Searching for Metaphors of Household Financial Management

(Metamon Project Report)

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MicroSave

Market-led solutions for financial services

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1. Introduction

This report summarizes the intent, activities, outputs and key lessons from an ambitious program of field work which sought to capture vividly and succinctly the essence of how ordinary people think about the management of their money and resources. Unlike much of modern research which strives for increasing levels of detail and completeness, we wanted to come up with simple constructs which could be stretched, by analogy, to shed light on the issues faced by a variety of customer profiles in a variety of situations. We had a pipe dream: to be able to express all this through a graphic metaphor. We called it Metamon (short for money management metaphor).

Not entirely unexpectedly, we fell short of that goal. But we believe that the purpose we set out for remains valid, even if elusive; and that the creative research techniques we used and the expressive devices we came up with deserve to be deployed more frequently along more formal forms of research. We hope to convince you that there is room to inject a little more inspiration, alongside the abundant perspiration, in our fieldwork and research outputs.

Viewing the question of household financial management in such broad terms forced us to try to synthesize all that we were hearing from people to a reduced set of principles or strategies before we could let loose the creative and expressive juices of the artists among our teams. We thus stumbled upon a model of household financial management practices which, though not necessarily containing any particularly new insights, we believe does a good job of summarizing a good bundle of insights.

This report begins by providing motivations for our work, both from a research and a service design point of view. The next section outlines our research methodology, especially the creative tools we used to capture what people think, rather than what they necessarily do, in relation to their financial management. The third section lays out our conceptual model of household finance. The fourth section presents our attempts at expressing the model more creatively and at developing broad metaphors. The final section provides our key lessons from the exercise, and proposes several ways in which this work can be taken forward.

2. Motivation

2.1. Gap 1: Mobile/Digital Money is Largely A Means of Payment, with Little Credit or Storage of Value

There has traditionally been a stark *access barrier* to financial services for the mass market in developing countries. Banks simply have not had the infrastructure and business model to deal with large numbers of low-value clients on a cost effective basis. Mobile phones are increasingly breaking the access barrier, and mobile money schemes are proliferating in many countries. But we are now seeing a *relevance barrier*: most mass-market customers with a bank or mobile money account simply do not use it very much or often, especially for storing value.

For most people, mobile or digital money is only fulfilling half the role of money: as a means of payment, not as a store of value. This reality puts into question the broader impact of those accounts in customers' lives, and even the potential to transform the payments landscape. People prefer to pay in whatever form of money they hold their value. If money is held physically, it is doubtful that electronic payments will make inroads into daily payments, and will remain relegated to situations where physical money really is at a disadvantage (mainly payments that are larger in size, occurring over longer distances, or in particularly unsafe environments). You can't go cash-lite on empty accounts.

Why do so many people not value electronic accounts for their store-of-value or credit enhancement features? This likely happens because digital accounts in their current form are not compatible with many of the informal money management practices that people are habituated to and comfortable with, such as fragmentation and mental earmarking of money earned, indivisibility and delayed liquidity of many physical savings instruments, social exchanges and peer pressure, etc. We unpack all these concepts in our description of our stylized household finance model.

2.2. Gap 2: Research Has Tended to Document What People Actually Do, Less So What They Think

In recent years, much detailed research has gone into understanding the financial lives of the poor, through financial diaries, standardized household surveys, targeted market research, focus group discussions and ethnographic accounts. Many of these field research efforts have been focused on telling us what the poor do and don't do in increasing levels of detail, and much less on telling us what drives their decisions. It is hard to infer a model of the thinking brain by observing a history of financial transactions: we are left with mountains of data and lots of guess-work. We have lacked insight into the inner workings of the minds of the poor, and we chart mainly what happens above the surface.

To understand the breach between desired outcomes and available options, let us look at two oft-cited examples of published work. Stuart Rutherford's The Poor and their Money (PaM) simply and powerfully explained how various financial services available to poor people complement or substitute for each other: savings accounts, loans and ROSCAs are ways to save up, save down and save through. Portfolios of the Poor (PoP) neatly and didactically synthesized how financial services can result in improvement in people's lives, by helping households smooth consumption, plan for investments and absorb shocks. Definitive and compelling as these two books are, there is a space in between them that seems yet unfilled: by what mental processes do people bridge the gap between the outcomes they seek (smoother consumption, more investment, lower risk – per PoP) and the instruments they have available (savings, credit, ROSCA – per PaM)?

The burgeoning research on behavioral economics applied to financial matters goes in the direction of filling this gap. Daniel Kahneman's Thinking Fast, and Slow shows how many decisions are driven by simple heuristic responses rather than resulting from more deliberate optimization incorporating all available evidence. This creates a number of psychological biases which drive a wedge between what people say they might do on cool reflection and what they do in reality. Understanding these biases and heuristic decision-making mechanisms can help build a more realistic model of actual household financial management. In principle, it can also help us conceive of mechanisms that either reinforce or over-ride them as appropriate, in order to lead people to better outcomes for themselves.

But we are far from developing such a cognitive model of the brain, and the research is by necessity fragmentary. Given important gaps in our understanding about the functioning of the human brain, we need a fuller, more approximative and abstracted model of financial decision-making by the poor. We propose to do so by teasing out fairly universal metaphors by which people decide how to manage their money. We seek to develop these metaphors through a creative rather than analytical process. Don't take this as science, think of it as a stop-gap while the behavioral economists piece together their painstakingly researched heuristic models.

2.3. Gap 3: It is Hard to Aggregate A Plethora of Customer Insights into A Product Development Logic

Despite the streams of data that are available about the financial lives of the poor, most product development is not incorporating sufficient customer insight. One reason may lie in a failure to condense and abstract our knowledge into something that is more directly useful to innovatively-minded service providers. We don't have established ways of aggregating the granular knowledge that is being collected from the field into higher-level constructs that capture the logic without all the detail. We hope that developing such metaphors can then more directly guide the practical development of financial products and tools that help people manage their money more effectively and at lower total cost.

Our hope is that the mobile phone can be more than a payment instrument – it should be a more comprehensive tool for managing one's money. The services presented on the phone should reflect the mental models that people carry in their minds, and should incorporate the discipline devices that people already use in their daily lives. Use of digitized financial services should naturally follow from the digitization of entrenched money management practices.

2.4. Gap 4: So Many Products and Such Difficulties in Marketing Them

The search for relevance and the increasing mass of research data being generated is taking us down the path of fragmenting customers' financial needs into ever finer slices, so that we can tailor products to each need. But how realistic is it to expect customers, who do not have direct physical contact with their mobile or branchless banking provider, to discover the existence, the benefits and the rules of use of an increasingly wide range of financial services? Do we really expect or even want poorly trained and supervised agents to be promoting these services with customers?

The mechanism for electronic or mobile delivery of financial services can be thought of logically as a sandwich. There is a financial infrastructure layer, an electronic payment platform, which manages the movement of money between accounts in real time (often referred to as payment "rails"). There are financial products made up of more or less structured packages of transactions in time and space that meet various user needs ("products on rails"). And there is a customer experience layer, through which customers can make sense of the whole thing. The user interface on the mobile phone – i.e. the set of screens through which customers are expected to navigate— is of course the most tangible and frequent expression of that customer experience.

The top and bottom are *unifying* layers which create efficiency, convenience and usability, while the middle one provides relevance (richness of functionality). Much of the research and practice today is focused on the bottom layer (how to build mobile money systems and cash merchant networks) and the filling in the middle (what products do customers need). Very little emphasis is placed on the top layer, and this risks leaving customers behind – they are interested in the whole deal, not the constituent parts.

It is doubtful that broader product take-up can happen in the absence of an appropriate customer experience or user interface layer which makes it easy for customers to: *(i)* relate financial services to how they think about their finances, and their needs and goals more broadly; *(ii)* discover new financial services or service features (on their own, or prompted by the provider); and *(iii)* understand how to use new services, in the light of their previous experience using other services.

The key requirement is that the user interface be intuitive, engaging and consistent. This can only be achieved if the user interface, and the products it is linked to, derive from a deeper understanding of how customers are expected to relate to the *entire* service experience. The ultimate objective is being able to design a single, mobile-enabled, mass-customizable experience that puts customers' goals and needs as the basis for the interactions between the bank and its customers.

3. Objectives and Scope

3.1. Research Objectives

We set out with three broad objectives, listed here in logical research sequence:

1. Develop and experiment with a new set of research tools that attempt to get to the heart of how people think about money management without having to inquire about or document specifics about their actual money management practices. This should help us to:

- Engage interview subjects more openly, without fear that they will be revealing private information about their finances which they don't feel comfortable in sharing.
- Introduce more variety of questions and situations, beyond their own personal circumstances, which might help us get a fuller and faster understanding of their attitudes to money management.
- Avoid the analytical bias of trying to infer mental models from observed choices and outcomes.

2. Develop several examples of broad metaphors which capture the essence (but not the full extent or complexity) of the thoughts and tensions they that people experience when they plan or organize their money. These metaphors might inform financial service providers' marketing efforts in a variety of ways:

- Product development: deciding what products and features are required to give customers fuller support around their money management.
- User interface development: providing coherence to the range of products and features offered to customers, through an intuitive and consistent (or, better, single) user interface.
- Customer targeting: permitting a more precise identification of services offered with client benefits sought and key client segments who stand to benefit most from them.
- Customer communications: articulating a marketing and communications campaign in an easy-to-understand and customer-engaging way.
- Financial education: developing tools that extend customers' understanding of their own financial situation, constraints and available options, directly linking understanding with usage.

3. Demonstrate how outputs of research on money management can be expressed intuitively and engagingly through a variety of creative methods. There are two purposes here:

- The metaphor should speak to clients themselves; if presented to them, clients should see themselves reflected in it. This is the best way to ensure that the metaphor is real and effective. This is in contrast with most research outputs, which represent an intellectualization of reality and speak the researchers' specialized language.
- It should be easier to draw attention from and engage with practitioners, who are ultimately the target users of the metaphors. They tend to have little time and inclination to read long papers.

3.2. Scope of Inquiry

The first challenge we faced is one of nomenclature. The language we normally use revolves around the *financial planning* that helps *people* meet their daily *needs* and attain particular *goals* by managing certain *instruments*. Each of these words is problematic.

- *Planning* and *goals* are too purposive. People often don't have very explicit intentions beyond the daily procurement of food and paying the next set of bills. Their longer-term desires are not fully prioritized *a priori*. To the extent that they do have longer-term intentions, they may lack a mental scheme or plan to achieve them.

- The word *needs* is often used as some objectified notion of subsistence, and invites a moralizing distinction from *wants*. The term may have meaning only for the most wretchedly poor, and even then it ought to be understood not only in physiological terms (calories, shelter, medicine) but also in psychological and cultural terms (tasty food, occasional small rewards, religious or communal donations). For everyone else, a need is anything you've become accustomed to or which most of your neighbors enjoy, whether strictly necessary for survival or not. Needs are therefore hard to separate out from other goals.

- It is also impractical to delimit the range of decisions encompassed in such *planning*, but it surely goes beyond the purely *financial*. Much of what people do to provide for and balance between present and future needs involves physical assets, human capital investments, social capital building and the application of their own labor, which may in fact never be obtained with or exchanged for money.

- The notion of *instruments* is also rather arbitrary. Many poor households would view a cow as an income supplement rather than as an investment instrument. Many of us would view education as a goal, rather than as an instrument, though having successful children may be the best thing you can do to secure your retirement. Indeed, the notions of income, goals and instruments are intertwined, and begin to take distinct meanings only for the fully banked wage earner.

- Finally, there are distinct perspectives that operate on *people*, as they may variously seek to provide for their own needs, or those of their household, extended family or clan. Their approach to money matters therefore needs to cut across multiple entities.

We do not propose new language here, instead let us state expansively the object of our inquiry. We seek to understand *how households organize the resources that are available to them in order to provide for their present and future needs and wants*. We are particularly interested in understanding how people build up assets and how they decide what form these assets should take, as this is the piece that is in principle most addressable by formal financial institutions.

3.3. Target Segment

This work is largely about poor people. But it is not their meager means that defines our target segment: instead it is the absence of formally contracted and fully salaried employment. To put it differently: our focus is on people who are not guaranteed a livelihood by anyone. The informally, self- or unemployed form a large majority in all developing countries, and they do tend to be poorer, in general, than the formally employed.
The salaried experience income as a steady drip, and this makes financial planning relatively straightforward. It becomes easy to figure out that 5% of monthly income ought to be saved to fix the roof in the house. Planning doesn't need to be done often, as there is no new information one day to the next, or even one month to the next, and re-planning today would only result in undoing yesterday's commitment. In addition, since the salaried are likely richer and better served by financial institutions, they will have various tools within their reach to assist them in planning (pencil on paper, excel spreadsheet, a planning widget in your internet banking page).

But if no one is guaranteeing you an income, you cannot live by rules. Why save 5% tomorrow, if it turns out to be a bad day – shouldn't you be dis-saving in fact, to put food on the table? And why also if tomorrow is a good day and you make twice what you normally make – shouldn't you instead save all of the extra money? Besides having to deal with greater income variability, you are also likely to have much greater exposure to expenditure shocks. Because you are poor, you are likely to have fewer medical services and protections, and even relatively small unplanned medical expenses can overwhelm your meager average pay. Every day does bring on fresh news (including of the 'no news is good news' kind), so every day you need to plan. Or rather: you'll want to plan every time you touch fresh money. Since you are likely paid daily, financial planning becomes a daily worry. In the words of Daryl Collins and Julie Zollmann, referring to their research in Kenya, "financial management is a constant, inseparable cycle of earning and allocating uncertain, erratic cash flows."

Proper financial planning is important for everyone. But we focus on the informal majority because financial planning plays a much more pervasive role in their lives. It is so much more top of mind, and at the same time more instinctive. This means that they are particularly vulnerable to those heuristic biases which are inherent in habitual, almost instinctive decision-making.

3.4. What We Mean by A Money Management Metaphor

A metaphor is a figure of speech in which an implied comparison is made between two unlike things that actually have something in common. It is commonly used to expresses the unfamiliar in terms of the familiar, or the more abstract in terms of the more concrete.

A money management metaphor is a mental model of how we expect customers to understand and relate to the various options they have to manage their money. Developing a metaphor need not involve uncovering any new insights about customers' needs, habits, aspirations or current practices. Rather, it's about being able to create a simple story or interesting image that captures enough of all those elements, in a vivid way. The test of the usefulness of a metaphor for our purposes is not how deep or complete it is, but rather how useful it is in starting and sustaining conversations with target customers about financial matters.

A good metaphor has three main characteristics. Most obviously, a good metaphor should be expressed vividly and succinctly, so that it can be conveyed quickly through a variety of media. Second, a good metaphor should contain appropriate *drama*, in the sense of capturing the main *tensions* that underpin people's financial management practices. Third, a good metaphor should be broadly representative, in the sense of being relevant across as many people as possible within the target segment. Metaphors need to be sufficiently abstracted from detail to fit many people, circumstances and even countries. The way the metaphor is expressed might need to be adjusted to make it culturally resonant, but the main thrust or plot would need to be fairly universal.

The point of view of the metaphor is an important decision. Our focus is on metaphors that capture how people manage their finances today, based on the range of options available to them. As such, it aims to drive broader marketing insights including about potential product opportunities. Financial service providers may want to explore what role their products play in the metaphor and how it can be enhanced.

Metaphors can be mixed!

In a literary context, mixed metaphors are frowned upon – they make the author look like he/she is trying either too hard or not hard enough. But this need not be a practical concern for us. When Microsoft launched its Windows operating system, it needed to give people an instinctive sense for how it worked. This was explained using analogies with the *desktop* (you lay things out on it) and the *window* (you zero in on things). The two metaphors are distinct but logically consistent because they both play on the spatial arrangement of items on the computer screen. The interplay between the two metaphors gave users a more complete sense of how the software could be used. It also gives people more chances for intuitive discovery of the embedded concepts or functionalities.

Metaphors can also be incomplete. There were some functions which Microsoft could not lay out on either the virtual desktop or virtual windows; these it collected in a special *start* button – which is present in neither desktops nor windows.

Sometimes it is better to explain a concept using several partial metaphors than to try to force everything into a single, but then necessarily more abstract and less precise, metaphor.

4. Research Methodology

4.1. Approach to Research

We wanted to maximize diversity of creative and methodological approaches, so we undertook metaphor development through four separate teams, each working largely independently of each other. We started with two teams running concurrently in India, one around Lucknow in Uttar Pradesh and one around Dehradun in Uttarakhand. Then we continued with two teams running concurrently in Bangladesh, both based in Dhaka. Each team was composed of different people, except the project coordinator who repeated service in two teams – one in India and one in Bangladesh.

Each team operated for 5½ weeks, comprised of two-day initial workshop, four weeks of field work, and a final week to develop the creative outputs and document their work. The work was carried out during January-March 2013.

Each team contained a multi-disciplinary skillset, including financial inclusion specialists (largely *MicroSave* staff), ethnographers, designers, and artists (painters, animators and cinematographers). Unfortunately, we were not able to get any linguist or semiotics expert, a skills gap which might be addressed in future work. Annex 1 shows the composition of the four teams.

Our approach was based on permitting maximum creative license to our teams. There was no prior approved methodology or game plan, beyond insisting that the teams maintain close interactions with target clients.

In general, though, metaphor development entailed a number of logical steps. First, our teams devised a number of ways of prompting clients to talk about money issues, and we listened for the common themes, the recurring phrases, the hot buttons, what was most important to them. Next our teams sought to synthesize the ideas and imagery collected into a variety of potential higher-level metaphors which had as many points of contact as possible with the customer stories we had heard. Then our teams tested specific elements of each candidate metaphor with clients, in highly simplified fashion, to see whether it resonated with them. From this feedback, our teams identified the single metaphor idea which seemed to offer most evocative richness on money management issues. These metaphors were then sketched out more fully and then built up and tested with clients through an iterative development process. The final stage involved the creation of an engaging tangible expression of the metaphor, expressed in a creative way on any kind of medium (storytelling, drawing, video clip, animation, radio or TV advert mockup, song...)

4.2. A Battery of Creative Research Tools

The teams employed a variety of research tools to elicit insights and reactions from respondents. A full description of these is contained in Annex 2, but below we describe the main categories.

We generally started with purely conversational research techniques, used to get a sense of our target market's general living and social circumstances, their main sources and uses of income, attitudes to and anxieties around money, and the main instruments they used. We mainly undertook in-depth one-on-one interviews, though there were also a few focus group discussions (structured conversations with a group of respondents) and shadowing (following a particular respondent through part of their daily life). The latter in particular provided more opportunities for visual identification of artifacts related to money management. In some cases we tried mapping out their responses visually in front of them, whether by connecting income and expenditure categories they mentioned to each other, or against a timeline.

Getting to know them

Inspecting money-related artifacts

Shadowing a farmer

Mapping responses against a timeline

Personal in-depth interview

We then conducted many interviews where we asked people to respond to various hypothetical situations. Sometimes the situations were expressed as a personal story told by the interviewer, and respondents were asked for advice. In other instances they were shown individual drawings or a series of sketches, and they had to infer what the issues were and what the moral of the story might be. Sometimes the stories were linear, sometimes they exposed choices explicitly, and in other cases they were more vague. Some stories had happy endings, and we asked them about what could have gone wrong and what they would have done about it. We also showed them more developed stories, as an animation on video. In another exercise, we asked them to map their financial relationships on a sheet containing concentric circles by recording what or who they resorted to in various situations.

Responding to hypothetical situations


A collection of situation sketches


Full story sketches


Exposing choices


Mapping relationships through various situations

In another set of exercises, we worked on triggering thoughts and associations. We started with purely verbal associations, where we would explain a situation and they had to come up with words or expressions that came rapidly to mind. We also prompted them visually: we asked them to pick out cards that were relevant in particular situations. Sometimes we reversed the process: we gave them names of financial concepts and they were asked to collect visuals that were associated with that (e.g. taking pictures with a digital camera). We also gave them cards and asked them to cluster them in various ways. In a more challenging exercise, we gave them images of things and asked them how they related to money.

Prompting thoughts and associations


Prompted associations with words and images


Image clustering


What things do you associate with money and finance?


What do these pictures have to do with money?

We also tried playing various sorts of games. A role-playing game involved having each family member express a goal, and then having the whole household or the head of household prioritize the various goals and develop plans on how to achieve them.

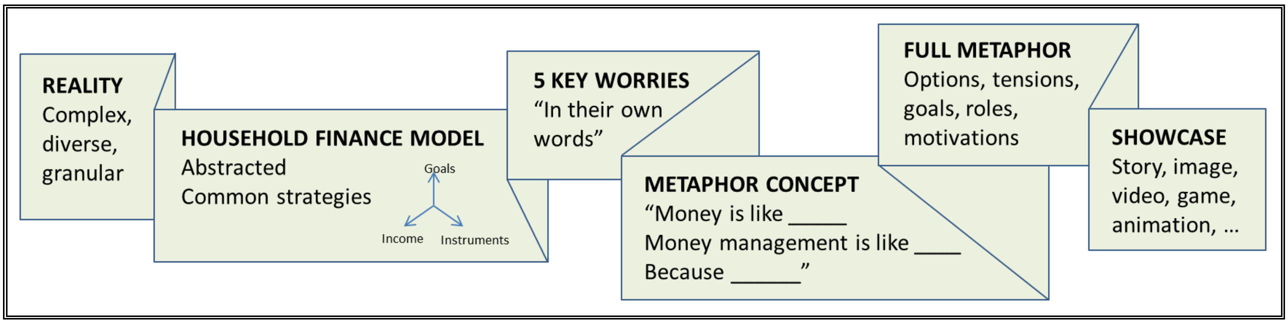
We also developed a board game (which we call *Grihasthi*, Hindi for *household*) which requires people to allocate income they receive with every roll of the dice to various purposes and instruments. Depending on what square one lands on, various situations (positive or negative) are simulated which the player needs to react to. The player has a couple dozen options to consider each time, between buying assets, putting money away in various savings vehicles and borrowing money from various sources. This game was designed to force people to make relatively instinctive financial decisions, which gave us an opportunity to explore verbally how they interpreted each instrument and why they made their choices as the game progressed.

The *Grihasthi* board game

A board game designed by one of our teams

4.3. Developing Metaphors

We did not approach metaphor development as a structured process, in order to leave as much room as possible to inspiration and creativity. Each team came up with their chosen metaphors through their own process, which involved several iterations of field research and team brainstorming. However, a rough pattern can be traced across most teams, which is reflected in the diagram below. To reiterate: this reflects more of an *ex-post* rationalization than a deliberate plan.



To go from the confusion of reality to a simple metaphor is overwhelming, so the first thing we found ourselves doing was creating an abstracted, intellectualized view of what we thought was happening within most households that we interviewed. We tried to classify concepts and strategies, and from this emerged the model of household finance presented in the next section. As we validated the relevance, consistency and completeness of the model through further field interviews, we found ourselves extracting the key phrases that people were using most often to refer to the concepts we were wrestling with. This offered another round of simplification of the key ideas we wanted to retain for our metaphor. Up to here is the reductionist stage of the process.

We then tended to search for key ideas which could represent money and its management. We searched for clues in the language and imagery our respondents used, but we added our own ideas. Various teams played with notions such as:

- A key: it gives access to opportunities
- Water: it flows, it can be stored
- Air: it flows and can change direction
- Light (torch): it is used to find hidden things
- Clay: it is malleable but you can harden it to preserve the shape
- Wheel: it lets you go further, it has multiple uses
- Speed: it gives you stability, it carries you further
- Road, bicycle: life is a journey
- Ladder: helps you climb/improve
- Time: limited resource
- Balloon: it keeps you afloat, it carries your dreams

In each case, it was important to have clarity of what represented the notion of *money* and what represented the notion of *money management* – and why. These can be captured in the form of short phrases. Once a team decided to develop a metaphor, the questions we kept asking each other were about the tensions and motivations that were involved in the metaphorical idea and how they related to the management of household finances.

The fuller metaphor ideas were repeatedly tested in the field, using both words and imagery to express various elements of the metaphor. In general we found that people took our metaphorical suggestions very literally, and hence they were of limited help in guiding the development of the metaphors. Client interviews at this stage were more focused at validating our concepts than in fine tuning them. The final step was to create one or more audiovisual outputs that expressed the metaphor most creatively and engagingly.

Linguistic cues to deeper-seated money metaphors
(Drawn from The Physics of Money, by Ignacio Mas and Kim Wilson)

The book Metaphors We Live By makes a compelling case that metaphors are much more than mere linguistic artifacts or literary flourishes: they are conceptual devices through which we structure our understanding of the world around us. They permit us to relate fuzzier concepts which cannot be sharply defined (things such as love and peace) in terms of physical notions which we can experience more directly through our senses. So: what does how we talk about money (in English) tell us about how we conceive it?

In the first instance we tend to look at money as a RESOURCE, and as such it can be earned, spent, set aside, used – we can even *make* it. It is a measurable quantity because it can have mass (as in *he has a ton of money*), volume (*buckets of money*), or height (*raising* or *putting* up money). It is appreciable through our full sensory range: *he touches money daily*, *he reeks of wealth*, *show me the money*, *money talks*. Because of its importance in daily life, the money resource is often analogized in terms of basic foodstuffs, as in *dough* or *bacon*.

More interesting metaphors relate to money as a SUBSTANCE, where it's the condition of the substance rather than its quantity that matters. We can associate money with temperature: readily-available *cash burns a hole in your pocket*. In international finance, speculative, short-term capital flows are *hot money*. Money can also have a tempo. Dubious traders can be out to make a *fast buck*, while economists will tell you that more readily convertible forms of money have higher *velocity*.

We also think of money in terms of the states of matter. We like to think of our monetary wealth as being *solid*: we *freeze money*, we name our currencies after weights (such as with the UK's *pound*), we think of people as being *loaded*. Easily available or spendable money we tend to see as being *liquid*: we speak of regular cash *flows*, of *pouring* or *hemorrhaging* money, of *pooling* it into a *slush fund*. If you manage your money well you will *stay afloat*, you will remain *solvent* (i.e. in the liquid), and you can avoid going *under* and having to be *bailed out*. The act of spending money is akin to vaporizing it: your account *dries up*, you *burn* money.

All of these depictions –using temperature, speed, physical state— are in fact highly consistent in basic atomic terms: hotter means faster means more fluid.

Sometimes we need to think of money in more probabilistic terms, in which case the money as a CONTAINER metaphor seems more appropriate. Your bet may be *in the money* when it is likely to go into your container: it's potential money. You're *out a dollar* when you lose it or waste it. And in certain cases we want to ascribe special enabling powers to money without reference to quantity, shape or form: it's money as a CATALYST, as in money which *greases the wheels of commerce* and *makes the world go round*.

5. A Model of Household Finance

In this section we construct a model of how people manage their household finances. By *model* we mean the distillation of many of the things we heard in our qualitative field research into a short list of common strategies or practices. There is always loss of diversity and nuance in such models, and we claim neither completeness in the model itself nor originality in the individual elements within it. But we felt that this was an essential step for us to take because it permitted us to focus our search for metaphors on those aspects which we thought would be most important to capture. We would like to think that we do calibrate our emphases and use words that are more descriptive of how people talk about their money.

We organize the presentation of the model around four main types of decisions people make on a recurring basis. We begin by a discussion of people think of their goals. We find that the literature often tends to exaggerate how many goals people have, how crisply they imagine them, and how deliberately they pursue them. We then discuss the three main roles that people assign to (financial and non-financial) instruments: *(i)* to separate available resources to work towards spending goals; *(ii)* to shape income in order to make it conform better with desired spending patterns; and *(iii)* to create buffers to be able to manage through difficult times. We conclude with a discussion of how individual instruments often cut across more than one purpose. A companion report, Musings of Money by Premasis Mukherjee, provides further elaboration and extensions of the ideas presented in this section.

Some essential readings on the financial lives of the poor

We have not burdened the write-up of this model with references to so much work that preceded ours, with which we would not have the richness of understanding we have today. For those who want to find out more about household financial management, the following references should prove valuable:

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5.1. Setting Spending Goals

5.1.1. Goal Reticence

Most people don't manage their lives against a very clear agenda of big (or salient) financial goals that they work towards. (By the way: do you?) When asked what their financial goals are, most people will mention fairly imminent, routine things: buy food rations, pay for their children's school fees for the next term as well as for this month's utility bill, replace an item of clothing, buy inventory for their small trading activity, or clearing a debt. Such *routine goals* require smaller but frequent set asides, and are prominent and well defined in people's minds through force of habit. Many of them are not very negotiable (in the sense that the household is likely to be quite determined to meet them), and hence need to be well backed up with a steady flow of regular income. Many of these are not small goals if viewed in their totality over a long period of time, but they are experienced as a sequence of smaller financial hurdles. People work *through* routine goals, one month at a time.

Other goals they work *towards*: they appear as much larger discrete chunks, and require prior assembling of the necessary resources. We call these *salient goals* because they are experienced as bigger-ticket sums and hence loom large in people's minds. Salient goals tend to come from particular lifecycle events, whether internal to the family or culturally driven, such as sending children off for further education, marrying them off, or preparing for an aged relative's death. But people tend to work through lifecycle goals sequentially, so they generally only provide one active salient goal at a time – or none at all, if circumstances do not permit.
Beyond these routine goals and the next lifecycle-driven salient goal, medium-term goals often seem oddly absent, as if people embraced little notion of gradual improvements in their living conditions. If pushed to come up with more goals, it is not uncommon for people to go all the way to the long-term aspirational: buy

land, build a permanent (i.e. brick) home – goals with a strong social driver but which they may not be working towards in any active way. And yet, you visit their homes and there are plenty of vestiges of past realized goals: there's likely to be a TV, a couch, a few bicycles, maybe even a refrigerator. The house has probably been expanded, there might be a latrine. Were these not each a salient goal at one time?

These types of items seldom come out when you ask people about goals because they like to keep their larger goals *fuzzy*. There is a natural tendency to resist setting one's heart on a specific thing, unless there is a good chance of achieving it or until the need is staring you right in the face.

People tend to maintain notions of what kinds of things they might aspire to, but rarely do they clearly prioritize, quantify or otherwise plan them – they are kept in the back of the mind. On the other hand, some sense of goal-setting is important in order to build the necessary resolve to set resources aside, otherwise no aspiration will ever have a chance of being realized. People solve this conundrum by treating the build-up of assets (whether in the form of goats, jewelry, or a savings account) itself as a *proxy goal*. The pool of assets becomes a goal in its own right, standing in for a number of things that can be bought with it. They will accumulate assets, and then they'll decide what to do with them among the fuzzy set of goals.

All the above types of goals –routinized goals, larger salient goals, or proxy goals representing a fuzzy set— are active goals in the sense that resources are planned against them. Alongside these goals, there may be aspirations or *desires* which may be very real and often spoken of, but which are not being worked on in any active sense. For younger families starting out, they might conceive of an old-age fund or buying land in these terms. One can view them as potential longer-tem goals or goals in suspension, though here we reserve the word goal for desires that are being worked against.

5.1.2. Focusing Goals

We have just seen that building up of assets often *precedes* the identification of specific goals. From time to time, a certain goal will be *individualized* from the larger set of fuzzy goals, i.e. made to come *into focus*. Which goal gets prioritized for individualization will of course depend on the sense of importance they attach to personal, family and social needs. But the *timing* of the individualization will likely be triggered by other factors. It might come about because proximity to a certain event may make a non-negotiable goal urgent, such as providing for a daughter's wedding which is now expected within some months, or contributing to next month's town festivities. In this case, the new wedding or festivity goal becomes a salient goal by itself, as a spin-off from the proxy goal (such as maintaining a herd of goats).

There is a natural timing about lifecycle events, balancing perceptions of importance and urgency. The large wedding expense will have been apparent from a child's birth. At the beginning it will be just an aspiration – there but not being worked against. At some point it will come to form part of a broader fuzzy set of goals. The daughter wedding goal might be active in the sense that the goats or jewels that are being accumulated might be destined to that purpose, but these assets might equally be destined for another purpose which may be seen as more pressing at the time. The wedding goal will be individualized at some point nearer to the expected date of the event, once it becomes more urgent.

Beyond sheer timing or social pressure, a goal may be individualized from a set of fuzzy goals if the household believes it has gained the capacity to meet it. This can arise from two different circumstances.
First, the pool of assets which constitute a proxy goal (e.g. a herd of goats) may get large enough so that the household can safely start entertaining a particular use for part of the bounty. This might occur because of sudden windfall income or because the value of saved assets has built up over time. They may start seeing a new roof when they look at their goats. In effect, the pool of assets constituting the proxy goal gets *raided* by what might appear as a new specific goal, one that would have been talked about loosely but not heretofore prioritized.

Second, instead of funding the new goal out of the proxy asset pool, the household might choose to *routinize* the goal by paying for it in smaller but more regular amounts. A household may opt to do so if it feels more comfortable in its capacity to generate regular income than to build up assets through regular savings or by syphoning off windfall income. One way to routinize a goal is to buy the item on credit. Once a TV is bought on credit, for instance, the *TV goal* is satisfied, and it is substituted with a *clear the debt* routine goal. Such credit is usually medium-term (6 months to 2 years) and where possible it tends to be highly structured into fixed weekly or monthly payments. 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 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 the pool of assets will remain untouched.

One could equally routinize a proxy goal rather than a particular goal – for example by buying goats on credit. This creates the discipline for building the assets that will be required to fund a set of as yet fuzzy goals.

5.2. Separating Resources to Match Spending Goals

It is common to observe households separate their resources or instruments to align with goals. In fact, it is this process of earmarking resources for a goal which, in our terminology, distinguishes a *goal* from a *desire*.

Separating resources or instruments and assigning them to various purposes helps households in two distinct ways. First, separation helps to *budget*, because it makes it easy to see where financial shortfalls – the gaps between regular income and routine expenses on the one hand, and between medium- and longer-term goals and available resources on the other – lie. Second, it helps to maintain *savings discipline*, because it creates a stronger association between saved resources and savings purposes. Explicitly assigning tangible resources (goats, jewels, cash in jars) to less tangible goals creates visual reminders of the existence of the goals themselves, and that those resources are *spoken for* and are not to be raided for other purposes.

Separation may operate at three levels. There is *mental separation* when the resources are ear-marked only in the mind. Resources may be briefly physically separated to help in budgeting (e.g. creating piles of banknotes on a tabletop), but the resources are then recombined and handled on a pooled basis. There is *resource separation* when piles are kept separate, one for each purpose, as when cash is placed in different jars. Cash in the jars stops being seen as general-purpose liquidity, but it's all still cash. There is *instrument separation* if the money for different purposes is invested into distinct instruments with different liquidity characteristics to match the goals.

Mental and especially resource separation tend to be used to apportion regular income across routine expenses, and in particular to protect against more immediate expenses swamping later obligations. The short-term nature of these transactions makes liquid assets like cash (or maybe a mobile money account) most convenient. Their regularity permits habits to form, thus reinforcing the more mild forms of discipline brought on by mental and resource separation.

Instrument separation tends to be prevalent for the management of salient goals. These goals tend to be of a more unique nature, so the resources set aside against the fulfillment of a salient goal would typically be invested in an asset which is itself a constituent of that goal (e.g. accumulating bricks for a house, or jewelry for a dowry), consistent with social custom (e.g. cows for a big festival), or similar in terms of size and duration. Instrument separation drives a stronger form of self-discipline, which is appropriate for larger salient goals which take longer to realise.

Fuzzy goals also tend be associated with specific assets. There may be several groups of fuzzy goals, each defined by a different pool of assets which is broadly consistent with the collection of potential goals in terms of size, duration and social custom. Pigs might be associated with fuzzy goals like motorcycle and house extension, while jewelry might be associated with fuzzy goals like children's marriage and health emergency fund. Fuzzy goals compete within each asset class, but they are not likely to cross-over into multiple asset classes. Thus, a household may maintain a portfolio of instruments acting as proxy goals (some goats, some jewelry) to cover the gamut of fuzzy goals it may wish to develop.

When a fuzzy goal is individualized into a salient goal, some of the underlying assets are likely to be spun off and ear-marked for the new salient goal. When the dowry goal gets individualized, for instance, specific items of clothing and jewelry will be placed in specially designated troves. This separation of the underlying assets is, in fact, the essence of individualizing the goal: it gets its own pool of resources – and hence, through tangibility, its own mind space.

5.3. Shaping Income to Accommodate Routine Goals

5.3.1. Flow Balance

The most basic notion of financial balance that households tend to operate under is that regular income ought to roughly match routine expenses.

Regular income is that which is fairly frequent (say, daily to monthly) and fairly predictable. Less frequent and less predictable income we refer to as *windfall income*. The size of regular income determines the volume of regular expenses that a household can comfortably expect to incur on a regular basis, and hence the volume of routine goals which can be embrace.

Key household concerns are therefore not only to increase total income but also to diversify income sources to create more income regularity. This might be done at the cost of reducing their productivity on their main income source. Thus we see farming families usually complementing their occasional farm income by engaging in non-farming activities, such as petty trading, craftsmanship or day laboring.

Absent financial coping strategies (on which more below), if regular income is too often not enough to meet routine expenses, the household will need to cut down on discretionary (non-routine) expenses, degrade their routine goals (e.g. eating meat less frequently) or suspend them altogether (e.g. taking children out of school), or live off saved resources. If, on the other hand, regular income exceeds routine expenses by too much, the difference is at risk of being spent on wasteful current expenditures. In either case, flow balance needs to be restored to avoid stress and temptation.

5.3.2. Investment Strategies to Shape Income

These flow imbalances are situations households want to avoid. They use a variety of investment strategies to change the household's earing profile as appropriate, converting excess regular income into windfall or occasional income, or *vice versa*, which we call *income shaping*.

If routine expenses are too often larger than routine expenses, households might seek to invest larger windfall income in assets yielding a regular income. For instance, it is common for villagers to have a couple of cows or buffalos which produce daily milk for most of the year. The cow is bought not for its store-of-value properties, but for its value-yielding properties. They see it as a productive investment, not at all as a financial investment. They would not look to sell the cow to realize a salient goal, or to cover through a bad patch.

The household might achieve the same through store or trade credit: creating a regular reserve of purchasing power which can be used in small daily amounts and repaid when windfall income is received. This is unstructured credit, without a strictly defined term though in principle relatively short term (up to a few months), and typically paid on a balloon (lump sum) basis – once the borrower comes into money. Access to such credit lets people take regular advances on their windfall income.

If, on the other hand, regular income exceeds routine expenses by too much too often, a lumping mechanism can be used to turn regular income into de-facto periodic windfalls. People might do so by putting money aside regularly in a lockbox at home, asking their employer to pay part of their wages with less frequency (saving through the employer), participating in a ROSCA (community-based rotating savings group), or raising goats which they can sell every three months or so. Note that under this interpretation of lumping, lumping instruments will not have an association with any earmarked goals; their role is simply to make income disappear and reappear with different frequencies. The process of assigning that money to (salient or proxy) goals will occur when the money is liberated, i.e. fully lumped up.

5.3.3. The Primacy of Routine

Investing in assets yielding a daily return, taking on small frequent credit amounts to be repaid on a balloon basis when there is a windfall, and syphoning off regular income to create windfalls through lumping – these are the most recurring forms of household financial management we have observed. These instruments are about manipulating the cash inflows of the household, and we call it (somewhat metaphorically) *income shaping* because that's how people tend to talk about it.

Indeed, most of our conversations with poorer people reflected a primary preoccupation with changing the *timing* and *predictability* of inflows and the satisfaction of routine goals. These issues occupied more mind space than the desire to achieve longer-term goals through inter-temporal budget optimization. Routine goals tend to be managed more actively than salient goals, probably because they are more immediate and involve habit formation. Once an insufficiently tended-to salient goal becomes pressing –the event is creeping up— the response is likely to be to focus on it by routinizing it: resorting to debt. This will in turn put pressure to try to shape income in order to be able to absorb the new debt repayment routine goal.
Income shaping can be said to be *consumption smoothing* by another name. So it is, but the term *income shaping* puts emphasis on the primary mechanisms that people seek rather than on the objective itself.

5.4. Building Buffers for Emergencies

We have seen so far that households designate resources in ways to either shape income or to fulfill (salient or proxy) goals. But in addition, they want to ensure that resources can be harnessed in case of dire need, for instance if there is a sharp negative income shock (due to weather, crop prices or unemployment) or a prolonged medical emergency.

This can be approached in three ways. First, the household might choose to make the creation of a buffer (such as a grain reserve or a health emergency fund) a salient goal in itself. In this case, they will dedicate specific resources to fulfill this goal over time, as they would for any other goal. But often they do not feel like they can build up such earmarked assets in the light of many more immediately pressing goals.

A second, more common approach for building a buffering capacity is to ensure that the collection of assets which they have notionally assigned to other salient or fuzzy goals are available in case of larger emergencies. We can state this more formally by saying that emergency uses are always within the fuzzy set of all goals. In this case, the instruments backing these goals will be selected with some consideration given to how easily value can be realized from them in case of need.

This creates a preference for accumulating assets whose value can be easily extracted without selling the asset itself, and hence without obliterating the goal they are attached to. This will be the case with assets which can be pawned (such as jewelry) or which one can borrow against (e.g. some savings accounts). If such options are not available, in the event of an emergency people will chose in preference to liquidate assets that are more easily sold and reconstituted. For example, people will sell their goats in preference to cows because there is a ready market for goats, goats can be repurchased in smaller chunks of money than cows, and goats grow and reproduce faster than cows.

A third approach to creating a buffer is to cultivate the borrowing capacity of the household. Most often, the ability to borrow –or, more broadly, to secure financial support from others—comes from people within their community: their family and friends, the church, the moneylender. These sources of borrowing represent often a last resort, sometimes a first resort.

Households engage in a number of behaviors to strengthen ties with community, and they incur a number of costs (supporting others when they are in need, donating money for festivities) which create options for future credit or support from the community. Most households cultivate this social capital assiduously, and all the money they spend in this regard can be interpreted as routinizing the goal of creating social capital or borrowing capacity. Accumulated social capital can be thought of as an asset, just as much as the jewelry one has hidden at home.

Social capital is deeply woven into financial behavior, as it not only directly expands the options one might have in the event of an emergency, but also cements one's place in a community which may improve livelihood opportunities.

How different segments strategize

The household finance model described above is based on generic strategies people employ. But how particular households use these strategies differs based on personal circumstances. We can, though, make some generalizations based on broad population segments. For instance, we found that, relative to richer people, poorer people tend to:

- Plan on a much shorter time horizon: financial management is seen very much in terms of daily survival.
- Keep their goals much fuzzier: their lower income and shorter time horizon means that most goals they might have seem practically unattainable, and hence they don't bother to individualize them.
- Rely much heavier on friends and family for emergencies: their saved buffers were minimal, so every emergency feels like a scramble.

We also found that, relative to men, women tend to:

- Focus more on survival and risk management (mitigating downside) than on maximizing happiness and creating new opportunities (managing upside).
- Worry more about buffering (stashing money away, being able to get credit whenever needed) than income shaping
- Manage more distinct goals (expenditure categories), and as a result incur in more money fragmentation.

5.5. Summary: The Multiple Roles of Financial Instruments

Financial instruments tend to be used for three logically distinct purposes, though often specific instruments serve more than one of these purposes:

- *Income shaping*: The main preoccupation of households is with the quantity and especially the timing and predictability of the income they earn. Income shaping is how most people achieve consumption smoothing. Cows are often bought for their daily milk, not as a store of value. ROSCAs are entered into to create small windfalls, not necessarily to ear-mark funds for predefined purposes. Store credit is sought to advance income from the next small windfall to tie over a temporary shortfall in regular income.

- *Fulfilling goals*: Instruments can also be vehicles for assigning value to fulfill particular goals. Value might be stored and goals deferred by accumulating assets, or future cash flows may be anticipated by routinizing goals through credit. Instruments assigned to fulfill goals are used to modify the inter-temporal distribution of income over longer time spans.

- *Buffering*: Creating the capacity to absorb shocks, either by building up a pool of assets that can be sold off in case of need, or by creating avenues to borrow or receive support from others in the community (here the option of credit is the underlying asset). This is a precautionary function.

Little income means few instruments, so there is a delicate multiple act that some instruments are often asked to play. We found that people can articulate broadly the purpose they have for various instruments: which they have for current yield and which they have for storing income; which goal or collection of goals they might be used for; what is the sequence of instruments they will call on or dispose of in case of emergency.

The nuance in the financial lives of the poor lies precisely in the fact that, having few resources, they cannot afford to overly specialise the purpose of each instrument and hence they need to assign multiple roles to each. This gives them a precarious handle on their goals, and in consequence they often opt to keep many goals tentative or fuzzy.

The role of credit in the financial lives of the poor

We have used the word *instrument* to cover both savings and credit mechanisms. Given the special importance that much of microfinance has placed on credit, it might be useful to restate the three main purposes of credit according to our model:

- Credit is a mechanism for routinizing goals, that is, for converting what would otherwise be a daunting big-ticket salient goal into a regular pattern of smaller payments. Its key purpose is to bring short-term spending discipline and to liberate enough resources over time to devote to a bigger goal.
- Credit is a tool for resolving temporary flow imbalances which can occur from time to time because of a shortfall of regular income relative to routine expenses. In this case, households will seek credit sources which in effect allow them to advance the timing of future regular income or, more commonly, to tie them over until a windfall income event occurs.
- Credit is often the main tool they will use in the event of an adverse shock. Creating options for credit by building up social capital is a key risk mitigation strategy they employ.

5.6. Some Customer Stories

Here we link the concepts we have just developed to two customer stories we collected in the course of our research, to give readers a flavor for the kinds of lives some of our research respondents lead.

Income Shaping Balancing Separation Lumping Proxy Goals Resolving Fuzzy Goals	*Jahanara Begum* lives in Jankipuram, in the outskirts of Lucknow, India. Her husband is a hawker in the local pavement market and sells low-cost shoes. Since income from her husband is not enough, she does some tailoring and *chikan* (a form of local embroidery) work from home. They have two sons and two daughters. The eldest son lives in Mumbai and works as an unskilled labour at construction sites, and the other three children still go to school. Their family income hovers around INR8,500 per month. Every day, in the evening, her husband gives INR100-200 to her from the sales proceeds to carry out daily expenses. She keeps this money in several of her lock-boxes. She has dedicated lock-boxes for her son and daughters' education and additional expenses like health emergency and regular food item expenses. Whenever required, she takes money out from the appropriate lock-box and pays the due. She also puts coins in a separate clay pot (*gullak*). This clay piggy pot is accessed for annual expenses for the Eid festival. She also saves INR600 every month in a *Sahara* (a non-banking finance company) monthly deposit scheme. Money for this savings is taken out from the surplus of the regular expense lockbox. The scheme gives return (mostly the savings only with nominal interest) every five years. Two years ago she got INR15,000 as return from Sahara. She had no prior plan for this money. When she received it, she was confused between whether to reinvest the money in another scheme of *Sahara*, put the money in her husband's business, finish their unfinished toilet with the money or buy a TV. Finally, yielding to her daughter's pressure, she purchased a TV and also bought some jewellery with it. She hopes to use these jewelleries in her daughters' marriage. She also wants to buy a house for their old age. She has another *Sahara* scheme maturing next year and she has no plan for what she will do with the money. She feels however that construction of a toilet is her priority.
Income Shaping	*Rajesh* is a part-time rickshaw puller from Lucknow. He is 27 years old. *Rajesh*'s family lives in a village in Sitapur near Lucknow and has 2 hectare of agriculture land. The main crop they cultivate in village is wheat. However, they seldom sell their

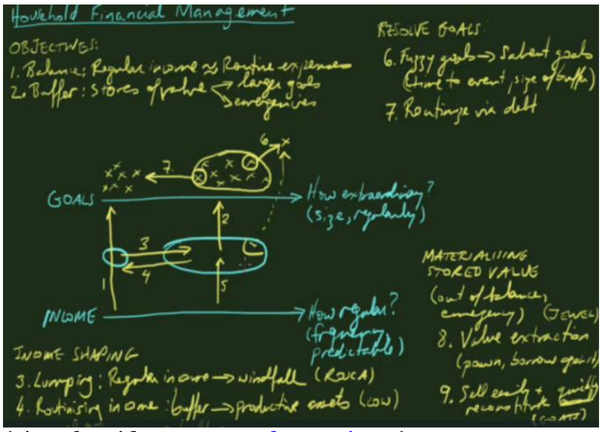
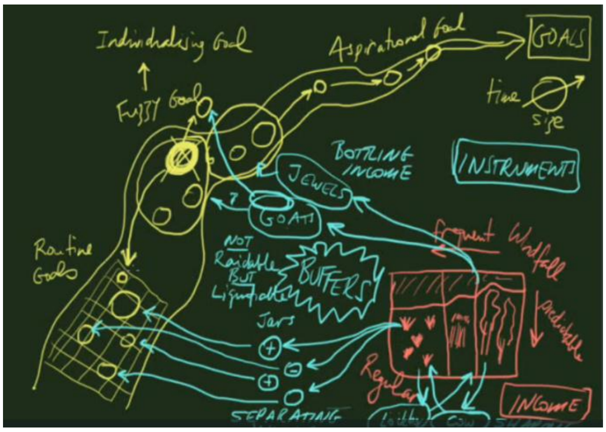
Separation	entire crop in one go. Rather, his family stores the grains and ration them for every month till the next crop. For any and every regular need, they sell 1-2 Kg of grain and fulfil their daily need. For last three years, they have also cropped *mentha* grass in the non-wheat seasons. This is a cash crop and yields nearly INR100,000 – INR150,000 for a cropping of 3-4 months. Last two years' *mentha* income is kept at a bank account, earmarked for *Rajesh*'s sister's marriage. While the wheat is growing in the fields, *Rajesh* goes to Lucknow to earn additional income. Last year, he did that thrice for 15 days each, and earned some INR2,000 each time.
Income Shaping Balancing Buffering Separation Routinising Goals Lumping Building Social Credit	*Gokran* of Barabanki is a 30 year old farmer. He and his mother, sister, wife and four children (three boys and one girl) living together in a semi *pucca* house. They own a colour TV with satellite cable a bore well water pump inside their house. Two elder sons go to school and the other two are toddlers. He is the sole bread earner of the family and takes care of the farming land. One source of income is the proceeds from the farming which is seasonal (every four months) and the second is by selling milk from a cow which they bought three years ago. *Gokran* is the one who manages the finances, and he keeps the family's cash locker (known as "*galla")*. He does not share most of the financial information with his wife, though he consults some decisions with his mother. *Gokran* uses the income from selling milk to manage their daily/monthly needs such as ration, grocery, schools fee, maintenance cost for the cow, and repayment of the loan which they took to purchase the cow. More than half the proceeds from farming are generally ploughed back into preparing for the next farming cycle, and the remainder is put into a savings bank account in the Grameen Bank. The money in this account is meant for unplanned needs such as medical emergencies, but also some planned ones. *Gokran* plans to renovate his house and build a new house. However, his immediate goal is to get his sister married, so he has parked the goal to build the house for a while and has been building up savings for the wedding. He also plans to purchase another cow, for which he wishes to take another loan. By doing this he can fulfil his goal immediately and can repay the loan from his monthly earnings. Two years ago, he purchased a second hand motorcycle to commute to the nearby town. For this purpose he started saving INR2,000 each month in a local *Bisi* (local name for RoSCA) for 6 months and complemented the remaining amount from the farm proceedings. He has also taken a 16 year long life insurance policy (endowment life insurance) for his youngest daughter (who is one year old) so that by the time she is old enough to be married, there is some savings built up for her in the form of cash. His mother is also a member of an SHG where she deposits INR1,200 per month. The bank allows anyone of the group members to draw a loan from that accumulated amount whenever in need. When probed about the reasons for doing this, she replied that this allows her an access to ready cash when in need or emergency.

6. Depicting Metaphors of Household Financial Management

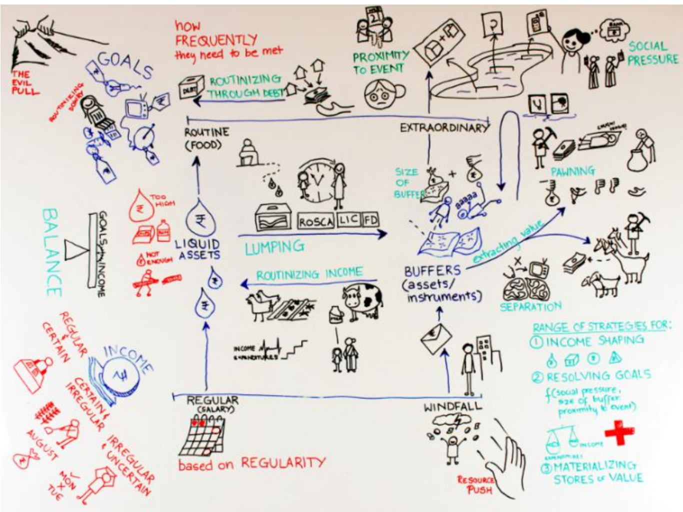
In this section we present the various attempts that were made by the teams to express creatively their understanding of household financial management practices. We begin with visualizations around the model described in the previous section, and then we turn to more self-standing metaphors. These materials are meant to be self-explanatory, so they are offered under a logical classification but without much further explanation. It is left to the reader to extract their meaning and judge them for their effectiveness as a metaphor.

6.1. Visualizations of the Household Financial Management Model

The first two items are pedagogical presentations of the model on a virtual blackboard. One is entirely conceptual and demands quite a bit of attention from the reader. The other one uses mixed metaphors to explain a similar set of concepts in a more didactic way.

1. Conceptual blackboard presentation	2. More dramatized blackboard presentation
 (view the video on YouTube or Vimeo)	 (view the video on YouTube or Vimeo)

The third item is narrated from a more customer-centric viewpoint, and is illustrated with evocative rapid sketches.

3. Presentation with evocative rapid sketching	Scenes from *the making of*:
	

With special thanks to Omkar Deonalli & Samira Jain (view the video on YouTube)

The next item is not so much a representation of the model as a live demonstration or validation of it. It consists of a video recording as an autorickshaw puller plays the *Grihasthi* board game that one team developed as a research tool. His answers to the interviewer's questions as he progresses through the game are matched against the concepts defined in our model.

4. *Grihasthi* board game being played to demonstrate the model

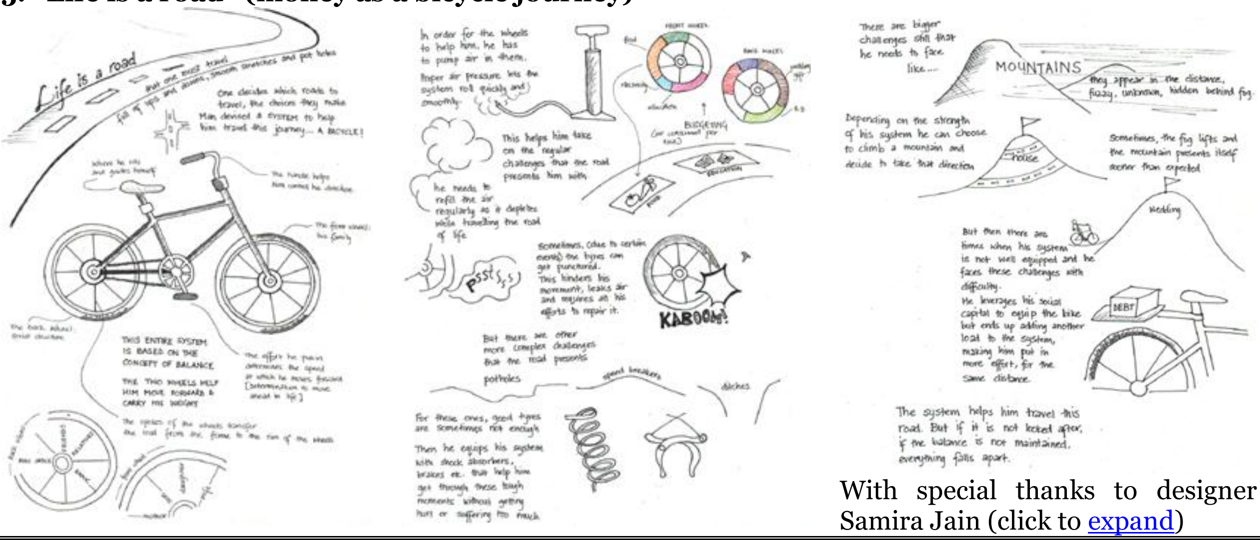
With special thanks to Shruti Dhawan (view the video on YouTube)

6.2. Looser Metaphorical Representations

The following items break out from the household finance model as a basic plot and enter the metaphorical space more vividly. These are trying to depict as many elements of the model as possible, at the cost of being more belabored than they otherwise might have been.

Item 5 is a drawing of a fuller story, where money management is akin to riding a bicycle on the journey of life.

5. "Life is a road" (money as a bicycle journey)



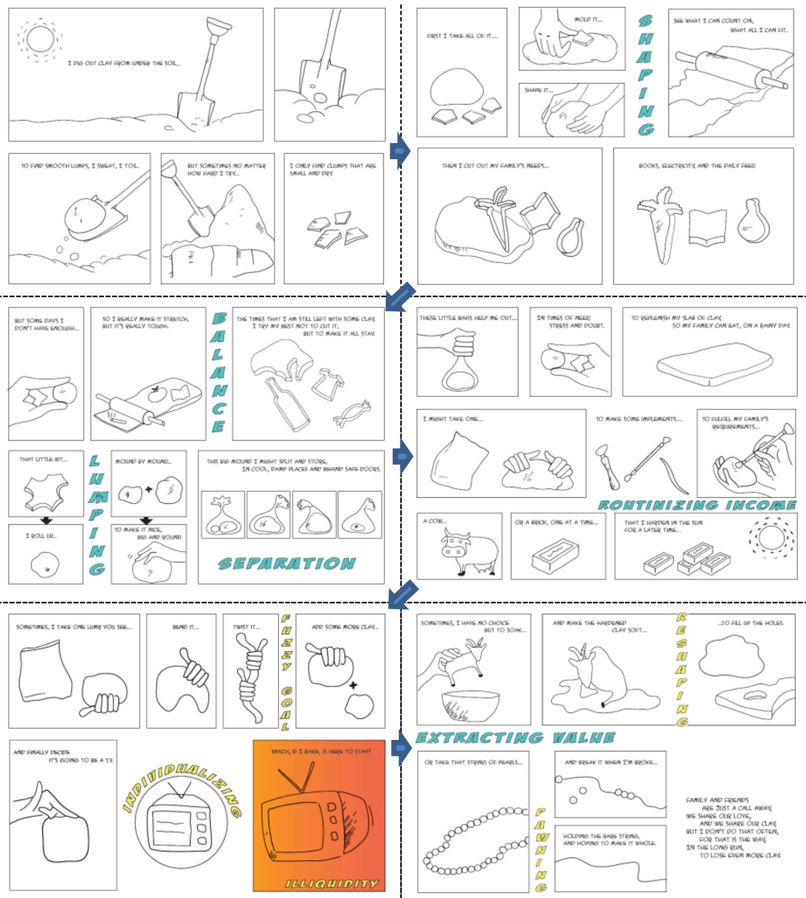
With special thanks to designer Samira Jain (click to expand)

Item 6 and 7 draw an analogy between how one manages money on the one hand, and handling dough or clay putty on the other.

6. Money as dough

Income is a mass of stuff that you can do many things with	Some of it comes in nice regular lumps 	... some of it comes in irregular and unpredictable shapes 
To make it useful it first needs to be reshaped	When it's all out of shape you want to make it more regular 	... or you want to give it a particular shape to fit a particular purpose 
You then want to separate it out	Some of it is to pay for routine expenses *(picture these in the shape of a lightbulb, book, food...)* 	... some of it is to form larger pools to back fuzzy goals longer into the future 
The ones you set aside for the future need to be put out of reach	You want to harden it (so that it won't be used for anything else) 	... and you want to store it in a hard-to-open container 
But you can extract value from the bread you set aside if you really need to	You can slice it and sell bits of it 	... or you can pawn it and take out the value inside it 

7. Money as clay



With special thanks to designer Samira Jain (work in progress)

The next two items play out metaphors through animation. In item 8 money management is explained through a fishing metaphor, and item 9 is an animation of a simulated video game that picks up on the idea that life is like a journey through an obstacle course.

8. Money management as fishing

With special thanks to designers Samira Jain & Omkar Deonalli
(view the video on YouTube or Vimeo)

9. Animation of a video game mock-up showing life as a journey through an obstacle course

With special thanks to game designer Sazzad Majumder
(view video on Vimeo)

The final metaphorical representation in this collection is a movie clip where money management is explained through a metaphor of using water.

10. Short film "Liquidity"depicting money management practices as if it was water management

The making of:

Original song:

ডাল ধরিয়ে ঝাকলে যদি পরতে তুমি সই
তোমার মান থাকিত কই...।।
আছে তোমার উড়াল ডানা জগত জুড়ে ওড়
নিজে ঘোর ঘোরাও চাকা মন মদিরা গড়।
বুঝি তখন হিসেব কষা এদিক সেদিক
ওই...।।
টানাটানির ঘর ভাবনা চৌদিকে যায় আঁখি
বাক্স পেটরা ভিন্ন করে পালক সাইজে রাখি।
তালা হলে সময়কালে চাবি পাব কই...।।
থাকলে গোলা ভরতি কানা আনন্দে মন নাচে
সবার সাথে বাগবাগিচা একটু খেয়ে বাঁচে।
তোমার পাগলা ঘোড়ার লাগাম ধরা আমার
হল কই...।।
কখনো বা আকাশ জুড়ে আশার ভেলা ভাসে
নিচের দিকে কাঠ ফাটা মাঠ পোড়ে সর্বনাশে।
আমি তোমার ধারায় সিক্ত হতে অধীর হয়ে
রই...।।

Friend, if you would have been available at a shake of a
tree, no one would have respect for you
You have got large wings and you fly the whole world
You travel and make the wheel run, make our heart roll
Then I understand the value of taking care of you and
account for you.
In a house of scarcity, I have to look at all sides
I have to keep separate boxes to store your feathers,
Else, how can I find my keys at the time of need.
When there is enough grain in store, I dance with joy
With all, even my garden gets their share of food
Alas, I cannot tame the rein of your mad horse.

Sometime, there is hope only in the sky
While the ground is dry and burns at desire
Then I wish I can be drenched at your flow of rain.

With special thanks to Shipu Moniruzzaman for film direction and Jahirul Haque for original music (view video on Vimeo)

7. Conclusions and Recommendations

7.1. Lessons from Our Field Work

1. **It is very useful to vividly capture what people think, not just what they do**. Product marketing, in the end, needs to appeal to the mind. New products need to have a clear role within people's mental models. We question how much you can infer about how people think about money simply by observing the financial choices they make. There needs to be a deliberate effort at capturing those thoughts, and expressing them in cogent terms.

   Conversations about money often turn philosophical, as they revolve around deep-seated desires: for your children to lead a better life than you had, to minimize life's daily hassles and humiliations, to feel like you are keeping up and fulfilling your obligations to kin and kith, to reduce the feeling of present or future dependency. Financial lives are shaped by the conflicting demands of these desires, and people will employ a variety of tricks and stratagems to balance between them. Only in the context of this broader outlook can we begin to make sense of micro-financial decisions they make to set money aside this way or that.

2. **There is a lot of value in approaching field research without appearing to ask intrusive questions of interviewees.** Money is a sensitive subject, and asking people questions on their actual money management practices immediately puts them on the defensive. Their answers are likely to be ambiguous, evasive and incomplete, if not downright misleading. Moreover, they are likely to tailor their answers to whatever the interviewer seems to be interested in, whether it's goal-setting (yes, I have many goals!), budgeting (yes, I keep close tabs on how I spend money!), or use of particular instruments (I have savings! I have credit!).
   It is possible to get at how people think about money management by transporting them in evocative ways to a variety of situations and having them react to them. Creative research tools (a story, a video clip, a game) can achieve this quickly and effectively. This allows for deeper probing of their reactions without appearing intrusive. Intelligently designed research can explore nuance and test consistency of answers by framing the same issue in different ways, through different situations. It also allows for a broader range of questioning, since one can explore different hypothetical situations rather than being bound by what actually has happened in their life in order to make sense of what they actually do.

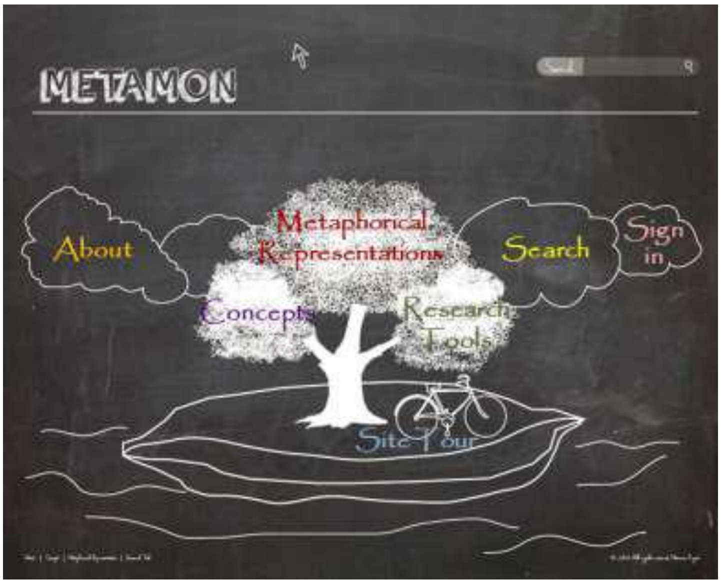
3. **It is feasible and useful to generalize on a reduced set of financial management strategies that people frequently employ, understanding that each person will use different**

combinations of those strategies. Having a model doesn't imply being restricted to a single view of the world. Think of it like playing a game of chess: we can catalog the various moves that are possible, even though no two games will ever be played the same way. It's the same game for everyone, though everyone plays it differently.

Similarly, the household financial management model presented earlier is best understood as a collection of possible strategies. It can be a useful lens with which to interpret the different attitudes and choices that people reveal when they are interviewed (which strategies they tend to focus on, and why), and to formulate hypotheses about how new products and features might be interpreted by target clients.

We were not able to test the universality of the model and metaphors we developed, since India and Bangladesh have a lot in common. However, those of us with experience of working in other countries were struck by how common the basic themes of daily financial struggles are.

4. **A core challenge with the metaphor development work has been that it was not hypothesis driven**. We searched for a metaphor to illuminate a very fuzzy concept – financial management. Fuzzy because it has no clear boundaries (how many decisions in life are ultimately *not* about preparing for the future?) and no clear outcomes (unlike, say, *being rich*). We could not start with a *hypothesis* for a metaphor, because that itself would have to be a metaphor which someone would need to have dreamed up. Research experience has shown time and time again, in one context and another, that without hypotheses it is very difficult to frame a research activity. This is a key limitation with our approach.



5. **Another challenge is how literally people tend to interpret ideas presented to them**. Time and again we were struck with how literally people interpreted concepts which were meant to be metaphorical. This made it hard to develop metaphors with customers under any kind of co-creation process. It also meant that metaphors, to be useful, need to be very concrete. Perhaps a failing of most of our metaphorical representations was that they are too broad and abstract, and that is the almost inevitable result of seeking to explain too many things through a single metaphor.
In future work, it would be useful to try to explain the concepts of money management through a patchwork of metaphors (see box on mixing metaphors above). We can more easily think up metaphors for the notion of balance (a bicycle which you need to keep straight up), for temptation (fruit which can be either eaten or planted), for income shaping (buying a fishing rod rather than a pile of fish), etc. But it is probably too much to expect a simple metaphorical notion to emerge that incorporates all these ideas.

6. **Building a simple, all-encompassing metaphor may not be possible**. We constantly had to grapple on the one hand with the instinct to focus on a few strategies to make the metaphor come to life vividly, and on the other hand with the desire to keep the full richness of our model (How is credit represented here? Are we neglecting the social side?)

7. **There is a lot of value in expressing research findings creatively and artistically**. We brought in designers and artists from the very beginning, and they were full members of our research teams. Inserting a creative expression element in research projects from the start helps in many ways. During the life of the project, it forces a diversity of skills (and hence perspectives) to be introduced within the team. It increases the sense of excitement, uniqueness and fun for team members. It reinforces the need

to think about how to communicate ideas, and how to simplify them, every step of the way and not just at the end. And at the output level, it helps engage with a broader range of audiences.

7.2. Suggested Way Forward

1. Develop a curated website which holds creative research materials like those produced through our work. This would include creative research tools to get research subjects to talk openly about financial management matters (hypothetical customer stories or videos, cards and visual prompts, board games, etc.), metaphorical representations of the research findings (full or partial metaphors), as well as more conceptual approaches to the problem (such as our model of household financial management and other relevant empirical work). The website would allow browsing and downloading of all available materials, invite interaction (by posting comments, 'liking' content, or 'following' threads to trigger notifications whenever there is new material), and uploading of relevant creative materials by anyone who wants to contribute their work and thoughts. The hope is that the website might inspire and help others to experiment with creative research tools. Annex 4 outlines what such a website might contain and look like.

2. Explore the development of metaphors around more concrete aspects. For instance, metaphors might be developed around new product ideas, which can help guide product development decisions (feature set, user interface), the market positioning (target segment, needs addressed), and product marketing communications. In other words, these would be metaphors around proposed solutions rather than metaphors representing the problem.

Annex 1: Team Members and Acknowledgements

The Mountain Team based in Dheradun, India

Mukul Kumar Singh

Mukul, an evolved banker, is a Senior Analyst in *MicroSave*. He was involved in several market research projects in mobile banking domain in last 3 years. Mukul is a dedicated follower of *Yoga*.

Abhitosh Ghongade

Abhitosh , a Masters in design from IIT, Kanpur is now a design researcher in CKS, India. He works on human centric designs and enhanced user interfaces. In the past he has been involved in vehicle, mobile phone software and FMCG product design. Abhitosh is a robotic enthusiast.

Amit Garg

Amit Garg is a financial inclusion specialist working in *MicroSave*. For last 5 years, he is involved in several market research and technical assistance projects across Africa and Asia. Amit is an avid traveller.

Samira Jain

Samira is a student in National Institute of Design, India. In past, she has worked with various microfinance institutions for designing their financial literacy campaigns. Samira loves to learn new languages.

Omkar Deonalli

Omkar is a photographer and animation expert, but he calls himself a visual communicator. He has designed several animations for advertisement and has developed comic strips. He thinks photography can be a tool for solving many of the world problems.

The Plains Team based in Lucknow

Ritesh Dhawan

Ritesh is an Analyst from *MicroSave*. Over the last 3 years and has provided technical assistance to various financial institutions on mobile banking and product development.

Jaspreet Singh

Jaspreet is a refined banker and is now a Senior Analyst in *MicroSave*'s mobile banking domain. Earlier he was with a leading bank of India in their agency banking channel. He is a very good golf player.

Muzammil Hussain

Muzammil is a design researcher by profession, passion and training. He works with CKS. He has worked in FMCG, mobile and car design research in past. Muzammil is a tattoo lover and gets tattooed often.

Brijesh Devareddy

Brijesh is a designer by training and ethnographer by passion. He works with CKS as a design researcher. He has worked in project in projects for major mobile giants of world for design inputs. Brijesh is a rock music enthusiast.

Shreya Anand

Shreya is a sociologist. She works with CKS as an ethnographer. She has also

Shruti Dhawan

Shruti is a graphic designer cum advertising expert. Earlier she was involved with

conducted research around consumer durables and mobile phone usage. Shreya loves volunteering for any social cause.

one of the leading media houses of India in their creative team. Apart from painting, Shruti loves dramatics and acting.

The Meta Team based in Dhaka, Bangladesh

Rajarshi Dutta Barua

Rajarshi is a Senior Analyst from *MicroSave*. He has conducted several market researches in Bangladesh, including a flagship mobile banking survey commissioned by IFC. Rajarshi is also a movie enthusiast and is very fond of mobile and computer games.

Abhishek Lahiri

Abhishek is a Senior Analyst from *MicroSave*. Earlier he was with a leading bank of India in their SME and microfinance functions. Abhishek has spent nearly 1.5 years in Papua New Guinea conducting research. He is passionate about security studies & international relations.

Sazzad Mazumdar

Sazzad is a printmaking expert and an animation specialist. In recent years, he has focussed more on designing games and mobile applications. Apart from designing games, Sazzad is a movie enthusiast.

Snigdha Shekhar Biswas

Snigdha is Masters in fine arts by training and a freelance painter by profession. His expertise lies in drawing portraits, illustrations and wildlife painting. Apart from that Snigdha is a photographer and prefers to be called as a perfectionist.

Nawsher A. Noor

Nawsher is the IT & business solutions manager in bKash, the pioneer mobile banking company in Bangladesh. Earlier he was with cellBazaar, another award winning mobile banking company.

The Mon Team based in Dhaka, Bangladesh

Shipu A.F.M. Moniruzzaman

Shipu is a painter, animation expert and film director all combined into one. He had several exhibitions of his paintings in Bangladesh and Japan. His animation film “Apon’s Bike” has been shown in several film festivals across the globe. Shipu’s favourite subject of painting is cycle rickshaws of Dhaka.

Ritika Srivastava

Ritika is a rural management specialist by training and is now working as an analyst in *MicroSave*. She is working in the research practice group of *MicroSave* for last 2 years and has been part of several market research projects on digital financial services. Ritika is a food enthusiast and prefers to experiment with food.

Jahirul haque

Jahirul is a freelance writer and folk song collector from Bangladesh. He writes in many dailies and travels across the country to collect songs. Jahir has made a documentary on fishermen of Bangladesh. He can speak almost all dialects of Bengali present in Bangladesh.

Abdella Saeed

Saeed is a graduate in graphic designs and currently working as a freelance animation expert. He has also worked in experimental portrait and terracotta.

Behind the scenes

The Metamon work was conceived and promoted by Ignacio Mas. He worked part of the time with all teams in the field to ensure they remained focused on the deeper issues and to cheer them on. He claims no artistic contributions, so all he could do to show tangible contribution was to lose himself in the writing of this report.

Premasis Mukherjee of *MicroSave* was the diligent project coordinator for the entire work, with the support of Graham Wright. Only he can claim to have been out there in the field every day during the life of the project, in both India and Bangladesh.

Ekta Ohri and Aditya Dev Sood of the Centre for Knowledge Societies (CKS) provided helpful guidance to the Indian teams, as did Nawsher Noor of bKash to the Bangladeshi teams.
KGFS in India and bKash in Bangladesh provided very helpful logistical support on the ground.

Special thanks to Kamal Qadir for introducing us to Shipu Moniruzzaman who in turn found us a great team of engaged artists. Thanks also to the microfinance institutions that gave us access to their clients: Sancheana and BMC in Lucknow, KGFS in Dheradun, and BURO in Dhaka.
The work was funded by the Bill & Melinda Gates Foundation, for which we are very thankful. We also benefitted from useful questioning and guidance from Jake Kendall and Evelyn Stark of the Gates Foundation.

Annex 2: Research Tools
(Prepared by the *MicroSave* team, led by Premasis Mukherjee)

1. Summary of the Tools

We were sure from the beginning that conventional tools of research could not yield us to the intuitive and psychological level of understanding of money management we are aiming in the MetaMon project. Most of the conventional tools rely heavily on "current practices", as compared to the "idea of money management", that we were trying to decipher. However, we could not zero-in on any one or set of tools that should be used for the purpose. This was partly because of the absence of such tools in the financial inclusion research domain and partly because we relied on a gradual learning process, where we can reinvent the tools as we progress.

We started with a tried set of participatory and ethnographic tools and then improvised, modified and even invented certain methods to solicit responses from people on "how they think of money management". A set of creative designers were helpful in trying new approaches, since they were not prejudiced in favour of any particular approach. At the end of the project when we look back, the list of methods and tools used seem to get categorised into the three broad themes of the research process.

We used a majority of tools to identify the process and challenges money management, as people perceive them. Most of these are conventional qualitative research tools, like

- Focus Group Discussions
- Personal Interviews
- Observation and Shadowing
- Mind-mapping
- Family mapping
- Family whisper
- Timeline drawing
- Relationship mapping

We realised soon that these tools had some of the "current practice" bias we tried to avoid. We needed some tools that can decipher the aspirations and willingness aspects of money management, not bounded by limitations imposed by supply of financial services. Hence, apart from tools that solicit responses on their own life, we used a set of tools that de-personalise the responses. The fact that these tools were not intrusive in their personal lives, made the respondents express more openly. Most of these tools are improvisation of existing ethnographic tools or are entirely new tools, e.g.

- Story-telling exercise
- Morale of the story exercise
- Pictures in motion
- Situation cards and situation card ranking
- Fairy tales
- Playing *Grihasthi* game (the game was conceived by the research team)

Once we became sure of the money management psychology of the people, pursuits were directed towards identifying the metaphor that can express the money management practices. Some of the new tools we tested were

- Image capturing
- Image association
- Word association
- Spot the metaphor
- Zero money world exercise

Though these tools could not zero-in on "the metaphor" or "the set of metaphors" , we could narrow our search from a long list or ideas to some vivid, succinct and identifiable metaphors of money and money management. The task ahead was to nuance the metaphors, so that we could understand how these metaphors can be explained to the people, so that the traction and identification is high. Some tools used in these sphere were

- Image clustering
- Metaphor chart

On a hind sight, we have tried some 20 different methods to yield the money management practices and metaphors.

In the sections below, we will discuss how these tools were used, what was the value they added and certainly the limitations we experienced while administering them.

2. Personalised research Tools for Money Management Modelling

In this section, we will discuss our experience of using the improvised version of different conventional qualitative and ethnographic research tools.

a. Focus Group Discussion

Objective:

- ✓ To gather views from a group of respondents on their money management practices, sense of planning, and methods to cope with irregular income inflows

Process

We visited and discussed with groups of 5-6 people having homogenous socio-economic background. They were mainly members of different microfinance institutions. The focus of the tool was to gather direct response on money management practices and the challenges around it. Though it is a common tool, there were some improvisations in the way we conducted FGD in this project. We often stated an imaginary financial crisis situation to them and then asked people to discuss about different ways in which the problem can be solved. In other cases, we asked the group to list down different savings/credit options they have (including informal ones) and then describe/discuss the benefit and issues regarding them.

What worked?

The common FGD tool was useful in doing the initial exploratory research. Since many of the research team members were not particularly exposed to financial services in the mass market domain, the tool also helped them in understanding the realities. Since many of the research locations were conservative villages, women also felt more comfortable interacting in a group rather than individually as in case of personal interviews.
Another benefit of the FGD tool was that people not only told their stories but also of others in the community. Their discussion reflected about the financial environments, instruments and general behaviour about surrounding area, as compared to very specific individual incidents.

Challenges

Like FGDs of any kind, many of the discussions were led by one or few of the dominant respondents. Other respondents tend to agree to them on most of the issues. We also witnessed that people do not try to discuss on monetary matters in front of others. Hence the quality and depth of responses was not there. Most of the responses were to confirm to the generally accepted practices. We could not gather many alternative and exceptional responses.
Besides, arranging the FGD mostly happened through MFIs. Hence, there was an inhibition by the respondents that anything they way might be reflected in their credit relation with the MFIs.

b. In-depth Conversation/Personal Interviews

Objective:

- ✓ To understand the current financial lives of people and understand the way the perceive money and money management

Process

In parallel to the FGDs, we conducted several personal interviews to understand the exact nature of financial transactions they carry on a day-to-day basis. However, we never used a questionnaire or interview schedule. Rather kept the process mode exploratory. Some of the approaches we tried in this are

- *Building up on history*: we asked the respondents to narrate the story of their life. Based on situations and decisions they made, we would enquire them further on the logic and reason for such decisions. This was helpful in ice breaking with the respondents. The greatest benefit of using this technique was that people would mostly not give cosmetic answers we are used to in case of a questionnaire based interview.
- *Start from a visual* reference: after initial ice-breaking, we would often start the discussion from one specific thing we could see in the surrounding. For example, in a house in lucknow, we spotted a knitting frame in the house and started discussing about what is the use of this tool for them. In another case, after spotting a new tri-cycle of the children of the family, our first question was regarding how they managed to buy the cycle and what prompted the decision. This technique helped us unfold the money management practices of the household gradually.

What worked?
This tool helped us understand the financial ecosystem of the respondents and the various financial instruments they use. We could also decipher the use of different instruments and assets in their lives.

Challenges
The tool heavily depends upon the ability of the interviewer to relate to the respondent. If the ice-breaking is not satisfactory, there is very little probability that the respondent will give insightful inputs. Only researchers with considerable experience could conduct these techniques. Since, the process is of continuous unfolding of decisions/situations, we had to keenly follow the narration and discussion; else lot of important clues will be missed. Also, the way the tool is conducted, only people with considerable experience and who are part of all household financial decisions can yield responses. We came across instances where the respondent was oblivious of the reason why some financial decisions were taken by her husband.

c. Shadowing

Objective:
- ✓ To understand their financial transactions and interactions of respondents by observing them over a day

Process
We followed the respondents for an entire day from their household to their workplace and any other place they visit. The idea is to capture each and every action and transaction she/he carries out during the day and also understand the logic behind them. In general anthropological and ethnographic research, shadowing is generally silent for the day without asking any question to the person for her/his behaviour. We, however, asked reason for most of the major transactions they carry out. Initially we asked the questions as they transact, but this proved to inhibit them. In the later part of the research, we used to note down every action and would follow the shadowing with an interview asking them of the reasons for such actions.

What worked?
The tool helped to understand how respondents handle money and how they use different informal and formal financial services. We could also understand the relationship dynamics that come into play when it comes to savings and credit behaviours. Since, the tool was to silently follow the action, we could note the

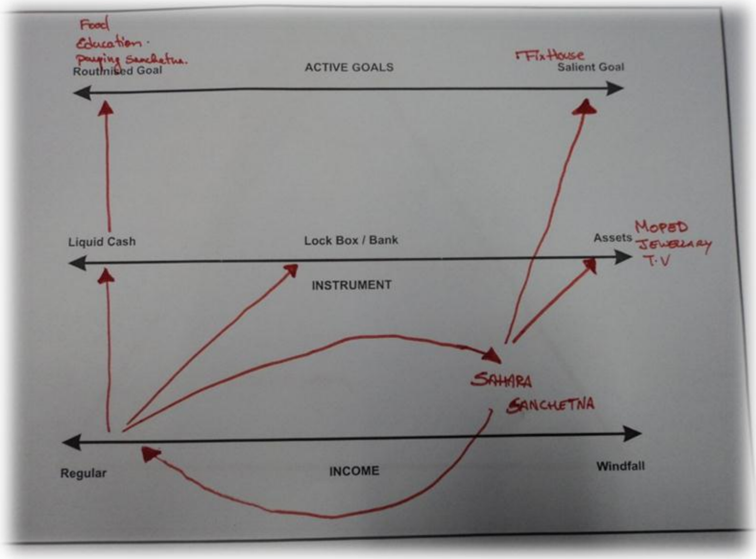
real transactions and behaviours as compared to the stated behaviour we are used to in case of FGDs, interview or most of the other market research activities.
Moreover, this approach allowed researchers to spend enough time with the respondents in their natural environment that helped build a level of trust, and made them talk more openly about their money management practices

Challenges
Shadowing a person is possible only for a day or maximum for two days. We were not able to capture financial transactions of respondents not being performed on that particular day.

d. Mind Mapping

Objective:
- ✓ To validate the money management model of the people and incorporate its finer nuances

Process
This tool was used in continuation of discussion with the respondents. As the conversation progressed, we will draw different aspects of their financial behaviour (income, goal, instrument, assets) on a blank sheet. Half-way through the conversation a map will emerge, showing the respondents' income sources and expenses along with any instruments used to modify the income. The map helped the respondent visualise their own financial lives in terms of the money management model.
We then probed further regarding the various nuances in their financial portfolio to understand how and why a particular decision was made.



What worked?
The tool helped us map out complete financial portfolio of the respondents from their various sources of income, expenses, goals and various instruments used to save and invest. The visual representation helped as conversation stimuli to effectively engage the respondents. This tool allowed us to probe further into various aspects of financial portfolio of the respondents and unravel the motivations driving financial behaviours. The biggest contribution of the tool, certainly, was in validating the 3-layered money management model and understands the rules governing it.

Challenges
Some respondents got intimidated by the researchers mapping their financial behaviour and hence there focus transferred from being objective about financial behaviour to filling different parts of the map.

e. Map the Family Finance

Objective:
- ✓ To validate the money management model, understand the importance of financial goals and the financial planning process

Process

While in mind-mapping, we discussed with individuals, in this exercise, we involved all members of the family. We started the exercise, by asking family members to mention different goals in their life. In parallel, we will ask the earning members of the family to spot and mention the income sources. We would draw the incomes in the middle of a chart-sheet and goals around the periphery. Then we will discuss with all the family members on the way they want to reach to the goal from the incomes they have. At every step, we probed into the reasons for the decisions they are making.

What worked?

In most of the instances, the tool turned out to be a game like situation that could engage the respondents in the process. The family members generally started with vaguely defined goals and an ambitious path to achieve it. But when different life situations were added to the story, the family would not change path but rather seek additional support to stay on the path. The exercise helped in understanding how a household as a unit thinks about goals and financial planning to achieve them. Apart from understanding the importance of goals and planning in their lives, we could realise the financial planning process in the family as a derivative of the family dynamics.

Challenges

The tool had an imbedded assumption that people plan their finances simply to achieve individual goals and that goals are succinct and clear for a family. In reality, we saw that goals were not that clear for most of the families. In few instances, the member whose future path was mapped felt shy to share more details in front of a group of strangers (in this case the research team). In some other instances, the head of the family tends to bias the goals from what he/she thinks about the family member. Hence, the tool needs to be highly moderated to have balanced and bias-free responses.

f. Family Whisper

Objective

- ✓ To understand the goal prioritisation by the respondents and rationale for using different money management practices

Process

Since the family mapping exercise worked as a genuine engager, we tried some more tools to involve family members in a more interesting way. In this exercise, we placed flash cards equal to the number of members of family respondents and then asked each family member to identify 'One' desire which she/he wants the head of the family to fulfil. We then drew a picture or just write down the name of the desire and asked the head of the family to place the flash cards (consisting of family member desires) in order of preference. We further probed the reason for the choice/prioritisation of goal. We often brought a new situation of massive income/emergency to see if the choice/priorities change.

What worked?

The tool was relevant because in day to day life, most of financial decisions are taken by the head of the family. This game gave us an insight on decision making process that intends to balance goals of different kinds. Through this exercise, we could assess different non-financial, social and family level dynamics that play a major role in goal fulfilment. This was a benefit we witnessed over conventional tools. Besides, this tool was more "action" oriented as compared to being "planning" oriented or "explanation" dependent. We could sense that the respondent is taking decisions simulating her/his real life and not because of generally accepted norms. The tool also gave us flexibility of creating simulated conditions that prompted people to think about money management in different situations. As compared to the Family mapping, here we could assess the nature actual goals and actual planning. Sometimes, we took the head of family away and choose between goals not in front of family members, but in another room. This helped in simulating a real life situation, where choices are made mostly by the head of family individually as compared to through discussion, as we have witnessed in family mapping exercise.

Challenges

Since many of the decisions were not purely rational financial choice, sometime respondents felt uncomfortable disclosing them to us. The success of the tool, hence, depended on the moderator convincing the respondent that we are not looking for perfect or rational answers but real responses.

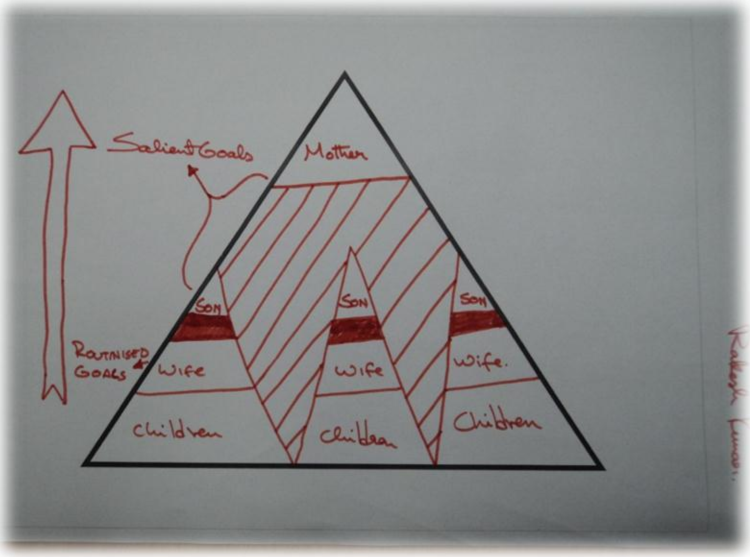
g. Relationship Mapping'

Objective

- ✓ To map how and to what extent social relationships influence financial transactions, particularly saving and credit avenues

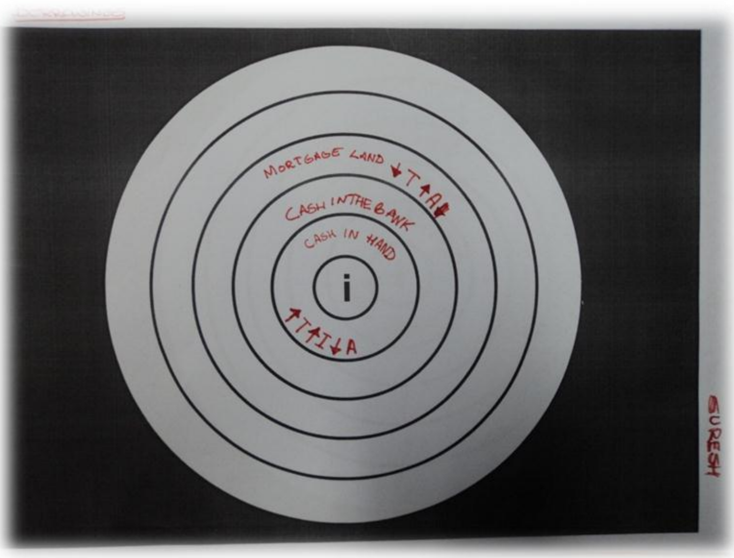
Process

We showed the respondents a sheet pre-printed with concentric circles. Then we would sketch the respondent at the centre and ask her/him to put credit sources in different circles based on the perceived "distance" they have. We were careful to capture the perceived preference of the credit sources as compared to the actual physical distance they have from the respondents' location. We prompted certain situations where in they had to borrow money, such as credit for medical emergency or for an investment opportunity. And then we asked them which source of credit they will access in such case. The choice was always followed



by probing around the reason for such choice In most of the cases, we could see the inner circle being populated by social avenues (e.g., family, friends and community) and as distance increases, informal and formal institutes (e.g., MFI, money lender) find their place. This exercise helped us understand the perception of people on different credit services and also the logic that separates one from another.
As a further improvisation of this tool, we used it for situations where in the respondents would choose savings avenues, such as metal box or clay pot at home, savings account at bank and other formal and informal avenues [e.g., Bisi (RoSCA), Sahara, Samitee (RoSCA)] and then would try to map them in the circles. This helped us understand the characteristics that differentiate one savings/investment instrument from another.

What worked?
The tool helped us get a clear understanding of how the respondents perceive and use these avenues in times of need and various life situations. We could also validate the logic of classification of assets and instruments in the money management model. We could also identify the factors and trade-offs that influence the decision making of the respondents around credit and saving avenues and how they vary based on various situations. Since the respondent could visualise the services, she also was provoked to think beyond only transactions and could recollect the thinking that goes behind such decisions.

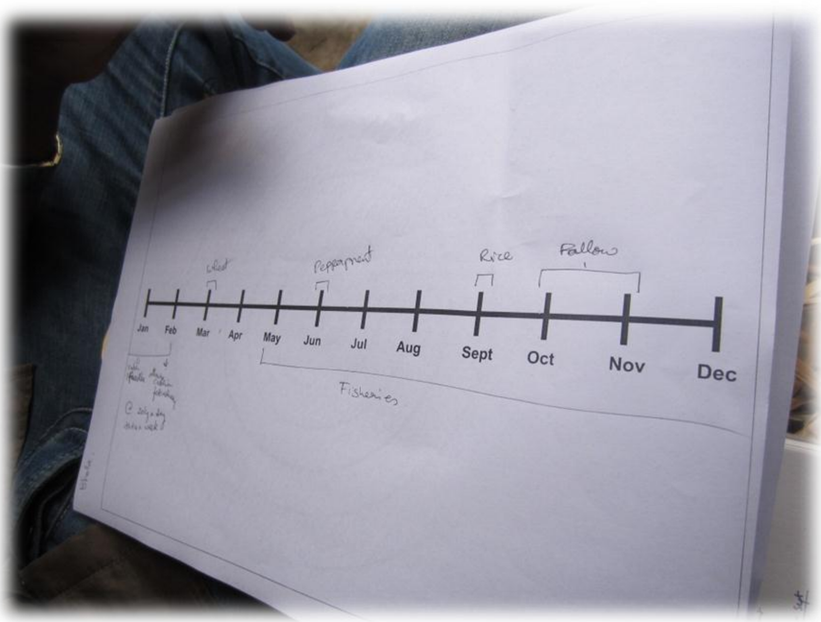


Challenges
This tool was initially designed to let the respondents complete the posting on their own, but on field we realised that they could not comprehend the tool. In later stages, we would populate the circles during discussion with the respondents.
Moreover, this tool could be used only with respondents who have multiple assets or who access multiple instruments. We found it hard to administer the tool with people having limited asset or resource.

h. Timeline Drawing

Objective
- ✓ To identify and map the year long income pattern of the respondents from various economic backgrounds and how it impacts their financial decisions

Process
We developed a template of a simple calendar depicting only months. Using the timeline, we would discuss the income and expense pattern of the respondents for each month. Relative importance of the months was also discussed with the tool.



What worked?

We could validate our hypothesis on the income pattern of the respondents, such as regular and windfall income, through this tool. The visualization of the respondents' income pattern gave a detailed descriptions of nuances of their financial behaviour, such as expenses, realising goals, savings and investments based on their income flows. Since the discussion was on a monthly basis, we could enter into the granularity of transactions, such as the difference between daily, weekly, monthly and yearly transactions.

Challenges

The discussions were centred much more around conducted transactions as compared to the psychology behind them. When asked about the logic of certain transactions, respondents, wither did not have a clear idea or made up a convincing answer.

3. Impersonal/Indirect Tools for Money Management Modelling

We have realised that conventional market research or ethnographic tools have one major limitation that stopped us from digging dipper into the thinking process of the people. Most of these relied on direct conversation with people about their financial lives. Since money is a sensitive subject, many of the respondents felt intimidated or cautious to divulge details of their financial lives to us, the external strangers. While some of the respondents gave generic answers, some others made up cosmetic stories about their decision making process.

To get rid of such biased responses, we used some new and improvised research tools where respondents were asked indirectly about the financial decisions they make and perception they have on money management.

i. My storyline

Objective

- ✓ To identify the triggers for financial decision making and validate aspects of the money management model

Process

We made certain imaginary stories around financial management of people of different profile. After narrating the story to the respondents, we asked them how the person would do things differently than the protagonist of the story. The stories were made giving special emphasis around one or few of the money management rules we identified in the model. For example, in one story, we narrated how maturity amount of a *Sahara* scheme was invested in buying a motorcycle. The respondent opposed the idea and said, he would have bought a cow instead, since the cow would supplement his income.

What worked?

Since we were not asking direct questions about their financial transactions, the respondents gave answers that are more intuitive and close to their thinking process. The stories helped them think beyond their financial lives and dwell into the perceptions and aspirations. Moreover, the less intrusive way of asking questions made the respondents comfortable in answering queries.

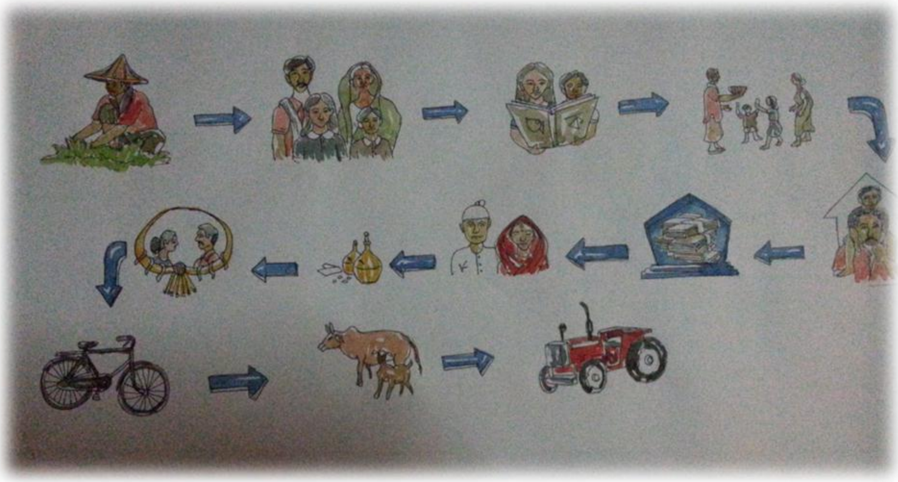
Challenges

The tool was not very effective in extracting perceptions and thinking process on issues other than the ones already provided for in the stories. The success of the tool depended mainly on the completeness of issues in the stories.

j. Happy ending Fairy Tales

Objective:

- ✓ To understand respondent's thinking around challenges of money management

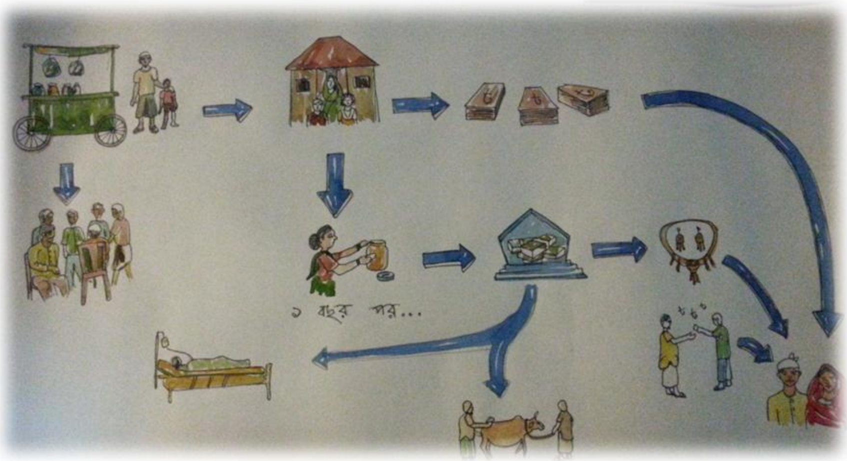


Process

This tool was a modification of the earlier story of "my storyline". Instead of narrating the stories, we depicted the stories like a comic strip.

We chose three profiles for running this game: a fisherman, a shopkeeper and a farmer. The stories were fairy tale like, were flawless and without any hitch. It showed how smoothly a person manages her/his family expenditures within the limited earnings. It also includes the savings which she/he makes in her/his lifetime to fulfil the goals of life. All the stories had happy ending.

In field, we showed the strips to the respondent and ask her/him, which part of the story seem most unlikely to them.



We would further probe on the reason/s mentioned as unlikely and try to understand their thought process around the challenge.

What worked?

As the tool focussed on drawing responses on a third party fictional person, respondents participated actively and without any prejudice**.** The tool could specifically isolate major challenges people see in their money management practices.

Challenge

In some instances, the respondents became interested in the images rather than the message it conveys. In other, people would try to identify the person's origin and locality from the dresses and will hesitate to comment because they though the person's life is not similar to theirs.

k. Story in motion

Objective:

✓ To understand the process and priority of a person in solving financial crisis

Tool Methodology

In this case, we made a short animation about a person struggling to find solutions to his problems regarding managing finance. We played the animation and asked the respondent to provide solution. We would further probe into the respondents' solution, to understand the logic why she/he thinks that way.

What worked?

The animation was useful in getting people interested in the situation and the exercise. Apart from that the tool was as useful as the fairy tale or moral of the story game.

Challenges

Unlike other story based methods, it was hard to edit the content of story on the spot according to respondent's context. In few instances, the respondent skipped some of the key points or missed entire plot at end of the clip. There were also some technical issues involved in making the tool work on different digital devices on filed. Besides, preparing the animation itself took time.

l. Situation Cards

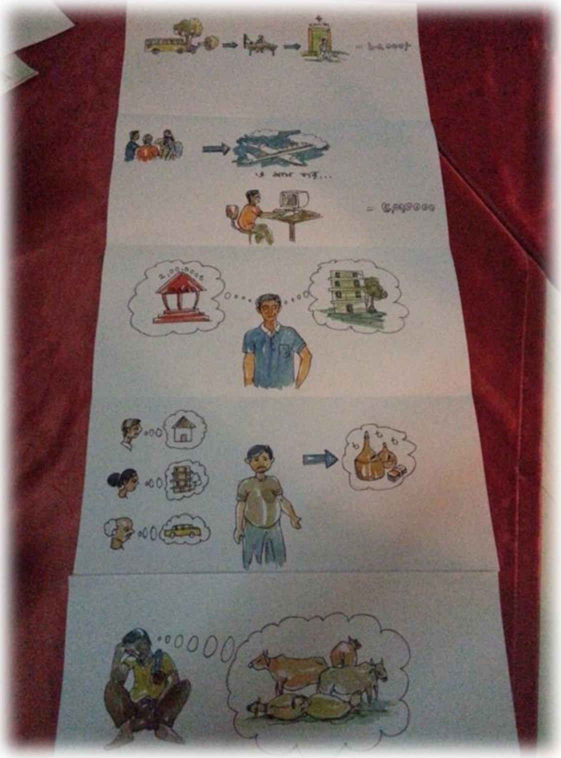
Objective:

✓ To understand how respondents behave and react under compelling financial circumstances, how they prioritise their goals and how they manage their money to meet those goals.

Process

We selected five situations and developed them in the form of pictorial descriptions on small sheets. These situations are a few but very common financial hurdles which common man faces during their lifecycle. All the situation cases are hypothetical and they are as follows:

- For instance, we asked the respondent that if you meet an accident and require undergoing an immediate surgery for which you require 50,000 taka. Where will you arrange this sum of money? Will you touch the amount of money which you had kept aside for your monthly expenses?
- Consider a case where your child has got the opportunity to study in a very reputed institution and in six months from now, you are required to deposit a fee of 5,00,000 taka. How would you arrange this sum of money?
- Recently, your younger brother has bought a piece of land and within a year its value has appreciated by 20%. You consider it as a good investment opportunity and are tempted to buy a piece of land in that area. You have 2,50,000 taka in your savings which is just enough to buy that land and you will not be having anymore buffer savings if you spend it. Would you still buy the land?
- You have been saving a lot in your bank account for your child's education but in the bargain, you have not been able to build your own house or any asset of your own. You peers and relatives build up a constant pressure on you to spend money and build an asset of your own. Would you break your savings and build an asset or would you still keep saving for your goal of providing good education to you child?
- Imagine you have five cows and selling its milk serves as a constant source of income for your family. Suddenly, two of the cows fall sick. Their treatment would cost you a huge sum of money. What will you do? Sell off the cows or arrange for the treatment of those two cows?



We asked about the respondents' own money management techniques first, followed by display of these situations. We then asked the respondent how they would tackle such situations which are uncalled for and how difficult is it for them to manage their money under such circumstances. Respondents could come up with broad range of responses as the tool is open ended.

What worked?

The tool helped in evoking quick responses from respondents which they could relate looking at the pictures. The responses gave us an insight into their imagery/ back of the mind thinking process on money management techniques. Respondents were able to spot the cards which of which they had some experiences in their day to day life. For these situations the responses were backed with clear logic and thinking.

Challenge

This tool was helpful for us since we could formulate stories in relation to the money management model. In absence of hypothesis, it is difficult to use this tool.

m. Situation Card Ranking

Objective

✓ To identify main challenges people have in money management

Process

After the situation analysis, where we have discussed each of the challenges of money management in detail, we asked the respondent to rank all the cards/strips in order of importance. We would further probe into the reason for such ranking.

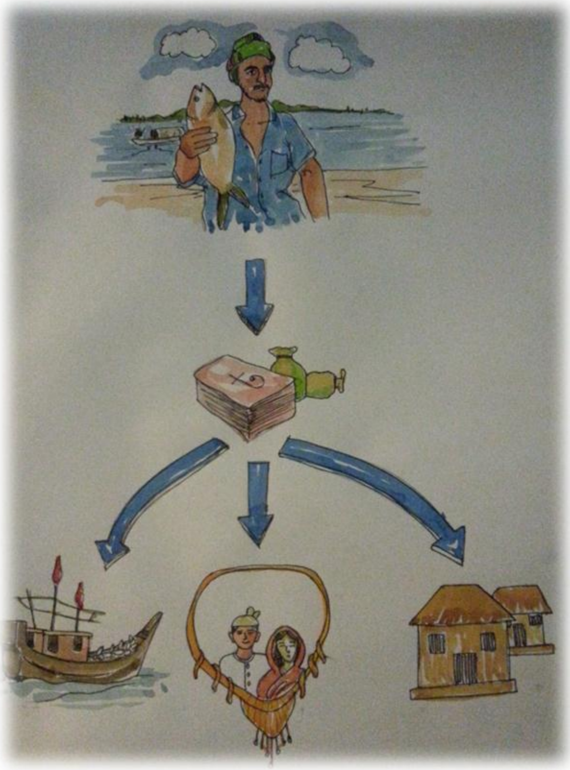
What worked?
This exercise was helpful in understanding the relative priority of several aspects of money management, as perceived by people.

Challenge
Since the previous situation analysis is a time taking exercise, it is difficult to continue with same respondent for the ranking exercise.

n. Cat on a hot tin roof - Situations analysis

Objective:
- ✓ To assess how respondents find solutions and make decision to different situations of financial stress and opportunities of income

Process
This is similar to situation analysis. In this case, however, we prompted the situations verbally and asked the respondents to answer quickly. Each situation requires the respondent to make a decision regarding their money, hence provides insights into their preferred mechanisms for each of the following: lumping of money, credit for both regular and emergency needs, income shaping by choosing to buy income-generating assets etc.



The scenarios were mostly
1. Present situations

2. Emergency situations. How will you arrange for the money in each of these situations:
    1. Someone in the family needs to undergo a surgical operation. The cost of the operation would be BDT.50,000 and is scheduled to happen in a month's time
    2. You met with an accident on the road and need BDT.10,000 for immediate medical treatment
    3. A family member has asked for a loan of BDT.10,000 to meet an emergency need. He will pay it back within 6 months.
3. Opportunities of income
    4. A friend has asked you to invest in his business and says that you can double your money in 2 years time
    5. A friend is selling a water pump for BDT. 10,000 which is less than half its price. This water pump can be rented out to farmers and you can earn around BDT 200 per day. Will you buy this equipment; if yes, how will you arrange for the money?
4. Dealing with windfall income
    6. You have inherited BDT 500,000 from a maternal uncle. How will you use this income?
    7. If respondent is salaried: your office has given you a bonus of BDT.50,000. How will you us it?

8. If respondent is a small business owner: you gained good profits this season and have earned BDT 50,000 in addition to your projected income/profits. How will you use the income?
9. You have received BDT 100,000 from selling off an ancestral property. How will you use this money?

What worked?
This tool helped us understand the decision making rationale in a given financial condition. We could asses the value of social relations that play a major role in such decision making. For example, one of the respondents told us that he would like to achieve his spiritual goal of Haz if he gets a windfall income because by doing so, he is fulfilling wish of Allah. Since there was no imagery involved, we could modify the situations according to the context impromptu.

Challenges
Respondents sometimes are unable to relate with certain situations as they believe such situations does not occur in their lives

o. *Grihasthi* – Board Game

Objective:
- ✓ To validate the financial management framework that was developed based on the findings of the fieldwork
- ✓ To validate the understanding around the following aspects
  - How people plan their finances and goals (connecting incomes to goals)
  - How people generate multiple sources of income (main and additional sources) and assets (progression of assets)
  - How people decide on liquefying different assets or fall back on various avenues (e.g., friends and family, MFIs, formal and informal avenues) in various life situations, such as emergencies, weddings, and natural calamities.
  - Factors/trade-offs that define various lumping and savings mechanisms that people choose. (Piggy bank vs savings a/c vs others)

Process
Based on our interaction with clients over 2 weeks, we developed a board game meant to be played with the respondents on field. The game was based on how people manage their household incomes and expenses on a day-to-day basis. The respondents were asked to take certain financial decisions through the game based on various income and expense situations.
What worked?
The game was a very effective tool for validating the money management framework. Most of the respondents played the game seamlessly, though they belonged to different income sections of the society and their learning curve varied. Each aspect of the financial management framework was validated throughout the game The game helped validating the money management framework. Owing to the participatory nature of this game, it worked very well to engage the respondents for a longer period of time
Given the flexible nature of the game, the moderator could contextualize the rules of the game based on each respondent's profile which made it even easier to engage the respondents in a deep dialogue around their financial behaviour.

Challenge
The game needs detailed understanding of the general financial behaviour of the people. Hence, in any other area, the game has to be modified after some level of basic field work.


गृहस्थी
कपड़े खरीदना
100 - 1,000
फ्रिज खरीदना
5,000
मुरगी खरीदना
3,000
टी.वी खरीदना
3,000
नया व्यापार
20,000 - 50,000
व्यवहार (शादी)
500 - 1,000
बकरी खरीदना
3,000
त्योहार
100 - 1,000
शुरू करते हैं
मेडिकल
परिवार
व्यवहार
मोटर साइकिल खरीदना
15,000
500 - 1,000
गाय खरीदना
भैंस
15,000 - 25,000
फरनीचर खरीदना
500 - 2,000
प्राकृतिक आपदा
सहारा
बैंक खाता
लोहे के बॉक्स
गुल्लक
बी.सी
बीमा
LIC
व्यापारी मालिक
बैंक एफ.डी
समूह
साहूकार
सुनार
किराना दुकान
व्यवहार
दोसत परिवार

4. Research Tools for Identifying Metaphor

Once we zeroed in the money management model, the search was on for the next level of realisation, i.e., a simple metaphor that could explain the model/money management practices of people.
In this section, we will discuss the tools that were particularly helpful in identifying the metaphors.

p. Fill in the blank

Objective

- ✓ To identify the metaphor for money being identified by clients and reasons for the choice

Process

This is a simple tool to relate money with any object or abstract concept.
In this we showed the respondent a blank sheet reading

"Money/money management is like…………"

The respondent is then asked to fill in the bank by relating something with money. Once the respondents identify an object or concept, we probed further for logic of his argument for identifying that metaphor.
In certain instances, we drew the image as per clients descriptions and confirm with the client the accuracy of her/his metaphor description and the image being drawn

What worked?

In this tool, without any prejudice, most of the respondents gave a realistic and unbiased opinion on metaphor .This game helped in identifying the belief and perception of people. However, it required some effort to understand the real metaphor from the description the respondent gives. For example, in one of the sessions, the respondent related money with 'speed'. What he meant was that if money comes without much effort (lottery/ancestral property), then he would like to use that 'fast money' in a fast manner (Haz visit), but not for house repairing as house repairing takes a lot of time. We had to decipher such meaning by further probing and going deeper into the actual thinking of the respondent.

Challenge

Respondents always could not come up with a direct metaphor for money or money management. Moreover, they mixed up the thought process in identifying a metaphor for money and money management.

q. Capture the Visual

- ✓ To understand how people perceive their assets and savings and what stands for savings/asset for them

Process

After discussing the general concept of savings and assets, we asked respondent to take photograph (using a digital camera) of five items from the surroundings including the household items that reflect savings and assets to them. Once they come back, we probed into reasons, why some of the unusual photographs were taken. For example, one respondent clicked a photograph of an unfinished wall. He explained that when he had money, he utilised it by erecting the wall, which eventually will be part of his house.

What worked?

The photographs gave a ready reference into how people understand assets and savings.

Challenges
In many instances, the respondents did not really understand the objective behind this tool and were unable to relate imagery with the saving mechanisms that they used. In some other cases, the respondents were not familiar with camera and hence did not feel comfortable using it.

r. Zero Money World

Objective:
- ✓ To understand the relevance and importance of money from respondent's point of view and also to understand how do they compare or draw an analogy for money

Process
We started with asking respondents about the importance of money and money management in their daily life. Then we presented to them an imaginary situation, where there is no money in the world. In some cases, we asked them what could be alternative of money and in others; we left the floor open and asked their opinion about a moneyless world. In most of the cases, they came out with analogies of money. In others, we could get an honest opinion about the real value of money and the challenges they face in dealing with it.

What worked?
The tool helped in extracting analogies of money metaphor from respondents. Responses were linked to utility value of money, but in general respondents were surprised to imagine a scenario without actual money (Taka). Each response was based on the strong belief and sentiment associated with money. The tool helped in bringing to light the belief system of respondents about money. For example, respondents told us that they would like to use something as a substitute of money which anyone can easily find and associate with.

Challenge
We had responses that negates the value of money and conceptualises money as a "necessary evil". Instead of finding a metaphor, we often landed up with proverbs and beliefs.

s. Relate with Money

Objective
- ✓ To identify objects that people relate with money or money management and assess the logic behind the association

Process
We developed a set of 16 cards, each depicting an object or concept that relates with money in some way. The objects/concepts were identified based on findings of other research tools. We showed the cards to the respondent and asked them how they think the object/concept is similar to money. We captured the words and descriptions for the logic of association

What worked?
Since we selected the objects based on other research tools, people could relate to most of the cards in some way or the other.

Challenge

From this exercise, we could not get a clear sense of which of these objects/concepts represent the strongest metaphor for money/money management.

t. Spot the Metaphor

Objective

✓ To identify the object/concept that has strongest metaphorical association with money or money management

Process

This exercise followed the last exercise of "relate with money". After discussing with respondents on each of the cards, we spread all the cards in front of them. Then we asked them to identify the one that strongly represent similarity with money and money management. Once selected, we probed further into the logic of selection.

What worked?

We could realise the characteristics of the metaphors that people identify with money. This exercise helped us to reduce the list of 16 probable metaphors to manageable 4-5 metaphors.

Challenges

We could not dig deeper into the nuances of the metaphor through this tool. How same metaphor represents money in different way is something this tool could not yield us to. Moreover, some of the cards got rejected because they could not relate with the image drawn, rather than the concept behind it.

u. Describe the Utility

Objective

✓ To understand the importance and characters of the metaphor in real life, as perceived by people

Process

The cards developed and used in the last two tools were used in this case too. However, we used only the selected 4-5 cards (from "Spot the Metaphor" exercise) in this exercise. We showed these cards to different respondents and asked about utility/importance of these objects in their real life. No reference to money or money management was made in this case. For example, once "key" was identified as a probable metaphor of money management, we went to a new respondent and asked about " how is this important to you?".

What worked?

This exercise helped us get a clearer understanding about the object/metaphor. We captured the word and descriptions and later we related them with descriptions people gave about money management practices and challenges.

Challenges

This was an easy tool with very specific objective. We did not find any challenge in administering it.

5. Research Tools for Detailing the Metaphor Description

v. Image Clustering

Objective:

✓ To understand how the respondents classify their various expenses and goals, assets, and instruments along with words and imagery associated with such classifications

Process

This research tool consisted of a set of contextual images that the respondents might relate to as expenses, goals, savings and credit instruments and sources of income. During the in-depth interview sessions, these images were laid out in front of the respondents once the researchers got a general idea of their financial background

- First the respondents were asked to identify each of the images as expenses and classify them based on its regularity and type. The respondents were also probed around vocabulary used to define the various categories
- Second, the respondents were asked to classify the images of various assets and instruments
- Further the researchers probed into which instrument will be used to fulfill each of the expense categories
- Finally, a hypothetical emergency situation was given to the respondents in order to probe around which asset or instrument would be chosen first for liquidation over others

What worked?

This tool helped the us initially in identifying the classification of various expenses, assets and instruments from the respondents' point of view.Few respondents were able to provide certain vocabulary for the expense and asset categories, such as

- *bandh grihasthi (closed assets) -khula grihasthi (open assets)*
- *Fast money- slow money*
- *Pucca dhan (solid/cooked money)- kachha dhan (uncooked money)*

This tool was helpful in initial conceptualisation on how money management can be explained metaphorically.

Challenges

We could not finalise on any one or set of coherent imagery or metaphor. For example, certain Hindu households felt offended by the imagery of chicken and goat because they do not eat meat owing to their religious beliefs.

w. Metaphor Image Charts

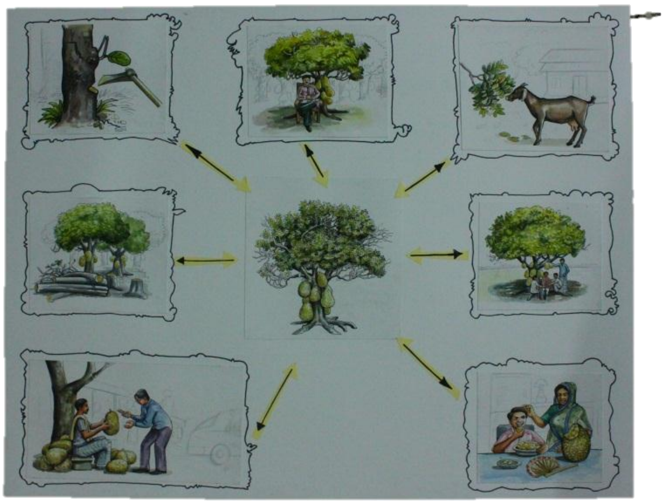
Objective

✓ To conceptualise the aspects that qualifies certain objects/concepts as metaphor of money management

Process

Once we finalised on 3-4 objects/concepts that can metaphorically represent money management, we developed charts, where different usage (as described in ”describe the utility” exercise) of those objects was depicted. We showed this chart to the respondents and tried to assess if it resonates with money management practices. For example, in the chart with “wheel” as metaphor, we described several usage of wheel including

- Income generation (potters’ wheel)
- Communication (rickshaw/cycle)
- Balance (bi-cycle)
- Progress (more the money, more the wheel explained by cycle-auto rickshaw-car)
- Caution and control (accident on road)



On field, the protocol followed as

- We will probe to see if the respondents can relate to the concepts explained in the chart
- Then we asked people how each of these concepts relates the metaphor to money management
- Finally, we will validate the concept by saying “can it be said that managing……… is like money management”

What worked?

Respondents were engaged with the visual depiction of the metaphorical concept.

Challenge

Like other image based exercise, the responses often depended on whether the image was perfect, rather than the concept behind the image.

6. Conclusion

Due to the creative freedom available in the MetaMon project, we could revisit several conventional research tools and generic market research approach more critically than possible in usual task driven research projects. We have realised that conventional tools are limited in their ability to reach beyond transactional information. More often than not, we end up understanding the transactions people do, and try to analytically arrive at the behavioural instinct that might have prompted the transaction. For example, we see people saving in different pots or packets and derive that their instinct is to diversify risk. More than the attribution error in such efforts, the amplified limitation is not being able to decipher the thinking process at all. A greater issue arrives when we ask people to describe the thinking and logic for certain services they take or transactions they do. In their daily lives, those transactions are so inherent that they cannot think of the logic when asked. It is but natural that thoughts and believes drive our transactions and not the other way round. In this sense, the conventional research tools try to understand the logic backwards. In some of the improvised and new tools we tried in MetaMon, we went the other way. Instead of tracking transactions, we directly tried to understand the inherent thought process around money management of people. We prompted them hypothetical situations and tried to see their intuitive response in that. By doing this, we completely eliminated the transactional boundary the person have and allowed open thinking. At a later stage of the conversation, we probed to see if they can relate such thought process to anything that they currently do. Surprisingly, most of the people could. We can confidently conclude that instead of starting with transactional information and then prove on logic, it is a useful approach to first try to understand the thinking and then reach at transactions/services they access.

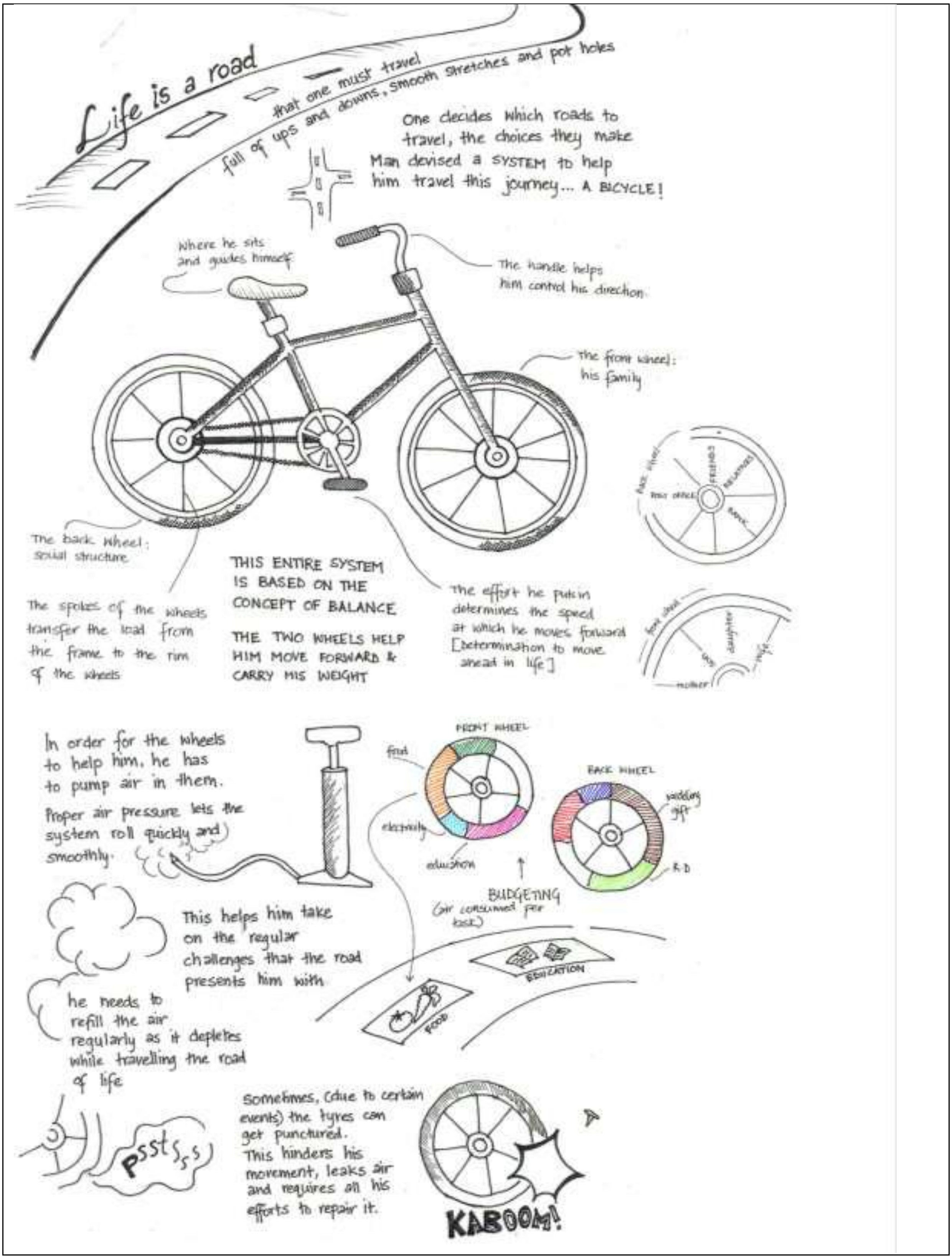
Another approach we tried is to impersonalise the conversations. In earlier researches we have seen that when asked directly about their financial lives, people often feel intimidated and cautious. They do not find a reason why they should divulge critical financial information of their lives to strangers, i.e., the researchers, whose motive they are not sure about. Often they end up giving generally accepted responses or make up cosmetic ones that would satisfy us for the time being. In this project, we tried to impersonalise the responses. By creating games and imaginary characters, we eliminated the intrusiveness of the research process. By doing so, we witnessed that people became more open in giving responses. When asked about the steps / strategies the protagonist in the story/situation should do, we could see they are responding as they understand such situation. But not being intrusive helped us get several critical information otherwise we fail to arrive at in conventional market research. However, if the story or the depiction does not represent the person we are talking to, either the respondent will not feel engaged into the exercise or will end up giving generic responses. Characters must be created according to segments we are visiting.

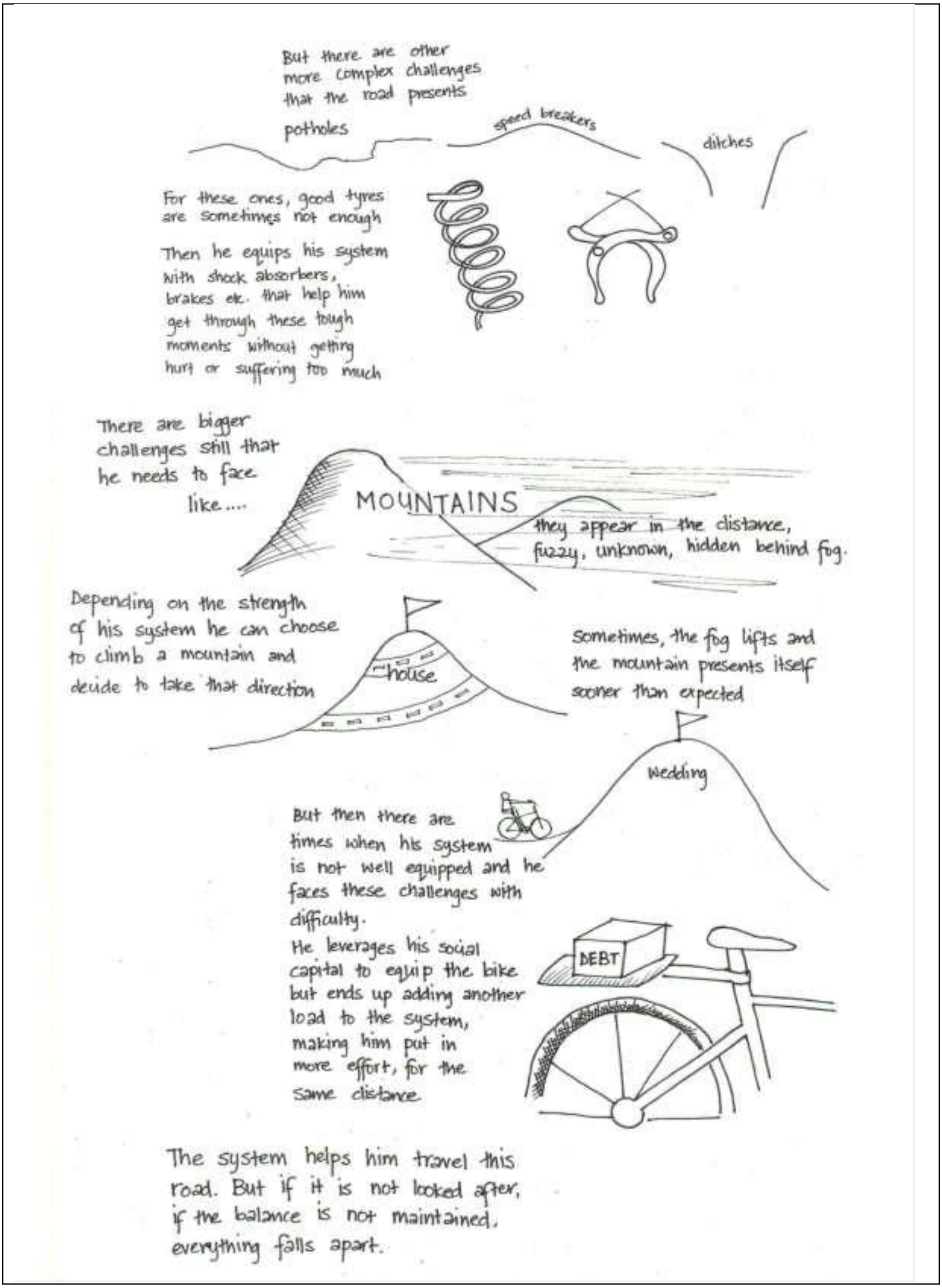
A third approach we tried is to catch/observe the person "in action", as compared to the "static" approach of most of the research tools. In conventional research tools, we "ask" the person about what they do, did or think. The risk is to get theoretical / unreal answers or no answer at all, since financial behaviour is something they "do" as compared to something they "talk about". By creating some games (e.g. *Grihasthi* game), we asked the person to play and conduct the transaction in a simulation world. As researchers we just observed the transactions they conduct and the way they play the game/s. Later we would ask them of the logic of such transaction. Since the respondent was engage in the game scenario, she/he could not escape the real instincts and we could gather the real life experience and responses of the people, as compared to after thoughts. However, the success of such game lies in creating the simulation world (the game structure) in such a way that

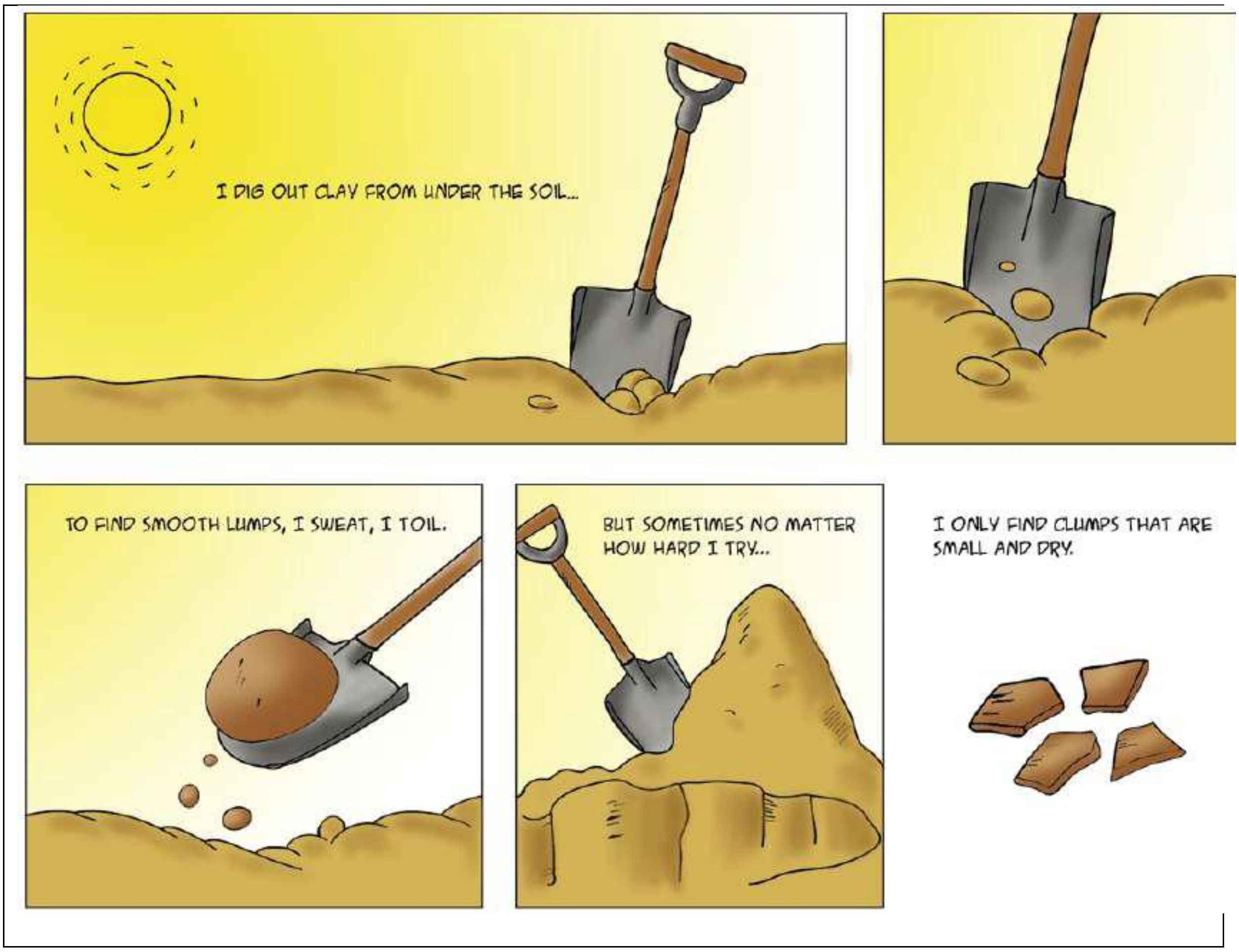
- ✓ recreates world of the player
- ✓ allows the player to take different strategies for different goals they would have in real life, and
- ✓ is interesting enough to keep the player engaged in the game.

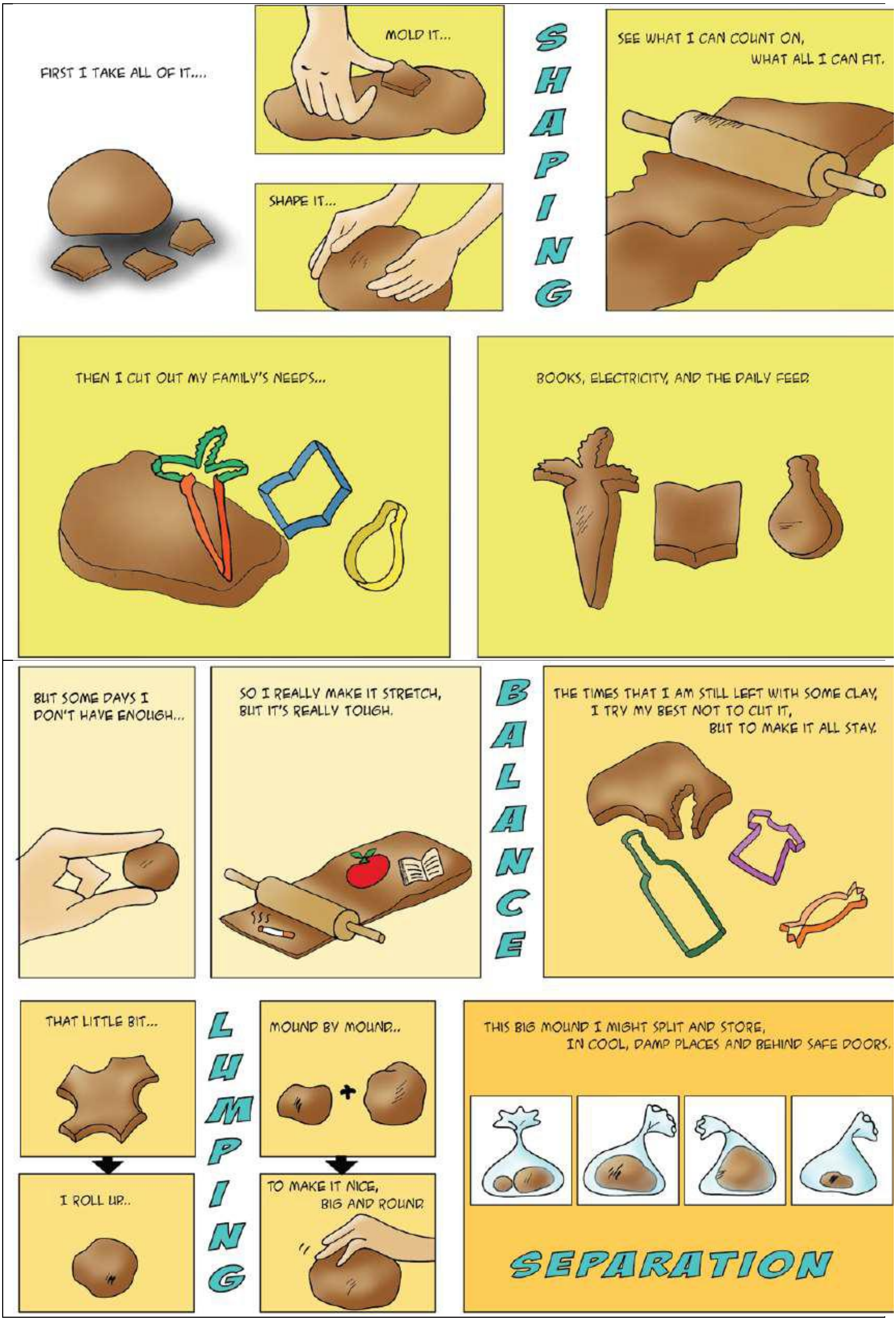
An approach where this research was unique in totality is in its formation of teams. We have formed research teams with diverse vintage. We had ethnographers, finance specialists, folk artists, painters, game developers and several other creative people in the team. Apart from the diversity they brought in the thinking process, we could sense that each of them played distinct role in the research process. Ethnographers brought openness in the research process, while market research specialists tried to keep the focus narrowed. These two teams were instrumental in creating a balance in the research and make the boundaries defined. Painters and other creative people could generate several new ideas of engaging the people, while the folk artist managed to capture the words and expressions of people in a more meaningful way. The game developer and animation experts could conceptualise innovative approaches of communicating the concepts and the content developer developed the templates that were instrumental in making the research a success. In any research of this magnitude and aspiration, we can say, experts are of limited value as compared to a team that is proud of creativity and rich expressions.

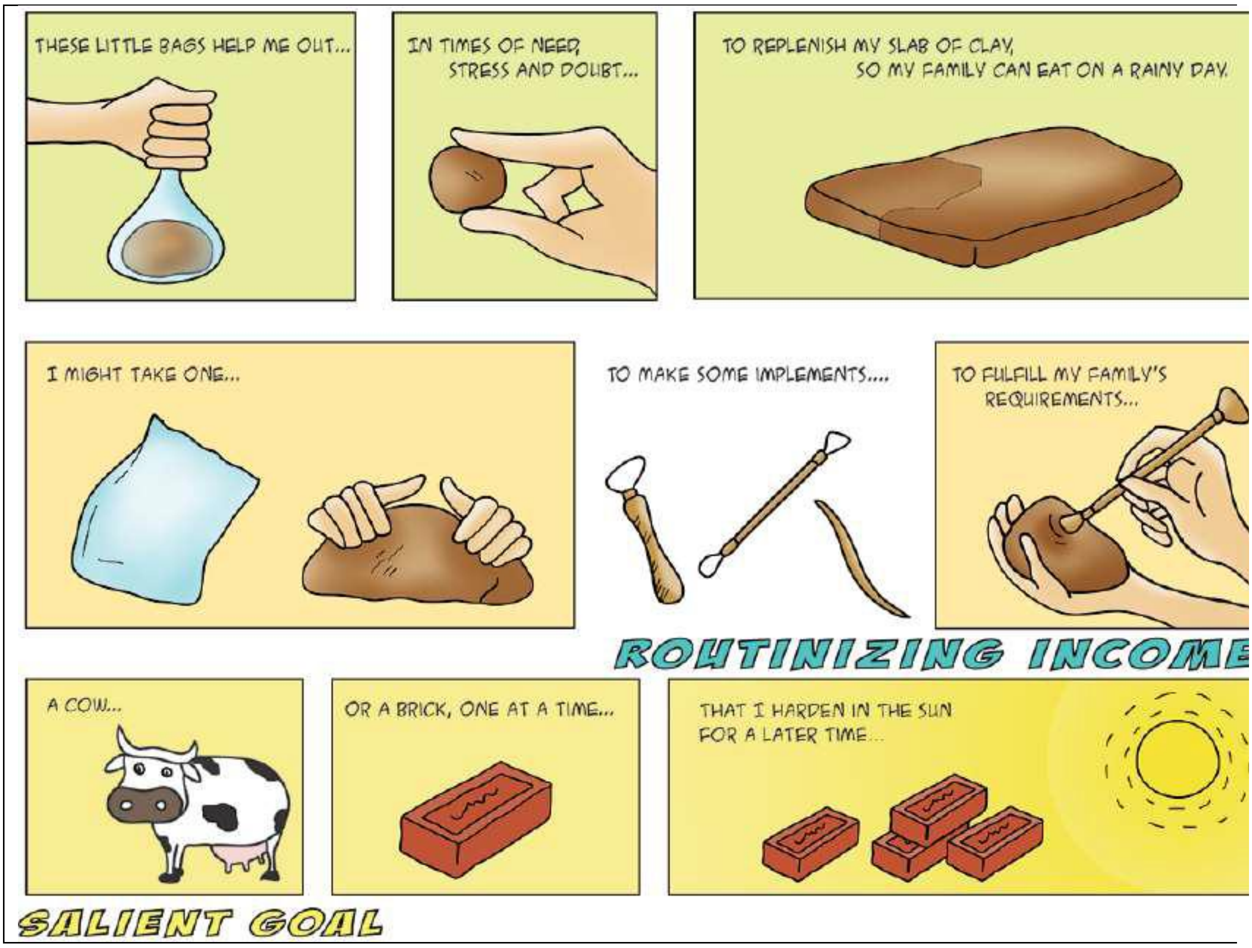
Annex 3: Full Drawings of Bicycle and Clay Metaphors

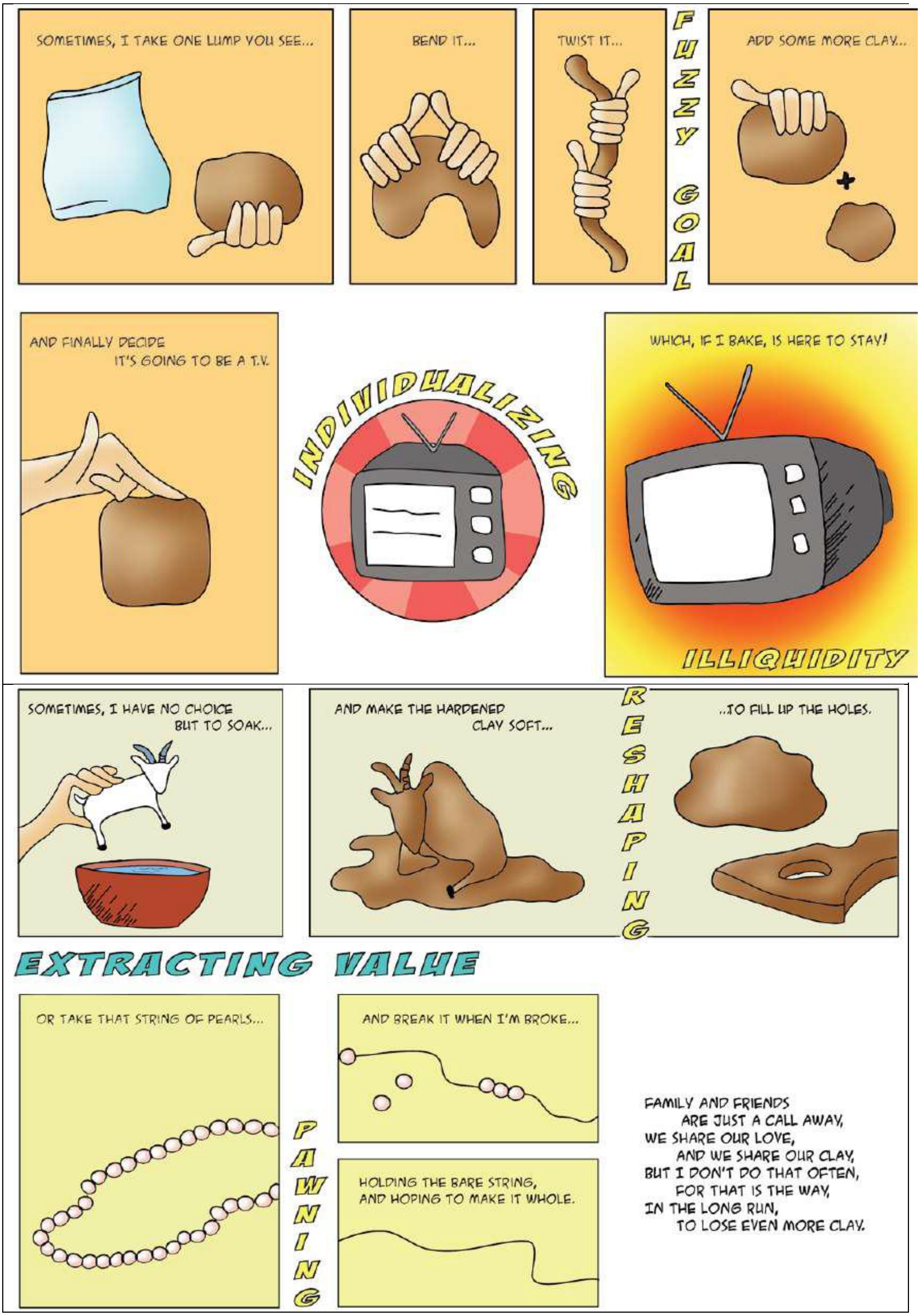



But there are other more complex challenges that the road presents
potholes
speed breakers
ditches
For these ones, good tyres are sometimes not enough
Then he equips his system with shock absorbers, brakes etc. that help him get through these tough moments without getting hurt or suffering too much
There are bigger challenges still that he needs to face like....
MOUNTAINS
they appear in the distance, fuzzy, unknown, hidden behind fog.
Depending on the strength of his system he can choose to climb a mountain and decide to take that direction
house
Sometimes, the fog lifts and the mountain presents itself sooner than expected
wedding
But then there are times when his system is not well equipped and he faces these challenges with difficulty.
He leverages his social capital to equip the bike but ends up adding another load to the system, making him put in more effort, for the same distance
DEBT
The system helps him travel this road. But if it is not looked after, if the balance is not maintained, everything falls apart.


I DIG OUT CLAY FROM UNDER THE SOIL...
TO FIND SMOOTH LUMPS, I SWEAT, I TOIL.
BUT SOMETIMES NO MATTER HOW HARD I TRY...
I ONLY FIND CLUMPS THAT ARE SMALL AND DRY.


FIRST I TAKE ALL OF IT....
MOLD IT...
SHAPE IT...
SHAPING
SEE WHAT I CAN COUNT ON,
WHAT ALL I CAN FIT.
THEN I CUT OUT MY FAMILY'S NEEDS...
BOOKS, ELECTRICITY, AND THE DAILY FEED
BUT SOME DAYS I DON'T HAVE ENOUGH...
SO I REALLY MAKE IT STRETCH,
BUT IT'S REALLY TOUGH.
BALANCE
THE TIMES THAT I AM STILL LEFT WITH SOME CLAY,
I TRY MY BEST NOT TO CUT IT,
BUT TO MAKE IT ALL STAY.
THAT LITTLE BIT...
I ROLL UP..
LUMPING
MOUND BY MOUND..
TO MAKE IT NICE,
BIG AND ROUND
THIS BIG MOUND I MIGHT SPLIT AND STORE,
IN COOL, DAMP PLACES AND BEHIND SAFE DOORS.
SEPARATION


THESE LITTLE BAGS HELP ME OUT...
IN TIMES OF NEED, STRESS AND DOUBT...
TO REPLENISH MY SLAB OF CLAY, SO MY FAMILY CAN EAT ON A RAINY DAY.
I MIGHT TAKE ONE...
TO MAKE SOME IMPLEMENTS....
TO FULFILL MY FAMILY'S REQUIREMENTS...
ROUTINIZING INCOME
A COW...
OR A BRICK, ONE AT A TIME...
THAT I HARDEN IN THE SUN FOR A LATER TIME...
SALIENT GOAL


SOMETIMES, I TAKE ONE LUMP YOU SEE...
BEND IT...
TWIST IT...
FUZZY GOAL
ADD SOME MORE CLAY...
AND FINALLY DECIDE IT'S GOING TO BE A T.V.
INDIVIDUALIZING
WHICH, IF I BAKE, IS HERE TO STAY!
ILLIQUIDITY
SOMETIMES, I HAVE NO CHOICE BUT TO SOAK...
AND MAKE THE HARDENED CLAY SOFT...
RESHAPING
..TO FILL UP THE HOLES.
EXTRACTING VALUE
OR TAKE THAT STRING OF PEARLS...
PAWNING
AND BREAK IT WHEN I'M BROKE...
HOLDING THE BARE STRING, AND HOPING TO MAKE IT WHOLE.
FAMILY AND FRIENDS ARE JUST A CALL AWAY,
WE SHARE OUR LOVE, AND WE SHARE OUR CLAY,
BUT I DON'T DO THAT OFTEN, FOR THAT IS THE WAY,
IN THE LONG RUN, TO LOSE EVEN MORE CLAY.