly school fees, a loan repayment, etc.).

The poor tend to be more concerned about *closing* the gap between regular income and recurrent expenses—by shaping income to match their recurrent expenses and, failing that, by adjusting their level of recurrent expenditures—than about *bridging* the gap by engaging in more sophisticated budgeting and savings behaviors.

Income shaping is, therefore, a key strategy of diversifying income sources so as to achieve a more stable and secure cash inflow profile, one that matches as much as possible the desired recurrent expense patterns.

The microcredit revolution that Muhammad Yunus spawned was very much premised on the need for poor people to act primarily on their income side. As idealized as the concept of the microentrepreneur has been, the key insights were to give poor people the resources to invest in tiny cottage industries that demanded a low level of working capital on a recurrent basis and yet produced steady, preferably daily, income. It is not entrepreneurship that is based on some probability of striking it big, but rather on scratching a daily surplus. The purpose is not so much future growth as present survival. It is not business for those willing and able to brave risks, it is business to avoid other risks, as a sort of family insurance. For those steeped in modern notions of entrepreneurship, the use of the term in the context of the poor can even seem jarring, and some prefer to call this search for stable cash flows a *livelihood*.

But income shaping is not just about setting out in business on your own. Income is shaped, for instance, when the cobbler diverts a little money that would normally go to buy more leather to buy a chicken that produces eggs daily—even if the egg layers have a lower return on investment than his shoe-mending operation. It happens when the farmer does some trading on the side to generate more frequent, recurrent cash flows—even if it detracts from the time and working capital he can dedicate to his farm. It happens when people seek three smaller wage jobs rather than a single main one—even if it limits their ability to excel at any.

Notice the cycle here: In all of these cases, daily income is sacrificed to find another vehicle to generate more daily income—not just more income, but with a different kind of time profile. What pushes them on this cycle of sacrificing, lumping, and regenerating daily income—what I refer to here as *income shaping*—is the desire to change not only the size but also the timing and predictability of cash inflows. Though these tactics may come at a cost, the increased frequency of payoffs and the implicit diversification of income sources they bring outweigh the downside.

Echoes of income shaping in the literature

Much of the financial inclusion literature notes the multiplicity of income sources that typical poor households have. Shipton (1990) explains that rural folks don´t live in narrow economic "sectors": "West African farmers are usually not just farmers. Multiple occupations (sometimes intermittent and often missed in questionnaire surveys) cut subsistence risks, even out income through the year, and put family labor to beneficial use." Even in the United States, early findings from financial diaries by Morduch and Schneider (2014) reveal the extent to which adults "often juggle multiple jobs and incomes. As a result, they often have numerous pay cycles and pay structures to manage, all of which contribute to uncertainty about how much income they will have and when it will arrive. […] A third of the participants [in the U.S. financial diaries research program] say that it is `not easy,´ `difficult´ or `very difficult´ to predict their income."

Sebstad and Cohen (2001) emphasize the risk management benefits from "ensuring a stable and sufficient flow of income [because] it provides the means for building assets [and] future resources to borrow against when a chunk of money is needed for shocks or economic stress events." Given that "labor is one of the most important assets for poor households, […] mobilizing labor is a common strategy for income generation to cope with a shock," such as by working longer hours, mobilizing child labor, letting employees go and replacing them with family labor, or migrating to find new opportunities. They report that a study in Gambia "shows that women are more apt than men to mobilize labor in response to a crisis, because women have fewer other assets to draw upon or sell." Beyond risk management, they report that in the four countries they surveyed, "a common strategy is for households to have one or more activities that generate a small but daily flow of income to meet daily needs, as well as larger-scale activities that generate larger lump sums of money when it is needed (such as a large batch of chickens that is sold off at once at Christmas time or when school fees are due.)"

Collins et al. (2009) put the spotlight on the irregularity and unpredictability of income as one of the main factors characterizing poor people´s financial lives. Making uncertain and "awkwardly timed" income flows "deliver a stable home life [is] a constant preoccupation." This is echoed in Zollmann and Collins (2010), who describe how "for all Kenyans, the primary financial management concern is continuing to generate greater and more stable cash flows amidst significant uncertainty. […] We observe that when the poor talk about financial capability, they associate it, not with allocating funds into financial investments, but instead with generating income. […] Financial management is a constant, inseparable cycle of earning and allocating uncertain, erratic cash flows." This is a matter of survival for some, and of comfort for others. "As small business cash flows are not as orderly as salary income, financial management becomes part and parcel of managing and building these continuous cash flows."

Based on the Kenyan financial diaries, Zollmann (2014) reports how "typical families are piecing together incomes from many different sources to try and construct a bigger whole." The median household in her sample has five income sources, and even in rural households, agricultural income only accounts for 11percent of household income. "Many rural households supplement their farming income with income from casual work—doing things like construction and washing, running small businesses, or picking up work at clinics, schools, and shops. Also, many earn their agricultural income from products that are sold in small quantities, frequently—like tea, milk, eggs and vegetables. The result is that income is flowing into the household more regularly than we might expect, and in many different kinds of potentially complementary patterns." Still, Zollmann reports that "for the median household, income fluctuated ± 55% from month to month."

In her analysis of five families outside of Guayaquil in Ecuador, Moser (1999) notes the gender roles in income shaping: "Since so much work was contract based or cyclical, women frequently `dovetailed´ their work, for example, picking up and dropping laundering jobs, in direct relation to their husband´s state of unemployment and employment. […] When men were earning well, their spouses tended not to enter domestic work." Households´ fluidity in earning patterns reflected "a continuum of activities rather than a clear-cut division between wage employment and self-employment."

Liquidity farming = On-demand liquidity

> *Farming is a process of creating value from edible life forms by nurturing their natural growth and reproduction processes. It entails multiple activities that have to be carried out with due care and within a certain temporal frame: initial sowing, regular feeding or fertilizing, and then harvesting. A balanced, well-tended farm always has some vegetable that can be plucked or some fattened animal that can be slaughtered.*

Of course, the goal of perfectly scheduled liquidity through income shaping remains elusive for most poor, unsalaried people. The income they scratch together never seems to be stable enough, and they face certain expenses that all too frequently overwhelm their means. Their financial lives are therefore characterized by a constant scramble for liquidity. They dedicate so much time and mental attention to it that we can almost consider it one more job they take on. But the job does not begin when you need liquidity and end when you secured it, because future liquidity options need to be cultivated.

People actively cultivate relationships with others who can help them in case of need—whether they are family, friends, employers, local stores, professional money lenders, or indeed financial institutions. I refer to as *liquidity farming* the practice of nurturing potential sources of future liquidity, beyond one´s income, assets, and saved resources that can be harvested when they need some extra money to meet daily shortfalls or emergencies. Liquidity management is the never-ending process by which social capital gets built up, leveraged—and sometimes abused.

The liquidity farm can be sowed and fertilized in a number of ways. For instance, spending a little money at the village festivities to demonstrate belonging and commitment to the community; engaging in occasional conspicuous displays of wealth and consumption that demonstrate success and hence resourcefulness; engaging in acts of generosity that invite reciprocity; participating in communal fund-raising efforts to demonstrate solidarity with kith and kin; shopping regularly at popular stores or taking regular loans with a microcredit institution even when they are not strictly needed to build up trust; and saving with people in the community, in the form of money guards, or loans to friends, or village groups, to build interdependence.

Liquidity can be harvested from these relationships, in times of need. For instance, by requesting a reciprocating gift or loan from a friend; asking your employer for an advance and the store for some credit; asking the savings group to allow you to take this week´s pot; or triggering some community fund-raising action on your behalf.

The key attraction of liquidity farming is that liquidity can be harvested at any time, on demand. This sets it apart from income-generating activities, which tend to have more rigid or uncontrollable cash flow cycles. The liquidity farm is about cultivating a set of lifelines; without access to them, people would have to entertain certain anxiety-ridden scenarios more often, such as selling off productive assets or forgoing important expenses such as schooling for the children.

Liquidity farming has uncertain returns: one can never be sure just how much can be obtained within what time frame from one´s relationships. Moments of hardship are often widely shared within communities, so the liquidity farm may work least well when you most need it. And it does have its costs, both economic and social. The practice may expose you to being *harvested* by others when you are seen as coming into money, creating an

immediate obligation to share in one´s success. The sense of obligation to contribute to community events may feel like a tax. Social relations can be strained when you are seen as being overly dependent on others or not sharing enough. And having to ask others for gifts and loans in a moment of need or stress can take an emotional toll and impact one´s self-esteem. The processes of liquidity farming are often highly ritualized to avoid some of these pitfalls.

The liquidity farm exists in everyone´s mind, all the time. Most elements in people´s liquidity farm are not tangible; they are tied up in their notions of community and self-esteem. They can readily imagine value being locked up in a relationship and transferred on a word or a handshake. It is a virtual garden.

It takes considerable time, effort, and also money to build up and maintain this network. The spending they incur to fertilize their liquidity farm is often incorporated into their recurrent expenditures, and might look to outsiders like nonessential expenses (gifts, celebrations). The value of one´s liquidity farm is assessed by scanning every person, group, institution, and asset one comes into contact with. People might not do it explicitly or even consciously, but they are constantly surveying their liquidity farm to identify opportunities and weaknesses. Their peace of mind depends on it.

Echoes of liquidity farming in the literature

The anthropological literature is replete with references to the sense of mutual obligation based on kinship or neighborly ties that pervade traditional societies, and with explanations of how it constitutes a basic coping strategy.

Shipton (1990) describes the "complex web of debts and credits to relatives, neighbors, friends, and merchants" that prevail in the Gambian countryside – the stunning variety of `crops´ found in people´s liquidity farms: "Virtually everything is lendable and at times will be lent. This includes nearly all factors of agricultural productions land, labor, livestock, seeds, fertilizer, pesticides, farm tools, (…) craft tools, vehicles, and household goods." And: "Many and varied loans occur within and between villages, including, for instance, seasonal crop loans, share contracting arrangements, delayed marriage payments, contributions for schooling or labor migrations with remittances expected later in return, and seed capital loans between small entrepreneurs. Some loans last hours, others up to several generations." But there is some clear logic and order in this complex web: "Farmers have their own personal hierarchies of creditors, and the newest, most distant, and least familiar lenders rank at the bottom."

Shipton (2011) draws a continuum between people´s "financial life" (marked by amounts saved, lent, and owed) and their "fiduciary life," a term he uses to refer to the "culture of serial entrustment and obligation, [which] spans the range from the most mundane to the most mystical concerns." In playing out their fiduciary life, people "place their trust not just in each other as individuals but in complex, web-like social systems; […] at issue are not only [economic] wealth and [political] power but also [cultural] meanings." People build up their social credit in myriad small ways: "much of [what might appear as] consumption can at the same time be subtle investment." And equally, on the giving side: "It is not just by returning favors from whence they came, but by helping others in turn as we can, that we can discharge our debts." Yet the balances on fiduciary debts "never really even out," a logic that can easily carry over to monetary debts. "Lenders, like borrowers, should earn their trust. If the latter must earn it by solvency and repayment record, the former must earn it by broader criteria, admittedly harder to measure: by

moderation, by respect for borrowers´ dignity and autonomy, and by ecological responsibility, to mention only three."

Graeber (2011) explains why, among close social relationships in traditional societies, there is a stubborn reluctance to convert a sense of general obligation to one of quantified debt: "Swapping one thing directly for another while trying to get the best deal one can out of the transaction is, ordinarily, how one deals with people one doesn't care about and doesn't expect to see again. What reason is there not to try to take advantage of such a person? If, on the other hand, one cares enough about someone—a neighbor, a friend—to wish to deal with her fairly and honestly, one will inevitably also care about her enough to take her individual needs, desires, and situation into account. Even if you do swap one thing for another, you are likely to frame the matter as a gift."

Maranz (2011) echoes this sentiment in the African psyche: "Precision is to be avoided in accounting [for debts] as it shows the lack of a generous spirit." He notes that how the highest values in African culture include "mutual economic and social support, hospitableness, putting group interest ahead of personal interest to the extent of showing a definite bias against individuality, and active participation in society." Therefore, "people want to borrow and loan in order to be functioning, contributing and respected members of society." He attributes the greater sharing culture in Africa to its scarce human and other resources, relative to Europe where resources have tended to be more bountiful: "To a significant degree capital formation was in focus in Europe while problems of subsistence and consumption were in focus in Africa." Therefore, European societal norms tended to encourage and protect accumulation (such as through primogeniture and dowries), whereas African societies developed an informal social security system. As a result, there is a different morality around money matters in Africa. First, "`interest´ is an expected part of friendship; disinterested friendship is in practical terms an oxymoron." Second, "the notion of `surplus´ cannot be separated from that of `selfishness´." And third, there is a resistance to apply precision in money matters: "eventual, approximate reciprocity is an ideal of the system, but may never be required." Maranz identifies the key trade-off involved in the African versus western European traditions: "The informal system was designed for bad times, not for good times. It is outstanding for sharing the meager resources that are available, but it does a poor job in creating jobs and increasing economic development—capital formation and investment, national savings, creation of industry and other means of production."

Douglas (1967) harkens back to the origin of money and markets, arguing that credit was a far easier solution to the problem of local exchange than barter in premonetary economies: "Credit is never difficult in a primitive economy; credit exists before markets." Credit remains a central socioeconomic organization mechanism in localized economies that have a distrust of money as being too fluid and socially disruptive. "Institutions of credit […] are arranged so that productive effort supports and does not undermine the traditional forms of society."

Gourlay (2014) describes the operation of a liquidity farm vividly in his telling of his personal experience running a roadside shop in the Micronesian town of Pohnpei, noting how the commercial often intertwined with the social: "The Pohnpeian term for credit is ´pwei pwand´ which translates directly as ´pay slow´ and is one of those cultural concepts that the word ´credit´ doesn't do justice to. This credit isn't tied to any market or regulated by any central bureaucracy. This credit is a cultural idea; a way of socializing, a way of earning and showing status. Even when Cheyne was setting up his business, the thought of buying and selling meant little to Pohnpeians—especially among family members, such a concept would have been bizarre. On Pohnpei you borrow and owe favors. You take and you owe. You give and you accrue status. A powerful chief doesn't own things so much as have the ability to give many things away. Bring him an entire harvest of yams and he will give it all away, because he can. Likewise, Buddo's Friendly Store did not actually sell very much, but it certainly gave a lot away."

Collins et al. (2009) note that "at any one time, the average poor household has a fistful of financial relationships on the go" and describe what we have here referred to as liquidity farming as "harnessing the saving power of a neighborhood or family network." They found that among their household diarists, it was "more common to borrow other people´s savings than to build your

own" and that people tended to "go to wealthier people for such loans—better-off family members or employers, for example, who feel some sense of responsibility to help out." Yet they distinguish between "reciprocal" lending and borrowing, which occurs when "there is an understanding that the borrower will return the favor and lend when the need arises," and "obligatory" lending, which "depends on the lender´s sense that he or she is obliged to help out the borrower with a loan […] and the creditor in one deal is unlikely to become the debtor in the next." One benefit of these informal arrangements is in terms of flexibility: "Such ties are part of a household´s `credit rating,´ just as in wealthy environments credit card accounts are maintained, though perhaps seldom used, in order to maintain options. These obligations are not `drawn down´ continuously, but maintained in good standing against the time they will be needed. In this way, they function as risk-sharing devices." Another benefit is that "informal-sector borrowing usually means paying zero interest, and in general the smaller the sum the more likely that is to be the case."

Johnson (2012) describes multiple benefits from relying on social relationships for financial matters. "By circulating funds through these informal networks, `savings´ are used to secure both financial support and social connections." The "give and take" nature of interpersonal transactions introduces an element of "negotiability," through which they seek a balance between the flexibility of "having liquidity close by" and the discipline of "having to make one's case to others" when they need that liquidity. In a quantitative survey in three different Kenyan regions, Johnson found that people valued four key benefits of informal financial groups roughly equally: "to have a lump sum to use when it's your turn; to socialize/meet your friends; to help when there is any other emergency; and to keep money safe."

Zollmann (2014) reflects on how Kenyans "talk about `looking for money´ through contributions and loans when a need arises" and notes women's seemingly greater reliance on the social network than men's. She explains how one woman maintains her borrowing capacity with local stores: "Valerie deliberately buys food daily, and from multiple shops and stalls around the community. She explained that this allows her to maintain relationships with all of those shopkeepers, so that she can access credit from multiple sources if the need arises." But Zollmann notes that "the social network is imperfect. Though the social network plays a major role in the financial lives of low-income Kenyans, […] relying too heavily on the social network to cope with risk has several serious shortcomings. The network cannot bear the scale of every risk event, [and] may not deliver in time for every type of need. […] It may place the givers—who are often themselves low-income—at risk and limit their ability to climb out of poverty."

Thorn Walden (1974) goes further, noting that "the claims of the extended family on the African entrepreneur acts as a tax on liquidity." He uses this to explain the apparently inefficient use of capital by African entrepreneurs, who show "an understandable reluctance […] to permit […] liquidity to rise and fall to whatever levels may be required for unconstrained profit maximization."

Guyer (2004) uses very much a farming analogy to describe the competition for resources within loose household and family units in Ghana: "Each individual negotiates for resources within a broad field of relationships, each of which is individually cultivated and judged according to its reliability."

Mopping up liquidity

> *You mop up your bathroom to absorb and collect spilled water. You mop up the battlefield to clear the ground of any scattered or remaining enemy combatants.*

People also have a concern about making money disappear when it is not strictly needed to cover regular expenses: surplus liquidity is money at risk of being misused. Available

money is vulnerable. The sooner the excess liquidity is disposed of, or *mopped up*, the less temptation it will bring.

People employ two main mechanisms to dispose of surplus liquidity, so that it is not misspent. If the surplus liquidity is recurrent, they will soak it up by upgrading their recurrent expenditures (deciding to eat meat more frequently, moving to a more comfortable house) or by buying something on credit. In this case, the spending decision every time some extra liquidity comes in is *routinized*. If the surplus liquidity is of a one-off nature, they might spend it immediately on the most urgent items they have in a kind of mental shopping basket, through a kind of *spending triage* process.

Both mechanisms result in shifting the timing, and maybe also the value, of individual expenditures based on available liquidity. But more fundamentally they entail automatic spending decisions, removing them from the here and now. I look at each of these two mechanisms in more detail below.

Spending routines

> *A routine is a customary or regular course of procedure leading to a tame state or situation in which things are always done the same way.*

Given the hardships involved in securing liquidity, most people try hard to build the discipline they need to use liquidity wisely when they come across it. That´s why they will establish a regular set of expenditures, which embody some spending rules—not only what level of comfort they want in their house and what kind of education they can afford for their children, but also how frequently they will eat meat and how often they will go out with friends or indulge themselves, etc. Some of these rules entail financial commitments to others (rent, school fees), while many are made hard and fast purely through force of habit (meat consumption, frequency of going out). Routines create automaticity in spending decisions; they create *needs*, as distinct from wants.

A key financial concern of households is therefore how to establish an appropriate pattern of routine spending. It is these regular expenditures that households feel most committed to achieving, so they will calibrate these commitments carefully based on their income profile (i.e., how successfully they´ve shaped their income) and the extent and depth of their liquidity farm. Too low a pattern of routine expenditures will likely force too many daily decisions on how to spend the available liquidity; there may not be enough *in-the-moment* spending restraint. But an overly ambitious spending routine may set aspirations that are hard to achieve and, hence, can increase the sense of privation and anxiety from depleting the liquidity farm.

If at any time a poor household faces a situation of excess liquidity that it feels is of a sufficiently regular nature, the excess liquidity may be at least partly mopped up by *upshifting* their recurrent expenditures, such as increasing the amount of meat consumed

from once a month to once a week, moving to a better home, or shifting the children from a public to a private school.

A situation of having extra liquidity will also increase the desire for some larger, one-off expenditures, such as a TV. Even though the TV has a lumpy price tag, it too can be routinized. Once a TV is bought on credit, for instance, the lumpy buy-a-TV goal is substituted with a clear-the-debt routine goal. Another example of *routinizing a goal* is investing in a daughter's education (a routine expense), as this then reduces the amount of dowry that will be required (a large one-off investment) to secure the goal of a good marriage. Money will need to be set aside weekly or monthly to pay the TV installments or to pay for the daughter's education, but there will no longer be a need to fret about building and protecting a pool of assets to attain either.

A third form of routinizing a fragile stream of liquidity is by setting it aside and converting it into a useful lump sum on a fairly fast-cycle basis. Much as buying a TV on credit entails establishing a routinized commitment to set money aside to repay the installments, savings can also be routinized by participating in community savings mechanisms like a ROSCA or by engaging the services of a depositor collector. A variety of informal financial mechanisms exist that allow people to commit very small amounts with high frequency in return for relatively larger but still short-term payouts. The opposite might also be useful: loaning out any windfall income received, so as to convert it into a more regular stream of income in the form of loan repayments.

Whether it´s by provoking additional spending, loan repayments, or savings set-asides, all these devices establish a liquidity-mopping routine by creating a commitment to yourself and/or to someone else to use that foreseen extra liquidity in specific ways.

Spending triage

> *In medical terms, triage is the process of sorting a group of patients in a hospital, war zone, or disaster setting based on their urgency of need for and likely benefit from immediate medical treatment. Triaging decisions need to be quick and cannot rely on a full analysis of conditions and options.*

The kinds of spending routines described above by definition do not help if you come across surplus liquidity that you do not expect to reoccur. How then can you build some restraint into one-off liquidity/spending decisions? Because of the inherent uncertainty around their financial lives, poor people cannot operate with a fixed list of spending priorities that they might work off sequentially. The trick is to routinize the spending decision process, rather than the spending decision itself—to have a mechanism to do rapid *triage* of spending options when the need arises.

For that you need to define a choice set (what are the available spending options) and a decision rule (how to pick among them). The choice set is easily assembled and updated: a

kind of mental shopping cart of things that you would like to buy or pay for, if only you came across money. The decision rule very often is based on urgency: buy the thing that fulfills the most pressing need. Not necessarily the most important overall, but the most urgent right now.

A spending temptation can be more easily beat if it is confronted with an urgent alternative; a merely important one may not because it can still be deferred. (Of course, the assumption is that the urgent need has some due level of importance, otherwise it would be an utter temptation.) Prioritizing based on urgency is more satisfying because it feels spontaneous: you can make the call of what is most urgent within your mental shopping card *in the moment*. By comparison, prioritizing based on importance would require taking a longer-term view, it´s no longer about here and now. Of course, you get to define what *urgency* means: it´ll be anything that you want more desperately right now than the slew of tempting alternatives. If you concentrate on those urgent needs, you are more likely to make better decisions than if you try to force yourself to think about the long term all the time—but succumb to lesser temptations. For all these reasons, urgency beats temptation in a way that importance alone may not.

Thus, the most basic solution to mopping up surplus liquidity is anticipating specific, urgent expenditures that are in the horizon. It´s about feeling that with the hard-earned money you have you are doing useful things. With today´s surplus liquidity, you can buy the tool that you needed for your workshop, settle a standing debt at a local store, or even get a haircut. You might also use it to further shape your income (e.g., buying more egg-laying chicken) or fertilize your liquidity garden (e.g., by celebrating with some friends).

The principle of urgency as a spending triage decision criterion applies not only for larger one-off expenditures; it is also incorporated into day-to-day money management within the envelope of routine expenditures. Today´s bitty money will be allocated in the order of urgency among the various routine daily needs. This drives the commonly observed practice of delaying the settlement of debts or paying the school until the last day possible. It also leads people to want to buy items (rice, kerosene, soap) in the smallest possible sizes, just to fulfill today´s requirement, because that sharpens the sense of urgency of the purchase around today and restores the item´s urgent position in the mental shopping cart for tomorrow.

Echoes of mopping up liquidity in the literature

Shipton (1990) explains the ambivalent attitudes that Gambians have toward cash: "Nothing in The Gambia is more sought after than money, but nothing is more quickly disposed of. Indeed, money is even seen as something to get rid of, something to convert into longer lasting forms. Several features make money an unstable form of wealth: its nearly universal fungibility, its divisibility, and its portability. These features make money contestable."

Maranz (2011) reiterates the rush Africans seem to be in to spend money once it becomes available and the apparent short-termism of the spending decision in the first three of his 90 observations relating to personal finance in Africa. The very first one is that "the financial need

that occurs first has first claim on the available resources." Immediacy of need, rather than necessarily its absolute importance, is the basic prioritization mechanism; the desire to cover immediate needs can "jeopardize the funding of known and planned-for future needs." This links to his second observation: "It is a general rule that people expect that money and commodities will be used or spent as soon as they are available. If the possessor does not have immediate need[s], relatives and friends certainly do. To have resources and not use them is hoarding, which is considered anti-social." Therefore, as his third observation, he writes: "money is to be spent before friends or relatives ask to `borrow´ it." There is a sense in which people want to be without money, "as being without money obviates the need to make decisions, to feel the conflict of wanting to be generous and yet wanting to use one´s money for personal and family needs."

Maranz (2011) applies the same logic of liquidity mopping to basic food items, which are typically "purchased in very small amounts even though the unit cost is much higher than for purchases in larger quantities." As an informant told him, "When we buy food in a large quantity, the discipline to manage it is not there. So there is misuse. It finishes before time [because] adults and children are not used to having quantities of food in the house and anything edible or otherwise consumable would quickly disappear, [and] if relatives and neighbors knew that there were usually supplies of food in a family´s larder or household supplies in the closet, it would be irresistible for them not to borrow."

Through their financial diaries in Bangladesh, India, and South Africa, Collins et al. (2009) echo this short-termism: "seldom did we observe households converting these [aggregated lump] sums into a longer-term financial asset: they were built to be spent." They speak of the many financial instruments poor households use "to trap and hold the small amounts they can squeeze out of a monthly budget." They note the "unexpectedly intense financial life" of poor households, one that is characterized by "large flows and small average balances." There is a preponderance of "large sums [that] were formed by borrowing rather than saving; […] if you´re poor, borrowing can be the quickest way to save." In India and Bangladesh, "the typical household extracted usefully large sums from financial tools with an average value of around three months´ income." The duration of their instruments is quite short: we most often observed funds being accumulated and used within the short term than saved beyond the study year, [and] most loans were […] repaid in days or weeks rather than years."

In her Kenyan diaries work, Zollmann (2014) noted that many households exhibited a "spend-as-you-earn pattern: […] most of the time, on days when they have high incomes, they also have high spending that day or the next. […] Bulk purchases and big payments are made when lumpy sources of money are available. […] A bonus from work might, for example, immediately translate into the purchase of cushions for the sofa."

Zollmann (2014) notes how urgency of expenditures drives many spending decisions. One strategy she notes is to reduce the size of purchases and correspondingly increase transaction frequency: "many household consumables were bought in very small quantities at the specific meal time—breakfast, lunch, or dinner—when they were needed." Another strategy is to delay payments as much as possible, even when they seem pressing. Zollmann talks of a mother who is not paying outstanding arrears on school fees, despite having "a pretty good period of earning from casual jobs but still did not pay the outstanding arrears. When we asked Gloria why, she said she would wait until the children were chased from school before paying. There were so many other needs at home, like finishing construction on the walls on the kitchen. By delaying school fees payments, she was able to put the money she had to work doing other important things. When pressure mounted to pay the arrears, she would look for the money, finding another way to stretch."

There are in fact situations where spending and saving go hand-in-hand. Rutherford (1999) notes "that people (and not just the poor) may save money as it goes out (keeping a few coins back from the housekeeping money); [… each time they] spend money to buy basic items like food and clothing, […] there is the opportunity to save something, however tiny. Many poor housewives try to save in this way, even if their working husbands fail to save anything from their income." An

example of this practice is cited in Collins et al. (2009): "Rural Bangladeshi households followed the well-established tradition of musti chaul—of keeping back one fistful of dry rice each time a meal was cooked, to hold against lean times, to have ready when a beggar called, or to donate to the mosque or temple when called on to do so."

Referring to the five families she observed in Ecuador, Moser (2009) has a powerful illustration of how the urgent (a birthday) can become a magnet for money, provided that such is available: "If there is no money, you ignore a birthday; if there is, it calls for a great celebration at enormous expense."

Hardening money

> *Hardening is making something more rigid. Stronger and more capable of endurance, but also more unyielding and pitiless. Less subject to change and fluctuation.*

The above discussion has focused on how people make spending decisions. But there is a whole other layer of decision-making: whether to let it accumulate rather than spend it at all. Setting money aside is of course another way of mopping up surplus liquidity. But the act of saving is in many ways the opposite of acting on urgency: denying yourself satisfaction today to have more tomorrow. Therefore, savings tend to be much more intricately associated with the notion of goals—a set of ideas about a future state that is strong enough to drive a willingness to make do with less today. Because savings require more deliberate effort to sustain, psychological elements are particularly important.

In the standard economics definition, money plays two main functions: it can act as a means of payment (or medium of exchange) as well as a store of value (or vehicle for savings). Payment and exchange is about fluidity of money, whereas saving is about immobilizing money. How can money be both fluid and firm? Money feels *liquid* because it is infinitely divisible, and every unit of it is like any other unit. But you can turn liquid money into a hard lump by convincing yourself that a particular pot of money is unlike any other money. You don´t necessarily need to sell off money and convert it into jewels, goats, or bricks; you can harden money psychologically.

Here I look at how poor people tend to manage their ideas around their savings and their goals, with reference to two commonly observed behaviors. The first is the practice of separating money into distinct pots and projecting a vivid purpose and/or broad moral character to each. I call this *animating money*: giving it shape, character, timeline, and story. The second is the practice of first collecting and then individualizing goals among a fuzzy set. I look at each of these two mechanisms in more detail below.

Animating money

> *"All the world is a stage, and all the men and women merely players; they have their exits and their entrances, and one man in his time plays many parts"* (Shakespeare 1599).

We constantly create stories about ourselves and our experiences to help us make sense of the world. These stories even help us manage our finances. They do so by permitting an intuitive and highly personal basis for classifying and interacting with our money. Various pots of money can be individualized and ranked through the characteristics and stories we attach to them, based on the different moral qualities and mental states we want them to evoke. Through these stories, pots of money become actors in one's own life dramas.

People routinely *animate* money in all the dictionary senses of the word. In our minds we often objectify it (not just by turning it into a hard asset, but by thinking of it as soft/hard or hot/cold money), we give it a story (whence it came, what it is to be used for), we give it a timeline (short-term/longer-term money), and we give it a spirit or moral quality (virtuous/loose or hard-earned/easy-come-easy-go money). These pots of money in turn give us vigor and move (or *animate*) us to action.

The purpose of all the imagery we attach to money is to undo or at least soften one of its more inherently useful qualities: its fungibility. It is hard to hang onto money or to maintain a steady purpose for it while it is freely, continuously, and instantaneously spendable or convertible for any other purpose. Liquid money is so rich in possibility that no story sticks to it. Hence there is the need to mop it up—or to change how you think about it.

So people use a variety of mental devices to associate their money with a set of purposes, circumstances, time horizons, and triggers. And they will support these ideas with a certain physical staging of their money: putting money with different purposes or attributes in separate jars; varying the format of the money receptacles, so that some are easy to get to while others are not (wood versus metal boxes, locked or not, reusable boxes versus single-use clay piggybanks); involving others in its management (moneyguards, savings groups, formal institutions); shielding from or inviting elements of surprise and chance (safe-keeping versus lottery); or indeed shifting certain money holdings into physical assets (jewelry, livestock).

Thus, *hardening money* is the practice of enacting mental models based on money-separation concepts that help people not only budget but also to maintain savings discipline. This can operate on a day-to-day basis within the envelope of routine expenditures, or on a longer-term basis to provide for lumpier needs, by telling yourself certain stories that would impel you to set money aside regularly. And it can be supported by actual liquidity constraints (withdrawal terms, peer pressure) or not. Even debts can be animated, to create a sense of which sets of debts need to be repaid, with what level of priority, and how much flexibility you can allow yourself in repaying them.

The financial inclusion literature has long recognized a certain preference of poor people for *illiquidity* as a discipline device. The literal, fuller sense of illiquidity refers to preventing the *convertibility* of an asset or money holding back into immediately usable cash. But there

is a narrower meaning that refers to preventing the *fungibility* of money across different pots and purposes. Poor people tend to be more interested in this second, narrower interpretation of illiquidity, because it structures discipline in spending but without closing altogether the possibility of unlocking the value in a rush in an emergency.

Limiting fungibility without necessarily going to the extreme of inconvertibility can be achieved in several ways. One is by the common practice of locking up value in large, indivisible assets, such as cows, that can be sold and converted into cash fairly easily, though not immediately, and no one would do so to cover a small expense, such as a night out. The other approach is by *animating* it: putting in place purely social or psychological barriers that prevent a particular stash of money to be used in certain ways, except in emergencies. Both mechanisms help people avoid small, frequent temptations. The more one restricts what saved money can be spent on, the easier it is for it to continue carrying out a dual function of purposeful accumulation and general cushion against emergencies.

By projecting emotions onto money, these stories let people put money management on autopilot. They help create a set of money management procedures that you don't have to think about too much, that feel intuitive and right, that are fairly flexible and adaptable to changing circumstances, and that you are happy running with for a while. The emotions these stories trigger become the enforcers of those rules. By removing money choices from the purely rational, you avoid regularly questioning your prior decisions.

Liquidity—at least that which goes beyond what you know you need for daily rations—is money that is not very well storied; perhaps that is why it is so vulnerable to impulse and misuse. Yet the general-purpose savings accounts banks tend to offer blend different types of monies and as such are story killers. This is why—just as they'll take cash out of their pockets—many people empty their savings account as soon as they contain some money. Others avoid this temptation by using a savings account to hold only one type of (well-storied) money, mentally converting the product into something that uses these stories' emotional pull to help them achieve their financial goals.

Echoes of animating money in the literature

Karlan and Appel (2011) explain why setting money aside is difficult in terms of procrastination: "one falls into thinking that today´s needs and opportunities are really more pressing than future [ones] will be; [the option to save] will always be there tomorrow, so it can wait; […] the hazy future becomes a storehouse for all the good things we´ll eventually do, and not saving becomes a matter of momentum." They emphasize the role of commitment devices and illiquidity options: "We cannot make impulse purchases when our money is locked away; […] it silences the voices of temptation. It snatches at the windpipes of all the things calling out to us and to our wallets."

Shipton (2011) notes that in western Kenya people do not treat "different forms of property [as being] freely substitutable or `fungible.´ […] People are "always reluctant to convert wealth `downward´ from livestock to grain or cash.´" The Luo of western Kenya shift wealth from one form into another under particular rules that act as "one-way turnstiles [: ...] from shorter-term to longer-term uses, from profane to more sacred ones, and from less to more honorable purposes in many local eyes. They make wealth less liquid and lock it into a sphere to which [outside and

institutional] claimants must expect little access." This differentiation is as important for debts as it is for assets: "When impersonal debts clash with personal ones more laden with multiple meanings, the impersonal ones get edged out. Asking Luo farmers to liquidate their herds or lands to repay loans is no better an idea than asking North Americans to part with their wedding rings to repay theirs." He notes the disconnect with much of official and institutional agricultural credit that is treated "as if it were a shoveled farm input."

Zelizer (1989) challenges the classic interpretations of money as "the ultimate objectifier, homogenizing all qualitative distinctions into an abstract quantity, [… with] complete indifference to values […] and free from subjective restrictions. [Money] may well `corrupt´ values into numbers [by making it possible to reduce value to a price], but values and sentiment reciprocally corrupt money by investing it with moral, social, and religious meaning." In her depiction of "special monies" that incorporates the "social and symbolic significance of money" to its economic or utilitarian function, she argues that "camouflaged by the physical anonymity of our dollar bills, modern money is also routinely differentiated, not just by varying quantities but also by its special diverse qualities. We assign different meanings and designate separate uses for particular kinds of monies. […] Not all dollars are equal." She illustrates this with reference to a historical case study of "the changing social meaning and structure of domestic money, specifically married women´s money in the US between 1870 [and] 1930. [[6]… Wives´] money was obtained in special ways, used for designated purposes, and even had a special vocabulary." She finds support for this thesis in many ethnographic studies of more primitive communities showing that often "how much money is less important than which money [and] special monies are often morally or ritually ranked. […] Money is transformable, from fungible to non-fungible."

Zelizer (1994) argues that "we routinely assign different meanings and separate uses to particular moneys" and document the "various way[s] in which people identify, classify, organize, use, segregate, manufacture, design, store, and even decorate monies as they cope with their multiple social relations." She quotes a noted consumer economist from 1923 as saying: "[P]roper spending is differentiated spending; effective spending requires earmarks." Zelizer goes on to argue that "the standard practice of budgeting constitutes a special case of earmarking: the subdivision of funds available […] into distinct categories, each with its own rules of expenditure."

Douglas (1969) carries this idea of "personalization" of money into modern daily life: "Many of us try to primitivize our money […] by placing restrictions at the source, by earmarking monetary instruments of certain kinds for certain purposes, by only allowing ourselves or our [spouses] certain limited freedoms in the disposal of money." She urges us to "approach money, both primitive and modern, through the idea of rationing and control." She refers to these as the "coupon" functions of money to distinguish them from the "means of exchange" function. Both functions may be performed by the same units—money—or may be specialized into restricted-use coupons and freely "permeable and flowing" money.

Maranz (2011) explains a unique accounting method practiced by many cattle-raising peoples in Africa, which is based on what we have referred to as an "origin" story: "Cattle owners divide their livestock into categories such as the `cattle of money´ [purchased cows] and the `cattle of girls´ [cattle used and received in exchanges of bridewealth]. Complex rules govern how and when cattle of one category can be bought, sold or butchered, and how cattle of one category can be transformed into that of another." This fuzziness about goals leads to imprecise budgeting and "lack of accountability in financial matters."

Sebstad and Cohen (2001) note that the sense of earmarking of savings can be so strong that many savers "considered them `untouchable´ except in dire circumstances. […] Many clients were

[6] Zelizer found numerous instances of "financial diaries" during her 1870–1930 period of study in the United States: "As the consumer society was being established, Americans wrote about and studied money matters in an unprecedented manner. Household-budget studies richly documented how the working class and lower-middle class spent their money."

reluctant to part with [their cash savings] when faced with a shock or economic stress event," preferring instead to borrow.

Concentrating goals

> *To concentrate: to bring together, to converge (as in concentrating our forces). Also, to separate out, to put under sharper focus (as in concentrating our attention). Two seemingly opposed meanings, but both with the purpose of intensifying.*

It follows from the above that concentrating on goals makes saving easier. Yet one often observes that poor people who are building up savings typically have a surprisingly loose idea of what they might use the savings for. Stated spending goals tend to relate either to *(i)* the next round of recurrent expenditures that, through habit, are always very top of mind (food rations, school fees, etc.); *(ii)* concrete, smaller-ticket, and fairly urgent items that are on the mental shopping list referred to earlier; and *(iii)* much looser, aspirational, and longer-term goals that are largely life-cycle-driven status markers (the eventual wedding for a young child, land, house, etc.).

It is surprisingly infrequent to hear that a household is saving up for a *specific* larger, one-off item that is achievable in the medium-term, such as a sewing machine, sofa, refrigerator, latrine, or motorcycle. Most often such items are mentioned as an enticing possibility rather than as a concrete objective they are working toward. This would seem to be at odds with the idea of *animating* pots of money with distinct purposes.

The reason is that people often maintain such larger, aspirational, and nonurgent items as a collection within a broader *fuzzy goal*. A fuzzy goal might be thought of in terms of improving the status and comfort of the house, building a better future for the children, or retirement in old age. In each case, there might be some item(s) that come to be representative of the fuzzy goal, but they do not necessarily constitute a firm decision to use the savings to buy those specific items. You concentrate *desires* into fuzzy goals.

When you are saving up, but your financial conditions are precarious, there are advantages to maintaining fuzzy goals—to not fixate on one object that you are going to purchase (say, a TV) but rather to keep it loose and imagine alternative things you might buy with it (a fridge, a bicycle, or indeed the TV). To begin with, why should it be more motivating to set your heart on one thing than imagining three? If today is a hot day, I may talk more about the fridge I could buy; if I´m bored, I may reflect on the TV I could get; and if I had a bad commute, I may be more motivated by the idea of a bicycle. But more importantly, given that there is a good chance that I may not be able to save enough money, it would be much more frustrating for me to *not* get the TV that I had set my heart on, than to not get neither the fridge nor the bicycle nor the TV—which in any case were each mere possibilities in my mind. In other words, a fuzzy goal is much richer with story, and the story itself is more malleable.

Fuzzy goals can be very prominent in people´s minds. When you ask people what they are saving up for they are more likely to respond with what we'd call instruments (a stash of cash, jewelry, goats) than with actual spend items. The instrument becomes the *proxy goal*; fuzzy goals come to be represented in people´s minds primarily by the saving instrument and secondarily by the loose collection of potential uses for the money (TV, fridge, bicycle). This is why I noted earlier that money pots have stories and values projected onto them, rather than merely purposes.

Eventually there reaches the point when the purpose of the money needs to be resolved—when a goal is *individualized* from the fuzzy set. People tend to lock in their minds a specific purpose under two circumstances. First, when the saved amount becomes large enough so that it becomes too much of a frequent temptation to use it (or, as described earlier, when a comfortable gap opens up between regular income and recurrent expenditures such that an item can now be bought on credit.) Second, when an element within the fuzzy set becomes urgent rather than important—the child's marriage is coming up! Note the decision criteria again: availability and urgency—these are the same factors that drive the need to mop up liquidity by selecting an item on the mental shopping list for immediate purchase.

There is of course some ambiguity as to how this plays out exactly in one´s mind, as the notion of availability and even urgency are, to a large degree, relative to some kind of idea of target. (E.g., before $100 is available, first $20 and then $50 must have been available—why were those amounts less subject under the *availability* criterion than the full $100?) To avoid this sense of permanent availability, people do have a notion of target or desired amount, which they can ratchet up and down in their minds based on their circumstances. This target amount is usually thought of in terms of the savings instrument itself, thereby reinforcing its status as a proxy goal: I want to build up to 10 goats, two crates of bricks, or three jewels.

Thus, spending goals tend to come into focus (or are *individualized*) usually very close to the time of purchase. It´s like they just thought of it. This is a psychological defense mechanism: why think up a goal, until it is unavoidable or reasonably within grasp?

To sum up, fuzzy goals *concentrate* categories of aspirations and desires. Goals are individualized when one starts to *concentrate* on particular items for purchase. It´s all about what will hold our concentration best, and that shifts over time.

Echoes of concentrating goals in the literature

The financial inclusion literature is remarkably silent on how people form their aspirations and financial goals over time. Goals are taken as either given or formed reactively as events happen in their lives. However, to the extent that goals act as intrinsic motivators, they have to be taken into account in any description of the financial lives of the poor.

Shipton (1990) highlights that one source of complexity in decision-making is the fluidity of social structures, which is one reason why the notion of clear goal setting is inappropriate: "There is no single social unit of analysis like the household to consider within villages, but a nested hierarchy of decision fields, including village wards (where they exist), lineages compounds, workgroups, and cooking groups. Decisions about family resource allocation are often not made unilaterally by `family heads'; in The Gambia, as elsewhere in Africa south of the Sahara, men and women often make their financial decisions separately, or negotiate and compete about joint savings or investments."

Shipton (1990) speaks of "gender walls of property," which, while rigid, are not wholly impermeable. "If cattle are a characteristically male preserve of wealth, gold and silver jewelry are a female preserve, a shelter from the daily demands of husbands and others; […] in an emergency, and only then, husbands may ask wives to pawn their earrings." And, "[s]tored food usually falls under the control of one member of the family, though other members may complain if they think it is misused. Men are usually expected to store coarse grains (millets, sorghum, and maize) for family food; women who grow rice store much of it too for family consumption."

Maranz (2011) argues that even large, predictable special events (such as weddings, naming ceremonies, funerals, and other rites of passage) are not explicitly budgeted for in Africa. Instead, Africans tend to "spend as much money and other resources as they can marshal for each one." But rather than interpreting this as a failure to plan or to maintain discipline across planned spending categories, this could be because each individual event is seen as part of a broader, fuzzier goal. More urgent events take precedence over other objectives that might coexist within that fuzzy goal.

Shipton (1990) explains, in the context of his research in Gambia, that particular financial devices can serve multiple purposes. Thus, the fuzziness pertains not only to the goals, but to the way that they relate to financial practices and instruments: "Saving, consumption, and productive investment are often not clearly distinguishable on West African farms. Purchasing a draught animal, for instance, can mean all these things simultaneously, as can contributing labor or grain to a ceremony in which other participants are potential part-time helpers on one's farm. In a sense, lending can also be a form of saving, and an effective one, since it removes property from the constant demands of relatives, neighbors, friends, or tax collectors."

Conclusions

The money resolution sketchbook

This paper has drawn out six sketches illustrating how people tend to handle money matters, under three broad headings, as depicted in Figure 3. But how do they fit together? Of course, that´s where individual drivers, family and social context, cultural norms, and other factors come in: They will determine the relative importance of each within an individual´s or a household´s handling of their money matters.

Figure 3. The sketched money resolution mechanisms

But these should not be understood to be separate mechanisms, as they are strongly interacting with each other. Money may be animated to achieve a spending goal, or else to create a new, more stable income source. Liquidity that is mopped up on a moment´s spending triage decision may go to fertilizing the liquidity farm. Money can be set aside routinely for a fuzzy goal. These interrelationships are represented in Figure 3 by placing the mechanisms loosely on a complex puzzle that people need to figure out how to solve to the best of their abilities and interests. The key point is that these mechanisms are not so much independent cards one can play in turn on the money management board, but rather a framework for isolating various key mental thought processes that, when combined, determines their moves.

The sketches also suggest that it is hard to infer financial behaviors simply by observing the nature and combinations of instruments people use. Goals can be routinized by saving in a ROSCA or by buying something on credit. The liquidity farm can be nurtured equally by saving with a friend (as a moneyguard), lending money to him (as a friend in need), spending money on him (a gift), or simply spending money *with* him (celebrating together).

The expanded portfolios of the poor

One of the most celebrated findings in Collins et al. (2009) is the surprisingly large number of instruments poor people hold in their financial portfolio. Out of our description of people´s financial lives, a new set of portfolios has emerged that they manage, beyond savings vehicles and debts. They manage a portfolio of income sources that they constantly shape; they manage a portfolio of relationships within their liquidity farm that they regularly fertilize and harvest for liquidity; they maintain a kind of portfolio or mental shopping basket of urgent things they will buy or pay for as soon as liquidity becomes available; they manage a portfolio of storied stores of value impregnated with values; and

they manage a portfolio of goals which get lumped together in a fuzzy way and occasionally become individualized.[7]

These portfolios are all managed according to a set of prioritizing principles, mainly: regularity and size for income sources; degree of intimacy/strangeness and physical distance for relationships; urgency for spending; moral characteristics aligned with broad purposes for savings pools; and time (life cycle) for the larger goals.

Figure 4. The full money decision framework

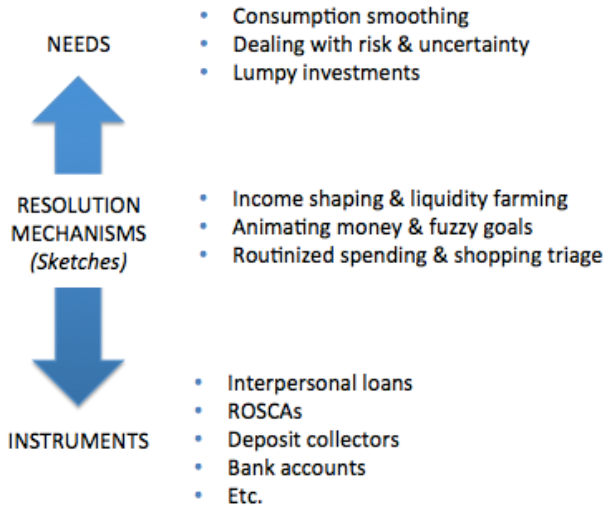


Figure 4 lays out how the money resolution mechanisms sketched out in this paper relate to the classification of customer needs and instruments that is typically the focus of the demand-side literature on financial inclusion, such as the much-celebrated Rutherford (1999) and Collins et al. (2009). By developing a better understanding of how people manage their money resolutions, it is hoped that we can make more nuanced assessments of the appropriateness of available financial instruments to the needs of poor people.

Expecting all this to come together in people´s minds seems far-fetched. But if there is one notion that can bring it all together is the feeling, emphasized by Zollmann (2014), that money is "working for you. […] Respondents appear averse to leaving money idle. Instead, they want to see their savings working—providing some immediate benefit—whether that is in buying consumption goods or physical assets, producing immediate returns, enabling them to borrow, or enabling a friend or relative to make an investment today. Savings are quickly shuffled to financial devices that provide immediate auxiliary benefits, either directly to the saver or to his or her social network. […] Just having money sitting around and not doing any particular work seemed to be viewed as wasteful."

Thus, money is working for you when it is kept in a form that generates frequent returns; builds up your social status and strengthens your social relationships; naturally attaches to your higher aspirations and your better nature; and from which value is easily extractable in case of urgent need. In this way, the power of several metaphors may be playing on the

[7] It is, of course, a common device for social scientists to decompose people´s activities and assets into portfolios. Moser (2009), for instance, bases her analysis of the broader lives of poor Equatorians with reference to a *portfolio* of human, social, financial, and physical capital.

same lump of money. It is money that "stretches" (to use another of Zollmann´s terms), but not only in monetary terms, in psychological terms, too.

Using the sketchbook to compare across socioeconomic strata, gender, and cultures

The sketches presented above are generalizations, without reference to geography, culture, gender, or socioeconomic background. But their true value may well be in providing a framework for exposing the differences in financial attitudes and practices across various categories of people. If observed differences can be explained *within* the framework of the sketches, this in turn validates the validity of the sketches as a general framework.

To illustrate the robustness of the sketches as a framework, I first express in Table 1 how they might be incorporated into the lives of a typical poor person in a developing country rather than a more affluent citizen in a developed country.

Table 1. The sketches as lived by the southern poor versus the northern rich

	Poor, informally employed person in a developing country	*Affluent, salaried, banked person in a developed country*
Income shaping	Often looking to diversify income, as few income sources are reliable and many have erratic pay cycles. Working more (or putting more household members to work) is a prime short-term shock-absorption mechanism.	Generally reliant on one income source that is very regular. Income is shaped through career progression and job selection. The state likely shapes your income for you through unemployment spells. Second or weekend jobs may have been taken when younger.
Liquidity farming	Has many relationships in the liquidity farm, more personal than institutional. Great peace of mind comes from the feeling that one has viable options to procure emergency funds. But few relationships can be counted on reliably at any time.	The need to farm liquidity as a contingent liquidity mechanism is much reduced. The liquidity farm is reduced to a credit score (as a ticket to all formal credit) and the closest family members. Not looking to place social relationships into the liquidity farm, as this creates a sense of contingent obligation that feels increasingly awkward.
Spending routines	Spending routines are largely focused on extracting small regular amounts out of daily cash flows, either to repay loans or to save in ROSCAs.	Since income is predictable and there is insurance to cover emergencies, spending and savings can be highly routinized through budgeting.
Spending triage	Strong sense that extra money earned "burns a hole in the pocket," and must be disposed of quickly. There is no shortage of items on the mental shopping list, and some of them are fairly basic needs.	There are relatively few income windfalls for the salaried, so the need for on-the-spot triage (rather than budgeting) is reduced. Also, urgency as a triage criterion is less useful, since all basic needs are met.
Animating money	Money is animated into loose categories reflecting the necessity or virtue of different kinds of money. Many are separated through many	Money animation takes the form of budgeting. Money separation among budget categories occurs by using different institutions and different types of accounts

	informal means, often linked up with relationships in the liquidity farm.	(a savings account, a children´s college fund, a retirement fund, etc.).
Concentrating goals	Largely life-cycle driven. Goals can easily be overwhelmed by adverse financial shocks. Because of this unpredictability, goals remain fuzzy for a longer time. Many are realized by routinized use of credit.	Largely life-cycle driven, though also subject to purchases of conspicuous items. The expectation of regular and growing income over long periods of time makes it possible to individualize goals with low probability of being frustrated.

As regards gender differences, the sketches may in fact help explain the frequent observation through microfinance research and practice that women tend to be more careful planners than men. This is often attributed to inherent differences in their attitudes toward future needs (e.g., present vs. future, or self vs. family) or in their capacity for self-discipline. But the observed differences could simply stem from their different relative use of the mechanisms in the sketches. For instance, it is possible that men may rely more on income shaping (since they can spend more of their time away from home), liquidity farming (since they may have more time and freedom to socialize), and shopping triage (if they feel responsible for delivering the bigger-ticket items to the household), and these are harder to detect empirically. Whereas women may rely more on animating money and routinizing expenses, which can be done more privately, are more traditionally thought of as budgeting, and are easier to directly observe and quantify. If so, this could illustrate how the lens used to analyze people´s financial lives can act as a filter on reality.[8]

Implications for researchers

Cohen (2002) has argued that "in a field in which attention to clients has been limited, poor people´s financial behavior has been an enigma for too long." There is now a vast literature on the financial lives of the poor, both qualitative and, increasingly, quantitative. The emphasis more recently has been on deconstructing the needs (consumption smoothing, risk management, lumpy investments, etc.) and assessing the performance of available (informal and formal) instruments in meeting those needs. But our understanding of how people make day-to-day financial decisions—how they build the conviction and resolve to commit to certain financial paths—remains murky.

There are some important implications for researchers from this line of work:

- It is difficult to treat poor people´s financial choices separately from their income-generation decisions and their goal formation. Money management is not merely a bridge between exogenously determined income flows and independently formed desires and aspirations; money management shapes and, in fact, underpins both.

[8] It is not just that women are often portrayed in the literature as being better money managers than men: it is also frequently assumed that women are much better at building constructive social relationships, presumably the kind that constitutes good liquidity farming grounds. In a graph depicting the social relationships among householders in her sample in Ecuador, Moser (2009) shows separate lines representing *female friendship linkages* and *male drinking linkages*.

These things need to be understood holistically, which of course is hard to do rigorously to academic standards.

- It is exceedingly hard to assess people´s financial decisions and practices merely by observing their actions. If you buy someone a drink, is that a case of wasteful spending or smart liquidity farming? If you run to the shop to buy something the moment you touch some money, are you shunning basic household finance or are you applying a disciplined liquidity-mopping logic? We lack any basis for objectively and meaningfully classifying transactions, and as a result it is hard to infer purpose and extract stories from the facts.

The ideas contained in the sketchbook could be carrier forward through more formal research in a number of ways. In the first instance, the sketches can be tested qualitatively in focus groups with poor people in different countries, with a view to *(i)* testing how intuitive the framework and each of the elements in it are to them; *(ii)* validating whether interview scripts based on these sketches are more engaging for informants and result in fuller and richer findings; and *(iii)* recording the specific ways in which people engage in these behaviors and what instruments they use, with a view to capturing key differences across various population segments. In addition, there may be an opportunity to go through financial diary data where such exist with a view to reclassifying transactions according to which sketch they relate to. This may offer an opportunity to quantify some of these behaviors.

Implications for financial service providers

This line of work also has implications for formal financial service providers (which are referred to here, generically, as *banks*), especially in terms of marketing and product design. The sketches contain some clues as to how banks can present themselves to seem more empathetic to the concerns of the poor:

- When it comes to money, people mostly want to talk about income; so should the bank. Microfinance will remain most powerful if it goes back to its roots of seeking to give more income-generation, and especially income-stabilization, options to poor people. Wilson (2012) uncovered the story of a bank founded in 1810 that understood this: "When a depositor was unable to work, the bank granted him a weekly allowance out of his own savings."

- Poor people´s main financial concerns are rarely about how to manage the (little) money they have; rather, they worry about how to deal with their money *gaps*—the money they need but don´t (yet) have. Hence the power of the informal liquidity farm. Imagine a bank that markets itself as helping you manage the money you *don´t* have—a sort of *anti-bank*. It would do so with credit products, but also with savings tools that emphasize the purpose and the narrowing of gaps rather than the sizes of balances.

- People want to feel good, even proud, for making sound financial choices. As Zollmann and Collins (2010) argue, "in the face of such serious sacrifice, it makes sense that poor money management is associated in consumers' minds with a lack of virtue." Having a meaningful banking relationship should be felt as a self-confidence booster. Robinson (2001) pushes this argument further into a broader societal role for banks: "By showing respect to customers and indicating confidence in their enterprises, [banks can] help to set the example that many poor households are well regarded and worthy of trust. This is especially important in societies where certain segments of the population […] are systematically subjugated by those who are locally dominant."

- The liquidity farm works mostly on the principle of reciprocity, which rests on an assumption of natural equality between social relationships. It is the aspiration of people to restore equality in a relationship where one side has done a favor to another that drives the urge to reciprocate. Banks should leverage this natural instinct, but it works only if they avoid putting themselves in a situation of hierarchy or dependency with respect to their customers. Instead, they should seek to build relationships with their customers based on mutual trust and mutual gain. Johnson (2012, p. v11) argues that banks need to "embody a form of give and take [with their clients] which is more 'balanced'."

The sketches also suggest some design principles that could be adopted for product development:

- Banks should buttress the mental discipline devices that people already employ, rather than seeking to create a new basis for discipline based entirely on artificial product features that people are likely to perceive as arbitrary impositions.

- Instead of seeking to displace people´s liquidity farms with their own products, banks might be in a unique position to facilitate them by managing its client base as a sociofinancial network. Customers in need of money could, in principle, get a loan from the bank, or from any of the bank´s customers through a peer-to-peer arrangement facilitated by the bank. In this fashion, the bank could leverage into informal information and risk-sharing networks more effectively. Banks would then have an opportunity to show themselves to be at least as good as informal practices in many ways, yet better in some specific ways.

- We have seen how important urgency is as a decision criterion, both for smaller daily purchases and for the individualization of larger goals. This reinforces the need for banking services to be immediately available, nearby. Note that availability is not only a matter of practical convenience; it´s about making it as natural as possible for people to carry on playing out their mental decisions through banking services.

- Thinking of savings balances as *animated* money suggests that product portfolios should be designed to provide scaffolding for all the money stories that people want to play out. Products should act as magnets not so much for money as for stories. The stories shouldn't come with the products themselves ("this is a school fees account"), but products need to be named and designed in a way that intuitively invites people to project their own stories into them. Banks should let this money retain and acquire new stories, unhampered by arbitrary product rules, and in this fashion users will make the financial products their own.

Let´s leave the last word to Parker Shipton (1990): "Much remains to be learned about how, and whether, financial institutions can emulate the financial principles observed already working in the rural areas. […] They need balance in their financial lives between saving and credit, between liquidity and illiquidity, and between individual and group action."

Bibliography

Bargh, John, and Tanya Chartrand. 1999. "The Unbearable Automaticity of Being." *American Psychologist*, July.

Cohen, Monique. 2002. "Making Microfinance More Client-Led." *Journal of International Development*, No. 14.

Collins, Daryl, Jonathan Morduch, Stuart Rutherford, and Orlanda Ruthven. 2009. *Portfolios of the Poor: How the World´s Poor Live on $2 a Day*. Princeton, N.J.: Princeton University Press, April.

Douglas, Mary. 1967. "Primitive Rationing." In Raymond Firth, ed. *Themes in Economic Anthropology* London: Tavistock Publications Ltd. Available on Google Books here.

Gigerenzer, Gerd. 2014. *Risk Savvy: How to Make Good Decisions* (London: Penguin, April).

Gourlay, Jonathan. 2014. "One small store." In Morning News, The Travel Desk (available online here), 7 April.

Graeber, David. 2011. *Debt*: *The First 5,000 Years.* London: Melville House, July.

Guyer, Jane. 2004. *Marginal Gains: Monetary Transactions in Atlantic Africa.* Chicago: University of Chicago Press, March.

Johnson, Susan. 2012. "The Search for Inclusion in Kenya's Financial Landscape: The Rift Revealed." FSD Kenya, Working Paper, March.

Kahneman, Daniel. 2011. *Thinking Fast, and Slow* (Farrar, Straus and Giroux, October).

Karlan, Dean, and Jacob Appel. 2011. *More than Good Intentions.* New York, NY: Dutton, April.

Knight, Frank H. 1921. *Risk, Uncertainty, and Profit*.

Krishna, Anirudh. 2010. *One Illness Away: Why People Become Poor and How They Escape Poverty.* Oxford: Oxford University Press, September.

Maranz, David. 2011. *African Friends and Money Matters.* Dallas, Tex.: SIL International, Publications in Ethnography 37.

Mas, Ignacio, and John Gitau. 2014. "Liquidity farming: How the poor cultivate relationships to create sources of future cash." NextBillion blog, 26 May.

Mas, Ignacio, and John Gitau. 2014 "Everyday financial alchemy: How the poor make money appear on cue." In NextBillion blog, 18 June.

Mas, Ignacio, and Premasis Mukherjee. 2013. "Searching for Metaphors of Household Financial Management." Unpublished manuscript, April.

Morduch, Jonathan, and Rachel Spikes. 2014. "Spikes and Dips: How Income Uncertainty Affects Households." Available on www.usfinancialdiaries.org.

Moser, Caroline. 2009. *Ordinary Families, Extraordinary Lives: Assets and Poverty Reduction in Guayaquil, 1978–2004.* Washington, D.C.: Brookings Institution Press, November.

Robinson, Marguerite. 2001. *The Microfinance Revolution, Volume 1: Sustainable Finance for the Poor.* Washington, D.C.: The World Bank, June.

Rutherford, Stuart. 1999. *The Poor and Their Money.* New Delhi: Oxford India Paperbacks.

Sebstad, Jennefer, and Monique Cohen. 2001. "Microfinance Risk Management and Poverty." Washington, D.C.: CGAP.

Shakespeare, William. 1599. *As You Like It*.

Shipton, Parker. 1990. "How Gambians Save—And What Their Strategies Imply for International Aid." World Bank PRE Working Paper Series No. 395. Washington, D.C.: World Bank, April.

Shipton, Parker. 2011. *Credit between Cultures: Farmers, Financiers, and Misunderstanding in Africa*. New Haven, Conn.: Yale Agrarian Studies Series, August.

Zelizer, Viviana. 1989. "The Social Meaning of Money: Special Monies. *The American Journal of Sociology*, Vol. 95 (No. 2): 342–77, September.

Zelizer, Viviana. 1994. *The Social Meaning of Money.* New York, N.Y.: Harper Collins.

Zollmann, Julie. 2014. "Kenya Financial Diaries: Shilingi Kwa Shilingi—The Financial Lives of the Poor. FSD Kenya, Working Paper. Nairobi: FSD Kenya, August.

Zollmann, Julie, and Daryl Collins. 2010. Financial Capability and the Poor: Are We Missing the Mark?" FSD Kenya, FSD Insights Issue 02, December.

Wilson, Kim. 2012. "Is 2012 the New 1810?" In Savings Revolution blog, 25 March.