

Human values and the design of the fight against poverty

Esther Duflo

Tanner Lectures, May 2012

Note:

These two lectures very largely draw on Abhijit Banerjee and my recent book *Poor Economics*. While the book is organized around thematic chapters, I have focused on two themes that are undercurrents of the entire book (they constitute two of the “five lessons” that we draw at the end “in lieu of a sweeping conclusion”). For each of the topics I will cover (paternalism vs. freedom, and hope as capability), I have tried to take the opportunity of preparing these lectures to highlight the fundamental argument that the book makes. Most of the examples are taken from the book and, when relevant, from other research that has appeared since the book was written or that we did not have space to cover. In this sense, these lectures should be co-authored, but I will spare Abhijit the blame for the poor writing. I just hope that I did not betray our shared vision. I would like to thank, without implicating, Abhijit Banerjee, Emily Breza, Jane Mansbridge Rohini Pande and Cass Sunstein for helpful comments on a first draft. I would also like to thank Homi Bhaba, Kaushik Basu, Angus Deaton, Pascaline Dupas, Emma Rotshild, and Amartya Sen for their discussion during the Tanner lecture. The lectures will be further revised in the next few weeks, this is a preliminary draft of the written version.

Lecture 1: Paternalism versus Freedom?

Paternalism does not garner good press anywhere, but is viewed in specially harsh light when applied to anti-poverty policy. Paternalism can be defined as the practice of providing a set of “basic needs” for people (the set may vary), typically without consulting them on what their needs actually are. This may involve the free or subsidized provision of housing, schooling, or health care etc., but usually also involves a set of mandates or restrictions on the shape that any assistance takes. The poor get food stamps or access to ration shops rather than cash, but the use of those food stamps may be restricted (Mayor Bloomberg drew some ire by proposing that they could not be used to buy sodas); people must wear a helmet when riding a motorcycle, even though not wearing one only puts the wearer in danger.

As such, paternalism seems to be in direct conflict with freedom: whether in the form of strings attached to a transfer or a legislated mandate, paternalism takes away an individual’s right to choose. For the critics, that is its biggest flaw: it overrides an individual’s agency on the grounds that those in power (the boss, the white man, the nanny state, for example) know better. Why should adults not have the ability to decide freely what is good for themselves? Some mandates may be required in circumstances where an action (or a lack of action) affects others in society. Hence, it may, for example, be justified to mandate immunization. But, if my decisions affect only myself, there is no reason why anybody should take the power to decide away from me.

For critics of Aid and Government, anti-poverty policy should be empowering, and the subtle or not so subtle paternalism that characterizes much of anti-poverty interventions runs exactly counter to this objective. If the poor make apparently “bad decisions”, they must have a good reason to do so. Interventions should not go beyond providing opportunities, and perhaps information, and then let people decide: the poor need to take responsibility of their own lives.

Yet, this view ignores the fact that our choices are rarely made in a vacuum. The social and physical environment, including infrastructure, rules, and social norms, provide a backdrop that turns out to exert a powerful influence on the decisions we make. What we easily forget is that this environment is very different for the poor than for the rich. The richer you are, the less responsibility you need to take for the basic constituents of your life (retirement savings, clean water, immunizations) because everything is taken care of for you. While the poor have to be responsible for every aspect of their lives, if the rich make no decisions and let the status quo obtain, they are likely to be largely on the right track. For most of the poor, if they do nothing, they are on the wrong track.

This lecture is about what this fundamental asymmetry implies for the relationship between paternalism and freedom: once we define freedom properly, could it be that the case that having some basic decisions taken care of our behalf makes us more free, rather than less free? Does this imply that there is an “acceptable” (e.g. freedom enhancing) paternalism, and where do we place the boundary between acceptable and unacceptable?

1) Paternalism against freedom: le “devoir du patron” and the white man’s burden

Paternalism emerged with the industrial revolution. Entire industrial towns developed around a particular enterprise and were built by a powerful leader. Examples include the town of le Creusot and Schneider and Co. steel, Noisiel and Menier chocolate, and Beaucourt and Japy clocks. Paternalistic industry captains provided support and structure to their employees “from cradle to grave”, both inside and outside the workplace. They built hospitals, primary and vocational schools, entertainment societies, and homes for use by employees and their families, rather, perhaps, than providing higher wages.

Paternalism was inspired by an often strongly religious ideology (the Schneiders were Protestants, and the Japys, devout Catholics) that equated the “patron” to a responsible father and the workers to children. The children were, by definition, morally inferior, undeveloped creatures. While the conditions of life were certainly better in the paternalist strongholds of France than in the poor houses of Victorian England, the underlying view of the poor in both settings was remarkably consistent: the poor were not to be trusted with decisions concerning their own lives or those of their children. According to the prevailing sentiment, the poor lacked the strong moral backbone, the long-term vision, and the ability to plan their own lives that their bosses possessed. They also needed to be reshaped from rough peasants into disciplined industrial workers who could follow the demanding rhythms of industry. This transformation required a strict, if benevolent, structure (Foucault, 1975).

The French industrialists chose paternalism over downright exploitation, in part because of their religious convictions, but also in part out of economic and political expediency. Providing a substitute for the social insurance that would otherwise have been provided by either the State or by the solidarity between workers (through workers’ organized cooperatives) was also a way to block both centralized government intervention and workers’ organization. For example, the “Caisse de Secours” (relief fund) of the “Compagnie des Mines de la Loire” was organized in a way to avoid any government interference. In 1848, the Society of Mulhouse Industrialists opposed the creation of a government-sponsored retirement fund, and in 1849, they created their own. In le Creusot, Schneider was likewise opposed to any State intervention (Gueslin and Guillaume, 1992). At the same time, paternalism was also a way to stop workers from organizing cooperatives, potential precursors to unions. Paternalism claimed the existence of a shared interest between workers and capitalists, and providing benefits to workers (such as the bonus linked to firm performance offered by the Compagnie des Mines de la Loire beginning in 1848) helped them both to make that case and to weaken the need for solidarity between workers. However, as the end of the century approached,

workers felt increasingly alienated and resentful of the tight control exerted by firms on both local government and workers' rights. In 1870, workers in le Creusot struck, seeking the right to unionize and manage the firm's benefits pool.

Prohibiting workers from organizing, deciding from above what they needed and what they did not need, and imposing extremely demanding work schedules on workers explicitly offered a trade-off between a certain measure of material comfort and freedom. This surrender of freedom was reinforced by the very local nature of the worker-employer relationship, which restricted mobility and ensured a more or less stable workforce to an expanding industry. Not only were housing and schools linked to a town, some industrialist societies (like the "societe industrielle de Mulhouse") encouraged their members to create retirement funds that the workers would forfeit if they ever left the firm (Gueslin and Guillaume, 1992).

From its inception, paternalism was directed toward the poor and offered as a substitute (and an alternative) to individual responsibility and freedom, collective (class/community) solidarity, and government intervention. It was rooted in a view of the poor that was often openly demeaning, even when there was a genuine desire to help them. The convenience of the beliefs from an economic point of view also suggest that the desire to improve the lives of the poor may not have been a primary motive, but rather a convenient way to mask and facilitate exploitation, hence, the heart of the Marxist critic of paternalism.

Many of the criticisms directed against foreign aid today (irrespective of whether it is funded by governments, NGOs, or large foundations) make very similar arguments. Critics claim that aid organizations impose on the poor a model of what is right or wrong that is based on the claimed superiority of the aid-providing civilization. Furthermore, the criticism goes, aid organizations attempt to substitute for both the local communities and for the national governments of the receiving countries. The motivation for aid may have nothing to do with the welfare of the poor, but everything to do with the economic interests of aid workers or their

countries. In prioritizing those economic interests, aid funders deny individual and collective freedom. While today, these arguments are more likely to be found towards the right of the political spectrum, there is also a left-wing view that comes to similar conclusions. These opponents of aid reject a model of development based on economic growth, modern medicine, and enhanced agricultural productivity as an attempt by the capitalist world to impose its culture on societies that may be perfectly content with a different value system. In the same way that the paternalist industrial class worked against a traditional agrarian culture that did not fit within the industrialist production system, the Western world may now be trying to impose its own culture in the name of “civilization.”

In a post-colonial world, these accusations are grave, as they immediately bring forth the specter of colonialism: it is not by accident that William Easterly’s tome against foreign aid is entitled “The White Man’s Burden” (Easterly, 2006). The colonial powers, contemporary to their paternalistic, industrialist countrymen, were also reaping the economic benefits of suppressing freedom and imposing a model of organization on local populations, all under the pretense of helping the less fortunate. Against this backdrop, those working with the poor in developing countries today must continuously address the suspicion that they are not respecting the poor, their values and their choices.

In both rich and poor settings, governments must decide the extent of intervention, and thus paternalism, in the lives of their constituents. Recently, the role of the state has become a flashpoint in American politics, for example.¹ In poor countries, where the reach of government is far more limited, there is often the feeling that there is a window of opportunity to develop a new paradigm for governance, relying much more on the willingness and ability of poor people and local communities to take charge of themselves. The current trend in anti-poverty policy is very much to “hand

¹ Republican presidential candidate and former Speaker of the House, Newt Gingrich described the government safety net as a “spider web,” which “traps people into dependency.” (Campaign speech, February 3, 2012, Las Vegas, Nevada.)

anti-poverty policy back to the poor.” In explicit opposition to the hidden paternalist view allegedly embodied by traditional aid and government policy, the microcredit movement is an example of an innovation that celebrates the poor’s² entrepreneurial spirit. After all, poor households often run their own businesses or farms alongside the affairs of the family. We should be awed by their potential, and focus on giving them the ability to fully realize it.

At least in principle, the view of the empowered poor does not need to mean a lowering of the resources devoted to support them, but rather a rethinking of how those resources are used: school voucher programs rather than government schools; health budgets devoted to health insurance programs rather than funding clinics or services; local control of infrastructure projects rather than centralized control. That the poor need to be doing their bit to help themselves is the common thread. In practice, however, this ideology is often taken a bit further. If there is intrinsic value in self-reliance, then the best public policy may often be very little public policy. In the words of John Hatch, the founder of the large microfinance institution, FINCA, “Give poor communities the opportunity, and then get out of the way!” (Banerjee and Duflo, 2008). Mohammed Yunus has often forcefully spoken against government or even NGO intervention, likening it to “charity”, which, in his vocabulary, is not a compliment. His best-seller *Banker to the Poor* summarizes the resolutely “anti-paternalist” view of the world that he shares with others:

When we want to help the poor, we usually offer them charity. Most often we use charity to avoid recognizing the problem and finding the solution for it. Charity becomes a way to shrug off our responsibility. But charity is no solution to poverty. Charity only perpetuates poverty by taking the initiative away from the poor. Charity allows us to go ahead with our own lives without worrying about the lives of the poor. Charity appeases our consciences (Yunus, 2010).

This passage emphasizes the fundamental belief that policies or interventions which take the initiative away from the poor perpetuate poverty. Thus, “charity” (top down

² Poor women, in particular

programs that do not require the poor to do their bit) is not only morally reprehensible because it takes away freedom, but in addition, the very act of taking away this freedom also traps the poor in poverty.

2) Choices and the environment

Yunus talks about “initiative,” implicitly referring to a state of the world where we are free to choose. But our choices are powerfully influenced by the environment, whether or not we are conscious of it: private and public institutions, infrastructures, as well what other people do in our communities have a powerful influence on what we “choose” to do.³

A first channel is the powerful influence of the “default” situation, what an individual will end up doing if she exercises no active choice at all. Considerable research has shown that default rules have a strong influence on final outcomes (Sunstein and Thaler, 2008). The determinants of the status quo are, in turn, functions of current regulation and past and present public investments.

Providing infrastructure may not be seen as paternalistic. Yet, the importance of public infrastructure in influencing our behavior cannot be overstated. For example, in rich countries, water comes out of the tap clean and ready to drink. For poor people in poor countries, clean water is normally not available at home, and the water found at wells is often contaminated.⁴ In rich countries, it would take some work to figure out how to opt out of drinking clean, treated water.⁵ Similarly, while poor people could choose to drink clean water by boiling it or adding chlorine to it,

³ For general references: see (Sunstein and Thaler, 2008) and (Moore et al, 2011)

⁴ According to the 2010 UN Millennium Development Goals report, poor people are much more likely to drink dirty water than rich people: while 98% of rural residents of developed countries drink water from an improved source, the fraction is only 76% in poor, rural areas

⁵ In principle, rich people could choose to drink un-purified water while camping or could dig a well in the backyard, but opting out of the default might be costly.

going against the default is not costless, and as we see below, few people do it. This implies that in some sense, providing clean water is a paternalistic action, as it steers individual towards a particular outcome.

The rules in place, both in the form of government laws and social norms, also constitute defaults. For example, in most rich countries, at least some vaccinations are mandatory.⁶ This is not to say it is completely impossible to keep a child from being immunized. In Texas, for example, a child can be exempted if the administration of some immunization contradicts “the tenets of an established religion” of which the parent is a member. In most poor countries, immunizations are freely available, but neither mandatory, nor automatic.⁷ Vaccinations can usually be administered at the nearby health center, but it is the parent’s responsibility to take the child there. Furthermore, health centers are frequently closed due to absenteeism, which makes it even more difficult to override the “no immunization” default. Both poor and rich parents have the choice to immunize their children, but the default situation is very different in those two settings.

Small administrative barriers can also have surprisingly large effects. Devoto et al (2011) demonstrate this in Tangiers, Morocco, where a utility company offered subsidized credit to households who were not yet connected to the water system. All households in Tangiers were eligible for the credit, but the researchers randomly selected half of the households and visited them at home to present the loan product to them and also to offer them assistance with the administrative procedures. 69% of the households that were targeted by this campaign took up a credit and a water connection, as opposed to only 10% of the control households. Importantly, while home water connections did not result in significant health gains (the quality of the water was already good beforehand), they resulted in considerable time gains, and

⁶ Note that a society may want to make immunization compulsory regardless of its stance on paternalism, since lack of immunization imposes externalities on the rest of us, but this is not what matters for this argument.

⁷ A mandate could not easily be enforced in any case.

households reported being happier, less tense, and less likely to be engaged in social conflict. In this light, the difference between the take-up rate in the two groups was quite striking: the campaign provided both information and help with administrative steps. There is evidence that both mattered. In particular, control households that were within 20 meters of at least one treatment household were 18 percentage points more likely to purchase a connection within the first 18 months after the program was started (more than doubling the likelihood). However, the control households were still much less likely to connect to piped water than the treatment households that were helped with the administrative steps. Together, this suggests that making a service available, is not necessarily sufficient to prompt action. Small barriers that may appear to us to be minuscule in view of the likely benefits may be significant factors in the household's decision-making. Those barriers also affect participation in social programs in rich countries,⁸ but they are more likely to be real obstacles for poor households (and in poor countries) for two reasons. First, the administration is much thinner on the ground (and possibly more corrupt), and systems are less efficient in poor regions, which means that those barriers are more likely to loom large. Second, the same step may have a very different significance for a literate, educated person, than for an illiterate person who might easily feel intimidated. For a wealthy resident of Tangiers, going to the city hall and getting the necessary permit to obtain a connection is a minor annoyance. For a poor woman from the inner city, it may represent a major adventure.

The Tangiers example also shows that information does not circulate as fast and as transparently, even in close-knit communities (the neighborhood of Tangiers are particularly dense), as we may assume. Poor people may not know the services to

⁸ For example, when the administration granted automatic eligibility for the National School Lunch Program to children who were already eligible for other programs, the number of kids certified to participate in free school lunch programs was set to increase by upwards of 400,000 students. See (Gleason et al 2003) and (Moore et al 2011).

which they are entitled, the steps that are required to obtain those services, or how to choose between the options they have. Even when information is technically readily available, collecting it and processing it may be difficult. For example, Kling et al (2011) show that in the US, mailing people tailored information about their various Medicare part D options leads to a 10% larger probability of switching plans in the treatment group relative to a randomly selected comparison group, resulting in an average savings of \$100.

Much research has also shown that the complexity of a choice leads to inaction and potentially to suboptimal choices. For example, again in the US, Choi, Madrian and Laibson (2009), and Beshears et al (2010) show that reducing the complex problem of the retirement savings decision to a simple choice between maintaining the status quo (no enrollment in a savings plan) or enrolling in a pre-defined option (which specifies a contribution level and an asset allocation) increases enrollment rates by 10 to 20 percentage points, almost doubling the fraction of people who are enrolled in any plan. Faced with complex decisions, people may avoid taking an action if they are unconfident in their decision or if they fear that they are making the “wrong” choice, thus accepting the status quo through inaction. Consider the decision of purchasing weather insurance: even if the product is relatively simple (for example, a policy could pay out a certain amount if the rain accumulation falls below a pre-specified threshold) and if farmers understand it correctly, they must still determine whether the product is right for them, and how much they should purchase, if any at all. They must also keep in mind the growing conditions in their fields, the distance between their fields and the weather station, and the sensitivity of their own crop yields to rain, for example. Whether or not to purchase weather insurance is not an easy decision and if farmers feel they have no guidance in making that decision, they may well choose to stay away from the product. This may be part of the reason why take-up of weather insurance products has been surprisingly low in developing countries (Cole et al, 2009).

The importance of making decisions simpler has been recognized in rich countries: the Affordable Care Act (aka Obamacare) requires insurers to provide a clearly written Summary of Benefits and Coverage to make the choice between health plans more comprehensible. But here again, in most instances, the poor face decisions that are generally not even required of us in richer countries. With the important exception of the US, most rich countries have a nationalized health insurance system that provides universal health care coverage without requiring citizens to make any decisions. Even in the US, most employers offer health insurance and are able to guide their employees through their options. In developing countries that have chosen to emphasize the purchase of health insurance (India for example), understanding what these plans cover and what they do not is extremely complicated. This is a reason for both low take up and often for low usage even conditional on take up.

The problem of complexity is compounded by the issue of trust. The recommendations of the government, your doctor, your employer, or your child's teacher can form a powerful default option even if you do not fully understand the reason for the recommendation, *if you have reason to trust them*. It is the trust that the employer has chosen a contribution level and an asset allocation that is likely to work for me that makes the employees studied by Choi et al. confident that they can pick the "quick enrollment" option offered to them. It is this trust that leads most people in rich countries to immunize their children against diseases when the doctor offers the vaccines to them, or to not demand antibiotics when their children are diagnosed with a virus. When this trust is shattered for some reason, for example when the measles vaccine was supposedly linked to autism, individuals may no longer follow the prescribed default (say, immunization against measles), not necessarily because everyone is strongly convinced that immunizing children

against measles is now dangerous, but because they have been derailed from the automatic course on which trust in the system was directing them.⁹

A fundamental difference between richer and poorer countries is that for the poor, this basic trust in the system is often neither present nor necessarily warranted. In India, for example, villagers are often openly scornful of the treatment options suggested by nurses, preferring instead to rely on unqualified quacks who are prompt to prescribe antibiotics and steroids. In part, this is because understanding why antibiotics aren't always needed to cure sicknesses requires some basic knowledge of biology, which the rich are more likely to have. But this is also because, both for historical and persistent reason, there is no reason to have automatic trust either in the nurses, or in the tool that she has at her disposal. In India for example, the long shadow of the sterilization drive the Gandhi era still loom large; medical personal is neither particularly competent nor diligent (Das and Hammer); the test they use, even if they do carry out, may be reliable. All of these factors remove the "easy" option to just go with the recommendation of the nurse or the doctor, or even to trust the result of a test. In Kenya, Jessica Cohen, Pascaline Dupas and Simone Schaner (2011) offered free rapid diagnostic malaria tests (and malaria drug subsidies) to randomly selected people who had come to a pharmacy because they believed they had malarial symptoms. Some people were tested after purchasing the drugs to treat malaria and others before, leaving them the option to take the test before they made the decision to purchase the drugs. The authors find that when the treatment for malaria was subsidized, only 38% of adults who sought out the treatment in fact tested positive for malaria. When offered the test, most people agreed to take it, but nearly half of those who tested negative still purchased and took the treatment; evidently, they did not fully believe the results of the test. This is likely due to the fact that the test that is normally available (a microscopic lab test carried out in health centers) has a high rate of false negatives, so doctors

⁹ Michael Specter's book, *Denialism* (2009), describes this process very well in the case of immunization and autism.

routinely ignore the results and use their judgment. Likewise, patients who came to the pharmacy are in a position where, having just taken a test, they must still decide what to do, without the help of a simple decision tree, and without much confidence that they are making the right choice.

In sum, defaults created by regulations, infrastructure, small barriers, information, or trust naturally direct our choices. Because those defaults are different in poor countries, the decisions made by the poor are often different. There are two common threads in the examples of the previous section.

First, the status quo decision for the poor often leads to outcomes that are “worse” from the point of view of achieving basic life comforts (health, proper nutrition, even survival). Second, while everybody may face a default situation, the poor may in fact have more choices in many basic life situations than we have in rich countries, where a (more or less) subtle paternalism guides most of what we do. It is easier for a poor person in Mali to get vaccinated than for a rich person in Cambridge not to. It is easier to boil water, or add chlorine, and hence drink clean water, then to opt out of the water system in New York City. It is possible for a poor person in India to get health insurance (and in many States, it will come with a subsidized premium), but in Massachusetts, it is actually not legal not to have health insurance, as Romney’s competitors made sure we all know.

Does that mean that we in rich countries, although we have much more comfortable lives, are in fact less free than the poor? Did Amartya Sen get it backwards, and is development (or at least, too much development) the opposite of freedom? Should developing countries be careful to not follow in the historical growth paths of rich countries and to avoid wresting away control from their citizens?

3) Do poor people enjoy greater freedom?

Some might argue with the idea that the status quo is more constraining for the rich than for the poor: after all people in rich countries can go on camping trips and drink un-filtered water, while people in Udaipur, India may have a very hard time getting all of the required immunizations for their children even if they want to. Let's assume, however, for the sake of argument, that it is in fact easier for a poor person in a developing country to escape the status quo of unclean water, un-immunized children, and no health coverage than for a rich person to move in the opposite direction. While, at first glance, that seems to suggest the poor person is more free, could we nevertheless argue that, in some sense, the poor person has less freedom than the rich one?

To answer this question, we need to define freedom. Sen defines freedom, not negatively, but positively, as the ability realize one's potential. Workers hit by the West Bengal famine were, in a sense not prevented to buy food. But fundamentally, they were not free, since their low wages were insufficient for them to buy food and avoid starvation. Freedom is thus directly tied to the notion of capability. Life, good physical health, and some sense of control over one's destiny are essential capabilities, and freedom requires access to those capabilities. It would make no sense, for example to claim that people in Haiti are free because they can die of cholera if they decide to. The presence of cholera makes them less free: freedom to lose is not freedom.

This does not mean that Sen equates freedom and physical well-being. Agency matters. Freedom does include the freedom to fast for someone who has enough money to buy food, and it does include the freedom to refuse a blood transfusion if it goes against one's beliefs. A person living in the rich West is capable of eating and capable of staying alive after a hemorrhage, even if they decide not to.

Real agency is constrained, not only by institutions and laws, but by both the practical ability to make choices and by the power of inertia. The existence of defaults and status quos for most choices means that people can't help but be

steered in some direction. We can now return to the specific nature of the defaults that loom large in the lives of the rich and the poor. Generally, those that govern the rich steer individuals more in the direction of healthier lives, more security in old age, and less vulnerability than do the defaults of the poor. Because health and security are fundamental capabilities, this makes the rich freer than the poor *even if the poor are still capable of achieving the same results if they make the right choices*. In other words, although the set of options available to me would seem to be the same, I am in fact more free in a society that puts chlorine in my water even if I did not explicitly ask for it than in a society that does not.

There are two distinct reasons for this. The first, most naturally, is that having to exercise active choice to obtain these basic constituents of life means that an individual is more likely to end up with the “wrong” choice. Water chlorination is a good example. Two million children die of diarrhea every year, and dirty water is one of the primary causes. In regions where piped water is too expensive, a cheap solution is to add chlorine to the water. In Kenya, it is distributed extensively, subsidized, and generally widely available. However, chlorine has been slow to catch on. In the Busia region of Kenya, a study found that the adoption of chlorine was less than 10%, despite a vigorous social marketing campaign. In Zambia, Ashraf et al (2010) find both low adoption rates and very strong sensitivity to the price of water purification products. Giving households everywhere access to piped water would of course solve the problem, but it is not affordable in many poor countries. An alternative that Michael Kremer and several colleagues tried is to provide chlorine dispensers at the water source. It is cheaper to distribute at the source as it avoids the cost of packaging the chlorine in bottles. Furthermore, the zero price of chlorine at the source removes most barriers to use, and seeing other people using it may help to shift the social norm. In a randomized trial (on 20 such dispensers, covering about 5,000 households), the researchers found that 60% of households served by those water points had residual chlorine in their water (as opposed to 8% in a comparison group), and diarrhea incidents also fell in the treatment group relative

to the control group.¹⁰ The water dispensers, by successfully removing small barriers to action, were successful in shifting the default to one that was more conducive to health and well being (and hence substantive freedom).

We often adopt a somewhat patronizing tone when thinking about the poor: why are they not boiling their water? Why are they not immunizing their children? Why are they not saving for a rainy day? Why don't they have a more caloric diet? We can see that all those "right" choices are available to them, but we forget that they imply active choices, when the "wrong" choices are hardly available to us. The freedom here is just the freedom to stumble.

There is a second, somewhat less obvious, reason why having to make all these choices makes the poor less free. Choice is not costless. It demands time, mental energy (to gather and process information), and emotional energy (to exercise the self control that is necessary to take the high road). As a minute of introspection should make clear, humans don't have an infinite amount of those resources. And when we spend energy trying to control ourselves, we have fewer resources for other things. In a very well known experiment, subjects were asked to list their thoughts, but while being instructed not to think about a white bear. When they were finally free to think about that white bear, participants who had previously been asked to suppress their thoughts listed more thoughts about that white bear than a group that was free to think about the bear the entire time (Wegner et al 1987). The act of "not thinking about a white bear" has since become the prototypical example of the "ego depleting task", which makes further effort at self control particularly difficult. People who are asked to think about a white bear are more likely afterwards to pick an unhealthy snack than a healthy one, for example. More generally, there is evidence from psychology that when people have exerted some of their self-regulatory strength on an initial task, they subsequently are less

¹⁰ So much so that it has been estimated to be one the cheapest way to reduce diarrhea incidence (J-PAL, 2010)

successful at difficult reasoning and thinking problems, more prone to spending money impulsively, and more likely rely on simplistic strategies for making judgments and decisions (see Baumeister et al, 2006 for a review). Psychologists have also shown that making choices and decisions consumes strength, leading to poorer self-regulation afterwards (Vohs et al., 2008).

While psychologists insist on the self-control problem and ego depletion, more traditional economics variables can play the same role. If our minds have finite resources and if we are entirely occupied trying to figure out whether or not boiling water for before an infant drinks it is a good idea, we may simply not have any time left to think about what is the right choice of school for the child's older sister (something American parents devote a lot of time to), or how to stock the shelves of the family business.

This limited supply means that even if the poor manage to make all the right choices for their basic lives, it will come at a cost. They might not have the space to make important decisions in other sphere of their lives. Sendhil Mullainathan and Eldar Shafir call this, in a forthcoming book on the psychology of poverty, "the packing problem": the poor have too many things to pack in too small of a suitcase. The decisions they have to make about their budgets leave them less attention to focus on other things. They show that poor people perform less well on an IQ test when they had to previously think about what they would do to fix a car problem that would cost \$1,000 vs. a problem that would only cost \$100. Having to think about getting the various basics of life right is difficult, even if it takes time, rather than money.

Banerjee and Mullainathan (2008) develop a model of a poverty trap that is based on this insight. In their model, an individual must divide her (limited) attention between home life and work, and her income between consumption and comfort goods. If she does not pay enough attention at work, problems on the job may not be caught early, leading to a loss of income. Problems can also arise at home, leading to

a loss of welfare; this loss however is less severe if she has access to more comfort goods (such as piped water at home, or an immunized child). People differ in their human capital, which is basically their productivity at work.

What Banerjee and Mullainathan show is that, in this model, people who have more human capital will be able to devote more attention to work, which further boosts their incomes. This is because they make more money, and they can thus afford more of the comfort goods that prevent problems at home from becoming too costly. This implies that they need to devote less attention to their problems at home and more to their work. As a result, this creates a virtuous circle, such that there is a threshold at which individuals can afford to spend undivided attention at work, and at that level, their income will jump. Without the usual trick employed by economists, such as non-convexities in the production function or problems in the credit market, the model generates a poverty trap: very similar people, on the left or the right of the human capital threshold will have very different incomes. The model also tells us that those who have more problems at home, or who must devote more attention to them, will be less productive. One implication is that in an environment where infrastructure or institutions limit the extent to which problems at home can arise can decrease the possibility of a poverty trap. And the effect will be the stronger the less attention and energy it requires from individuals. The best situation is one where those basic issues at home will require neither our attention nor our money.

This model makes the point very clearly: the lack of a publicly provided set of “right” options, those that ensure the home life comforts that most of us aspire to have, traps people into poverty. In turn providing these simple comforts can, literally, set them free. It also suggests that benign defaults (or mandates) cannot easily be substituted for by the requirement to choose (David Laibson’s “active choice” concept): the problem here is not that individual make the wrong choice on the home front because they just go with the flow. It is that the energy and time they

expand making the right decision on the home front takes away from the other things they could be doing with their time.

4) What does this tell us about policy?

This evidence should make clear why the emphasis on self-reliance that is fashionable in the policy discourse can go too far, and perhaps, has already gone too far. A policy that aims to make it easier and more automatic to acquire the basic elements of a healthy and productive life through better infrastructure, carefully designed defaults, or even, on occasion, prescriptions (when they can be enforced), promotes meaningful freedom.

The paternalism of a government or a foreign aid agency trying to achieve these goals is therefore not equivalent to the paternalism of the French industrial houses: the objective is not to tie citizens down or to have them choose between political empowerment and home comforts, but on the contrary to create the space where a more fulfilling life can be led, and where agency does not have to be wasted on issues about which most people agree. Industrial barons like Schneider wanted to exchange their patronage for the suppression of dissent. This is why it was important that benefits be locally provided and clearly attached to a specific job, and this is why the paternalistic industrialists were opposed to the State (and even more to workers' organizations) providing the same benefits. If this infrastructure had been provided by the State, it would have not only made the workers less dependent from their masters, but it would also have afforded them the luxury to think, not only about what they wanted to do professionally (that's the Banerjee and Mullainathan model), but also, perhaps, about values and politics more generally (something the original paternalists certainly did not want).

One can go further and revisit whether the culture of "mandated empowerment" (Banerjee and Duflo, 2008), which is fashionable in today's social programs and which stands in opposition to paternalism, actually promotes agency. Many social

programs insist on beneficiary participation in management, claiming that it is valuable and instrumental for program success. Under the Sarva Siksha Avyan program in India, for example, every village must have a village education committee (VEC). With Abhijit Banerjee, Rukimini Banerji, Rachel Glennerster and Stuti Khemani, I have surveyed VECs in Uttar Pradesh, India (Banerjee et al, 2010). We found that very few parents knew that a VEC even existed, and even fewer, what the VEC should or could do. Perhaps most impressively, one quarter of the VEC members did not even know they were on the VEC. Providing information to parents about how badly their children were doing in school and about the role and responsibilities of the VEC had no impact on either VEC activism or school performance. However when, in 65 villages, the NGO Pratham recruited and trained some volunteers to hold reading camps, the reading levels of the children improved: the community was capable of taking on the problem of low education (volunteers were found, children were sent to the classes, and the classes were enough to teach the kids to read), but not through a simple exhortation to participate. Members of the community had to be shown a clear path toward what they could actually accomplish.¹¹ Perhaps, for rich parents who have the luxury of being able to spend time worrying about their children's educations, participating in the VEC and being given a voice to obtain more resources for their schools is indeed empowering. Poor parents may care just as much about education, but may have no energy left to figure out exactly how to work the system or to figure out what they might be able to accomplish when they are given vaguely defined powers. A much more concrete, well-defined path to action can actually be a way to promote agency. And perhaps, finding ways to make schools actually work without the community having to worry about it at all would be even more empowering.

The poor could potentially benefit even more from basic comfort than the rich because their professional lives are, in many ways, much more demanding and

¹¹ In an entirely different context, people are more likely to take steps to reduce their weight if they are given concrete advice about what to do (buy 1% milk) than if they are just given general principles (avoid cholesterol) (Sunstein, 2011).

stressful than ours. According to a data set we assembled from various household surveys in 18 countries around the world, about half of the urban poor run a non-agricultural business. Many of the rural poor own a farm, and despite that, many of those households still run businesses as well. In addition, those who work for a wage typically work on a casual basis, employed daily or in short spells, without predictability. This means that their professional activities actually require more attention, and are more sensitive to errors than ours. In the OECD, only 12% of the workforce is self-employed; the rest can count on a reliable salary and with this, some slack when they make a mistake. Note that this is the opposite of what the poor would choose in the Banerjee and Mullainathan world. In fact, their paper devotes a section to demonstrating that the poor might in fact choose low responsibility jobs if they could, even if those jobs were less productive. This is simply because the scope for error is lower in these jobs, and the poor know they must devote some time to their home lives. In the real world, the poor may not have this choice. The fact that entrepreneurship is often not an occupational end goal is evident when the poor are asked what they would like their children to do. The vast majority, even if they are entrepreneurs themselves, dream of a government job for their children or, at minimum, a secure job in a large firm.

In most instances, the mistrust of government as the basic purveyor of social services goes hand in hand with the promotion of entrepreneurship for the poor. This is the case in Yunus's and other microcredit enthusiasts' discourse, for example. The notion of self-empowerment through entrepreneurship is based on an analogy: we see a woman very aptly managing her family, keeping them well-fed, healthy and in school, despite the fact that she gets little help from the government. We conclude that she must also be good at managing her business. We forget that however competent she is, pushing her into entrepreneurship is essentially asking her to do two full-time jobs. Her productivity is likely to be lower than that of men for the same human capital, precisely because she is more likely to keep the domestic issues in mind, even while working. This may be part of the explanation why, in several contexts now, researchers have found that micro-enterprises run by women

actually have a lower marginal productivity of capital than those run by men (De Mel, McKenzie and Woodruff 2009 and Fafchamps et al 2011). Simultaneously promoting entrepreneurship *and* self-reliance for basic services may be particularly self-defeating: far from setting people free, this may be setting them up for failure in both domains.

We have thus made the case that paternalism, far from being opposed to individual responsibility, may form a basis on which we might have freedom over what really matters in life. Most of the choices the poor have to make are just pure “noise,” which at best stand in the way of them making important choices and at worst lead them to make a wrong turn and fail to achieve the basic amenities needed for a decent life. Thus, if it can be achieved, making it easier for them to obtain the basic constituents of a healthy and productive life is desirable.

Many of the important details regarding how to design, implement and evaluate such a lofty plan are beyond the scope of this lecture. However, in order to feel comfortable putting this thinking into practice, we must still address three key issues. First, when strong defaults with an exit option are not possible, (i.e. things need to be made mandatory with no libertarian paternalism “escape” of Thaler and Sunstein) can we still say that paternalism for the poor means more freedom? For example, would a universal health care insurance law increase or decrease freedom in poor countries? Is it legitimate to sometimes override (some) people’s carefully considered decisions? We lose the relative philosophical comfort of having our cake and eating it too, when we have to choose between doing nothing and imposing a mandate. While I realize that this is more controversial, the arguments developed in this lecture suggest to me that there are circumstances where the mandate may actually be the freedom-enhancing option.

Second, who decides what is to be included in the “basic constituents of healthy lives” that comprise the default packages, and who decides which instruments are needed to get there? That is, who decides whether helmets should be mandatory to

ride a motorcycle, or whether there should be chlorine (or fluoride) in the water? In French paternalist society, this problem was solved because it was clear that the boss “knew better.” But in a democratic version of paternalism, which is not based on the belief that someone (an expert, an aid worker, a bureaucrat) necessarily knows better, there is a bit of a chicken and egg problem. Logically, the basic package should be decided as the outcome of a democratic process. But this requires the meaningful participation of all citizens, and that in itself requires the poor to have peace of mind. In my view, while this is a real question, this is not one that should stop us from getting started. A number of outcomes (avoiding infant mortality for example) should be uncontroversially desirable, and there is a fair amount of scientific evidence for how to achieve them. One could start with those issues and then let the democratic process play its role to change the rules over time.

Third, can developing country governments be trusted to be the stewards of this benevolent paternalism? Or, will the responsibility to deliver more goods and services simply open the floodgates for corruption, graft, or vote buying? That is, even if we assume that benevolent paternalism is desirable for freedom’s sake, it is feasible? In particular, do we suffer from another chicken and egg problem here? If the citizens are too concerned with the problems of their daily lives, how can they effectively monitor the governments that are supposed to help them? This lecture was about whether paternalism was desirable to enhance freedom, more than whether it was achievable, so in a sense this question is beyond its scope. Nevertheless, it is important because it may render our conclusion moot if empowering governments to do more to end up reinforcing bad institutions.

Abhijit Banerjee and I devote the last chapter of *Poor Economics* to a closely related set of issues. Ultimately, our sense is that while corruption, dereliction of duty, and mismanagement are serious issues hindering the functioning of developing countries’ institutions, they can often be addressed with relatively unambitious reforms. Furthermore, and this may be the most important point and a suitable

place to end this lecture, the democratic process can be substantially improved by orienting the debate toward what has been concretely achieved by politicians, or what those politicians could achieve on a set of issues. In Benin, Wantchekon (2003) finds that when a subset of voters were asked to participate in town-hall style debates about policies (education, governance, health, etc), they were more likely to vote for the candidates who had organized the debates than were those voters who were invited to the typical pre-electoral meetings, replete with general speeches, goodies and promises of ethnically biased policies. In New Delhi, Banerjee et al (2011) find that voters are less likely to vote for candidates who have been less effective at delivering those goods that really matter for the poor when voters are informed through a report card. Politicians are punished for not spending on slums. These two studies suggest that poor voters are easily engaged in the process of figuring out the basic policy package they want. Finding ways to give the poor the mental space and the tools to engage in the policy process may actually be an avenue for improving the quality of decision-making: this may solve our second and third questions together.

References

- (2010): *Millenium Development Goals report 2010*, United Nations Pubns.
- Ashraf, N., J. Berry, and J. Shapiro (2010): "Can higher prices stimulate product use? Evidence from a field experiment in Zambia," *American Economic Review*, 100, 2383–2413.
- Banerjee, A., R. Banerji, E. Duflo, R. Glennerster, and S. Khemani (2010): "Pitfalls of participatory programs: evidence from a randomized evaluation in education in India," *American Economic Journal: Economic Policy*, 2, 1–30.
- Banerjee, A. and E. Duflo (2008): "Mandated empowerment," *Annals of the New York Academy of Sciences*, 1136, 333–341.
- (2011): *Poor economics: a radical rethinking of the way to fight global poverty*, Public Affairs.
- Banerjee, A., S. Kumar, R. Pande, and F. Su (2011): "Do informed voter make better choices? Experimental evidence from urban India," *Working Paper*.
- Banerjee, A. and S. Mullainathan (2008): "Limited attention and income distribution," *The American Economic Review*, 98, 489–493.

- Baumeister, R., M. Gailliot, C. DeWall, and M. Oaten (2006): "Selfregulation and personality: how interventions increase regulatory success, and how depletion moderates the effects of traits on behavior," *Journal of Personality*, 74, 1773–1802.
- Beshears, J., J. Choi, D. Laibson, and B. Madrian (2010): "Simplification and Saving," *Working Paper*.
- Choi, J., D. Laibson, and B. Madrian (2009): "Reducing the complexity costs of 401 (k) participation through quick enrollment," *Developments in the Economics of Aging*, ed. DA Wise, 57–88.
- Cohen, J., P. Dupas, and S. Schaner (2011): "Price Subsidies, Diagnostic Tests, and Targeting of Malaria Treatment: Evidence from a Randomized Controlled Trial," *Working Paper*.
- Cole, S., X. Giné, J. Tobacman, P. Topalova, R. Townsend, and J. Vickery (2009): "Barriers to Household Risk Management: Evidence from India," *Harvard Business School Working Paper*, 09-116.
- De Mel, S., D. McKenzie, and C. Woodruff (2009): "Are women more credit constrained? Experimental evidence on gender and microenterprise returns," *American Economic Journal: Applied Economics*, 1–32.
- Devoto, F., E. Duflo, P. Dupas, W. Pariente, and V. Pons (2011): "Happiness on tap: piped water adoption in urban Morocco," *NBER Working Paper*, 16933.
- Easterly, W. (2006): *The white man's burden: why the West's efforts to aid the rest have done so much ill and so little good*, Penguin Group USA.
- Fafchamps, M., D. McKenzie, S. Quinn, and C. Woodruff (2011): "When is capital enough to get female microenterprises growing? Evidence from a randomized experiment in Ghana," 17207.
- Foucault, M. (1975): *Surveiller et punir*, vol. 225, Gallimard Paris.
- Gleason, P., T. Tasse, K. Jackson, and P. Nemeth (2003): "Direct certification in the National School Lunch Program - impacts on program access and integrity," *Final report submitted to the US Department of Agriculture, Economic Research Service. Princeton, NJ, Mathematica Policy Research, Inc.*
- Gueslin, A. and P. Guillaume (1992): *De la charité médiévale à la sécurité sociale: économie de la protection sociale du Moyen Âge à l'époque contemporaine*, Editions de l'Atelier.
- J-PAL (2010): "Child Diarrhea."
- Kling, J., S. Mullainathan, E. Shafir, L. Vermeulen, and M. Wrobel (2012): "Comparison friction: experimental evidence from Medicare drug plans," *The Quarterly Journal of Economics*, 127, 199–235.
- Kremer, M., E. Miguel, S. Mullainathan, C. Null, and A. Zwane (2009): "Coupons, promoters, and dispensers: impact evaluations to increase water treatment," *Working Paper*.
- Luoto, J., D. Levine, and J. Albert (2011): "Information and Persuasion: Achieving Safe Water Behaviors in Kenya," *Working Paper*.
- Moore, Q., K. Conway, and B. Kyler (2011): "Direct certification in the National School Lunch Program: state implementation progress school year 2010-2011," *Final*

- report submitted to the US Department of Agriculture, Economic Research Service. Princeton, NJ, Mathematica Policy Research, Inc.*
- Sen, A. (1981): *Poverty and famines: an essay on entitlement and deprivation*, Clarendon Press.
- Specter, M. (2009): *Denialism: how irrational thinking hinders scientific progress, harms the planet, and threatens our lives*, Penguin Press.
- Sunstein, C. (2011): "Empirically informed regulation," *U. CHI. L. REV.*, 78, 1349–1362.
- Sunstein, C. and R. Thaler (2003): "Libertarian paternalism," *The American Economic Review*, 93, 175–179.
- (2008): *Nudge: improving decisions about health, wealth, and happiness*, Yale Univ Pr.
- Vohs, K., R. Baumeister, B. Schmeichel, J. Twenge, N. Nelson, and D. Tice (2008): "Making choices impairs subsequent self-control: a limited resource account of decision making, self-regulation, and active initiative." *Journal of personality and social psychology*, 94, 883.
- Wantchekon, L. (2003): "Clientelism and voting behavior: Evidence from a field experiment in Benin," *World Politics*, 399–422.
- Wegner, D., D. Schneider, S. Carter, and T. White (1987): "Paradoxical effects of thought suppression." *Journal of personality and social psychology*, 53, 5.
- Yunus, M. (2010): *Banker to the poor: micro-lending and the battle against world poverty*, ReadHowYouWant.

Lecture 2: Hope as capability

A few years ago, BRAC, one of the two pioneer microfinance institutions in Bangladesh, designed a program aimed at villagers that are too poor to be directly targeted by microfinance programs. Under this program, the poorest of the poor are identified by their fellow villagers (during a participatory process), and their poverty is verified during a home visit by BRAC agents. Potential beneficiaries are then offered a choice of assets (two cows, some goats, some chickens, a starting stock for a village shop, or a sewing machine, etc...), as well as a small stipend for a few months and weekly training sessions to teach participants both how to tend to animals and to manage their household lives. The program is currently being evaluated in several countries, including Bangladesh. Banerjee, Chattopadhyay, Duflo and Shapiro (2011) report of one of the first of these evaluations in West Bengal, of a version of the ultra poor program implemented by Bandhan, one of India's largest microfinance organization. We find a strikingly positive set of results: 18 months after the households received the asset (often livestock), per capita food consumption was on average 15% larger among beneficiaries than among non-beneficiaries. These consumption increases are much too large to be accounted for by the value from liquidating the asset (although about a third of the beneficiaries did appear to do so) or the stipend they received for a few weeks. The increase was spread across various types of consumption, notably food, and the beneficiaries reported a much higher level of food security: they were less likely to have skipped meal, more likely to have had two square meals a day on most days, more likely to have given meals to other people, and less likely to have received meals as charity themselves. The increase in consumption was accompanied by an increase in financial savings (which was a mandatory part of the program), which implies that their income must have risen by at least as much. And indeed, we observed an income per capita increase of 20% across various categories of income. They earned more income from livestock (7 times as much), but also from non-agricultural small businesses (50% more), and from tending their own fields (3 times as much). On the other hand, they were less likely to be working as casual workers in someone else's

field or home (many of the women targeted by the program previously worked as maids or as occasional farm help). Comparing the increase in income to the value of the program (assets, stipend, and administrative costs) suggests a rate of return of 27% if those gains are sustained for 3 years.

What is interesting about this program is that the income gains seemed to have spread much beyond the scope of the initial intervention. In fact, in rupee terms, the increase in non-farm small enterprise income exceeded the gains in livestock income, despite the fact that the beneficiaries almost all received livestock. Very similar results were obtained in a contemporary evaluation of BRAC's original program in Bangladesh.

One avenue toward understanding these results is through the notion of a poverty trap: the transfer may have set the beneficiaries on a virtuous circle, where they felt better, worked more, and hence earned more, not only directly from their assets but also from other activities. The extra income allowed them to work even more, further increasing their income, and releasing them from a "low income-low productivity" trap. And indeed, beneficiaries spent considerably more time working, an hour per day on average, which represents an increase of 28% in the time spent working.

The concept of the poverty trap has played a central role in the economics of poverty and development. The theme of this lecture is whether a deficit of hope can be the source of a poverty trap, and, conversely, whether hope can fuel an exit from the poverty trap.

Poverty traps occur whenever there is a very steep relationship between income today and income in the future over some range. For the very poor, the rate of return from investing (in food, in education, in a business) is so low that, with the resources they

have, they cannot invest enough to improve their lot: they tend to become poorer and poorer. Beyond a given threshold, however, investment becomes productive, such that if someone is sufficiently rich at the outset, their income can increase in each period (see Mazumdar (1959) for the initial description and Ray (1998) or Banerjee and Duflo (2011)) for simple explanations of how the poverty trap works).

The notion of the poverty trap is related to that of capabilities, as developed by Amartya Sen and briefly discussed in our first lecture: poverty deprives individuals of central capabilities, limiting their collective ability to achieve. That deprivation in turn limits how much income those individuals can earn, keeping them both poor and with low capabilities.

Bodily integrity is a central capability, as we discussed in the previous lecture, and the classic model of poverty traps in economics is based on the nutrition-productivity nexus (Dasgupta and Ray, 1986). If the wage is extremely low, even the income from working all day may not be sufficient to buy enough calories to maintain the body's basic functioning and to provide the energy necessary to work. This means that people cannot be paid less than a minimum wage unless they have some alternative means of earning. In this case, the poverty trap comes from the fact that there is a minimum threshold below which the body cannot function effectively (it does not mean people would die, but they may survive by earning very little and doing very little).

The nutrition explanation does not seem to be sufficient to account for what happened in the bandhan program. Food expenditure increased roughly proportionally to the increase in overall consumption (17%), although beneficiaries were much less likely to complain about food insecurity (missing meals, not eating two square meals a day). Under a nutrition-based poverty trap model, we should have seen an increase in food consumption that was more than proportional: to get

out of the trap, beneficiaries should have spent as much as possible of their new resources on food. Moreover, proportionally, the increase in food expenditures was steeper for more expensive sources of food (73% for dairy, 100% for fruit and nuts, 42% for eggs and meat, versus 10% only for cereals). This also suggests that these households were not starving, or they would have devoted the extra resources to acquiring the cheapest cereals (see Jensen and Miller, 2011 for a full argument along these lines).

If food is not the source of a poverty trap (and of its unlocking), then what could alternate sources be? One possibility is mental health. The questionnaire in the West Bengal ultra poor study included some of the standard questions that help determine whether a person is depressed and also that person's general state of wellbeing. At baseline, potential beneficiaries, like many people in developing countries, often showed symptoms of depression. Eighteen months later, beneficiaries were much less likely than non-beneficiaries to report symptoms of depression, anxiety, or stress. They felt that their health had improved (although we do not see improvement in measures of actual physical health), and their life satisfaction increased. What we hypothesize, although we cannot directly confirm it using this data, is that this improved mental health is what gave participants the energy to work more, save, and invest in their children (we see in the data that children spend more time studying). These households were identified by their peers (and often self-identified) as the most destitute, and each of them had stories of desperation to share. A sizeable fraction (36%) did not even accept the offer of the free asset, and their stated reason was often that they did not trust they could successfully take care of it. But for those who did take the program up, hope and a sense that they had been given a chance may have been what motivated them to succeed.

The ultra-poor program is one of several examples where an improvement in economic prosperity is associated with a change in behavior that is probably caused by more than just the extra income. One particularly striking example is provided by

David Atkin, who studies what happens to the children of women who obtain jobs in Maquiladoras in Mexico. These jobs are typically not what we would regard as “good jobs”. They probably make the Foxconn jobs in China look almost attractive. Yet, when Atkin compares 16-year-old women who had a factory open in their towns to comparable women who did not, he finds that those women who obtained a job simply by virtue of where they lived have taller children (Atkin, 2009). This increase cannot be attributed to the actual increase in the income they made, which was very modest. One possible explanation is that the sense of stability that a regular job provided was what gave these women the strength to invest in their children.

The goal of this lecture is to explore more systematically whether hope, or the lack of it, can be the source of a poverty trap. In other words, should hope be classified as a fundamental capability in Sen’s framework, akin to health, good nutritional status, and education? We proceed in three steps. First, we explore the implications of hope (or lack of hope) from the point of view of a rational decision-maker. We show that the anticipation of likely failure (or at least of a severe limit to the extent of possible success) could lead an individual to rationally decide to hold back his or her efforts, avoid investment, and thus achieve even less than he or she could otherwise have attained. Second, we relax the assumption of perfect rationality and review some evidence from psychology and neuroscience about the impact of depression and pessimism on decision-making. This evidence tends to suggest that depression can make us less effective at focusing on the long run and thus more prone to making decisions that are likely to keep us poor. This creates the potential for a poverty trap based on the vicious circle of negative events (shocks) and the psychological implications of those negative events. Finally, we ask what happens in a world where people may have rational expectations, but may not behave in a fully rational, time consistent way: does self awareness ameliorate or worsen the potential for a hopelessness-based poverty trap?

1) Rational expectations: Why can hopelessness be self-fulfilling?

The knowledge (or even the belief) that there is poverty trap and that one happens to be on the wrong side of it may reinforce its strength. To take the simplest case, suppose there is a nutrition-based poverty trap, and that an individual knows that even if he eats as much as he can, using his minimal resources, he will never be able to do meaningful work. Optimizing his nutritional intake and his energy expenditure will allow him to a low level of nutrition and physical fitness. This is a point, however, where his utility may not be much greater than if he chose to be even skinnier. He might decide, when possible, to “splurge” on something delicious rather than go for the cheapest calories. The poor may thus be even more malnourished than if they acted to maximize their physical fitness. On the other hand in this model, if they saw an opening to climb out of the poverty trap (a positive shock to future income, for example), they would eat as much as possible and become much better nourished. Anticipations of what is achievable determine behavior and outcomes.

In “Poor Economics”, we argue that there is no obvious evidence that most of the poor are really trapped in this sort of nutrition-based poverty trap, in part because we don’t see the kind of behavior that it would suggest.¹² However, the basic logic applies to any situation where there is a threshold to cross before investment can be productive. Consider small businesses for example. Several pieces of evidence point towards something like a step function in the production function of small businesses,. The vast majority of businesses have zero employees (only a manager and perhaps a few family members), and over time, do not seem to grow to acquire any. They also have almost no assets. The marginal productivity of capital is very high at very low levels of investment, but flattens off quickly. For example, in an experiment in Sri Lanka, De Mel, McKenzie and Woodruff (2008) gave small grants (\$100 or \$200) to randomly-selected small businesses. They found that the returns

¹² In particular, the income elasticity of food consumption is nowhere near as high as the model would suggest.

to the first \$100 dollars were very large but that, strikingly, giving a business \$200 or \$100 dollars made essentially no difference. This was in part because the extra \$100 was not absorbed in the business, and in part because even when it was, the productivity appeared to be low.¹³ Furthermore, despite this high marginal productivity, small businesses are not very profitable overall. Their owners work very long hours and, for small businesses in Hyderabad, we estimate that if they were to pay themselves the minimum wage for each hour they worked, the businesses would lose money (Banerjee and Duflo, 2007). One way to explain all of these facts is that there are sharply diminishing returns to running a small informal business. On a very small scale, investments are profitable, but once a business has reached the maximum scale that a single person can manage at the existing technology, there is no way to expand without a significant fixed outlay, a large infusion of cash, and perhaps even more importantly, a change in mindset from owner to owner-manager. It of course does not mean that larger firms cannot be profitable, but that to cross the relevant threshold, a business owner would need to be able to finance a large, indivisible investment. For many small business owners, this investment may be out of reach. Microfinance organizations, which have been very successful at lending small amounts of money, have not yet cracked the problem of how to lend sums that would be significant enough to allow someone to invest in real machinery. Banks are very reluctant to lend to small firms for fear that they may not be repaid. The amount that would need to be saved by small entrepreneurs to self-finance the kind of fixed-cost investment that would be necessary would be such that it would take years to achieve.

What does this mean for micro-entrepreneurs? It implies that, unless they are incredibly talented, incredibly lucky, or stumble onto a pile of cash, they will probably not be able to bring their businesses to any scale other than what is just sufficient to “buy themselves a job”, i.e. work the whole day and earn enough to

¹³ Also, the estimates start to become imprecise at that level, precisely because few people use the extra \$100 for their business.

make it just about worthwhile. Importantly, this is true even if micro-entrepreneurs run their businesses in the best way possible, making all the right decisions and taking advantage of all investment opportunities, etc. Now imagine that these business owners lived in the world of limited attention we discussed in the last lecture, where they have other things to worry about (for example, the business may be run by a woman who is also running the household and raising children). Paying full attention to the business would take away from time at home, and sacrificing that time at home for the business might not seem worthwhile. The marginal return to making exactly the right decision or sacrificing a bit of consumption at home may be huge, but the overall gains might never be large enough to fundamentally change the lives of the business owners or their families. In that case, they may, perfectly rationally, decide that it is just not worth it to spend so much effort trying to manage their businesses perfectly. It may also not be worthwhile to make a marginal investment at the cost of depriving their children of an occasional treat. Thus, businesses will be run without much personal (or financial) investment and will not be nearly as productive as they could otherwise have been.

Note that the poor in this case behave rationally, given a realistic perception of their possible outlook. It is trying incredibly hard despite all odds that would be irrational (or require a perspective on life which would be much too rosy). And indeed, there is considerable evidence (reviewed, e.g. in Kahneman (2011) chapter 24, and Sharot (2011)) that entrepreneurs exhibit, even more than most of us, an “optimism bias”. They tend to think that their lines of business are particularly prone to success and that their own businesses are particularly likely to do well (even though many small businesses fail in their first year). While over-optimism can cause problems, it also plays a positive role, and both Sharot and Kahneman note that over-optimistic people tend to be more successful.

The limited scope of the businesses of the poor and perhaps the subsequent low level of effort dedicated to them may help to explain the puzzling fact that small businesses seem to bypass some very high-return opportunities. For example, Jon

Robinson, Michael Kremer and coauthors observe that in Kenya, many small shops frequently run out of cell phone recharge cards, missing out on sales (Kremer et al, 2011). In Hyderabad, Abhijit Banerjee and I calculate that “middle class” households running a small business could double their stocks of goods in a few weeks if they spent the same fraction of their budgets on health as the poor (instead of twice as much) (Banerjee and Duflo, 2007). In Kenya, with Jon Robinson and Michael Kremer, I observe that many households do not invest in fertilizer despite very high rates of return (Duflo, Robinson and Kremer, 2008). Furthermore, those households who do use fertilizer tend to use too much per hole, which dramatically reduces its profitability. While the lack of fertilizer use is in part explained by difficulties in saving, even over a few weeks, another explanation is that making the effort is not quite worthwhile. While fertilizer has high rates of return, the incremental income that would come from using it and using it correctly may not be worth the fixed cost of thinking about how to do it, gathering all of the correct information, and making the effort to save. We estimate that, for farmers in the Kenya study area, going from not using to using fertilizer would increase income (net of fertilizer costs) from \$242 PPP to \$275 PPP. This represents a 15% increase in net income, which is not negligible, but does not amount to a dramatic change in lifestyle. If in addition, credit constraints, for example, prevented the farmer from using the full optimal level, then the increase in net income due to fertilizer use would turn out to be very small.

The fact that the poor are not necessarily trying to fully maximize the profits of their businesses may also explain the relatively disappointing results of programs that attempt to improve the performance of those businesses. Many microfinance institutions now offer business training as an added service. At weekly meetings, clients are taught how to keep better accounts, manage their inventories, understand interest rates, and so forth. Programs of this kind were evaluated in

studies in both Peru and India.¹⁴ The research results in both countries find some improvement in business knowledge, but no changes in profits, sales, or assets. These programs are motivated by a sense that micro-businesses are not particularly well-run, but if these businesses are run that way because of a lack of enthusiasm rather than a lack of knowledge, it is not particularly surprising that the training does very little to help. In the Dominican Republic, another training program tried a simplified curriculum, encouraging entrepreneurs to focus on simple “rules of thumb,” such as keeping the business and household expenses separate and paying oneself a fixed salary (Drexler et al, 2011). Here again, when they evaluated a standard training module, it was ineffective, but giving the entrepreneurs the simplified tips did lead to an increase in profits. This is probably because the new rules actually simplified the lives of the business owners instead of demanding even more intellectual resources from them. As a result, people were willing to implement the recommendations of the training.

The lack of any prospect for real transformation in life may thus hamper the willingness or ability of individuals to try to make the very best of the (lousy) cards they were dealt. Symmetrically, the fear of losing what little they have and of finding themselves stuck on the wrong side a poverty trap may affect the way those who have just escaped extreme poverty choose to behave. If households have no insurance against a catastrophic illness or accident, a bad harvest, or a bad break for the business, they may decide to run their lives as conservatively as possible to smooth out the impact of those shocks. They may choose to stick with known technologies (i.e. traditional seeds) rather than try something new (a cash crop such a pineapple in Ghana, or hybrid seeds for traditional crops), even if they believe that on average there are great potential gains from these new technologies.

¹⁴ The study in Peru is Karlan and Valdivia (2011). The study in India is Field et al (2010).

Fear of failure or loss may also be helpful in understanding why most migration episodes to cities are temporary and why migrants do not seem to be fully committed to the project of establishing themselves once they arrive. For migrants, it might be too costly to lose the social networks they formed at home, which have the capacity to help smooth out shocks (Banerjee and Newman, 1998), even though working harder to become a fully integrated member of the new city might produce high returns. This may also explain why households are more likely to run many small businesses rather one larger business.¹⁵ All of those strategies end up reducing household income and thus contribute to keeping them in relative poverty.

Both a lack of hope or fear can cause an individual to deliberately “hold back”, thus reducing the ability to realize his or her full potential. Businesses or farms often operate below capacity, either because it requires too much effort to do any better or because it is too scary to experiment given the risks involved. However, the potential losses may go much further than a 10%-15% reduction in income: many people do not know the extent of their true potential and they cannot discover it unless they try. But, if lack of hope makes it optimal not to try, then they will never find out. Even the rare entrepreneurs who have been talented enough to escape the poverty trap of small businesses may never fully discover their full potential.

The same logic applies to other domains, of course. A particularly heart-wrenching case is that of education, where the logic of expectations appears to create a hopelessness-based poverty trap. The available evidence suggests that the returns to education are more or less proportional to the number of years spent in school. Namely, it is not the case that the returns to education only accrue after completing high school or attending college. There are benefits (monetary and otherwise) from learning how to read and write, learning how to do basic arithmetic, and also from learning how to do these things faster and more accurately. However, when parents

¹⁵ Another possible explanation is that they reach the optimal scale very quickly on each.

are asked their beliefs about the benefits of education, they tend to report that the benefits to a few years of education are small, but the benefits to subsequent years are huge. For example, in Madagascar, parents believed that each year of primary education would increase a child's income by 6%, each year of junior high education by 12%, and each year of senior secondary education by 20% (Nguyen, 2008). With Florencia Devoto and Pascaline Dupas, I found a very similar pattern in Morocco. There, parents believed that each year of primary education would increase a boy's earning by 5%, but each year of secondary education by 15%. The pattern was even more extreme for girls. Parents assumed that each year of primary education was worth almost nothing, 0.4%, but each year of secondary education was perceived to increase earnings by 17% (Banerjee Duflo 2011, Chapter 4).

Thus, while in reality returns to education appear to be linear, parents tend to perceive that the returns accrue only at sufficiently high level of education, and this influences their education decisions. Experiments in the Dominican Republic (Jensen, 2010), Madagascar (Nguyen, 2008), and India (Jensen, 2012) suggest that changes in the perceived (or real) returns to education affect enrollment and drop-out decisions as well as effort in school and test scores. While parents seem to be largely willing to send their children to school, at least for a few years, they are not willing to invest much money or energy in their children's educations unless they think that the child can do really well. If they have more than one child, they may choose a very inegalitarian rule: invest in the "smart" one rather than the others, for example. In Burkina Faso, Akresh et al (2012) find that children received less educational investment if their siblings had higher measured IQs. Even more strikingly, in Bogota, Colombia, the siblings of children who won a lottery entitling them to a conditional cash transfers were *less* likely to be in school than those of children who lost in that lottery (Bertrand et al 2011). Presumably, parents thought that because they had to invest in that child's education anyway, it was efficient to invest enough to meet some threshold level at which education is worthwhile, potentially at the cost of the less fortunate siblings.

If a child does not get the opportunity to stay in school or if she goes to school without the belief and support of her parents and teachers, she is indeed not likely to succeed, especially if she struggles from the beginning. And, sadly, she is likely to struggle from the beginning even if she *is* talented, as long as her parents or teachers think that she is not for two reasons. First, the educational system puts a huge premium on success at the top, and hence teachers tend to teach the best students in the class. These top students are likely to be precisely those children who had some outside help to start. Second, how teachers think about students influences how they teach and even grade them (this is what Rosenthal and Jacobsen (1968) dubbed the “Pygmalion effect”¹⁶). As a result, interventions that can boost confidence early on may have long-term impacts. In Kenya, Duflo, Dupas, and Kremer (2011) ran an experiment where large first grade classes (80 students or so) were divided into two smaller classrooms either on the basis of prior student achievement (tracking) or using random assignment of students to classrooms. Both low achieving students and high achieving students performed better under tracking than under random classroom assignment after 18 months, apparently because the teachers could better focus the curriculum toward those students. More remarkably, one year after all students were put back in the same classroom, students in ex-tracking schools were still doing better than students in schools that had never been tracked.

We see how hope not only works as an enabling capability, but also is a key to the development of other capabilities. Hope can fuel aspirations: for example, a successful role model can change the expectations of what a girl can achieve, and thus affect her own aspirations for herself, or her parents’ aspirations for her. In turn, these aspirations can affect behavior. In recent work in West Bengal, Beaman et al (2012) find an example of the role of aspirations and role models in shaping

¹⁶ In an experiment that IRBs would probably not condone today, some teachers were told that some students had exceptionally high IQs. Those students performed much better than students who had comparable IQs, but whose teachers were not told they had high IQs.

real behavior. Teenagers and parents were asked what type of job and what type of education they hoped to attain themselves (teenagers) or for their teenage children (parents). Generally, parents (both mothers and fathers) were much less ambitious for the careers of their daughters than for those of their sons; they were very likely to say that daughters should stay at home or do what their in-laws want them to do. Parents were also less ambitious in their educational goals for their daughters. The same is true for the teenagers themselves. However, after about seven years of exposure to a female politician at the local level (due to a policy in India which forced villagers to elect a woman as the village head), the gender gap in aspirations was very sharply reduced. Moreover, despite no investment by local leaders in educational facilities, the educational achievement of teenage girls also increased. The most likely explanation, since little else changed in terms of actual policy or career opportunities, is that seeing a woman achieving the position of local head provided a role model, which affected aspirations, which in turn affected educational choices.

In all these examples, we see the same mechanism at work: the existence of a step that is too high to climb creates a rational temptation to hold back, to avoid trying too hard. Having not tried, individuals may never discover what they are capable of. This worsens the poverty trap, or in some cases creates one where there was not one in the first place. One implication is that interventions that remove these steps (help with access to credit for example) can have a double dividend. Furthermore, in some cases, better information about what opportunities lie ahead may be sufficient.

2) Hopelessness and decision making

Until now, we have explored the impact of hope on rational decision-making, assuming (as is standard practice in economics) that decisions, but not decision-making ability, are influenced by hopelessness. There is however a recent literature at the boundary between economics and psychology that is exploring whether, in

addition to these mechanisms, there could be a direct impact of hopelessness on decision-making ability.

In the first lecture, I described experiments by Mullainathan and Shafir, which show that the poor are much more affected than the rich in their ability to solve problems on an IQ test when they simultaneously have to think about dealing with a large car repair. Metaphorically, Mullainathan and Shafir refer to this as the “packing problem”: the poor’s suitcase is too full, and having to fit the car repair expense in it makes it very difficult to think about other things with a clear mind. We have discussed the potential to use “paternalistic” policies in order to take away some decision-making power and to guarantee some peace of mind. But, it may be possible to explore more deeply why these types of phenomena occur: is there a precise mechanism that links the stress of having to think about the large car repair and the ability to perform another cognitive or self-control-demanding task? And to the extent that a mechanism exists, can it also be triggered by hopelessness?

Several household surveys now include measures that can help to gauge psychological well-being, and in particular, to evaluate, on a comparable basis across countries (or across people within countries), whether individuals suffer from high stress or depression symptoms. Anne Case and Angus Deaton (2009) report a high fraction of people suffering from symptoms of depression and anxiety, both in Udaipur (rural India) and in two different study sites in South Africa. Haushofer (2012) uses data from the World Values Survey, which reports a subset of these variables for individuals interviewed in many countries, and finds a strong correlation between income and a particular symptom of depression (feeling that life is meaningless) as well as locus of control (people can/cannot shape their own fates) both within and across countries.

Of course, these correlations do not necessarily indicate that there exists a causal relationship between depression and income, but there is evidence for several possible channels for such a relationship. Living in a stressful environment is one

factor. One of the major findings of the “Moving to Opportunity” experiment in the US, in which randomly selected households were given the opportunity to move to lower poverty neighborhoods, is that, despite a lack of improvement in either economic outcomes or physical health, beneficiaries had better mental health (distress, depression, anxiety, calmness, and sleep) than those who stayed in their initial neighborhoods (Kling et al, 2007). Tellingly, the authors note that “the magnitude of the mental health results—for example, a 45 percent reduction in relative risk among compliers of scoring above the K6 screening cut point for serious mental illness (...) is comparable to that found in some of the most effective clinical and pharmacologic mental health interventions.”

As we discussed in the first lecture, a lack of basic infrastructure, which makes daily life more difficult, is also a source of stress. In Morocco, the program that helped some people register for in-home piped water, which we discussed in the first lecture led to a reduction in stress and an improvement in life satisfaction, despite the fact that there was no improvement in physical health or other dimensions of life (Devoto et al, 2011). Cattaneo et al (2009) find the same results for a program that provided households with cement floors (although in that case, there were also improvements in child health, which may have partly explained the result). Lack of hope for the future, or worry about the future, also plays a role: Haushofer et al (2011) report that, in Kenya, households were more likely to report symptoms of worry when rainfall had been low in the previous month in their particular communities (and thus they were expecting a poor harvest). While the sensitivity to negative shocks varies from individual to individual¹⁷ downturns and negative shocks, particularly those who appear to be outside of the control of an individual, tend to be trigger for depression and helplessness, both in humans and for other species.

¹⁷ The likelihood of developing depression appears to be related to low efficiency of serotonin transporters, which makes a person less resistant to stressors (see Sharot, 2011, chapter 6, for references)

In turn, depression, or stress *itself* can affect how we think about the future. Psychologists have shown that depression encourages the development of a “pessimistic explanatory style” (Seligman). Unlike to the rest of us (who tend to be over optimistic), depressed individuals are more likely to see bad events as their fault (see Peterson, Maier and Seligman, 1995). In turn, a pessimistic explanatory style triggers depression by producing negative predictions for the future, which promote passiveness and lower resilience. Eventually, this passiveness makes the negative expectations more likely to come to pass, as depressed individuals are less likely to take steps to get out of a difficult situation. This means that the more negative shocks someone suffers, the more they are prone to seeing the future in a bleak light, which in turn makes them even more prone to experiencing more negative shocks. One can immediately see the potential for a vicious circle.

Moreover, stress also directly depletes the cognitive resources at our disposal, and, some neuroscientists argue, the ability to use these resources for very specific tasks. It is, once again, something we probably know to be true from introspection -- we are more likely to have trouble finding our keys, say, when we are running late for an appointment. More importantly, there is evidence, mainly from laboratory experiments, that individuals find it more difficult to think about the future when they are stressed out, even when that stress is artificially induced. For example, in a laboratory experiment, Cornelisse and Haushofer (2011) find that individuals who were just informed that part of their “wealth”, in part accumulated through hard work on a meaningless task over the previous hour and in part given to them as endowment at the beginning of the experiment, had been wiped out were more likely than subjects in a control condition to exhibit a high preference for the present when they were then asked to chose between reward immediately or in the future. The authors argue that stress made people more likely to be present-biased. It may also be the case that the negative shock made participants unwilling to carefully weigh their options before answering.

Of course Cornelisse and Haushoffer's experiment was conducted in a laboratory with relatively low stakes. The respondents whose wealth got wiped out may just have been upset with the experimenter and may have been looking for ways to answer in a contrarian fashion. It turns out, however, that there may be a physiological basis for the possibility that stress and depression can both hamper decision making. Neurobiologists have, in particular, highlighted the role that cortisol can play in mediating the impact of stress and depression on the quality of decision-making. Cortisol is released by the body in response to both physiological and physical stress and is also a marker of depression. It serves a useful role, as it helps regulate both blood sugar and immune responses that are triggered by stress events. But, the side effect is that the release of cortisol affects brain areas such as the prefrontal cortex, amygdala, and hippocampus, which are important for cognitive function. In particular, the prefrontal cortex is important in the suppression of impulse responses. It is therefore no surprise that when experimental subjects are submitted to artificially stressful conditions in the laboratory, they are less likely to make the economically rational decisions when faced with different alternatives.¹⁸

The field evidence that negative shocks induce increases in cortisol among poor people (or that, on the contrary, some amount of stability reduces it) is still limited, but there are two interesting studies which are very suggestive of such a pathway. Fernald and Gunnar (2009) find that children of beneficiaries of the PROGRESA program in Mexico (a conditional cash transfer program for poor families) have significantly lower cortisol levels than children of the "control" communities that were added in 2003.¹⁹ They hypothesize that the channel is through mother's depression. In the same communities in Kenya where Haushofer et al (2011) show

¹⁸ See Ramos and Arnsten (2007), Knoch et al (2006), Hare et al (2009), Porcelli and Delgado (2009), and van den Bos et al (2009).

¹⁹ Note, as a caveat, that that this comparison is not based on the initial PROGRESA randomized pilot, but on a set of communities that were chosen ex-post to examine the longer run impacts of the PROGRESA program.

an association between rainfall level and worries, they also measure cortisol levels. The Kenyan study households are mainly dependent on rain-fed agriculture, and low rains are a strong predictor of a poor harvest. Controlling for both month fixed effects and location fixed effects, the authors find that cortisol levels are lower when rainfall is higher, and that the effect is largely mediated by the fraction of people reporting “worries”.

This literature is in its infancy, and there is much more we need to learn. Would those isolated results replicate? Is there adaptation? Do cortisol levels affect the poor, who may have permanently higher levels, in the same way as they affect those who suffer temporary shocks? Because the existing studies focus on the basic biological mechanism at work rather than on policies, we also have very little to say on policy: is an implication of this work, for example, that mental health should be given much more of a priority in developing countries than it is now because, far from being a luxury of rich societies, it could be a lever to improve both happiness and incomes? The possibility exists, but there is simply no evidence either way at this stage.

These studies, nevertheless, suggest the possibility that hope and confidence may be closer to having physical manifestations (similar to proper nutrition) than we have acknowledged until now. There could be both functional and intrinsic value to generating such hope.

3) Rational, but not all the way

In the first part of this lecture, we examined the rational expectation channels through which low expectations (for oneself or for other) may be self-fulfilling. In the second part, we emphasized separate, biological channels through which hopelessness may affect the quality of decision-making. An alternative view is that there may be psychological (though not biological) ways in which hopelessness may have disproportionate effects. In other words, because of psychological or cognitive

limitations shared by both the rich and poor, hopelessness may lead to behaviors that may at first glance seem anomalous.

First, we discussed (in part 1) how thinking about the future may lead to discouragement, and second, (in part 2) how being stressed or depressed may make it more difficult to think about the future. A third possibility is that people are very *reluctant* to consider what the future has in store, and in particular to consider the possibility of bad events happening in the future. Avoidance may be a behavior that protects against discouragement, but it may hinder choices that are necessary precisely to mitigate the extent of negative shocks. This may be a (partial) explanation for why the demand for insurance is surprisingly low, even in contexts where people only have limited access to insurance. Zwane et al (2011) show that when the possibility of accidents is made more salient through a household survey, people are more likely to purchase hospitalization and accident health insurance when given the opportunity. There are of course other reasons why making the potential benefits of an insurance product salient may increase subsequent take-up, but this finding is consistent with a long literature on public health communication. Specifically, the literature on the framing of public health messages experimentally demonstrates how “loss-framed” messages (insisting on the danger of not doing something) tend to be more effective than “gain-framed” messages (insisting on the gains from doing it) in encouraging behaviors that entail a risk of learning something unpleasant, such as taking a detection test (Rothman and Salovey, 1997). This may be because we normally do not like to contemplate the possibility of a bad outcome, and the negative-framed message force us to do so. Taken together, the evidence implies that those who are the most likely to face negative shocks in the future may be those who are least likely to spend much time thinking about how they can protect themselves against them. If this leads them to in fact not get such protection, this has the perverse effect of increasing the effective risks they face.

Conversely, a lack of hope may explain behaviors that seem so conservative that they are difficult to explain within standard models. Bryan, Chowdhury and

Mobarak (2012) provide a very stark demonstration. They conduct a study in Bangladesh, a country where, during the “hungry” season, there is very little farm-work to do, and there would seem to be strong gains from seasonal migration. The authors encourage migration by providing a randomly selected set of households with a 600 Taka grant (about 8 dollars), conditional on migration, to help pay their bus fares to go to the city. They find that the offer increases the probability of migrating by 22% in the treatment group. Furthermore, they find that the families of those who are induced to migrate because of the offer have significantly higher per capita consumption (30% to 50% higher). In other words, the initial 8 dollar investment was worth about \$100 in extra consumption over the season. This is very puzzling: if the returns to migration are so large, why aren’t more people trying it out? Of course, they need to have the 600 taka to pay for their bus fare, but that represents a very small share of their annual budgets, and it would seem possible for them to save that much. A second explanation is that the true costs of migration may be larger than that, but if they were that much larger, the 600 taka incentive would not encourage many people to actually try it out. One clue is that about half those who were induced to migrate because of the incentive in the first year were more likely to migrate again the second year: in the first migration episode, they seem to have learned that migration was beneficial. The authors’ interpretation of their finding is that migration is hampered by two features: first, the (idiosyncratic) uncertainty of whether the potential migrant can successfully find a job; and second, a very high risk aversion for households who are close to subsistence. Consistent with this theory, they find that the poorest migrate less, but are more sensitive to the incentive. They also find that when households are offered an insurance program (a loan that they don’t have to repay in full if they are unable to find a job once they migrate), their probability of migrating also increases. One thing that remains puzzling in this explanation, however, is that the level of risk aversion that would explain these results is tremendous, given the ratio between the potential average gains and the very low cost of migrating. Even for the very poor who are close to subsistence (and hence likely more risk averse), such high levels of risk aversion seem implausible. An alternative interpretation of the result is that the

poor are wary of engaging in any activity where they might lose *anything* relative to the status quo. It is conceivable that a similar explanation can account for low adoption of new technologies, as long as those technologies entail any perceived risk (a new crop, a new type of fertilizer, a new activity, a new school for a child, even an insurance product). The current situation is not pleasant, but it is what it is: being pessimistic about the possibility that anything can change may lead to large losses due to extreme conservatism.

Another mechanism linking hopelessness to inaction may be the knowledge of one's own likelihood to fail. In particular, the belief that an individual may fail to follow through with plans in the future may hinder his or her willingness to get started on a path to achieve a goal. We have already discussed at length the notion of self-control. In the present, we tend to be impulsive, and give in to temptations, even if we know that they come at the cost of our long-term welfare (either in budget or health). We are not naïve about these temptations: we know they loom large. But unfortunately, this self-knowledge can hurt by discouraging people from starting to save. Everyone is subject to temptations, but the logic of temptation may be quite different for the poor than for the rich. A model by Banerjee and Mullainathan (2010) very clearly exposes this logic.

The authors model a world in which people are subject to temptations. Temptations are goods that we want in the present, but the consumption of which we don't look forward to. For example, I may want a piece of milk chocolate now (I do, particularly as a bar is sitting right next to me) but I may not think with relish about eating the same piece of chocolate if I leave it until tomorrow.²⁰ Temptations tend to be an expression of visceral needs (things like, sex, sugar, fatty foods, cigarettes), where we easily become satiated. In that case, it is much easier for the rich to have already satiated their "tempted selves." And, importantly, they can anticipate that, in the future, if they give in to their temptations, it will not make a significant dent in their

²⁰ And now I have eaten the piece of chocolate!

budget. When deciding whether to save or not, the rich can assume that any extra money that is allocated for the future will be used for long-term purposes. For example, if sugary tea is the archetypal temptation good, 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 may not be true for the poor: tea is a more substantial part of the budget so they know a non-negligible part of any money they save today will be wasted tomorrow. In that case, they might as well give in to the temptation today if all they are going to do is give in to it tomorrow, especially since they know they'll enjoy it today, but do not look forward to waiting until tomorrow.

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 a bicycle or admission to a better school for their children, are relatively expensive, with the result that when they have a little bit of money in hand, the temptation goods compete for the consumer's attention. The result is another vicious cycle: 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. This creates a poverty trap.

Saving behavior crucially depends on what the 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 between different poor people.

An experiment by Dean Karlan and Sendhil Mullainathan with fruit vendors provides an interesting illustration. Karlan and Mullainathan fully repaid the loans

of a random subset of fruits vendors (in India, and in the Philippines), who typically borrow at *daily* rates of about 5%. For a while, many of the vendors managed to stay debt-free: After ten weeks, only 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 it back on their own. This asymmetry between managing to stay free of debt but 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 one will be able to buy the television one has been looking forward to having: in our evaluation of a microcredit program in Hyderabad (Banerjee, Duflo, Glennerster and Kinnan, 2010) we find that the consumption of “temptation goods” (those that were described at baseline as those the households wanted to cut) dropped in households that had access to microcredit, while the acquisition of durable goods increased. This is exactly the opposite to the prediction of many critics of microcredit, who worry that the possibility to borrow plunges households into debt traps. But this makes a lot of sense in the Banerjee-Mullainathan model: people now can use the microloan to buy a TV (or for that matter to put it in a bank account towards a future TV or a dowry) and use the discipline of the credit officer to force them to “save” by reimbursing their loan every week.

4) **Conclusions**

I hope I have been able to show how hope operates as a capability, in Sen’s sense of the term. A little bit of hope and some reassurance that an individual’s objectives are within reach can act as a powerful incentive. On the contrary, hopelessness, pessimism, and stress put tremendous pressure both on the will to try something, and on the resources available to do so. While we are still very far from having an evidence base for all the possible implications of these mechanisms (and in

particular for the potential of treating mental health as way to improve incomes as well), this fact already points to a number helpful directions for possible economic policies.

First, removing the most negative branches of the tree could be extremely productive. For example, a safety net (such as a universal or a targeted low-income transfer that would insure that no one becomes entirely destitute) may help, not only those who are hit by disaster, but all those who live in fear that such a disaster may strike. Finding ways to effectively insure the poor against catastrophic health events is also a priority.

Second, on the positive side, making the poor aware of opportunities and making those opportunities salient could be very important, as demonstrated in experiments that show how education investment responds to opportunities for women.

Third, the goals should not be too lofty or hard to reach. The prospect of a job in a BPO for a child who is struggling in grade one may seem too remote to the parents for them to really support the child's education. Goals that are bite-sized and achievable may be necessary for people to get started. Several countries have abolished testing in schools on the grounds that it is stressful for the child. But a child who realizes she does not really keep up in school and who has no way to assess her own progress may be even much more stressed than if she had a way to regularly assess where she stands. Likewise, giving the poor the opportunity to experiment with a small amount of risk (like in the Bangladesh experiment) may be a way to create the conditions for confidence and optimism.

References

- Akresh, R., E. Bagby, D. de Walque, and H. Kazianga (2012): "Child ability and household human capital investment decisions in Burkina Faso," *Economic Development and Cultural Change*, forthcoming.
- Atkin, D. (2009): "Working for the future: female factory work and child health in Mexico," *Unpublished Manuscript, Yale University*.
- Banerjee, A. and E. Duflo (2007): "The economic lives of the poor," *Journal of Economic Perspectives*, 21, 141–168.
- (2011): *Poor economics: a radical rethinking of the way to fight global poverty*, Public Affairs.
- Banerjee, A., E. Duflo, R. Chattopadhyay, and J. Shapiro (2011): "Targeting the hard core poor: an impact assessment," *Working Paper*.
- Banerjee, A., E. Duflo, R. Glennerster, and C. Kinnan (2010): "The miracle of microfinance?: evidence from a randomized evaluation," *Working Paper*.
- Banerjee, A. and S. Mullainathan (2010): "The shape of temptation: implications for the economic lives of the poor," *NBER Working Paper*, 15973.
- Banerjee, A. and A. Newman (1998): "Information, the dual economy, and development," *Review of Economic Studies*, 65, 631–53.
- Barrera-Osorio, F., M. Bertrand, L. Linden, and F. Perez-Calle (2011): "Improving the design of conditional transfer programs: evidence from a randomized education experiment in Colombia," *American Economic Journal: Applied Economics*, 3, 167–195.
- Beaman, L., E. Duflo, R. Pande, and P. Topalova (2012): "Female leadership raises aspirations and educational attainment for girls: a policy experiment in India," *Science*, 335, 582–586.
- Bryan, G., S. Chowdhury, and A. Mobarak (2012): "Seasonal migration and risk aversion," *Working Paper*.
- Case, A. and A. Deaton (2009): "Health and well-being in Udaipur and South Africa," *Developments in the economics of aging*, 317.
- Cattaneo, M., S. Galiani, P. Gertler, S. Martinez, and R. Titiunik (2009): "Housing, health, and happiness," *American Economic Journal: Economic Policy*, 1, 75–105.
- Cornelisse, S., J. Haushofer, E. Fehr, M. Joels, and T. Kalenscher (2011): "Bi-directional effect of stress on present bias in intertemporal choice," *Working Paper, University of Zurich*.
- Dasgupta, P. and D. Ray (1986): "Inequality as a determinant of malnutrition and unemployment: Theory," *The Economic Journal*, 96, 1011–1034.
- De Mel, S., D. McKenzie, and C. Woodruff (2008): "Returns to capital in microenterprises: evidence from a field experiment," *The Quarterly Journal of Economics*, 123, 1329–1372.
- Devoto, F., E. Duflo, P. Dupas, W. Pariente, and V. Pons (2011): "Happiness on tap: piped water adoption in urban Morocco," *NBER Working Paper*, 16933.
- Drexler, A., G. Fischer, and A. Schoar (2011): "Keeping it simple: financial literacy and rules of thumb," *MIT Working Paper*.

- Duflo, E., P. Dupas, and M. Kremer (2011): "Peer effects, teacher incentives, and the impact of tracking: Evidence from a randomized evaluation in Kenya," *The American Economic Review*, 101, 1739–1774.
- Duflo, E., M. Kremer, and J. Robinson (2008): "How high are rates of return to fertilizer? Evidence from field experiments in Kenya," *The American Economic Review*, 98, 482–488.
- Fernald, L. and M. Gunnar (2009): "Poverty-alleviation program participation and salivary cortisol in very low-income children," *Social Science & Medicine*, 68, 2180–2189.
- Haushofer, J. (2011): "The Psychology of Poverty," *Working Paper, University of Zurich*.
- Haushofer, J., J. de Laat, M. Chemin, and C. Archambault (2011): "Poverty raises levels of the stress hormone cortisol: evidence from weather shocks in Kenya," *Working Paper, Jameel Poverty Action Lab, MIT*.
- Jensen, R. (2010): "The (perceived) returns to education and the demand for schooling," *The Quarterly Journal of Economics*, 125, 515–548.
- (2012): "Do labor market opportunities affect young women's work and family decisions? Experimental Evidence from India," *The Quarterly Journal of Economics*.
- Jensen, R. and N. Miller (2011): "Do consumer price subsidies really improve nutrition?" *The Review of Economics and Statistics*, 93, 1205–1223.
- Kahneman, D. (2011): *Thinking, fast and slow*, Farrar Straus & Giroux.
- Karlan, D. and S. Mullainathan (2011): "Debt cycles," *Work in Progress*.
- Karlan, D., I. Osei-Akoto, R. Osei, and C. Udry (2011): "Examining underinvestment in agriculture: Measuring returns to capital and insurance," Tech. rep., Mimeo, Yale University.
- Kling, J., J. Liebman, and L. Katz (2007): "Experimental analysis of neighborhood effects," *Econometrica*, 75, 83–119.
- Kremer, M., J. Lee, J. Robinson, and O. Rostapshova (2011): "The return to capital for small retailers in Kenya: evidence from inventories," *Working Paper*.
- Mazumdar, D. (1959): "The marginal productivity theory of wages and disguised unemployment," *The Review of Economic Studies*, 26, 190–197.
- Nguyen, T. (2008): "Information, role models and perceived returns to education: Experimental evidence from Madagascar," *Unpublished Manuscript*.
- Peterson, C., S. Maier, and M. Seligman (1995): *Learned helplessness: A theory for the age of personal control*, Oxford University Press, USA.
- Ray, D. (1998): *Development economics*, Princeton University Press.
- Rosenthal, R. and L. Jacobson (1968): "Pygmalion in the classroom," *The Urban Review*, 3, 16–20.
- Rothman, A. and P. Salovey (1997): "Shaping perceptions to motivate healthy behavior: the role of message framing," *Psychological bulletin*, 121, 3.
- Sen, A. (1999): *Development as freedom*, Oxford University Press.
- Sharot, T. (2011): *The optimism bias: a tour of the irrationally positive brain*, Pantheon Books.

Zwane, A., J. Zinman, E. Van Dusen, W. Pariente, C. Null, E. Miguel, M. Kremer, D. Karlan, R. Hornbeck, X. Giné, et al. (2011): "Being surveyed can change later behavior and related parameter estimates," *Proceedings of the National Academy of Sciences*, 108, 1821–1826.