ABHIJIT V. BANERJEE
AND ESTHER DUFLO

POOR ECONOMICS

A RADICAL RETHINKING OF THE WAY TO FIGHT GLOBAL POVERTY

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on the real nature of poverty."
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Poor Economics

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Top of the Class

In summer 2009, in the village of Naganadgi in the state of Karnataka, India, we met Shantarama, a forty-year-old widow and mother of six. Her husband had died four years before, entirely unexpectedly, of appendicitis. His life was not insured, nor was there any pension that the family was entitled to. The three eldest children had each gone to school at least until eighth grade, but the next two—a ten-year-old boy and a fourteen-year-old girl—had dropped out. The girl was working in a neighbor's field. We assumed that the death of the father had forced the family to withdraw the children from school and send all the older ones to work.

Shantarama set us straight. After her husband died, she had rented out the fields they owned and started to work as a casual laborer. She earned enough to take care of their basic needs. The girl was indeed sent to work in the fields, but only after she dropped out, because the mother did not want her idling at home. The rest of the children had stayed on in school—out of the three oldest children, two were still students when we met them (the oldest, who was married and twenty-two, was expecting her first child).We learned that the oldest boy was in college in Yatgir, the nearest town, studying to be ... a teacher. The two middle children were out of school only because they absolutely refused to go. There were several schools near the village, including a government school and a few private schools. Those two children had been enrolled at the government school, but they had both run away countless times before their mother abandoned any hope of being able to make them attend. The ten-year-old boy, who was with his mother when we interviewed her, mumbled something about school being boring.

Schools are available. In most countries, they are free, at least at the primary level. Most children are enrolled. And yet in the various surveys that we have conducted around the world, child absentee rates vary between 14 percent and 50 percent.[1] Absence often does not seem to be driven by an obvious need at home. Although some of it might reflect ill health—for example, in Kenya when children were treated for intestinal worms, they missed fewer days of school[2]—much of it probably reflects children's unwillingness to be in school (which might well be universal, as most of us will remember from our childhood) and also the fact that their parents do not seem to be able, or willing, to make them go.

For some critics, this is a sign of the catastrophic failure of an establishment-led effort to increase education from the top down: Building schools and hiring teachers is useless if there is no strong underlying demand for education; conversely, if there is real demand for skill, a demand for education will naturally emerge, and supply will follow. However, this optimistic view seems to be inconsistent with the story of Shantarama's children. There is certainly no shortage of demand for educated people in Karnataka, whose capital is Bangalore, India's IT hub. The family, with a future teacher among its members, was both aware of the value of education and willing to invest in it.

So if the failure of schools in developing countries to attract children can't be explained by problems of access, or lack of demand for educated labor, or parental resistance to educating their children, then where is the snag?

SUPPLY-DEMAND WARS

Education policy, like aid, has been the subject of intense policy debates. As in the case of aid, the debate is not about whether education per se is good or bad (everyone probably agrees it is better to be educated than not educated). It centers instead on whether governments ought to, or know how to, intervene. And though the specific reasons invoked are different, the fault line divides the field essentially in the same place it divides it on the subject of aid, with the aid optimists being generally education interventionists, and the aid pessimists being in favor of laissez-faire.

A large majority of policy makers, at least in international policy circles, have traditionally taken the view that the problem is essentially simple: We have to find a way to get the children into a classroom, ideally taught by a well-trained teacher, and the rest will take care of itself. We will call these people, who emphasize the "supply of schooling," the "supply wallahs," appropriating the Indian term for "purveyor of" (as in the western Indian surnames Lakdawala [wood supplier], Daruwala [booze supplier], and Bandukwala [gun seller]), to avoid confusing them with supply-siders, the economists who think Keynes got everything wrong and are in fact largely opposed to any form of government intervention.

Perhaps the most visible articulation of the supply wallah position can be found in the UN's Millennium Development Goals (MDG), the eight goals that the world's nations agreed in 2000 to reach by 2015. The second and third MDGs are, respectively, to "ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling" and to "eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015." Most national governments seem to have bought into this idea. In India, 95 percent of children now have a school within a half mile or so.[3] Several African countries (including Kenya, Uganda, and Ghana) have made primary education free, and children have flooded the schools. According to UNICEF, between 1999 and 2006, enrollment rates in primary school in sub-Saharan Africa increased from 54 percent to 70 percent. In East and South Asia, they increased from 75 percent to 88 percent over the same period. Worldwide, the number of children of school age who were out of school fell from 103 million in 1999 to 73 million in 2006. In our eighteen-country data set, even among the extremely poor (those who live on less than 99 cents a day), enrollment rates are now above 80 percent in at least half the countries for which we have data.

Access to secondary school (ninth grade and above) is not part of the MDGs, but even there, progress has been made. Between 1995 and 2008, secondary gross enrollment ratios increased from 25 percent to 34 percent in sub-Saharan Africa, from 44 percent to 51 percent in South Asia, and from 64 percent to 74 percent in East Asia,[4] despite the fact that the costs of secondary schools are much higher: Teachers are expensive, because they need to be better qualified, and for parents

and children the value of the forgone earnings, and the forgone labormarket experience, is much larger because teenage children can work and earn money.

Getting children into school is a very important first step: This is where learning starts. But it isn't very useful if they learn little or nothing once they're there. Somewhat bizarrely, the issue of learning is *not* very prominently positioned in international declarations: The Millennium Development Goals do not specify that children should learn anything in school, just that they should complete a basic cycle of education. In the final declaration of the Education for All Summit in Dakar in 2000, sponsored by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the goal of improving the quality of education is mentioned only in the sixth position—out of six goals. The implicit assumption, presumably, was that learning would follow from enrollment. But unfortunately things aren't that simple.

In 2002 and 2003, the World Absenteeism Survey, led by the World Bank, sent unannounced surveyors to a nationally representative sample of schools in six countries. Their basic conclusion was that teachers in Bangladesh, Ecuador, India, Indonesia, Peru, and Uganda miss one day of work out of five on average, and the ratio is even higher in India and Uganda. Moreover, the evidence from India suggests that even when teachers are in school and are supposed to be in class, they are often found drinking tea, reading the newspaper, or talking to a colleague. Overall, 50 percent of teachers in Indian public schools are not in front of a class at a time they should be.[5] How are the children supposed to learn?

In 2005, Pratham, an Indian NGO focused on education, decided to go one step further and find out what children were really learning. Pratham was founded in 1994 by Madhav Chavan, a U.S.—educated chemical engineer with an unflappable belief that all children should, and can, learn to read and read to learn. He has taken Pratham from a small Mumbai-based UNICEF-sponsored charity to one of the largest NGOs in India, perhaps in the world: Pratham's programs reach close to 34.5 million children all over India and are now venturing into the rest of the world. Under the banner of the Annual State of Education Report (ASER), Pratham formed volunteer teams in all 600 Indian districts. These teams tested more than 1,000 children in randomly chosen villages in every district—700,000 children overall—and came up with a report card. One of the leading lights of the ruling Congress-led government, Montek Singh Ahluwalia, launched the report, but what he read could not have made him happy. Close to 35 percent of children in the seven-to-fourteen age group could not read a simple paragraph (first-grade level) and almost 60 percent of children could not read a simple story (second-grade level). Only 30 percent could do second-grade mathematics (basic division).[6] The math results are particularly stunning—all over the Third World, little boys and girls who help their parents in their family stall or store do much more complicated calculations all the time, without the help of pen and paper. Are schools actually making them unlearn?

Not everyone in the government was as gracious as Mr. Ahluwalia. The government of the state of Tamil Nadu refused to believe that it was really doing as badly as the ASER data seemed to imply and ordered its own teams to conduct a retest, which unfortunately only served to reinforce the bad news. These days in India, in an annual ritual in January, ASER results are released. Newspapers

express dismay at the poor scores, academics talk about the statistics in panel discussions, and very little changes.

Unfortunately, India is not unique: Very similar results have been found in neighboring Pakistan, in distant Kenya, and in several other countries. In Kenya, the Uwezo Survey, modeled on ASER, found that 27 percent of children in fifth grade could not read a simple paragraph in English, and 23 percent could not read in Kiswahili (the two languages of instruction in primary school). Thirty percent could not do basic division.[7] In Pakistan, 80 percent of children in third grade could not read a first-grade-level paragraph.[8]

The Demand Wallahs' Case

For the "demand wallahs," a set of critics (including William Easterly) who believe that there is no point in supplying education unless there is a clear demand for it, these results encapsulate everything that has been wrong with education policy in the last few decades. In their view, the quality of education is low because parents do not care enough about it, and they don't because they know that the actual benefits (what economists call the "returns" to education) are low. When the benefits of education become high enough, enrollment will go up, without the state having to push it. People will send their children to private schools that will be set up for them, or if that is too expensive, they will demand that local governments set up schools.

The role of demand is indeed critical. School enrollment is sensitive to the rate of returns to education: During the Green Revolution in India, which raised the level of technical know-how needed to be a successful farmer and thereby increased the value of learning, education increased faster in regions that were better suited to the new seeds introduced by the Green Revolution.[9] More recently, there is the example of the offshore call centers. In Europe and the United States, they are usually vilified for taking away local jobs, but they have been part of a small social revolution in India by dramatically expanding young women's employment opportunities. In 2002, Robert Jensen of the University of California at Los Angeles teamed up with some of these centers to organize recruiting sessions for young women in randomly selected villages in rural areas where recruiters would typically not go, in three states in northern India. Not surprisingly, compared to other randomly chosen villages that did not see any such recruiting efforts, there was an increase in the employment of young women in business process outsourcing centers (BPOs) in these villages. Much more remarkably, given that this is the part of India probably most notorious for discrimination against women, three years after the recruiting started, girls age five to eleven were about 5 percentage points more likely to be enrolled in school in the villages where there was recruiting. They also weighed more, suggesting that parents were taking better care of them: They had discovered that educating girls had economic value, and were happy to invest.[10]

Since parents are able to respond to changes in the need for an educated labor force, the best education policy, for the demand wallahs, is no education policy. Make it attractive to invest in business requiring educated labor and there will be a need for an educated labor force, and therefore a pressure to supply it. And then, the argument continues, since parents will start to really

care about education, they will also put pressure on teachers to deliver what they need. If public schools cannot provide quality education, a private-school market will emerge. Competition in this market, they argue, will ensure that parents get the quality of schooling that they need for their children.

At the core of the demand wallahs' view is the idea that education is just another form of investment: People invest in education, as they invest in anything else, to make more money—in the form of increased earnings in the future. The obvious problem with thinking of education as an investment is that parents do the investing and children get the benefits, sometimes much later. And though many children do, in effect, "repay" parents for the investment by taking care of them in old age, many others do so only reluctantly, or they simply "default," abandoning their parents along the way. Even when the children turn out to be dutiful, it is not always clear that the extra bit of money that they earn because they spent that extra year in school translates into that much more for the parents—we have certainly come across parents who rue the day when their children became rich enough to move out to their own house, leaving them to their lonely elderly lives. T. Paul Schultz, a Yale economist, talks about his father, the famous economist and Nobel Laureate Theodore Schultz, whose parents were against educating him, because they wanted him to stay back on the farm.

It is true that many parents do take pride and pleasure in the fact that their children are doing well (and in sharing the good news with their neighbors). In this sense they may feel more than adequately repaid even when they don't get a penny from their children. So from the point of view of the parent, education is partly investment but also partly a "gift" that they offer their children. But there is also the flip side: Most parents are in a position of power relative to their children—they decide who goes to school, who stays home or goes out to work, and how their earnings are spent. Parents who are cynical about how much they would get out of a son's earnings once he is old enough to push back, and who do not value education for its own sake, may prefer to take him out of school and send him to work when he is ten. In other words, although the economic return to education (as measured by the extra earnings of an educated child) clearly matters, lots of other things probably matter as well, things like our hopes about the future, our expectations about our children, even how generous we are feeling toward them.

"Exactly," says the supply wallah. "This is why some parents need a push. A civilized society cannot allow a child's right to a normal childhood and a decent education to be held hostage to a parent's whims or greed." Building schools and hiring teachers is a necessary first step to lower the cost of sending a child to school, but it may not be enough. This rationale explains why most rich countries simply give parents no choice: Children have to be sent to school until a certain age, unless parents can prove they are educating them at home. But this clearly does not work where state capacity is more limited and compulsory education cannot be enforced. In such cases, the government must make it financially worthwhile for parents to send their children to school. This is the idea behind the new tool of choice in education policy: the conditional cash transfer.

The Curious History of Conditional Cash Transfers

Santiago Levy, a former professor of economics at Boston University, was deputy minister in the Mexican Ministry of Finance from 1994 to 2000, tasked with reforming the intricate welfare system, which was made of several distinct programs. He believed that by linking the receipt of welfare payments to investment in human capital (health and education), he could ensure that the money spent today could contribute to eradicating poverty, not only in the short term but in the long term as well, by fostering a healthy and well-educated generation. This inspired the design of PROGRESA, a transfer program "with strings attached." PROGRESA was the first conditional cash transfer (CCT) program: It offered money to poor families, but only if their children regularly attended school and the family sought preventive health care. They got more money if the children were in secondary school than in primary school and if it was a girl who went to school rather than a boy. To make it politically acceptable, the payments were presented as "compensation" to the family for the wages lost when their child went to school instead of working. But in reality, the goal was to nudge the family, by making it costly for the family to fail to send their children to school, regardless of what the family thought of education.

Santiago Levy had another goal—to make sure that the program survived the change of government every few years, since each new president usually canceled all his predecessors' programs before launching his own. Levy calculated that if the program was demonstrably a great success, the new government would not find it easy to get rid of it. So he set up a pilot project, which was offered only in a randomly chosen group of villages, making it possible to rigorously compare outcomes in chosen and non-chosen villages. The pilot demonstrated beyond reasonable doubt that such a program does substantially increase school enrollment, particularly at the secondary level. Secondary school enrollment increased from 67 percent to about 75 percent for girls, and from 73 percent to about 77 percent for boys.[11]

This was also one of the first demonstrations of the persuasive power of a successful randomized experiment. When the government duly changed, the program survived, albeit renamed OPORTUNIDADES. But Levy probably did not anticipate that he had given birth to two new traditions. First, CCTs spread like wildfire all over the rest of Latin America, and subsequently to the rest of the world. Mayor Michael Bloomberg even gave them a try in New York City. And second, when other countries launch their own CCTs, they now usually also carry out a set of randomized trials to evaluate them. In some of these experiments, features of the program are varied, to try to understand how to design it better.

Paradoxically, it was one of these replications, in Malawi, that led us to rethink the success of PROGRESA. The conditionality in PROGRESA is based on the principle that increased income is not enough and that parents need to be given an incentive. Researchers and practitioners started to ask whether an *unconditional* program could have the same effect as a conditional transfer. A World Bank study found, provocatively, that conditionality does not seem to matter at all: The researchers offered the families of school-age girls a transfer ranging between $5 and $20 USD PPP per month. In one group, the transfer was conditional on enrollment. In another, it wasn't. A third group (the control group) did not receive a transfer. The effects were large (after a year, dropout was 11

percent in the control group, and only 6 percent among those who benefited from the transfer), but they were the same for those who received the conditional transfer and for those who got the unconditional one, suggesting that parents did not need to be *forced* to send their children to school, they needed to be helped financially.[12] Subsequently, another study that compared conditional and unconditional transfers in Morocco found similar results.[13]

Several factors probably explain why the financial transfer made a difference in Malawi: Perhaps parents could not pay for school fees, or could not give up the money their children earned. Of course, borrowing to finance the schooling of their ten-year-old based on what she will make at twenty is entirely a pipe dream. The income transfer, by moving parents out of extreme poverty, may also have given the mental space to take a longer view of life: Schooling is something where the costs are paid now (you have to nag—or drag—your children into school now) and it only pays off when they are older.

For all these reasons, income per se matters for education decisions: Jamal will get less education than John because his parents are poorer, even if the income gains from education are the same for both. Indeed, in our eighteen-country data set we find that the share of spending on education increases as we move up from those who live on under 99 cents a day to those in the $6–$10 category. Given that the number of children born to each family goes down sharply with income, this means that education spending per child grows much faster than total consumption. This is the opposite of what we would expect in a world where education is an investment like any other, unless we are willing to believe that the poor are just incapable of getting educated.

This is important, because if parental income plays such a vital role in determining educational investment, rich children will get more education even if they are not particularly talented, and talented poor children may be deprived of an education. So leaving it purely to the market will not allow every child, wherever she comes from, to be educated according to her ability. Unless we can fully erase differences in income, public supply-side intervention that makes education cheaper would be necessary to get close to the socially efficient outcome: making sure that every child gets a chance.

Does Top-Down Education Policy Work?

The question, however, is whether this kind of public intervention, even if it is desirable in principle, is actually feasible. If parents do not care about education, isn't there a risk that such a top-down education drive would just lead to a waste of resources? In *The Elusive Quest for Growth,* Easterly argues, for example, that the investment in education in African countries has not helped these countries to grow.

Once again, the best way to answer this question is to study what happened when specific countries tried it. The good news is that despite the poor quality of education, schools are still useful. In Indonesia, after the first oil boom in 1973, the country's then dictator, General Suharto, decided to go on a school-building spree.[14] It was the classic top-down supply-driven program: Schools were built based on a prespecified rule that gave strict precedence to areas where the

number of unschooled children was the highest. If the lack of schools in this area reflected lack of interest in education, this program should have been a miserable failure.

In fact, the INPRES (Instruksi Presiden, or Presidential Instruction) program was a great success: To evaluate it, Esther compared the wages of adults who, as children, were young enough to have benefited from the newly constructed schools to what the immediately older generation (people who were just old enough to have missed their chance to go to these schools) was earning. She found that relative to the older generation, the wages of the younger one were significantly higher in areas where more schools were constructed. Putting together the effect on education and on wages, she concluded that every extra year of primary school due to the new school raised wages by about 8 percent. This estimate of the returns to education is very similar to what is commonly found in the United States.[15]

Another classic top-down program is compulsory schooling. In 1968, Taiwan instituted a law that made it mandatory for all children to complete nine years of schooling (the previous law only required six years of school attendance). This law had a significant positive effect on the schooling of both boys and girls, as well as on their employment prospects, especially for girls.[16] The benefits of education are not only monetary: The Taiwan program had a large effect on child mortality.[17] In Malawi, girls who did not drop out because of the cash transfer were also less likely to become pregnant. The same results were found in Kenya.[18] There is now a significant body of rigorous evidence testifying to the far-reaching effects of education.

Moreover, this research also concludes that every little bit of education helps. People who are comfortable with reading are more likely to read newspapers and bulletin boards and to find out when there is a government program available for them. People who go on to secondary education are more likely to get a formal-sector job, but even those who don't are able to run their businesses better.

It seems, then, that once again the polarized debate between philosophically opposed strategies largely misses the point. Supply and demand strategies have no reason to be mutually exclusive. Supply by itself does some good, but demand is important, too. There are indeed people who somehow find ways to get educated without any top-down help when the right jobs come to town, but for many others, the impetus from schools being built in their area can be critical.

None of this means that top-down strategies deliver as much as they could, or should. After all, as we saw, the quality of education delivered in public schools can be dismal. The fact that students are getting *something* out of them does not mean they could not work significantly better. Could it be that demand-based approaches would work better? Private schooling is the canonical demand-driven strategy—the parents must spend their own hard-earned money to put their children into one, even though free public schools are available. Have private schools cracked the problem of the quality of education?

Private Schools

There is a surprising amount of agreement that private schools should play an important role in the process of filling the gaps in the education system. India's Right to Education Act, which was recently passed with strong support across the political spectrum (including the left, which, the world over, has traditionally opposed the role of the market), is a version of what is called voucher privatization—the government gives citizens "vouchers" to pay private-school fees.

Even before the education experts gave it the heads-up, many ambitious low-income parents around the world had decided that they had to get their children into private schools, even if they would have to scrimp for it. This has caused the surprising phenomenon of cut-price private schools all over South Asia and Latin America. The monthly fees in these schools can be as low as $1.50. The schools tend to be quite modest, often just a couple of rooms in someone's house, and the teachers are often local people who couldn't find another job and decided to start a school. One study[19] found that an excellent predictor of the supply of private schools in a Pakistani village is whether a secondary girl's school had been set up in the area a generation earlier. Educated girls, looking for an opportunity to make some money without having to leave the village, were increasingly entering the education business as teachers.

Despite their sometimes dubious credentials, private schools often work better than public schools. The World Absenteeism Survey found that in India, private schools were more likely to be found in villages where the public schools were particularly bad. Furthermore, on average, the private-school teachers were 8 percentage points more likely to be in school on a given day than public-school teachers in the same village. Children who go to private school also perform better. In India in 2008, according to ASER, 47 percent of government-school students in fifth grade could not read at the second-grade level, compared to 32 percent of private-school students. In the Learning and Educational Achievement in Pakistan Schools (LEAPS) survey, by third grade, children in private schools were 1.5 years ahead in English and 2.5 years in math relative to children in public schools. It is true that families who decide to send their children to private schools may be different. But this could not be entirely explained by the private schools' attracting kids from richer families: The gap in performance between private- and public-school students was close to ten times the average gap between the children from the highest and lowest socioeconomic categories. And though it is not quite so large, there is still a sizable gap between children enrolled in public and private school even within the same family[20] (this may still be an overestimate of the true benefit if parents send their most talented child to private school or also help that child in other ways).[21]

So children in private school learn more than children in public schools. This does not mean, however, that private schools are as efficient as they could be. We see that they are not when we compare the effect of being in private school to the effect of simple interventions.

Pratham Versus Private Schools

Pratham, the remarkable educational NGO that runs ASER, not only exposes the deficiencies of the educational system but also tries to fix them.We have been working with them for the last ten years, evaluating almost every new edition of their program for teaching children arithmetic and reading. Our association started in the year 2000 in western India, in the cities of Mumbai and Vadodara, where Pratham was running what they called the Balsakhi (meaning "children's friend") program. The program took the twenty children in each classroom who most needed help and sent them to work with the balsakhi, a young woman from the community, on their specific areas of weakness. Despite an earthquake and communal riots, the program generated very large gains in test scores for these children—in Vadodara, about twice the magnitude of the average gains from private schooling that have been found in India.[22] Yet these balsakhis were much less educated than the average private- (or public-) school teacher—many of them had barely ten years of schooling, plus a week's training by Pratham.[23]

Given these results, many organizations would have rested on their laurels. Not Pratham. The idea of resting anywhere, least of all on their laurels, is entirely foreign to Madhav's personality or that of Rukmini Banerji, the human dynamo who is the driving force behind Pratham's spectacular expansion. One way in which Pratham could reach more children was by having communities take over the program. In the Jaunpur District in the eastern part of Uttar Pradesh, India's largest state and one of the poorest, Pratham volunteers went from village to village testing children and encouraging the community to get involved in the testing to see for themselves what their children knew and didn't know. The parents were not thrilled by what they saw—their first instinct often was to try to smack their children—but eventually a set of volunteers from the community emerged, ready to take on the job of helping their little brothers and sisters. They were mostly young college students who held classes in the evening in their neighborhoods. Pratham gave them a week of training but no other compensation.

We evaluated this program as well, and the results were quite dramatic: By the end of the program, *all* the participating children who could not read before the program could at least recognize letters (in contrast, only 40 percent of those in the comparison villages could read letters by the end of the year). Those who could read only letters at the beginning were 26 percent more likely, by the end, to be able to read a short story if they had participated than if they had not.[24]

More recently, Pratham has shifted its focus to working with the government school system. In Bihar, India's poorest state and the state with the highest measured teacher absentee rate, Pratham organized a set of remedial summer camps for schoolchildren in which the teachers from the government school system were invited to come and teach. The results from this evaluation were surprising: The much-maligned government teachers actually taught, and the gains were comparable to the gains from the Jaunpur evening classes.

Pratham's results are striking enough that many school systems in India and around the world are reaching out to the organization. A version of the program is now being tested in Ghana, in a large-scale RCT run as collaboration between a research team and the government: Youth who are

looking for a first job experience will be trained to provide remedial education in school. Delegations from the Ministry of Education in Senegal and Mali have visited Pratham's operations and are thinking of replicating the program.

This evidence poses a set of puzzles: If volunteer and semi-volunteer teachers can generate such large gains, private schools can clearly adopt the same kinds of practices and should do even better. Yet we know that in India a full one-third of fifth-graders in private schools cannot read at first-grade level. Why not? If government teachers can teach so well, why don't we see it in the school system? If such large learning gains are so easily available, why don't parents demand them? Indeed, why was it that in Pratham's Jaunpar program, only 13 percent of the children who could not read attended the evening classes?

No doubt, some of the usual reasons that markets do not work as well as they should are at work here. Perhaps there is not enough competitive pressure among private schools, or parents are not sufficiently informed about what they do. Broader issues of political economy that we will discuss later may explain the poor performance of government teachers. But one key issue is unique to education: The peculiar way in which *expectations about what education is supposed to deliver* distort what parents demand, what both public and private schools deliver, and what children achieve—and the colossal waste that ensues.

THE CURSE OF EXPECTATIONS

The Illusory S-Shape

Some years ago we had organized a parent-child collage session in an informal school run by Seva Mandir in rural Udaipur. We had brought a stack of colorful magazines and asked parents to cut some pictures out from them to represent what they thought education would bring to their children. The idea was for them to build a collage with the help of their children.

The collages all ended up looking rather similar: The pictures were studded with gold and diamond jewelry and various recent models of cars. There were other images available in the magazines—peaceful rural vistas, fishing boats, coconut trees—but if the evidence of the collages is to be believed, this is not what education is all about. Parents seem to see education primarily as a way for their children to acquire (considerable) wealth. The anticipated route to those riches is, for most parents, a government job (as a teacher, for example), or failing that, some kind of office job. In Madagascar, parents of children from 640 schools were asked what they thought a child who had completed primary education would do for a living, and what a child who had completed secondary education would do. Seventy percent thought that a secondary-school graduate would get a government job, when in fact 33 percent of them actually get those jobs.[25]

Yet very few of these children will make it to sixth grade, let alone pass the graduation exam that, these days, is typically the minimum qualification for any kind of job that has an education requirement. And it is not that parents are fully unaware of this: In Madagascar, where parents

were asked their view of the returns to education, it was found that parents get it right *on average.* But they greatly overstate both the upside and the downside. They see education as a lottery ticket, not as a safe investment.

Pak Sudarno, a scrap collector in the slum of Cica Das in Bandung, Indonesia, who, very matter-of-factly told us that he was known to be the "poorest person in the neighborhood," explained this succinctly. When we met him in June 2008, his youngest son (the youngest of nine children) was about to enter secondary school. He thought that the most probable outcome was that after completing secondary school, the boy would get a job in the nearby mall, where his brother was already working. This is a job that he could have had already—but nevertheless, Pak Sudarno thought it was worthwhile for him to complete secondary school, even if it meant three years of forgone salary. His wife thought that the boy might be able to enter a university. Pak Sudarno felt that this was a pipe dream—but he thought that there was some chance that he could get an office job, the best job possible, for the security and respectability it offered. In his view, it was worth taking the chance.

Parents also tend to believe that the first few years of education pay much less than the next ones. For example, in Madagascar, parents believed that each year of primary education would increase a child's income by 6 percent, each year of junior high education by 12 percent, and each year of senior secondary education by 20 percent. We found a very similar pattern in Morocco. There, parents believed that each year of primary education would increase a boy's earning by 5 percent, and each year of secondary education by 15 percent. The pattern was even more extreme for girls. In the view of parents, each year of primary education was worth almost nothing for them: 0.4 percent. But each year of secondary education was perceived to increase earnings 17 percent.

In reality, available estimates show that each year of education increases earnings more or less proportionally.[26] And even for people who do not get a formal-sector job, education seems to help: For example, educated farmers earned more during the Green Revolution than uneducated ones.[27] Moreover, there are also all the other, nonfinancial benefits. In other words, parents see an S—shape where there really isn't one.

This belief in the S—shape means that unless parents are unwilling to treat their children differently from one another, it makes sense for them to put all their educational eggs in the basket of the child they perceive to be the most promising, making sure that she gets enough education, rather than spreading the investment evenly across all their children. A few doors down from Shantarama (the widow whose two children were not in school), in the village of Naganadgi, we met a farming household with seven children. None of them had studied past second grade, except the youngest, a twelve-year-old boy. They were not satisfied with the quality of the government high school, where had spent a year. So the boy was attending seventh grade in a private boarding school located in the village. A year at school cost the family more than 10 percent of its total income from farming, a considerable commitment for just one child and clearly an impossible expense for seven. The lucky boy's mother explained to us that he was the only intelligent child in the family. The willingness to use words like "stupid" and "intelligent" to refer to one's own children, often in their presence, is entirely consistent with a worldview that puts a large premium on picking a winner (and in getting everyone else in the family to back the winner). This belief

creates a strange form of sibling rivalry. In Burkina Faso, a study found that adolescents were more likely to be enrolled in school when they scored high on a test of intelligence, but they were *less* likely to be enrolled in school when their siblings had scored high.[28]

A study of conditional cash transfer in the city of Bogotá, Colombia, found compelling evidence of the propensity to concentrate resources on one child. The program had limited funds, and parents were offered the option to enter any of their age-eligible children into a lottery. Parents of winners would get a monthly transfer as long as the child attended school regularly. Lottery winners were more likely to attend regularly, more likely to reenroll each academic year, and, in the version of the program where part of the transfer was conditional on college enrollment, much more likely to attend college. The disturbing finding was that in families that entered two or more children and one won, the child who lost the lottery was *less* likely to be enrolled in school than children in families where both lost. This is despite the increase in family income, which should have helped the other child. A winner was picked, and resources were concentrated on him (or her).[29]

Misperception can be critical. In reality, there should not be an education-based poverty trap: Education is valuable at every level. But the fact that parents *believe* that the benefits of education are S—shaped leads them to behave as if there were a poverty trap, and thereby inadvertently to create one.

Elitist School Systems

Parents are not alone in focusing their expectations on success at the graduation exam: The whole education system colludes with them. The curriculum and organization of schools often date back to a colonial past, when schools were meant to train a local elite to be the effective allies of the colonial state, and the goal was to maximize the distance between them and the rest of the populace. Despite the influx of new learners, teachers still start from the premise that their mandate remains to prepare the best students for the difficult exams that, in most developing countries, act as a gateway either to the last years of school or to college. Associated with this is a relentless pressure to "modernize" the curriculum, toward making it more scientific and science oriented, toward fatter (and no doubt weightier) textbooks—to the point where the Indian government now sets a limit of 6.6 pounds on the total weight of the book bag that first- and second-graders can be asked to carry.

We once followed some Pratham staff to a school in the city of Vadodara, in western India. Their visit was preannounced and the teacher clearly wanted to make a good impression: His idea was to draw an enormously complex figure on the board, representing one of the fiendishly clever proofs that Euclidian geometry is famous for, accompanied by a long lecture about the diagram. All the children (students in third grade) were neatly arranged in rows on the floor, and sat very quietly. Some might have been trying to draw a simulacrum of the figure on their tiny slates, but the quality of the chalk was so low that it was impossible to tell. It was clear that none of them had a clue what was going on.

This teacher was not an exception. We have seen countless examples of this kind of elite bias among teachers in developing countries. In collaboration with Pascaline Dupas and Michael Kremer, Esther helped design a reorganization of Kenyan classrooms, taking advantage of an extra teacher to divide the class in two. Each class was separated by prior achievement, to help children learn what they did not know yet. Teachers were then randomly assigned to the "top" or "bottom" track by a public lottery. Teachers who "lost" the lottery and were assigned to the bottom track were upset, explaining that they wouldn't get anything out of teaching and would be blamed for their students' low scores. And they adjusted their behavior accordingly: During random visits, teachers assigned to the bottom track were less likely to teach, and instead more likely to be having tea in the teachers' room, than those assigned to the top track.[30]

The problem is not the high ambition per se; what makes it really damaging is that it is combined with low expectations of what the students can accomplish. We once went to see some testing of children in Uttarakand, in the foothills of the Indian Himalayas. It was a brilliant fall day, and it was hard not to feel that the testing was something of an intrusion. The child we were trying to test certainly thought so. He vigorously nodded when we asked him whether he went to school and seemed agreeable enough when we told him we would ask him some questions, but when the interviewer handed him a sheet to read, he resolutely looked the other way, as only a seven-year-old can. The interviewer tried very hard to coax him to just glance at the sheet, promising nice pictures and a fun story, but his mind was made up; his mother kept muttering words of encouragement, but a certain halfheartedness in her efforts suggested that she did not expect him to change his mind. As we walked toward the car after the "interview," an elderly man in a short dusty dhoti (the loincloth farmers wear in the area) and a yellowing T-shirt fell into step with us. "Children from homes like ours . . . ," he said, leaving us to guess the rest. We had seen the same pessimism in the mother's face and in faces of many mothers like her: She was not going to say it, but we were wasting our time.

References to a certain old-fashioned sociological determinism, whether based on caste, class, or ethnicity, are rife in conversations involving the poor. In the late 1990s, a team led by Jean Dreze prepared a report on the state of education in India, the Public Report on Basic Education in India (PROBE). One of the findings was:

Many teachers are anxious to avoid being posted in remote or "backward" villages. One practical reason is the inconvenience of commuting, or of living in a remote village with poor facilities. . . . Another common reason is alienation from the local residents, who are sometimes said to be squandering their money on liquor, to have no potential for education, or simply to "behave like monkeys." Remote or backward areas are also seen as infertile ground for a teacher's efforts.

A young teacher simply told the team that it was impossible to communicate with "children of uncouth parents."[31]

In a study designed to find out whether this prejudice influenced teachers' behavior with students, teachers were asked to grade a set of exams. The teachers did not know the students, but half of the teachers, randomly chosen, were told the child's full name (which includes the caste name). The rest were fully anonymous. They found that, on average, teachers gave significantly

lower grades to lower-caste students when they could see their caste than when they could not. But interestingly, it was not the higher-caste teachers who were doing this. The lower-caste teachers were actually *more* likely to assign worse grades to lower-caste students. They must have been convinced these children could not do well.[32]

The combination of elevated expectations and little faith can be quite lethal. As we saw, the belief in the S—shape curve leads people to give up. If the teachers and the parents do not believe that the child can cross the hump and get into the steep part of the S—curve, they may as well not try: The teacher ignores the children who have fallen behind and the parent stops taking interest in their education. But this behavior *creates* a poverty trap even where none exists in the first place. If they give up, they will never find out that perhaps the child could have made it. And in contrast, families that assume that their children can make it, or families that don't want to accept that a child of theirs will remain uneducated, which tend to be, for obvious historical reasons, more elite families, end up confirmed in their "high" hopes. As one of his early teachers likes to recall, when Abhijit was falling behind in his schoolwork in first grade, everyone somehow managed to persuade themselves that this was because he was too far ahead of the class and bored. As a result he was sent up to the next grade, where, once again, he immediately fell behind, to the point where the teacher took to hiding his homework so that the higher-ups would not question the wisdom of having promoted him. If, instead of being the child of two academics, he had been a child of two factory workers, he would almost surely have been assigned to remedial education or asked to leave the school.

Children themselves use this logic when assessing their own abilities. The social psychologist Claude Steele demonstrated the power of what he calls "stereotype threat" in the U.S. context: Women do better on math tests when they are explicitly told that the stereotype that women are worse in math does not apply to this particular test; African Americans do worse on tests if they have to start by indicating their race on the cover sheet.[33] Following Steele's work, two researchers from the World Bank had lower-caste children in the Indian state of Uttar Pradesh compete against high-caste children in solving mazes.[34] They found that the low-caste children compete well against the high-caste children as long as caste is not salient, but once low-caste children are reminded that they are low castes competing with high-caste children (by the simple contrivance of asking them their full names before the game starts), they do much worse. The authors argue that this may be driven in part by a fear of not being evaluated fairly by the obviously elite organizers of the game, but it could just as well be the internalization of the stereotype. A child who expects to find school difficult will probably blame herself and not her teachers when she can't understand what is being taught, and may end up deciding she's not cut out for school—"stupid," like most of her ilk—and give up on education altogether, daydreaming in class or, like Shantarama's children, just refusing to go.

WHY SCHOOLS FAIL

Because in many developing countries, both the curriculum and the teaching are designed for the elite rather than for the regular children who attend school, attempts to improve the functioning of the schools by providing extra inputs have generally been disappointing. In the early 1990s,

Michael Kremer was looking for a simple test case to perform one of the first randomized evaluations of a policy intervention in a developing country. For this first attempt, he wanted a noncontroversial example in which the intervention was likely to have a large effect. Textbooks seemed to be perfect: Schools in western Kenya (where the study was to be conducted) had very few of them, and the nearuniversal consensus was that the books were essential inputs. Twenty-five schools were randomly chosen out of 100, and textbooks (the officially approved books for those classes) were distributed. The results were disappointing. There was no difference in the average test scores of students who received textbooks and those who did not. However, Kremer and his colleagues did discover that the children who were initially doing very well (those who had scores near the top in the test given before study began) made marked improvement in the schools where textbooks were given out. The story started to make sense. Kenya's language of education is English, and the textbooks were, naturally, in English. But for most children, English is only the third language (after their local language and Swahili, Kenya's language), and they speak it very poorly. Textbooks in English were never going to be very useful for the majority of children.[35] This experience has been repeated in many places with other inputs (from flip charts to improved teacher ratios). As long as they're not accompanied by a change in pedagogy or in incentives, new inputs don't help very much.

It should now be clear why private schools do not do better at educating the average child—their entire point is to prepare the best-performing children for some difficult public exam that is the stepping- stone toward greater things, which requires powering ahead and covering a broad syllabus. The fact that most children are getting left behind is unfortunate, but inevitable. The school Abhijit went to in Calcutta had a more or less explicit policy of expelling the bottom of the class every year, so that by the time the graduation exam came around, it could claim a perfect pass record. Kenyan primary schools adopt the same strategy, at least starting in sixth grade. Because parents share these preferences, they have little reason to put pressure on the schools to behave otherwise. Parents, like everyone else, want schools to deliver what they understand to be an "elite" education to their child—despite the fact that they are in no position to monitor whether this is what is actually being delivered or give any thought to whether their children will benefit from it. For example, English-language instruction is particularly popular with parents in South Asia, but non-English-speaking parents cannot know whether the teachers can actually teach in English. The flipside of this is that parents have little interest in the summer camps and the evening classes—kids who need those classes are not going to win the lottery, so what is the point?

We can also see why Pratham's summer schools worked. The public-school teacher seems to know how to teach the weaker children and is even willing to put some effort into it during the summer, but during the regular school year this is not his job—or so he has been led to believe. Recently, also in Bihar, we evaluated a Pratham initiative to fully integrate remedial education programs into government schools, by training the teachers to work with their materials and also by training volunteers to work as teacher's assistants in these classrooms. The result was striking. In those (randomly chosen) schools that had both the teacher training and the volunteers, the gains are substantial, mirroring all the Pratham results we saw above. Where there was just teacher training, on the other hand, essentially nothing changed. The same teachers who did so well during the summer camps completely failed to make a dent: The constraints imposed by the official

pedagogy and the particular focus on covering the syllabus seem to be too much of a barrier. We cannot just blame the teachers for this. Under India's new Right to Education Act, finishing the curriculum is required by law.

At the broader, societal level, this pattern of beliefs and behavior means that most school systems are both unfair and wasteful. The children of the rich go to schools that not only teach more and teach better, but where they are treated with compassion and helped to reach their true potential. The poor end up in schools that make it very clear quite early that they are not wanted unless they show some exceptional gifts, and they are in effect expected to suffer in silence until they drop out.

This creates a huge waste of talent. Among all those people who drop out somewhere between primary school and college and those who never start school, many, perhaps most, are the victims of some misjudgment somewhere: Parents who give up too soon, teachers who never tried to teach them, the students' own diffidence. Some of these people almost surely had the potential to be professors of economics or captains of industry. Instead they became daily laborers or shopkeepers, or if they were lucky, they made it to some minor clerical position. The slots that they left vacant were grabbed, in all likelihood, by mediocre children of parents who could afford to offer their children every possible opportunity to make good.

Stories about great scientists, from Albert Einstein to the Indian math genius Ramanujam, both of whom did not make it through the educational system, are of course well-known. The story of the company Raman Boards suggests that this experience may not just be limited to a few extraordinary people. A Tamil engineer named V. Raman started Raman Boards in Mysore in the late 1970s. The company made industrial-grade paper products such as the sheets of cardboard used in electrical transformers. One day, V. Raman found a young man, Rangaswami, outside the door of the factory, asking for a job. He was from a very poor family, he said, and he had some engineering education, but just a diploma, not a proper college degree. Compelled by his insistence that he could do good work, Raman gave him a quick intelligence test. Impressed by the results, he took the young man under his wing. When there was a problem, Rangaswami would be assigned the task, and working initially with Raman, but increasingly on his own, he would come up with a creative solution to it. Raman's firm was eventually bought up by the giant Swedish multinational, ABB—it is now the most efficient of the many plants that ABB runs the world over, including in Sweden. Rangaswami, the man who could not get an engineering degree, is the head of engineering. His colleague, Krishnachari, another of Raman's finds—an ex-carpenter with little formal education—is a key manager in the components division.

Aroon, Raman's son, who ran the company before it was sold, now runs a small R&D unit with a few people who were with him at Raman Boards. His core research team of four includes two people who never completed high school, and no qualified engineers. They are brilliant, he says, but at the beginning the problem was that they didn't have the confidence to speak up, so how could one know? It is only because it was a small firm, and yet one that did a lot of R&D, that they were discovered. And even then it took a lot of patient work to discover their capabilities and they needed constant encouragement.

This model is obviously not easy to replicate. The problem is that there are no straightforward ways to identify talent, unless one is willing to spend a lot of time doing what the education system should have been doing: giving people enough chances to show what they are good at. Yet Raman Boards is not the only firm that thinks there is a lot of undiscovered talent out there. Infosys, one of India's IT giants, has set up testing centers where people, including those without much formal qualification, can walk in and take a test that focuses on intelligence and analytical skills rather than textbook learning. Those who do well get to become trainees, and successful trainees get a job. This alternative route is a source of hope for those who fell through the gaping holes in the education system. When Infosys closed its testing centers during the global recession, it was front-page news in India.

A combination of unrealistic goals, unnecessarily pessimistic expectations, and the wrong incentives for teachers contributes to ensure that education systems in developing countries fail their two basic tasks: giving everyone a sound basic set of skills, and identifying talent. Moreover, in some ways the job of delivering quality education is getting harder. The world over, education systems are under stress. Enrollment has gone up faster than resources, and with the growth in the high-tech sectors, there is a worldwide increase in the demand for the kind of peoples who used to become teachers. Now they are becoming programmers, computer systems managers, and bankers instead. This is going to be a particularly serious issue for finding good teachers at the secondary level and beyond.

Is there a way out, or is the problem simply too difficult?

REENGINEERING EDUCATION

The good news, and it is very good news indeed, is that all the evidence we have strongly suggests that making sure that every child learns the basics well in school is not only possible, it is in fact fairly easy, as long as one focuses on doing exactly that, and nothing else.

A remarkable social experiment from Israel shows how much schools can do. In 1991, 15,000 more or less indigent Ethiopian Jews and their children were airlifted out of Addis Ababa in a single day and dispersed into communities all over Israel. There, these children, whose parents had had on average between one and two years of schooling, entered elementary schools with other Israeli children, both long-term settlers and recent immigrants from Russia, whose parents had had on average 11.5 years of schooling. The family backgrounds of the two groups could not have been more different. Years later, at the point when those who entered school in 1991 were about to graduate from high school, the differences had narrowed considerably. Sixty-five percent of the Ethiopian children had reached twelfth grade without grade repetition, compared to the only slightly higher 74 percent among the Russian emigrants. It turns out that even the most severe disadvantage in terms of family background and early life conditions can largely be compensated for, at least in Israeli schools, where the right conditions are met.[36]

Successful experiments have given us a number of ideas on how to create these conditions. A first factor is a focus on basic skills, and a commitment to the idea that *every child* can master them as

long as she, and her teacher, expends enough effort on it. This is the fundamental principle behind the Pratham program, but it is also an attitude that is encapsulated by the "no excuse" charter schools in the United States.[37] These schools, such as the Knowledge Is Power Program (KIPP) schools, the Harlem Children's Zone, and others, mainly cater to students from poor families (particularly black children), with a curriculum that focuses on the solid acquisition of basic skills and continuous measurements of what children actually know: Without such diagnosis, it is impossible to evaluate their progress.

These schools have been shown, in several studies based on comparing those winners and losers of the admission lotteries, to be extremely effective and successful. A study of charter schools in Boston suggests that expanding fourfold the capacity of charter schools and keeping the current demographic profile of students the same would have the potential to erase up to 40 percent of the citywide gap in math test scores between white and black children.[38] The mechanism at play is exactly what we see in Pratham's programs: Children who are completely lost in the regular school system (their test scores are way behind those of other children when they enter charter schools) are given a chance to catch up, and many take it.

A second piece of good news from Pratham's work is that it takes relatively little training to be an effective remedial teacher, at least in the lower grades. The volunteers who had such dramatic effects were mostly college students and other people with a week or ten days of training in pedagogy. Moreover, this extends beyond teaching only reading and basic arithmetic. The same program in Bihar that put volunteers in classrooms also had them teach the children who could read well to use their reading skills to learn—Pratham calls this Reading to Learn, the sequel to its more basic Learning to Read—and the learning gains were substantial. Charter schools mainly use young, enthusiastic teachers, and they are able to significantly help both primary-school and middle-school children.

Third, there are large potential gains to be had by reorganizing the curriculum and the classrooms to allow children to learn at their own pace, and in particular to make sure the children who are lagging behind can focus on the basics. Tracking children is a way to do that. In Kenya, the study mentioned earlier compared two models to assign first-grade students to two separate classes. In one model, children were randomly assigned to a classroom. In the other, they were split up based on what the children already knew. When students were assigned according to their initial level, so that the teachers could address the children's needs better, students at all levels of initial achievement did better. And the gains were persistent: At the end of third grade, students who had been tracked in first and second grades were still doing better than those who had not been tracked.[39] Alternatively, one could find other ways to tailor the teaching to the needs of individual students. One possibility is to make the boundaries between the grades more fluid, so that a child whose age puts him in fifth grade but who needs to take second-grade classes in some subjects can do so without additional stigma.

More generally, a lot could be done to change the unrealistic expectations that everyone has. A program in Madagascar that simply told parents about the average income gains from spending one more year in school *for children from backgrounds similar to theirs* had a sizable positive effect on test scores, and, in the case of parents who found out that they had underestimated the benefits of

education, the gains were twice as large.[40] An earlier study in the Dominican Republic produced similar results with high school students.[41] Since it is essentially free to have teachers simply pass on information to parents, this is so far the cheapest known way to improve test scores, among all the interventions that have been evaluated.

It may also be a good idea to try to set more proximate goals for both children and teachers. That way everyone can stop focusing so much on that one elusive outcome at the end of many years. A program in Kenya that offered a $20 USD PPP scholarship for the next year to girls who scored in the top 15 percent on an exam not only got the girls to do much better, but it also put pressure on the teachers to work harder (to help the girls), which meant that boys did better, too, even though there was no scholarship for them.[42] In the United States, rewarding children for achieving long-term goals (such as getting high grades) was not successful, but rewarding them for effort on reading proved extremely effective.[43]

Finally, given that good teachers are hard to find and information technology is getting better and cheaper by the day, it seems rational to use it more. The current view of the use of technology in teaching in the education community is, however, not particularly positive. But this is based mainly on experience from the rich countries, where the alternative to being taught by the computer is, to a large extent, being taught by a well-trained and motivated teacher. As we have seen, this is not always the case in poor countries. And in fact, the evidence from the developing world, though sparse, is quite positive. We did an evaluation of a computer-assisted learning program run in collaboration with Pratham in the government schools in Vadodara in the early 2000s. The program was simple. Pairs of third- and fourth-graders got to play a game on the computer. The game involved solving progressively difficult math problems; success in solving them gave the winner a chance to shoot some garbage into outer space (this was a very politically correct game). Despite the fact that they only got to play for two hours a week, the gains from this program in terms of math scores were as large as those of some of the most successful education interventions that have been tried in various contexts over the years, and this was true across the board—the strongest children did better, and so did the weakest children. This highlights what is particularly good about the computer as a learning tool: Each child is able to set his or her own pace through the program.[44]

This message of scaling down expectations, focusing on the core competencies, and using technology to complement, or if necessary substitute for, teachers, does not sit well with some education experts. Their reaction is perhaps understandable—we seem to be suggesting a two-tier education system—one for the children of the rich, who will no doubt get taught to the highest standards in expensive private schools, and one for the rest. This objection is not entirely unwarranted but unfortunately, the division exists already, with the difference that the current system delivers essentially nothing to a very large fraction of children. If the curriculum were radically simplified, if the teacher's mission were squarely defined as making everyone master every bit of it, and if children were allowed to learn it at their own pace, by repeating if necessary, the vast majority of children would get something from the years they spend in school. Moreover,

the gifted would actually get a chance to discover their own gifts. It is true that it would take some work to put them on the same footing as those who went to elite schools, but if they had learned to believe in themselves, they might have a chance, especially if there is a willingness in the system to help them get there.[45] Recognizing that schools have to serve the students they do have, rather than the ones they perhaps would like to have, may be the first step to having a school system that gives a chance to every child.

Notes

Foreword

Chapter 4

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45 This may be helped by making sure that money is never a factor in a student's decision to attend the best schools and that there is a way to make it happen. In Chile, in a largely voucher-based system, the poorest students are given an extra voucher, but any school that accepts voucher students (all but a handful of elite schools) must admit these students at no additional cost. To make this system fully operational, students and parents should, however, be better informed that they have this option, and the results of regular standardized assessments should be regularly examined to identify the most promising students everywhere in the country.