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Saving Brick by Brick

Driving from the city center toward the less affluent suburbs in almost any developing country, one is struck by the number of unfinished houses. There are houses with four walls but no roof, houses with a roof but no windows, would-be houses that might have an unfinished wall or two, houses with beams sticking out of their roofs, walls that someone started painting but never finished. Yet there are no cement mixers or masons in sight. Most of these houses have not been worked on for months. In some of the newer neighborhoods of Tangiers, Morocco, this is so endemic that the finished and freshly painted houses are the ones that stand out.

If you ask owners why they keep an unfinished house, they generally have a simple answer: This is how they save. The story is familiar. When Abhijit's grandfather earned some extra cash, he would add a room to the house. This is how, one room at a time, more or less, the house where his family still lives was built. Poorer people cannot afford a whole room. Abhijit's family used to have a driver who would occasionally ask for a day's leave. He would buy a sack of cement, a sack of sand, and a stack of bricks and would take a day off to lay some brick. His house was built over many years, 100 bricks at a time.

At first sight, unfinished houses don't seem to be the most attractive savings instrument. One cannot live in a roofless house; a half-built house can collapse in the rains; and if money is needed for an emergency before the house is finished and it has to be sold incomplete, the partial construction may be worth less than what it originally cost to buy the bricks. For all these reasons, it would seem more practical to save cash (say, in a bank) until enough money has accumulated, and then build at least an entire room, complete with a roof, in one go.

If the poor still save brick by brick, it must be because they have no better way to save. Is it because banks have not found a way to collect the savings of the poor, and there is a "microsaving revolution" waiting to happen? Or is there something we haven't yet thought of that makes an unfinished house an attractive investment? And should we be impressed by the extraordinary patience of people, often living on less than 99 cents a day, who will deprive themselves of some of the little pleasures of life for years in order to complete their houses? Or surprised by the fact that, if building the house brick by brick is the only way to get to own a house, they don't try to save more to build it faster?

WHY THE POOR DON'T SAVE MORE

Given that the poor have little access to credit to finance their ventures, and limited insurance to cope with risks, shouldn't they try to save as much as they can? Saving would give them a buffer against a bad year in the field or an illness. It could also hold the key to starting a business.

At this point, one common reaction is, "How could the poor save—they have no money?" But this is only superficially sensible: The poor should save because, like everybody else, they have a present and a future. They have little money today, but unless they expect to stumble on a pile of cash during the night, they presumably also expect to have little money tomorrow. Indeed, they should have more reason to save than the rich, if there is at least some possibility that, in the future, a little bit of buffer could shield them from a disaster. Such a financial cushion would, for example, allow the poor families in India's Udaipur

District to avoid cutting meals when money runs out, something that they claim makes them extremely unhappy. Likewise in Kenya, when a market vendor falls ill with malaria, the family ends up spending a part of the business working capital to pay for medicine, but that makes it hard for the recovering patient to go back to work because now he has little or nothing to sell. Couldn't they avoid all that if they had some money set aside to pay for the drugs?

The Victorians thought that was just how the poor were—much too impatient and unable to think far enough ahead. Consequently, they believed that the only way to keep the poor from sinking into a life of sloth was to threaten them with extreme misery if they ever strayed from the straight and narrow. So they had the nightmarish poorhouse (where the indigent were housed) and the debtors' prisons that Charles Dickens wrote about. That view of the poor as essentially different people, whose innate inclination toward shortsighted behavior is what keeps them poor, has persisted over the years in slightly different forms. We see a version of the same view today among the critics of microfinance institutions who accuse the MFIs of preying on the profligacy of the poor. In a very different vein, Gary Becker, the Nobel Prize winner and father of the modern economics of the family, argued in a 1997 paper that the possession of wealth encourages people to invest in becoming more patient. By implication, therefore, poverty makes people (permanently) more impatient.[1]

One of the great virtues of the recent movement, among microcredit enthusiasts and others, to recognize the nascent capitalist inside every poor man and woman is that it moves us away from this view of the poor as either carefree or totally incompetent. In Chapter 6 on risk and insurance, we saw that the poor are in fact constantly worrying about the future (particularly about looming disasters) and take all sorts of ingenious or costly preventive measures to limit the risks they are subject to. Poor people show the same kind of ingenuity when managing their finances. They rarely have an account in a formal savings institution. In our eighteen-country data set, in the median country (Indonesia), 9 percent of the rural poor and 12 percent of the urban poor have formal savings accounts. In Brazil, Panama, and Peru, that number is less than 1 percent. But they save, nevertheless. Stuart

Rutherford, the founder of SafeSave, a microfinance institution in Bangladesh that focuses on helping the poor to save, tells about how they do this in two wonderful books, *The Poor and Their Money* and *Portfolios of the Poor*.[2] As background for that book, 250 poor families in Bangladesh, India, and South Africa described every single one of their financial transactions to survey researchers who visited them every two weeks for an entire year. One of their main findings is that the poor find many ingenious ways to save. They form savings "clubs" with other savers, in which each member is supposed to make sure that the others achieve their savings goals. Self-help groups (SHGs), popular in parts of India and found in many other countries as well, are savings clubs that also give loans to their members out of the accumulated savings of the group. In Africa, the most popular instruments are rotating savings and credit associations (ROSCAs)—more commonly known as "merry-go-rounds" in English-speaking Africa and as *tontines* in Francophone countries. ROSCA members meet at regular intervals, and all deposit the same amount of money into a common pot at every meeting. Each time, on a rotating basis, one member gets the whole pot. Other savings arrangements include paying deposit collectors to take their deposits and put them in a bank, depositing savings with local moneylenders, leaving them with "money guards" (acquaintances who take care of small sums of money for a little fee, or for free), and, as we saw, slowly building a house. Similar institutions also exist in the United States, mostly within recent immigrant communities.

Jennifer Auma, a market vendor in the small town of Bumala in western Kenya, embodies this sophistication. Auma sells maize, sorghum, and beans. During our entire conversation, she expertly sorted beans, the red ones to one side, the white ones to the other. When we met her, she belonged to no fewer than six ROSCAs, which differed in size and frequency of meeting. In one of them, she contributed 1,000 Kenyan shillings, or KES ($17.50 USD PPP), per month, in another one 580 KES twice a month (500 for the pot, 50 to pay for the sugar for the tea, which is an essential part of the ceremony, and 30 for the welfare fund). In another, the contribution was 500 KES per month, plus 200 as extra savings. Then there was a weekly ROSCA (150 KES per week), one that met three times a week

(50 KES), and one that was daily (20 KES). Each ROSCA had a specific, separate purpose, she explained. The small ones were for her rent (this was before she built a house), the bigger ones for long-term projects (such as house improvements) or for school fees. Auma saw many advantages to ROSCAs over traditional savings accounts: They don't have fees, she could make small deposits, and on average she got access to the pot much faster than it would take her if she saved the same amount every week. Moreover, the ROSCA group was also a good place to ask for advice.

But her financial portfolio did not end with the six ROSCAs. She had taken a loan from one of her ROSCA savings pools in early May 2009 (a little over two months before we met her) to buy maize worth 6,000 KES ($105 USD PPP). She was also a member of the village savings bank, where she had a savings account, though it was currently almost empty. She had used that money to buy shares in the village bank worth 12,000 KES ($210 USD PPP). Along with some shares she already had (each share entitled the borrower to borrow up to 4 KES from the village bank), this allowed her to borrow 70,000 KES ($1,222 USD PPP) and build herself a house. She also had little stashes of money hidden in various parts of her house to deal with small emergencies such as health needs, although as she pointed out, sometimes the health money was used for feeding visitors. Finally, she was owed money by a variety of people, including 1,200 KES by her clients and 4,000 KES by a former member of her joint liability group in the village savings bank. He had defaulted on the loan when he still owed the bank 60,000 KES ($1,050 USD PPP), obliging the group members to cover for him, and he was only now slowly paying them back.

As a market vendor married to a farmer, Jennifer Auma probably lived on much less than $2 a day. Yet she had an array of finely tuned financial instruments. We see this kind of financial ingenuity time and time again.

Yet all the ingenuity the poor employ to save may simply be a symptom of the fact that they don't have access to the more conventional and simpler alternatives. Banks don't like managing small accounts, largely because of the administrative costs of running them. Deposit-taking institutions are heavily regulated, for good reason—the government is

worried about fly-by-night operators running away with people's savings—but this means that managing each account requires bank employees to fill out some amount of paperwork, which can quickly become too burdensome, relative to any money that the bank can hope to make from these tiny accounts. Jennifer Auma explained to us that her savings account at the village savings bank was not a good place to save small amounts, because the withdrawal fees were too high. The fees were 30 KES for withdrawals less than 500 KES, 50 KES for withdrawals between 500 KES and 1,000 KES, and 100 KES for a larger withdrawal. As a result of such administrative fees, most of the poor may not want a bank account even when they are entitled to one.

The fact that the poor have to substitute for lack of access to proper bank accounts by adopting complicated and costly alternative strategies to save might also mean that they save less than they would if they had a bank account. To find out whether this was the case, Pascaline Dupas and Jonathan Robinson paid the opening fees for a savings account at a local village bank, on behalf of a random sample of small business owners (bicycle taxi drivers, market vendors, carpenters, and the like) in Bumala. The bank had an office in the main marketplace where all these people operated their businesses. The accounts didn't pay any interest. Instead, they charged a fee for each withdrawal.[3]

Few men ended up using the accounts that were offered to them, but about two-thirds of the women deposited money at least once. And these women saved more than comparable women who were not offered an account, invested more in their businesses, and were less likely to draw on their working capital when ill. After six months, they were able to purchase on average 10 percent more food for themselves and their family, day in and day out.

Although the poor do find sophisticated ways to put some money aside, these results show that they would be better off if it were much cheaper to start a bank account. As it is, each account in Kenya costs 450 KES to open, and on average about 5,000 KES got deposited in any account that was used at least once. This means that if Dupas and Robinson had not paid the fee for them, these poor clients would have had to pay a "tax" of nearly 10 percent for the privilege of having an account, not counting the withdrawal fees. To this, we have to add the

cost for the poor of going to the bank, usually in a town center, far from where they live. The cost to the bank of managing small amounts of savings has to go down a lot before savings accounts for the poor can be economically viable.

The "self-help groups" popular in India and elsewhere represent one way to reduce costs, leveraging the idea that if members pool their savings and coordinate their withdrawals and deposits, the total amount in the account will be larger, and the bank will be happy to take it. Technology can also play a role. In Kenya, M-PESA allows users to deposit money into an account linked to their cell phones and then use the cell phone to send money to other people's accounts and to make payments. Someone like Jennifer Auma, for example, could deposit cash at one of the many local grocery shops that happens to be an M-PESA correspondent. This would credit her M-PESA account. She could then send a text message to her cousin in Lamu, who would be able to present the text message to his local correspondent to get his money. Once he gets the cash, the money would be deducted from her M-PESA account. Once M-PESA is linked to banks, people will be able to wire money in and out of their savings accounts using a local M-PESA correspondent, without having to trek all the way to the bank.

Of course, no technology would remove the need for regulation of bank accounts. A part of the problem, however, comes from the fact that under the current regulations only highly paid bank employees are generally allowed to handle depositors' money. This is probably unnecessary. Instead, the bank could use a local shopkeeper to take deposits. As long as the local shopkeeper issues the depositor a receipt for the money that the bank is *legally obligated to honor*, the depositor is protected. Then it is the bank's problem to make sure that the shopkeeper doesn't run away with the saver's money. If the bank is willing to take that risk—and many banks would be happy to—then why should the regulator care? This realization has been percolating through the system in recent years, and a number of countries have passed new laws permitting this kind of deposit taking (in India, for example, this is called the Banking Correspondent Act). This might eventually revolutionize the whole business of savings.

There is currently an important international effort, led in particular by the Bill & Melinda Gates Foundation, to increase access to savings accounts for the poor. Microsaving is poised to become the next microfinance revolution. But is the lack of access to formal saving accounts the only issue? Should we concentrate exclusively on making it easy and safe to save? Dupas and Robinson's results suggest that this is not the whole story. First, there was the disturbing fact that most men did not use their (free) accounts. Many women did not use them either, or used them very little. Forty percent of women did not make a single deposit, and less than half made more than one; many who had started to use the account stopped after a while. In Busia, Kenya, in another study,[4] only 25 percent of the couples who were offered up to three accounts for free (one for each member of the couple and a joint account) deposited any money in any of the accounts. This went up to only 31 percent among those who also received a free ATM card to make withdrawals and deposits easier and cheaper. Savings accounts clearly help some people. However, their absence is not the only thing that stops the poor from saving.

We have already seen, in the previous chapter, another example of people who had lucrative opportunities to save but did not use them: the fruit vendors from Chennai, who borrowed about 1,000 rupees ($45.75 USD PPP) each morning at the rate of 4.69 percent per day. Suppose that the vendors decided to drink two fewer cups of tea for three days. This would save them 5 rupees a day, which could be used to cut down on the amount they would have to borrow. After the first day with less tea, they would have to borrow 5 rupees less. This means that at the end of the second day, they would have to repay 5.23 rupees less (the 5 rupees they did not borrow, plus 23 paisas in interest), which, when added to the 5 rupees they saved that second day by again drinking less tea, would allow them to borrow 10.23 rupees less. By the same logic, by the fourth day, they would have 15.71 rupees that they could use for buying fruit instead of borrowing. Now, say they go back to drinking their two cups more tea but continue to plough the 15.71 rupees they had saved from three days of not drinking so much tea back into the business (that is, borrowing that much less). That accumulated amount continues to grow (just as the 10 rupees had turned

into 10.23 after two days) and after exactly ninety days, they would be completely debt-free. They would save 40 rupees *a day*, which is the equivalent of about half a day's wages. All just for the price of six cups of tea!

The point is that these vendors are sitting under what appears to be as close to a money tree as we are likely to find anywhere. Why don't they shake it a bit more? How can we square this with the sophisticated financial planning that we encountered with Jennifer Auma?

THE PSYCHOLOGY OF SAVINGS

Understanding the way people think about the future can help resolve these apparent contradictions. Andrei Shleifer is probably the best exponent of the theory that many people sometimes do silly things (he coined, or at least popularized, the term "noise traders" to characterize the behavior of naïve stock traders who are ruthlessly exploited by sophisticated traders). Once, when he had just returned from Kenya, he shared with us something that he had noticed there: a huge difference between the farms run by a group of nuns, which were lush and vibrant, and those run by their neighbors, which were much less impressive. The nuns were using fertilizer and hybrid seeds. Why, he asked us, were the farmers not able to do what the nuns were doing? Could it be a sign that they were much more impatient (the nuns' profession presumably inclines them to patience because the rewards are mainly in the afterlife)?

He had hit on something that had long been a puzzle for us. In surveys conducted over several years, Michael Kremer, Jonathan Robinson, and Esther found that only about 40 percent of the farmers in the Busia region in western Kenya (not far from Sauri, the village where Jeffrey Sachs and Angelina Jolie met Kennedy, the young farmer who had not been using fertilizer before the project gave it to him) had ever used fertilizer, and just 25 percent used fertilizer in any given year.[5] Conservative estimates, based on offering a random group of farmers free fertilizer to use on a small part of their fields and then comparing the harvest on that plot to that on a similar plot of land belonging to the same farmer, suggest that the average annual return to using fertilizer exceeds 70 percent: For $1 paid in fertilizer, the average farmer

would get $1.70 worth of extra maize. Not quite the returns the fruit vendors could make, but seemingly well worth the effort of saving a little. Why were they not doing it more? It may be that farmers do not know exactly how to use fertilizer. Or they could underestimate the returns. But if that were true, then at least the farmers who got the offer of free fertilizer (and a demonstration of how best to use it) and earned the high returns should be hugely enthusiastic about using it in subsequent seasons. In fact, Esther, Kremer, and Robinson found that the farmers who were given free fertilizer one season were 10 percentage points more likely on average to use fertilizer in the very next season after the study, but that still meant that a majority had gone back to not using fertilizer. It was not that they were unimpressed with what they saw: The vast majority claimed to be convinced and initially said they would surely use fertilizer.

When we asked some farmers why they did not end up using fertilizer, most replied that they did not have enough money on hand to buy fertilizer when it was time to plant and use it. What is surprising is that fertilizer can be purchased (and used) in small quantities, so this is an investment opportunity that seems easily accessible to farmers with even a small amount of savings. It suggests that the issue, once again, is that farmers find it difficult to hold on to even very small sums of money for the period from harvest to planting. As Michael and Anna Modimba, a couple who farm maize near Budalengi in western Kenya, explained, saving is hard. On their farm, they had used fertilizer in the last growing season, but not the one before, because they had had no money left to buy it then. Saving at home is difficult, they explained, because there is always something that comes up that requires money (someone is sick, someone needs clothes, a guest has to be fed), and it is hard to say no.

Another farmer we met the same day, Wycliffe Otieno, had found a way to solve this problem. He always made the decision about whether or not to buy fertilizer just after the harvest. If the harvest was sufficient to pay for school fees and provide food for the family, he immediately sold the rest of his crop and used the money to purchase hybrid seeds, and if he had any leftover money, fertilizer. He stored the seeds and the fertilizer until the next planting season. He explained to us that

he always bought the fertilizer in advance, because, like the Modimbas, he knew that money kept in the house would not be saved: When there is money in the house, things always happen, he said, and the money disappears.

We asked him what he did when he had already purchased fertilizer (but not yet used it) and someone got sick. Wasn't he tempted to resell it at a loss? His answer was that he never found the need to resell the fertilizer. Instead, he tended to reevaluate the true urgency of any need when there was no money lying around. And if something really needed to be paid for, he would kill a chicken or work a bit harder as a bicycle taxi driver (a job he did on the side when he was not too busy with farming). Although they had never purchased fertilizer in advance, the Modimbas had the same view. If a problem came up but they had no money (say, because they had purchased fertilizer), they would figure something out—perhaps borrow from friends or, as they put it, "suspend the issue"; but they would not resell the fertilizer. It was their opinion that it would be a good thing for them to be forced to find an alternative solution, instead of using the cash at home.

So to help people like the Modimbas, Esther, Kremer, and Robinson designed the Savings and Fertilizer Initiative (SAFI) program. Right after the harvest—when farmers have money in hand—they are given the opportunity to purchase a voucher entitling them to fertilizer at sowing time.[6] ICS Africa, an NGO working in the area, implemented the program. Fertilizer was sold at market price, but an ICS field officer visited the farmers at home to sell the vouchers, and the fertilizer was delivered to their homes when they wanted it. The program increased the fraction of farmers who used fertilizer by at least 50 percent. To put this in perspective, the effect of this program was greater than the effect of a 50 percent reduction in the price of fertilizer. Just as Michael and Anna Modimba and Wycliffe Otieno had predicted, as long as it was brought to their door at the right time, farmers were very happy to buy fertilizer.

But that didn't explain why the farmers did not buy the fertilizer in advance on their own. A huge majority of the farmers who bought the vouchers went for immediate delivery, then stored the fertilizer and used it later on. In other words, just as Wycliffe Otieno had told us,

once they had fertilizer, they didn't resell it. But if they really want fertilizer, why don't they go ahead and buy it themselves? We asked the Modimbas. Their answer was that the fertilizer shops did not always have fertilizer available immediately after harvest—they only got it later, just before planting. As Michael Modimba said: "When we have money, they don't have fertilizer. When they have fertilizer, we don't have money." For Wycliffe Otieno, this was not such a problem: Because his job as a bicycle taxi driver brought him into town all the time, he was able to regularly check whether fertilizer had come in, and then buy it from whatever shop happened to have it. But for farmers like the Modimbas, who lived about an hour's walk from the market town and had few reasons to go there, checking the stores was more difficult. It was this small inconvenience of keeping an eye out for fertilizer delivery (asking a friend to check, calling the store) that was holding back their savings and productivity. All our intervention really did was to remove this minor bottleneck.

Savings and Self-Control

The experience of the Indian fruit sellers and the Kenyan farmers suggests that a lot of people fail to save even when they have access to good saving opportunities. This suggests that barriers to savings are not all externally imposed. Part of the problem comes from human psychology. Most of us have some memory of trying to explain to an irate parent that we were just sitting next to the cookie jar and the cookies somehow vanished. We knew eating the cookies would mean trouble, but the temptation was too strong.

As we discussed in Chapter 3 on preventive health, the human brain processes the present and the future very differently. In essence, we seem to have a vision of how we should act in the future that is often inconsistent with the way we act today and will act in the future. One form that this "time inconsistency" takes is to spend now, at the same time as we *plan* to save in the future. In other words, we hope that our "tomorrow's self" will be more patient than "today's self" is prepared to be.

Another manifestation of time inconsistency is to buy what we want today (alcohol, sugary or fatty foods, trinkets) but to plan on spending money in more responsible ways tomorrow (school fees, bed nets, roof repairs). In other words, the things we take pride or pleasure in imagining buying in the future are not always what we end up buying today. Knowing that we will have one drink too many again tomorrow gives most of us no pleasure—indeed, it probably makes us unhappy—yet when tomorrow comes along many of us cannot resist it. Alcohol, in this sense, is a *temptation good* for many people, something that makes immediate claims on us without giving us anticipatory pleasure. In contrast, a television is probably not a temptation good: Many poor people plan and save for months or even years to buy one.

A group of economists, psychologists, and neuroscientists worked together to establish that there is in fact a physical basis for such disjunction in decisionmaking.[7] They gave participants a choice of various rewards that would be enjoyed at different points in time, using time-dated gift cards. Each participant thus had a set of decisions to make. For example: receive $20 *now* or $30 in two weeks (present vs. future); receive $20 in two weeks or $30 in four weeks (future vs. more distant future); or receive $20 in four weeks or $30 in six weeks (more distant future vs. even more distant future). The twist was that the subjects made these decisions inside an fMRI scanner, so the researchers could look at what zones of their brains were activated. They found that the parts of the brain corresponding to the limbic system (thought to respond only to more visceral, immediate rewards) were activated only when the decision involved comparing a reward today with one in the future. In contrast, the lateral prefrontal cortex (a more "calculating" part of the brain) responded with a similar intensity to all decisions, regardless of the timing of the options.

Brains that work like this would produce a lot of failed good intentions. And indeed, we do see a lot of those, from New Year's resolutions to gym memberships that lie unused. However, many people, such as the Modimbas or Wycliffe Otieno, seem fully aware of such inconsistency. They talked about freezing their money in the form of fertilizer as a way to get around it. They also seemed to be convinced that some

of the "emergencies" they faced were in effect a kind of temptation good, because it was easier in the moment to spend money rather than just "suspend the issue" (Michael Modimba's phrase), or to stay at home rather than go out to earn something extra.

In Hyderabad, we explicitly asked slum dwellers to tell us whether there were any goods they would like to cut back on. They readily came up with tea, snacks, alcohol, and tobacco. And indeed it was clear from what they told us and from the data we collected that significant parts of their budgets ended up getting spent on these items. The same self-knowledge was apparent when Esther, Kremer, and Robinson asked a group of participants in the Kenyan fertilizer program, in advance of the harvest, to choose the day when they would come to sell the vouchers. A large fraction asked them to come early. The farmers knew that right after harvest was when they would have money available, but that it would soon disappear.

Given this self-awareness, it is no surprise that many of the ways the poor save seem to be not only intended to keep the money safe from others, but also to guard it from themselves. For example, if you want to reach a goal (buy a cow, a refrigerator, a roof), joining a ROSCA where the total pot size is exactly enough to achieve that goal is a great option, because once you join, you are committed to contributing a certain amount every week or month, and when you get the pot, you have just enough to buy that thing you have been looking forward to buying, and you can do it right away before the money slips through your fingers. Building a house brick by brick may be another way to make sure your savings remain focused toward a concrete goal.

Indeed, if the lack of self-control is sufficiently serious, it would be worth *paying* someone to force us to save. For example, we might prefer to run the risk that the mortar on our freshly built walls might get washed away by the rain so that we wouldn't have to keep the cash on hand and risk that we might, on a whim, use it all for a party. And somewhat paradoxically, some MFI clients may borrow in order to save. A woman we met in a slum in Hyderabad told us that she had borrowed 10,000 rupees ($621 USD PPP) from Spandana and had immediately deposited the proceeds of the loan in a savings account. Thus, she was paying a 24 percent annual interest rate to Spandana,

while earning about 4 percent on her savings account. When we asked her why this made sense, she explained that her daughter, now sixteen, would need to get married in about two years. That 10,000 rupees was the beginning of her dowry. When we asked her why she had not opted to simply put the money she was paying to Spandana for the loan into her savings account directly every week, she explained that it was simply not possible: Other things kept coming up.

We were still a bit bothered by this rather unusual arrangement and kept asking questions. This attracted a group of other women, who were patently amused by our ignorance. Didn't we know that this was a perfectly normal thing to do? The point, as we eventually figured out, is that the obligation to pay what you owe to Spandana—which is well enforced—imposes a discipline that the borrowers might not manage on their own.

However, it is clear that people should not have to pay 20 percent or more per year in order to save. Designing financial products that share the commitment features of the microfinance contracts, without the interest that comes with them, could clearly be of great help to many people. A group of researchers teamed up with a bank that works with poor people in the Philippines to design such a product,[8] a new kind of account that would be tied to each client's own savings targets. This target could be either an amount (the client would commit not to withdraw the funds until the amount was reached) or a date (the client would commit to leave the money in the account until that date). The client chose the type of commitment and the specific target. However, once those targets were set, they were binding, and the bank would enforce them. The interest rate was no higher than on a regular account. These accounts were proposed to a randomly selected set of clients. Of the clients they approached, about one in four agreed to open such an account. Out of those takers, a little over two-thirds chose the date goal, and the remaining one-third, the amount goal. After a year, the balances in the savings accounts of those who were *offered* the account were on average 81 percent higher than those of a comparable group of people who were not offered the account, *despite the fact that only one in four of the clients who had been offered the account actually signed on*. And the effects were probably smaller than they could have been, because

even though there was a commitment not to withdraw any money, there was no positive force pushing the client to actually save, and many of the accounts that were opened remained dormant.

Yet most people preferred not to take up the offer of such an account. They were clearly worried about committing themselves to not withdrawing until the goal was reached. Pascaline Dupas and Jonathan Robinson ran into the same problem in Kenya—many people did not end up using the accounts they were offering, some of them because the withdrawal fees were too high and they did not want to have their money tied up in the account. This highlights an interesting paradox: There are ways to get around self-control problems, but to make use of them usually requires an initial act of self-control. Dupas and Robinson demonstrated this nicely in another study with the vendors of Bumala market, in Kenya.[9] They had noticed that many small businesses lose sales when their owner (or someone in his family) gets sick and has to buy medicine. So they thought of helping people earmark some of their savings specifically for such contingencies, or for buying preventive health products (such as chlorine or a bed net). They contacted members of ROSCAs and offered them a lockbox, which could be used to save specifically for health contingencies. Some people (randomly selected) were given the key to the box, whereas for others, the NGO field officer kept the key: She would come and open the box when the people needed the money because of a health problem. Giving people a health box did help them to spend more on preventive health. But giving them a *locked* health box, to Dupas and Robinson's surprise, did not: They simply did not put much money in it. People reported not using it, or using it only for very small amounts, for fear that they would need the money for something else and would not be able to access it.

Awareness of our problems thus does not necessarily mean that they get solved. It may just mean that we are able to perfectly anticipate where we will fail.

POVERTY AND THE LOGIC OF SELF-CONTROL

Because self-control is hard to buy, self-aware decisionmakers take other defensive actions against the possibility of being tempted in the future.

An obvious strategy is not to save as much, because we know that we will just waste the money tomorrow: We might as well give in to the temptation today, if all we are going to do is give in to it tomorrow. This perverse logic of temptations operates in the same way for the poor as it does for the rich, but there are good reasons that the consequences may be much more serious for the poor than for the rich.

Temptations tend to be an expression of visceral needs (things like sex, sugar, fatty foods, cigarettes, not necessarily in that order). In that case, it is much easier for the rich to be at the point where they have already satiated their "tempted selves." When deciding whether to save or not, they can assume that any extra money that is allocated for the future will be used for long-term purposes. So if sugary tea is the archetype of a temptation good, as it seemed to be for the women in Hyderabad, then the rich are unlikely to be troubled by it—not because they are not tempted but because they can already afford so much tea (or other substitutes for tea) that they do not have to worry about their hard-earned savings being frittered away on extra cups of tea.

This effect is reinforced by the fact that a lot of the goods that the poor might really look forward to having, such as a refrigerator or bicycle or admission to a better school for their child, are relatively expensive, with the result that when they have a little bit of money in hand, the temptation goods are in an excellent position to stake their claim (*You'll never really save enough for that refrigerator,* the voice in your ear insists. *Have a cup of tea instead . . .*). The result is a vicious circle: Saving is less attractive for the poor, because for them the goal tends to be very far away, and they know that there will be lots of temptations along the way. But of course, if they do not save they remain poor.[10]

Self-control may also be more difficult for the poor for another reason: Decisions about how much should be saved are difficult decisions for anyone, rich and poor alike. These decisions require thinking about the future (a future probably unpleasant to contemplate, for many of the poor), carefully laying out a number of contingencies, negotiating with a spouse or a child. The richer we are, the more these decisions are made for us. Salaried workers contribute to Social Security, and their employers often contribute something more to a provident fund or a

pension plan. If they want to save more, they have to decide just once, and the money is then automatically deducted from their bank accounts. The poor have access to none of these props: Even the savings accounts that are supposed to make it easier for them to commit to a goal still require an active step of depositing money. To be able to save every week or every month, they have to surmount self-control problems over and over again. The problem is that self-control is like a muscle: It gets tired as we use it, and therefore it would not be a surprise if the poor find it harder to save.[11] This is compounded by the fact, which we discussed in Chapter 6 on risk, that the poor live under considerable stress, and stress-induced cortisol makes us choose more impulsive decisions. The poor thus have to do a harder job on fewer resources.

For both reasons, we would expect the rich to save a higher fraction of their current net worth (think of wealth plus income). And because saving today is one ingredient of net worth tomorrow, this will have the tendency to create an S-shaped relationship between net worth today and net worth tomorrow. The poor save relatively little and therefore their future resources tend to be low. Then as people get richer, they start saving a higher fraction of their resources, which means that they will have, relatively, a lot more resources in the future than the poor. Finally, when people get rich enough, they don't have to save as much of their wealth to meet their aspirations for the future, unlike middle-class people (for whom this may be the only way, for example, to buy a house).

We do see this S-shape between net worth today and net worth in the future in the real world. Figure 1 plots the relationship between resources the households had in 1999 and what they had five years later in Thailand.[12] The curve has a flat, elongated S-shape (admittedly, we are torturing the S a little bit). People who are richer today (more resources) are, on average, richer tomorrow, which is of course not surprising. What is more distinctive is the way in which the relation is fairly flat at very low levels of resources but then turns up sharply before flattening off.

This S-shape, as we saw before, generates a poverty trap. Those who start just to the left of the point where the wealth curve just touches the 45°

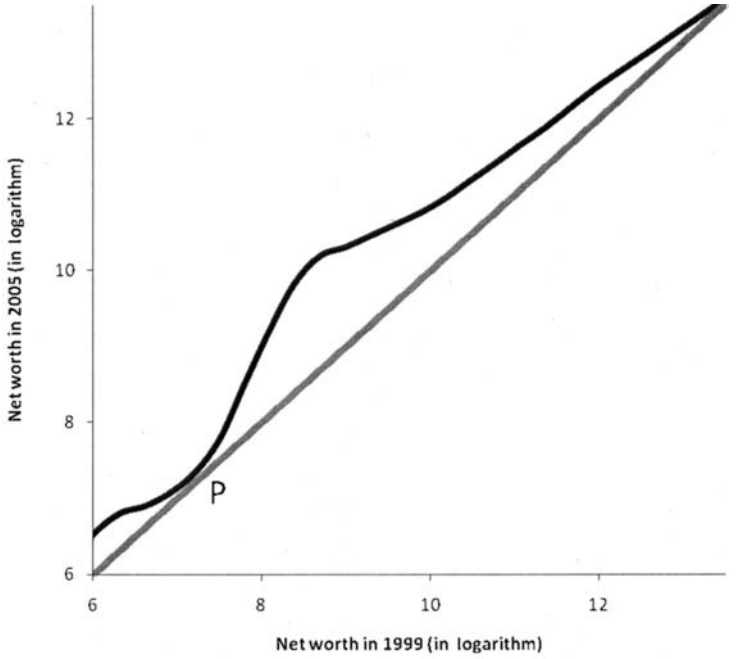

Figure 1: Wealth in 1999 and wealth in 2005, Thailand

line will not get richer than that point: They won't accumulate more—they are in the trap. Those just to the right of this point, P, on the other hand, are saving more than they need to stay in the same place and are getting richer. The poor stay poor here because they do not save enough.

Getting out of the Trap

Saving behavior crucially depends on what people expect will happen in the future. Poor people who feel that they will have opportunities to realize their aspirations will have strong reasons to cut down on their "frivolous" consumption and invest in that future. Those who feel that they have nothing to lose, by contrast, will tend to make decisions that reflect that desperation. This may explain not only the differences between rich and poor but also the differences among different poor people.

The fruit vendors are a good illustration. Dean Karlan and Sendhil Mullainathan fully repaid the loans of a random subset of these vendors (in India, and in the Philippines).[13] For a while, many of the vendors managed to stay debt-free: After ten weeks, 40 percent were still debt-free in the Philippines. So these fruit vendors seem to have enough patience to stay out of debt for a while. On the other hand, almost all of them eventually fell back into debt. It was usually a shock (an illness, an emergency need) that pushed them back into debt, and once that happened, they did not manage to pay the debt back on their own. This asymmetry between managing to stay free of debt and not managing to get *out* of debt shows the role of discouragement in making it harder to impose self-discipline.

Conversely, optimism and hope can make all the difference. Hope can be as simple as knowing that you will be able to buy the television you are looking forward to having. When we were working on the evaluation of Spandana's microfinance program, Padmaja Reddy once took us on a tour to meet her clients in the slums of Guntur, the birthplace of the organization. It was about 10:30 AM when we walked into a small clearing in the slum, where a dozen or so women were assembled. When Padmaja, whom they evidently knew, asked them what they were up to, they giggled. There was an awkward moment when we could see the women nudging each other, but then it came out—tea was being made. Padmaja joined in laughing with the women, but then, still smiling, went into a brief harangue about how they could improve their futures by cutting back on tea and snacks.

Most microcredit institutions disapprove of borrowing to buy consumption goods—some actually put a lot of effort into making sure that their money gets spent on some income-earning asset. Padmaja, on the other hand, is happy as long as the clients use the money to realize any of their long-term goals. Thinking about long-term goals and getting used to making short-term sacrifices in order to get there are the first steps, she thinks, toward liberation from one of the most frustrating aspects of poverty.

It was because of Padmaja's insistence on the ill effects of wanton tea drinking that, as reported above, we actually asked the women what things they would want to spend less money on, before our eval-

uation of Spandana's program. When we started the study, Padmaja confidently predicted that once people knew that there was a way to turn their tea money into stuff that really matters to them, they would have little trouble cutting back on these "wasteful expenditures." We saw no point in reminding her that this went diametrically against the view that we heard from so many people, that the worst thing about easy credit for the poor is precisely that it makes it too easy for them to indulge their momentary whims, but it was clearly on our minds when we started to look at the data, some eighteen months after the first round of loans. We needn't have worried. Padmaja, as she often says, knows how her clients think. As we saw in Chapter 7 on credit, one of the clearest impacts of getting access to microcredit was to reduce exactly the items that the women had told us they would like to give up—tea, snacks, cigarettes, alcohol. Total monthly spending on these goods went down by about 100 rupees ($5 USD PPP) per family for those that took an extra microcredit loan as a result of the program, or about 85 percent of what the average household spends. By itself, the cut in this kind of spending could pay for about one-tenth of the monthly repayment on a 10,000 rupee ($450 USD PPP) loan with a 20 percent interest rate. Later, we found very similar results for the clients of the MFI Al Amana in rural Morocco: They cut on social expenditures (and for some of them, on all expenditures), and built up their savings.[14]

Microcredit, of course, is just one of many ways in which we can help the poor think in terms of a future where some of their long-term goals can become attainable. Better education for their children would probably have the same effect. So would a steady and secure job, a theme to which we will return in the next chapter. Or insurance against health or weather disasters, so that they don't worry that any nest egg that they manage to accumulate will just get wiped out. Or even a social safety net: a minimum income support that people would be entitled to if their income fell below a certain range that would free them from having to worry about finding money to survive. The sense of security that any of these would provide would encourage savings for two reasons: by creating a sense that the future

holds promises, and by lowering the stress level, which directly impedes decisionmaking ability.

The bigger point is that a little bit of hope and some reassurance and comfort can be a powerful incentive. It is easy for those of us who have enough, living a secure life, structured by goals that we can reasonably confidently aspire to achieve (that new sofa, the 50-inch flat screen, that second car) and institutions designed to help us get there (savings accounts, pension programs, home-equity loans) to assume, like the Victorians, that motivation and discipline are intrinsic. As a result, there are always worries about being overindulgent to the slothful poor. Our contention is that for the most part, the problem is the opposite: It is too hard to stay motivated when everything you want looks impossibly far away. Moving the goalposts closer may be just what the poor need to start running toward them.