

First
Krishna Raj Memorial Lecture on
Contemporary Issues in Health and Social Sciences
Instituted by Anusandhan Trust

Making and Un-making Poverty

**Social Science, Social Programmes,
and Poverty Reduction in India and Elsewhere**

Anirudh Krishna
Public Policy and Political Science Faculty, Duke University, USA

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**eSocialSciences, SNTD University, Department of Economics,
Mumbai University, Tata Institute of Social Sciences**



Anusandhan Trust has instituted the Krishna Raj Memorial Lecture Annual Series on Contemporary Issues in Health and Social Sciences to honour the intellectual and academic traditions that Krishna Raj set in place, and in his memory. This is a humble tribute to the memory of the visionary editor of the *Economic and Political Weekly (EPW)*.

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ANIRUDH KRISHNA (*Ph.D. in Government, Cornell 2000; Masters in Economics, Delhi 1980*) is Assistant Professor of Public Policy and Political Science, Duke University. His research investigates how poor communities and individuals in developing countries cope with the structural and personal constraints that result in poverty and powerlessness.

Most recently, Krishna has been examining poverty dynamics at the household level, tracking movements into and out of poverty of over 25,000 households in a varied group of 225 communities of India, Kenya, Uganda, Peru and North Carolina, USA. In each community he found that while some households have escaped from poverty, other households have simultaneously fallen into poverty. Escape and descent are concurrent everywhere – and they are asymmetric in terms of reasons. Policies to promote escapes are commonly considered, but policies to prevent descents have been largely overlooked. Articles on these subjects have been published in a number of highly respected academic journals. (See [www.pubpol.duke.edu/ Krishna](http://www.pubpol.duke.edu/Krishna)). One article, published in *Journal of Development Studies* in October 2005, won the Dudley Seers Memorial Prize.

Earlier, Krishna examined how poor community groups interact with states and markets. Publications include *Active Social Capital: Tracing the Roots of Development and Democracy* (Columbia University Press, 2002); *Reasons for Success: Learning From Instructive Experiences in Rural Development* (Kumarian Press, 1998), with Norman Uphoff and Milton Esman; *Changing Policy and Practice From Below: Community Experiences in Poverty Reduction* (United Nations Press, 2000); and *Reasons for Hope: Instructive Experiences in Rural Development* (Kumarian Press, 1997) with Norman Uphoff and Milton Esman. An article on social capital and political participation published in *Comparative Political Studies* (May 2002) won a best article award of the American Political Science Association.

Before turning to academia, Krishna worked for 14 years in the Indian Administrative Service, where he managed diverse initiatives related to rural and urban development. He has consulted with FAO, UNDP, the World Bank, and other international development agencies.

Abstract

Fully one-third of all poor people in villages studied in Rajasthan were not born poor – they have acquired poverty within their lifetimes. Ill health and high healthcare costs are the principal reasons, here as elsewhere, for a persistently high rate of descent into poverty. Too many people in our country are living one illness away from poverty. The flow into poverty must be controlled. Providing better healthcare is critically important. Merely nudging someone above the poverty line – by subsidizing the purchase of a cow or goat or sewing machine – is an insufficient and misdirected goal. A very large proportion of the talent pool in this country remains untapped, without access to real opportunities for upward economic mobility. Tapping this large and previously ignored pool of talent in the countryside will bear enormous dividends.

What will it take to improve health and education? What institutions need to be built up and which ones taken down for improving healthcare? What other institutions are needed to support upward mobility? More than any huge influx of new resources, institutional change will be critical for these tasks. More pressingly, there is an urgent need for public debate on institutional change. What kinds of institutions will help in different contexts to achieve the objectives outlined above? What will underwrite effectiveness and ensure responsiveness in healthcare, education and information provision needs to be discussed and resolved openly. There are no ideological points to be won; only demonstrations of what works in particular contexts need be entertained.

Madam Chairperson and friends,

It is a great honor to present the Inaugural Krishna Raj Memorial Lecture. I thank the organizers for inviting me, and I thank everyone else for being here today.

I started reading the EPW since the 1970s when I was a student at the Delhi School of Economics, and I have read it regularly since then, even though it was hard to procure copies in the small district and sub-district towns, where for several years I served as an administrative official. Those high ideals, those lofty yet practical debates, kept me enthralled even when my immediate concerns were more mundane and pressing. It is this special quality of Krishna Raj – and of EPW under his stewardship – that it could tackle issues of scholarly intricacy while remaining firmly grounded in the experiences of ordinary Indians. A rare feat, indeed.

In the 1990s I changed careers, becoming an academic¹. I published a couple of books and some articles in international journals. But in 2002, I sought to place an article with EPW, and I was immediately seized with a peculiar trepidation: EPW was the place where the great minds of my youth had published! How would Krishna Raj view an unsolicited submission from an unfamiliar author? But I should not have feared. Kindly, in a few well-chosen words, Krishna Raj promptly acknowledged my submission. A few weeks later, he wrote to say that EPW would carry my article ... I was exhilarated!

¹ Anirudh Krishna teaches Public Policy and Political Science at Duke University. For the last five years he has been investigating household poverty dynamics in India, Kenya, Uganda, Peru, and rural North Carolina (www.pubpol.duke.edu/krishna). Before commencing his academic career in 1996, Krishna worked for 14 years in the Indian Administrative Service and managed diverse poverty reduction initiatives. Comments provided by participants at the Inaugural Krishna Raj Memorial Lecture and conversations in Mumbai with staffs of CEHAT and Anusandhan Trust helped sharpen the arguments presented here. The usual disclaimers apply.

In the years following, I conducted additional research on these subjects – in Rajasthan, and later in Gujarat and Andhra Pradesh – finding out how ordinary people were variously escaping poverty or falling victim to poverty. Each time, Krishna Raj was good enough to publish these articles.

I guess he felt, as I do, that poverty needs to be examined more directly, that its constituent elements need to be better understood, and that the dynamics linking household experiences with national policies – the micro-macro links – need to be much better explored.

There was a dominant view at that time, which still carries some weight, holding that faster economic growth is the only antidote to poverty. But those who hold this view have not made clear the links that operate between growth in the aggregate and positive outcomes at the individual level.

How does growth actually trickle down to remove some individual's poverty? Is it through increases in employment? But employment in the formal sector has actually declined over the past several years,² so poverty could not have been reduced through this avenue. Through what other avenues did the benefits of growth travel before reaching and helping poor people in this country? Not much evidence has been forthcoming to illuminate the nature of pathways that lead people out of poverty.

Further, there is almost complete silence regarding the creation of poverty. How do people become poor in the first place?

Is all of poverty an inheritance, something one acquires at birth, along with one's name? Or is poverty also created afresh, through previously non-poor people falling into poverty? What pathways lead people downward into poverty? Very little knowledge is available about how poverty gets created, much less about how poverty creation can be averted, or at least reduced, through suitable interventions.

² According to official estimates, employment in the formal sector (private and public) fell from 28.2 million in 1997 to 27.0 million in 2003. This reduction was equally shared between the public and the private sectors (<http://indiabudget.nic.in/es2005-06/chapt2006/tab33.pdf>).

Krishna Raj was quite clear that social welfare is threatened by the non-provision of healthcare: poverty is deepened and widened because of illnesses left uncured. In the 1970s he wrote against the relative neglect of health care. Yet, little heed was taken of these important hypothesized links, in particular between health and poverty, and more generally between social services and the human prospect in the countryside.

It is in a spirit of dedication to these beliefs held by Krishna Raj that I offer in this memorial lecture the results of some recent research, which show that health is, indeed, closely related to the persistence of poverty. Those who fall into poverty and those who remain poor (despite their best efforts) are most often beset by illnesses and cope with high medical expenses.

Let me start by asserting that poverty is a dynamic quantity: it increases when some individual or household becomes poor, and it is reduced when some other individuals move out of poverty. It is individuals' movements that result in poverty growing or falling; of itself, poverty does not have any free will; it is merely a conceptual construct, a statistician's calculation. In order to know better what is happening to poverty – and why – it is important to keep track of individuals' movements into and out of poverty.

Because some individuals are always falling into poverty while some other individuals are escaping from it, poverty is simultaneously both created and reduced. Defeating poverty comprehensively will require helping more poor people escape from poverty, and it will also require restricting the creation of new poverty. Unless both dynamics are simultaneously addressed, poverty will continue to remain large in a country.

I will talk first about measures required to stem the creation of new poverty, arguing that healthcare comes first among this set of policy measures, much as Krishna Raj had anticipated. Next, I will deal with the second type of policies, concerned with promoting more escapes from poverty.

I will contend that merely nudging people above the poverty line is not a sufficient objective. Individuals who are poor have vastly different talents and capacities. Providing each of them with a fair opportunity to derive

benefits commensurate with their talents and capabilities is a more worthwhile goal, as Amartya Sen's work indicates.

Unfortunately, in our society equal opportunity seems like a distant goal. A large number of people have moved out of poverty in the regions I have studied, but hardly any among them has moved very far up. Mostly, these people ended up becoming pushcart vendors or lorry loaders or plumbers' assistants or roadside barbers, maids or gardeners. Hardly ever has the individual concerned risen high enough to become a software engineer or lawyer or doctor, or entered any of the other high-paying occupations – no matter how talented he or she was. This is a tragic loss, not only for these individuals but also for the country.

An ever-growing number of young people all over India are going to school. Their parents are investing a great deal in their education, but whatever innate talent exists within this vast pool of people is presently unable to rise beyond a low glass ceiling.

Let me present these research results, so that you can react to the same body of evidence.

I Understanding Poverty in Dynamic Context

Over the past five years I have investigated poverty trends at the grassroots in five different countries – three regions of India, along with parts of Kenya, Uganda, Peru and North Carolina, USA.³ Other scholars, using different methods, have studied these trends in other countries. These studies share a clear and notable conclusion: large numbers of people fall into poverty regularly, even as large numbers escape out of poverty. New poverty is constantly created even as some old poverty is destroyed.

A few examples should help to illustrate this point. In 36 communities of Andhra Pradesh that we studied, consisting of a total of more than 5,500 households, 14 percent of all households moved out of poverty over the 25-year period ending in 2004. Unfortunately, another 12 percent of households fell *into* poverty over the same time period. The positive achievement of those who moved out of poverty was almost nullified because a nearly equal number of households fell into poverty concurrently.

In Gujarat – the fastest-growing state in India – we examined the pathways traveled by households in 36 village communities of four separate districts. Nearly ten percent of all village households escaped from poverty, but another 6 per cent concurrently fell into poverty. Growth in the state hardly provided positive results all around; in fact, very different – and opposite – pathways were traveled by different households.

³ These results are reported in Annex Table 1.

These results are not idiosyncratic to any particular region or country or time-period or method of investigation. Micro-level studies conducted with diverse methodologies in different regions of the world show commonly that poverty is simultaneously both created and overcome.⁴ For instance, a random sample of 3,139 rural households from all over India was examined by Shashank Bhide and Aasha Kapur Mehta. Over the period 1970-1982, 23 percent of these households escaped from poverty, but another 13 per cent simultaneously fell into poverty.⁵

There is an essential dynamic quality to poverty: some households experience a rising tide and are lifted to higher positions, but other households encounter a falling tide and are concurrently pitched into poverty. Such parallel and opposite flows operate everywhere, as the studies reported in Annex Table 2 show. For instance, 26 per cent of households in a sample studied in Bangladesh escaped from poverty over the period 1987-2000, but another 18 per cent of households became poor simultaneously. In Kwa-Zulu Natal, South Africa, ten percent of households came out of poverty over five years between 1992 and 2000, but more than twice as many households, 25 per cent, fell into poverty over the same period of time. Poverty increased paradoxically, even as many households escaped from poverty.

Falling into poverty is not a transient or a marginal phenomenon. Large numbers of households move into poverty constantly – and it is not only borderline households who are affected by these flows. Among 2,630 households in 36 Ugandan communities, a total of 344 households fell into poverty during the ten-year period, 1994-2004. As many as 24 per cent of these newly impoverished households can no longer afford food and clothes, and another 29 per cent have pulled their children out of school. Several formerly well-to-do households are included within this number. They have

⁴ A sample of these results is presented at Annex Table 2.

⁵ Bhide, S. and A. Mehta, "Correlates of Incidence and Exit from Chronic Poverty in Rural India: Evidence from Panel Data," *Working Paper 15*. New Delhi: Indian Institute of Public Administration and Chronic Poverty Research Centre, 2004.

fallen so deeply into poverty that coming back out is a remote possibility for them.

Among families that fell into poverty in 71 villages of Rajasthan, several owned relatively large tracts of land, but many among these families have by now become entirely landless, and very few have much hope of restoring their previous well-to-do status. Fully one-quarter of all households that fell into poverty in the Andhra Pradesh villages mentioned earlier were relatively rich 25 years ago. They owned cattle and jewelry in addition to land and a *pukka* house, but they are now reduced to working as day laborers on other people's fields. The probability of becoming poor is larger for households that subsist closer to the poverty line, but the danger of falling into poverty is also clear and present for other, better-off households.

Some who fall into poverty are able to bounce back, i.e., in some cases the flow into poverty is reversible, but most households that fell into poverty have remained poor over extended periods of time. Among households that fell into poverty in 36 Ugandan communities during the 15-year period, 1979-1994, only one-third could come out of poverty over the next ten years. The remaining two-thirds of newly impoverished households were still poor when we studied this region in 2004. A similar story was repeated in the 20 Peruvian communities that we studied. Of households that fell into poverty between 1979 and 1994, less than half could climb back over the next ten years. The other half have been persistently poor for ten years and longer. A poverty trap, corresponding to a low-level equilibrium, tends to ensnare many freshly impoverished people.⁶

It would be so much better if descents into poverty were identified and prevented before they occurred. Sadly, very little has been done in this regard. How poverty is created has been mostly ignored in analysis and policy.

⁶ Carter, M. and C. Barrett, "The Economics of Poverty Traps and Persistent Poverty: An Asset-Based Approach." *Journal of Development Studies*, 42 (2), 178-99, 2006.

A large part of the problem has to do with prevailing methods of identification and measurement. Most frequently, poverty has been studied as a stock. We calculate, for example, how many people in India were poor in 1991 and how many are poor in 2006. By subtracting the first number from the second one we can derive the net change in poverty over this 15-year period – but we cannot know *how* this net change was brought about. How many formerly non-poor people fell into poverty during this period (and why), and how many formerly poor people escaped from poverty and for what reasons?

This lack of knowledge about constituent flows has very important policy consequences. Research shows that escaping poverty and falling into poverty are *not* symmetric in terms of reasons. People escape from poverty in consequence of one set of reasons, but people fall into poverty because of another set of reasons, as discussed below.

Because these underlying reasons for escape and descent are different, different policies are required to deal with each separate trend. One set of anti-poverty measures is required to help more poor people escape from poverty, and another set of measures is concurrently required to help prevent further descents into poverty.

A *two-track strategy* is required in order to defeat poverty. Following any one track will not be sufficient for this purpose. Countries that have mounted such two-track strategies have been most successful in reducing poverty to a single-digit figure. Countries, even rich countries, which have relied solely on one set of policies have continued to experience relatively high levels of poverty.

II Health and Poverty Creation

What should be done in order to curb descents into poverty? While somewhat different reasons are associated with falling into poverty in different contexts, ill health plays a very important role everywhere.

Tracking the poverty trajectories of more than 25,000 households in five separate countries, colleagues and I found that ill health and healthcare expenses have played a principal role everywhere in propelling households into poverty. For 59 per cent of households that fell into poverty in the communities that we studied in Rajasthan, India – and as many as 74 per cent in Andhra Pradesh and 88 per cent in Gujarat – health and healthcare expenses constitute a primary reason for descent.

Similar patterns were observed in other parts of the world. For 73 per cent of those who fell into poverty in communities investigated in Western Kenya – 77 per cent in Uganda, and 67 per cent in Peru – ill health and high healthcare costs are the most important reasons for descent into poverty.

Millions of people are plainly living one illness away from poverty. Studies undertaken independently in other parts of the world – by medical as well as social science researchers – show how ill health is commonly a major cause of impoverishment. Krishna Raj was right on target in terms of what he said in the 1970s, i.e., even before any of these study results were available. Surveys in several Asian and African countries have shown how a combination of ill health and high healthcare costs has forced thousands of households into poverty, including many who were quite well-to-do before suffering precipitous descents.

Researchers have coined a new term – “the medical poverty trap” – to describe these increasingly frequent and unfortunate occurrences, and it is not only low-income countries where these trends have been experienced.⁷ More than half of all recent personal bankruptcies in the US have been attributed to medical expenses.⁸ Long-term income streams have been calculated to fall by 17 per cent on account of one major health incident, with successive incidents resulting in more calamitous effects.⁹

In addition to ill health and high healthcare costs, some other factors of descent are also important for descent, though their impact tends to vary across countries and regions. Persistent drought and land exhaustion have accelerated descents in some countries. Crop price fluctuations have ruined families in some parts of Africa and Latin America. Expensive marriage ceremonies and funeral feasts are a factor of descent in parts of India and some other countries. But these reasons of descent have unequal importance.

Ill health and high healthcare costs are the principal drivers of people’s descent into poverty everywhere. Families suffering from ill health are most prone to falling into poverty.

Indebtedness is quite frequently associated with large medical expenses. Research by T.R. Dilip and Ravi Duggal concludes that “there is strong evidence to believe that expenditure on inpatient care treatment is pushing many households into debt.”¹⁰ I found in villages of Rajasthan and Gujarat that people borrow money to pay for medical expenses at interest rates that often exceed one-hundred percent per year.

⁷ Whitehead, M., G. Dahlgren, and T. Evans, “Equity and Health Sector Reforms: Can Low-Income Countries Escape the Medical Poverty Trap?” *The Lancet*, September 8, 2001; and Xu, K., D. Evans, K. Kawabata, R. Zeramdini, J. Klavus, and C. Murray, “Household Catastrophic Health Expenditure: A Multi-country Analysis.” *The Lancet*, July 12, 2003.

⁸ Himmelstein, D., E. Warren, D. Thorne, and S. Woolhandler, “Illness and Injury as Contributors to Bankruptcy.” *Health Affairs*, February 2, 2005.

⁹ Yao, Y, “Health Shocks, Village Governance, and Farmers’ Long-term Income Capabilities,” China Center for Economic Research, Beijing University, 2005.

¹⁰ Dilip, T.R. and R. Duggal, “Incidence of Non-Fatal Health Outcomes and Debt in Urban India.” Working Paper, Center for Enquiry into Health and Allied Themes (CEHAT), Mumbai, India, 2002.

Preventing descents into poverty should become a central task of poverty reduction. It helps little to work toward defeating poverty if what one is seeking to reduce is simultaneously regenerated. Separate policy fixes are required for achieving this objective.

Economic growth does not by itself fix the problem of inadequate healthcare. In Gujarat, for instance, a state where high growth rates have been achieved regularly for many years, ill health continues to remain a considerable problem. In 35 of the 36 villages that we studied in this state, large numbers of people have fallen into poverty (or remained poor) on account of ill health, hard-to-access healthcare facilities, and high healthcare costs. Healthcare services in fast-growing Gujarat are no better than in other, less well-off, states of India; in fact, Gujarat places fourth from the bottom among 25 Indian states examined by Darshini Mahadevia.¹¹

Macro-level evidence supports this grassroots-level view. Countries that have put in place measures to control the descent into poverty have been most successful in defeating poverty over the past 50 years. Japan is an important case in this regard. High rates of growth were sustained in Japan for several years after the early 1950s, and poverty also fell quite dramatically, but growth was not the only factor responsible for poverty reduction. New research shows how quite early on, Japanese government officials recognized the critical inter-relationship between illness, healthcare services, and poverty. Not convinced that poverty would be reduced merely as a side benefit of economic growth, the Japanese government installed a universal health coverage package in the 1950s that with some modifications continues until the present time. Poverty in Japan is two percent at the present time, among the lowest rates observed anywhere in the world. Comparative research in OECD countries concludes that “growth is hardly a panacea for poverty reduction” and that “more generous sickness benefits are consistently associated with lower poverty rates, both in relative and absolute

¹¹ Mahadevia, D. “Health for All in Gujarat: Is it Achievable?” *EPW*, August 26, 2000.

terms.”¹² In Australia, whose neo-liberal growth performance has been widely touted and frequently emulated, absolute poverty was close to 16 percent in the year 2000. In Sweden, France, and Germany, on the other hand, mediocre growth performance over two decades, 1980-2000, was accompanied by considerable poverty reduction. Public healthcare accounts for a major part of this difference.

Fixing healthcare comes first among measures required to reduce the creation of more poverty. Health is the common link that leads to impoverishment in the majority of cases. If one wishes to make a real difference, one should invest in better healthcare.

A story from one Gujarat community is illustrative in this regard. Only seven out of a total of 106 households in Panelav village have fallen into poverty over the past 25 years – many fewer than in other villages of this region – and in only one among these seven cases was healthcare a significant reason for descent. A locally based NGO runs a health clinic in this village. Doctors and attendant staff are regularly available, and the fees charged are within reach for even less well-off villagers.

Such public actions are important to undertake over a wider area – by government as much as by NGOs. Indrani Gupta and Arup Mitra show that “further reduction in poverty is probably not possible without significant improvements in the health condition of the population.”¹³ NGOs alone can hardly shoulder this responsibility in all of India. Governments, both state and central, will also have to step up and undertake this task. Research by CEHAT and separately by Gita Sen and her colleagues at IIM-Bangalore shows how individuals’ out-of-pocket expenses on healthcare have risen steadily and now constitute as much as 75 per

¹² Scruggs, L. and J.P. Allan, “The Material Consequences of Welfare States: Benefit Generosity and Absolute Poverty in 16 OECD Countries.” *Comparative Political Studies*, 39 (7), 880-904, 2006.

¹³ Gupta, I. and A. Mitra, “Economic Growth, Health and Poverty: An Exploratory Study for India.” *Development Policy Review*, 22 (2), 193-206, 2004.

cent of the total healthcare expenditure in India.¹⁴ At the same time, India has the unenviable distinction of being among the last five countries of the world in terms of government expenditure on health as a percentage of GDP – a ratio, which has instead of rising, has also declined steadily.¹⁵

How can this conundrum be resolved? Effective solutions are urgently required, because instead of getting better things are getting worse over time. One old man in a Rajasthan village told me poignantly as follows:

In the old days, the aged people would fall sick and they would die. Their survivors would grieve and be unhappy, but they would pick up their lives eventually and carry on much as before. Now, the old people fall sick, and their children run up huge debts caring for them. Now when the old people die, they leave behind ruined families.

What should we as a society and a nation do in order to deal with this situation in which poverty is growing because affordable and effective healthcare is not available? What should we do in addition about the second part of the problem of poverty? How can the flow out of poverty be accelerated?

¹⁴ Sen, G., A. Iyer, and A. George, “Structural Reforms and Health Equity: A Comparison of NSS Surveys, 1986-87 and 1995-96.” *Economic and Political Weekly*, April 6, 2002.

¹⁵ Banerji, D. “Politics of Health Care in India,” *EPW*, July 23, 2005.

III

Opportunities for Upward Mobility

Recall that the results of research presented earlier showed that many formerly poor people are no longer in poverty. Eleven percent of households in communities studied in Rajasthan, ten percent in Gujarat, and 14 per cent in Andhra Pradesh have succeeded in overcoming poverty over the past several years. An even larger number of individuals, 23 per cent, moved out of poverty in the sample that Bhide and Mehta have examined.

What factors have been responsible for these escapes? It is somewhat startling to observe that instead of jobs in the formal sector, diversification of income sources has been the most important reason for escape. Diversification has involved two alternative pathways. First, people have moved to the informal sector in cities, becoming plumbers' assistants or lorry loaders, or cooks, ice-cream cart vendors, masons, helpers, rag pickers, etc., and by these means their households have risen above poverty. The second route has involved diversification within agriculture, quite often facilitated by investments in irrigation. More than 75 percent of all observed escapes from poverty have occurred with people moving along one or both of these pathways, and fewer than 25 per cent of escapes from poverty have come about as a result of obtaining formal-sector jobs, which is by itself a significant commentary on the nature of the growth process followed in India and elsewhere.

How far out of poverty have these people actually risen? Has their achievement been limited to barely crossing over the poverty line – or have a reasonable number also ascended to more rewarding positions, obtaining better-paying jobs and contributing more significantly to growth in the country?

My original research – and research by other scholars – identified those who had moved out of poverty, and it was only in subsequent studies, undertaken relatively recently, that I was able to identify the height of achievements of those who have progressed. These results are not very encouraging. Evidence collected from three quite diverse countries (India, Uganda, and Peru) shows that only a handful of people coming from rural communities have succeeded in attaining *any* high-paying position.

For instance, over all of the past ten years hardly anyone from among more than 200,000 residents of 71 Rajasthan villages advanced very far in terms of economic achievement. About a thousand individuals in these 71 villages graduated from high schools during this period of ten years, yet only one was able to become a software engineer, one other became a civil engineer, one became a medical doctor, and one is practicing as a lawyer in the district courts. Others who graduated from high school (and some who completed college) mostly ended up at some low-level position within some government department. The largest number became schoolteachers, followed by military recruits, *patwaris* and clerk typists.¹⁶

It is not only in Rajasthan, which some might classify as a '*bimaru*' state, where such a dismal pattern of achievement was observed. In Karnataka villages as well, a similar pattern of low overall achievement was repeated. Studying achievement trends in 20 villages of Mysore and Dharwar districts, we found that two individuals had become engineers over the past 10 years and one other person had become a lawyer, but in all other cases the highest positions achieved were those of schoolteacher, police constable, soldier, or bus conductor.

High growth rates sustained over more than ten years have been commended by analysts of India's economy. It is calculated that every year a hundred or more new millionaires

¹⁶ These results are presented in Annex Table 3.

get created in India.¹⁷ Yet for people from villages in most parts of India it is almost as if these new opportunities did not exist.

Why is it so? What will it take to make economic opportunities more broadly accessible? *How can poorer people and people from rural areas become better connected to the new opportunities created by growth, becoming partners in growth rather than remaining “beneficiaries” of development projects?*

In order to answer this question – in an exploratory and preliminary manner – we looked at a sample of new recruits in Bangalore’s software industry.¹⁸ The software sector has been in the forefront of post-liberalization economic growth in India. Software development is seen world over as India’s distinct corner of globalization. The intake of college graduates by this sector has expanded from a few thousand in 1990 to more than 50,000 annually by 2004. Because of continuing high rates of growth, however, this sector is perennially short of qualified manpower.

Looking within this pool of new recruits, we addressed a series of related questions: Who has benefited from the creation of these large numbers of better-paying jobs? To what extent have people from villages been recruited? What factors have variously assisted or hindered the rise to these positions of people from villages and other excluded groups?

A random sample of 150 individuals was drawn from among all professionals recruited at the entry level within the past five years by three Bangalore-based software companies that have different specialties and size. We interviewed HRD managers in several other software companies, finding that very similar recruitment policies are widely practiced in this

¹⁷ “A recent report by the National Council for Applied Economic Research, based in New Delhi, forecast that the number of “crore-patis,” Indian society’s rough equivalent of a millionaire, rose by two-and-half times in the last three years to an estimated 53,000 households nationwide” (Somini Sengupta, *New York Times*, February 28, 2006).

¹⁸ Krishna A. and V. Brihmadessam. “What Does it Take to Become a Software Engineer? Educated Parents, Information Networks, and Upward Mobility in India. *EPW*, July 29, 2006.

sector of growth. The results presented below are thus not unrepresentative of more general trends.¹⁹

We found that a majority of these software professionals grew up in urban settings. Only 14 percent come from a rural area – their families belong to rural areas, and they received part or all of their school education in rural schools. The remaining 86 percent have backgrounds that are mostly or entirely not rural – these are the city residents. The fact reported above, that despite education rural residents have mostly not made it to high-paying occupations, is corroborated by these data from the software industry.

Why do village residents not succeed even after getting educated? A clue to the answer is provided by observing the critical importance of parents’ education. Only those individuals have been able to gain entry into this industry whose parents are both quite highly educated. Most respondents’ fathers have either a Bachelors degree (46 percent) or a Masters degree (31 percent). Thus, more than three-quarters have fathers who are college graduates. Fathers of all remaining individuals have at least a high school education. In addition, their mothers are also mostly well educated, though not on average as well educated as their fathers. A total of 52 percent of respondents’ mothers have a Bachelors degree or better, while another 31 percent have completed high school.

It is this *combination of relatively highly educated fathers and mothers* that most clearly identifies new entrants to India’s software industry. Before discussing why parents’ education should matter so much, let me first map this “qualification for entry” against the population of India. All-India data show that among people aged 45 years or more (i.e., within the age group of likely parents of new entrants), less than two percent of rural residents are college graduates and less than *seven*

¹⁹ The initial surveys were conducted by inviting the individuals selected to complete a Web-based interview form. A quite remarkable proportion – nearly 70 percent of those invited – completed this survey. Follow-up interviews with selected individuals were held in Bangalore in December 2005.

percent in all have a secondary education.²⁰ Considering women alone, this percentage is even lower. Among rural women aged 15 years and higher less than *four* percent have a high school education and less than one percent are college graduates.²¹ Among women who are older this percentage is smaller still.

Thus, if having two educated parents is a “qualification for entry” to better-paying jobs, at best somewhere between *four to seven percent* of all rural Indians would qualify. I would imagine that it is the same small pool of people from among whom recruits are drawn to other high-paying occupations. Only a tiny sliver of people in rural India are currently full participants in the benefits of economic growth.

Why should parents’ education matter so much for a high-paying job? One would assume that an individual’s own education should matter most. Our investigations revealed that parents’ education acts as a surrogate for another critical missing factor: information or guidance. In an environment where information is not otherwise easily available, where information about career opportunities is mostly propagated by word-of-mouth, where no counseling centers or career guidance are available in schools and colleges, having two educated parents – who are networked with other educated and well informed people – conveys a distinct advantage. Individuals plugged into these social networks learn earlier on about the opportunities that are arising, and they can prepare themselves over the years to compete for these jobs. Others, who learn too late or not at all about available opportunities, are destined for low-paying, dead-end government or private jobs.²²

²⁰ Source: “Consumer Expenditure and Employment -Unemployment Situation in India, NSS Report No. 386, 46th Round, July 1990-June 1991 (cited in www.indiastat.com).

²¹ Source: “Attending an Educational Institution in India, Its Level, Nature and Costs,” NSS Report N. 439, 52nd Round, July 1995-June 1996 (cited in www.indiastat.com).

²² A study conducted in one part of Mumbai also finds that returns to investment in education are much higher for families that have better networks providing information and access (Munshi, K., and M. Rosenzweig, “Traditional Institutions Meet the Modern World: Caste, Gender and Schooling Choice in a Globalizing Economy.” Working paper, Brown University)

Because parents in rural areas did not mostly attend schools – simply because 30 years ago schools did not exist in most villages – their children face considerable disadvantages. There are indications that as cities surge ahead in terms of technology and global connectedness, talented youth in poor rural communities may be faced with increasingly higher obstacles. As one newly recruited software engineer informed me:

There is a lot of disparity now... When I was studying, many years back, this [disparity] was not that much. With little difficulty, I could have managed in Bangalore. But today if a person from my village came to Bangalore, I am sure that he would be totally shot down, because he would not be able to handle most of the things... There is a lot of computer education [in big cities], a lot of other skills are being taught – a lot of things that are not being addressed in educational institutions in the periphery [of India].²³

Recall how hardly any individual from villages has succeeded in rising to high-paying positions. Interviews with some of these individuals were also undertaken to inquire about the key obstacles they have faced. A very important reason indicated by these rural respondents relates to lack of information leading to lack of access.

“He is very good at mathematics,” the father of a gifted twelve-year old boy told me in a village of Andhra Pradesh, “and he wants to be an engineer, but no one here can guide him about what he needs to do.” I have heard similar experiences narrated by countless other children and parents as I investigated poverty and its causes in diverse parts of rural India. Many talented young people are being left behind.

It is not only talented individuals in poor communities who suffer. Over the long term, the country’s growth potential also suffers. A recent World Bank report states that “Because

²³ Interview with Narendranath Udupa (Bangalore, December 22, 2005, Transcript # BVB 07).

talent and ideas are widely distributed in the population, a prosperous modern society requires the mass of people to have incentives [and access] – and a state that can and will provide key complementary inputs and public goods.”²⁴

It is in this arena – of facilitating equal opportunity – that a second critical failing of policy manifests itself. We have not invested in developing talent in our poorer areas, thereby laying waste to an enormous part of our talent pool. Seventy percent of Indians live in rural areas, but only 14 percent of India’s software engineers are rural in origin. If the figures were available, I suspect one would see a similar imbalance in other high-paying sectors.

IV A Dangerous Confluence

A dangerous confluence of events is likely at hand. It has been long in coming, but educational achievement is finally rising rapidly in rural India. At considerable costs to themselves, rural parents are investing in the education of their children. Unfortunately, these investments are not delivering the hoped-for returns.

Recent studies show how the school-less rural society that we inherited at Independence is giving way to one in which nearly every village child goes to school. Results from surveys conducted last year within 20 villages each of Rajasthan and Karnataka show that functional literacy – defined here as having at least five years of school education – has increased explosively and is still on the rise.

A diverse mix of villages was selected for these studies, located within two districts of Karnataka (Dharwar and Mysore) and two districts of Rajasthan (Ajmer and Udaipur). Every individual resident in these villages was surveyed by teams of experienced investigators. These results show clearly that educational achievement has increased explosively among younger villagers.²⁵

Let us first consider these figures for the Rajasthan villages, a state usually regarded as being backward in terms of education. It is true that among people aged 61 years and older, no more than 11 percent of people are functionally literate – and this percentage is close to zero among Scheduled Castes (SCs) and Scheduled Tribes (STs). Among villagers aged 11-20 years, however, fully 64 percent are functionally literate. SCs and Other Backward Castes (OBCs) have achieved the largest gains of all villagers; they stand level

²⁴ World Bank, *World Development Report, 2006: Equity and Development*. Washington, DC: The World Bank.

²⁵ The entire set of these figures is available at Annex Tables 4 and 5.

with all other villagers among the younger age-cohorts.

A huge surge in educational achievement is sweeping the countryside. Every ten-year cohort has consistently registered a substantial increase in functional literacy. The caste gap and the gender gap have narrowed consistently over time. Whereas 46 percent of men and only 9 percent of women aged 31 to 40 years are functionally literate in these Rajasthan villages (resulting in a gender gap of 37 percent), 77 percent of men and 46 percent of women aged 11 to 20 years are functionally literate. The gender gap has narrowed to 23 percent, and it is being reduced further as more and more children of both sexes are sent to school.

Educational achievement in Karnataka villages is higher on average than in villages of Rajasthan. Even here the greatest gains have been made in recent years. Eighty-five percent of villagers aged 11-20 years are functionally literate compared to 32 percent in the age-group 31-40 years. Within 20 years, functional literacy has increased by more than 50 percent, and this increase has been shared almost evenly across all the caste groups.

Along with functional literacy, higher education has also increased quite rapidly in villages. Whereas only 15 percent of males aged 41-60 years in these Karnataka villages have ten or more years of formal education, more than 40 percent of village residents aged 21-30 years have this level of education. Similar trends are operating in villages in Rajasthan; 21 percent of males aged 21-30 years have ten or more years of formal education, more than twice as many as in the age-group 41-60 years.

It is not just in Rajasthan and Karnataka where such trends and such effects have been observed. Similar accounts are also available from other Indian states, including not only Gujarat, but notably also Bihar and Uttar Pradesh.²⁶ We

²⁶ See, respectively, Breman, J., *Beyond Patronage and Exploitation: Changing Agrarian Relations in South Gujarat*, Delhi: Oxford University Press, 1993; Jeffrey, C., R. Jeffery, and P. Jeffery, "Degrees without Freedom: The Impact of Formal Education on Dalit Young Men in North India," *Development and Change*, 35 (5), 963-86, 2004; and Chaudhary, S. N., *Dynamics of Rural Power Structure: Case Study of an Indian Village*, Delhi: Amar Prakashan, 1987.

found consistently that in terms of households' spending priorities children's education comes immediately after basic food. Even quite poor households are investing in children's school education. They know that in the world of today their child cannot get anywhere without education.

We are faced, therefore, with a situation in which education is rising rapidly in rural areas, but where very few rural residents are obtaining any of the better-paying jobs. Their parents have invested enormous amounts in school (and increasingly, college) education, but very few have seen commensurate or hoped-for returns from these investments.

Studies by political scientists show consistently that rising education goes together with increasing political activity and assertiveness. Indeed, I have found that patterns of leadership are changing in villages, with old patronage- and caste-based leadership challenged successfully by educated younger leaders.²⁷ However, not very many young men and women aspire after gaining an education to become a small-time leader, peddling influence in their native village; fewer still are equipped by temperament to play the vicious game that politics has become.

In the twenty-or-so years that I have roamed parts of rural India, studying diverse aspects of our development process, I am most troubled by the growing knots of educated but unemployed young men that I see gathered in every small town and large village. Their mounting numbers and rising hopelessness do not bode well.

A rising tide of frustrated ambitions might well result in considerable hostility, providing fodder for political agitators of a destructive and divisive type. Before this comes to pass, we must recognize what is at our doorsteps. We must do what it takes to redress the disadvantages that talented youth suffer in rural and other poor areas of our country.

²⁷ See the discussion, especially in Chapters 3, 7 and 8, of *Active Social Capital: Tracing the Roots of Democracy and Development* (New Delhi: Oxford University Press, 2003)

Conclusion

I end, therefore, with a plea for two agendas that adopted concurrently will help make us a society in which all inhabitants have a realistic chance to rise as high as their abilities permit, and where none lives in fear of being pitched into poverty on account of being ill or suffering an injury at work.

Too many people in our country are living one illness away from poverty. They see the pathway downward more assuredly, while the upward path is much more dimly lit for them. It is only when we can reverse this situation that poverty will be defeated successfully in our land.

The flow into poverty must be controlled. Providing better healthcare is critically important for this objective. Because the causal link between health and poverty creation has not been better recognized, people fall into poverty with alarming regularity. The quality of healthcare provided to most citizens is appalling.

Fully one-third of all poor people in villages studied in Rajasthan were not born poor – they have acquired poverty within their lifetimes. Ill health and high healthcare costs are the principal reasons, here as elsewhere, for a persistently high rate of descent into poverty.

We must listen, belatedly but directly, to what Krishna Raj told us many years ago. Social services must be urgently strengthened in our villages as well as our towns. Concurrently, efforts need to be made to make upward mobility a reality, no matter where one is born.

Merely nudging someone above the poverty line – by subsidizing the purchase of a cow or goat or sewing machine – is to my mind an insufficient and misdirected goal. Many

poor individuals have the potential to rise much higher. Providing everyone with the opportunity for a high-quality education, with realistic access to career pathways of different kinds, is a far superior longer-term goal, more rewarding in terms of both equity and national economic performance.

A review of talent published recently in the newsmagazine, *The Economist* expressed in surprise, “How can a country with a billion people suffer from talent shortages?”²⁸ The answer, I suspect, lies in the fact that we are tapping only the tip of the iceberg.

A very large proportion of the talent pool in this country remains untapped, without access to real opportunities for upward economic mobility. Not every educated young person should or will rise to become a software engineer, but those who have the requisite talent and energy should not be held back. Tapping this large and previously ignored pool of talent in the countryside will bear enormous dividends.

What will it take to improve health and education? The answers to all these questions will, I imagine, involve changes in institutions. What institutions need to be built up and which ones taken down for improving healthcare? What other institutions are needed to support upward mobility? How can early career guidance be best provided to youth? More than any huge influx of new resources, institutional change will be critical for these tasks. We should spend more on education only if it will be helpful, but much of what we are already spending is going to waste. Studies reveal consistently that many public schoolteachers are not teaching and many public medical staffs are regularly missing from their duty stations.²⁹ I do not mention these facts only to criticize the government, far less to suggest that governments should be absolved of these responsibilities.

²⁸ “The Battle for Brainpower,” *The Economist*, October 7, 2006

²⁹ See, for example, Banerjee, A., A. Deaton, and E. Duflo, “Health Care Delivery in Rural Rajasthan,” *EPW*, February 28, 2004; and Duflo, E., and R. Hanna “Monitoring Works: Getting Teachers to Come to School” (available at http://econ-www.mit.edu/faculty/download_pdf.php?id=1238).

More pressingly, I wish to signal the need urgently for public debate on institutional change. What kinds of institutions will help in different context to achieve the objectives outlined above? It is not simply a matter of government versus NGO – such dichotomies quickly degenerate into turf warfare of an unhelpful kind. What will underwrite effectiveness and ensure responsiveness in healthcare, education and information provision needs to be discussed and resolved openly. There are no ideological points to be won; only demonstrations of what works in particular contexts need be entertained. Let us enter into this debate in a spirit of resolving the problems that keep poverty large in our land, leaving aside ideological differences and past disputes – and through these ways let us pay tribute to the legacy of ideas provided by Krishna Raj.

Annex Table 1
Trends in Poverty Dynamics over 25 years
(Per cent)

	Escaped Poverty	Became Poor	Change in Poverty
Rajasthan (35 villages)	11	8	3
Gujarat (36 villages)	9	6	3
Andhra (36 villages)	14	12	2
W. Kenya (20 villages)	18	19	-1
Uganda (36 villages)	24	15	9
Peru (20 communities)	17	8	9
North Carolina (13 communities, 10 years)	23	12	11

Sources (in order):

- Krishna, A. (2004). "Escaping Poverty and Becoming Poor: Who Gains, Who Loses, and Why?" *World Development*, 32 (1), 121-36;
- Krishna, A., M. Kapila, M. Porwal, and V. Singh. (2005). "Why Growth is not Enough: Household Poverty Dynamics in Northeast Gujarat, India." *Journal of Development Studies*, 41 (7), 1163-92;
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- Krishna, A., P. Kristjanson, M. Radeny, and W. Nindo. (2004). "Escaping Poverty and Becoming Poor in 20 Kenyan Villages." *Journal of Human Development*, 5 (2), 211-26;
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- Krishna, A., P. Kristjanson, J. Kuan, G. Quilca, M. Radeny, and A. Sanchez-Urrelo. (2006). "Fixing the Hole in the Bucket: Household Poverty Dynamics in Forty Communities of the Peruvian Andes." *Development and Change*, forthcoming, September 2006;
- Krishna, A., C. Gibson-Davis, L. Clasen, M. Markiewicz, and N. Perez. (2006). "Escaping Poverty and Becoming Poor in Thirteen Communities of Rural North Carolina." Working Paper. Sanford Institute of Public Policy, Duke University. Available at www.pubpol.duke.edu/krishna.

Annex Table 2
Results from Other Studies

-1 Study	-2 Period	-3 Country/ Region	-4 Sample	-7 Poor at start of period (per cent)	-5 Percentage Escaped Poverty (per cent)	-6 Percentage Fell Into Poverty (per cent)
Sen, 2003	1987-2000	Bangladesh	379 rural households	57	26	18
Scott, 2000	1968-1986	Chile	200 households in eight communities	77	23	8
Haddad and Ahmed, 2003	1997-1999	Egypt	347 households	25	6	14
Bhide and Mehta, 2004	1970-1982	India (Rural)	3,139 households	48	23	13
Carter and May, 2001	1993-1998	South Africa	1,171 households	27	10	25
Deininger and Okidi, 2003	1992-2000	Uganda	1,300 households	54	29	12

Sources (in order):

Sen, B., "Drivers of Escape and Descent: Changing Household Fortunes in Rural Bangladesh" *World Development* 31 (3): 513-34, 2003;

Haddad, L. and A. Ahmed, "Chronic and Transitory Poverty: Evidence from Egypt, 1997-99." *World Development*, 31 (1), 71-85, 2003;

Bhide, S. and A. Mehta, "Correlates of Incidence and Exit from Chronic Poverty in Rural India: Evidence from Panel Data," *Working Paper 15*. New Delhi: Indian Institute of Public Administration and Chronic Poverty Research Centre, 2004;

Carter, M. and J. May, "One Kind of Freedom: Poverty Dynamics in Post-apartheid South Africa." *World Development*, 29 (12), 2001;

Deininger, K. and J. Okidi, "Growth and Poverty Reduction in Uganda, 1992-2000: Panel Data Evidence." *Development Policy Review*, 21 (4), 481-509, 2003.

Annex Table 3
Highest positions reached in 71 Rajasthan villages (last 12 years)

Accountant	(2)	Lineman	(7)
Advocate	(4)	Panchayat Secy.	(4)
Computer Operator	(4)	Patwari	(11)
Constable	(8)	Peon	(6)
Clerk Typist	(10)	Sub-Inspector	(4)
Doctor	(1)	Schoolteacher	(50)
Driver	(4)	Soldier (<i>Jawan</i>)	(32)
Civil Engineer	(2)	Software Engineer	(1)

Source: Original data collected in 2004.

Annex Table 4
Percentage of Villagers with Five or More Years of School Education
(All residents of 20 villages of Rajasthan)

Caste Group	Age Group (years)				
	11-20	21-30	31-40	41-60	61+
Upper (n=4,467)	89	76	57	41	27
OBC (n=14,222)	64	43	26	14	7
SC (n=2,569)	64	40	23	12	4
ST (n=4,067)	32	16	9	2	2
Muslims (n=819)	57	45	29	21	11
AVERAGE (n=26,124)	64	45	29	18	11

Source: Original data collected in 2005

Annex Table 5
Percentage of Villagers with Five or More Years of School Education
(All residents of 20 villages of Karnataka)

Caste Group	Age Group (years)				
	11-20	21-30	31-40	41-60	61+
OBC (n=15,376)	86	59	37	30	19
SC (n=5,032)	85	50	24	16	6
ST (n=2,010)	71	32	16	13	11
Muslims (n=635)	82	65	36	21	21
AVERAGE (n=23,067)	85	55	32	25	15

Source: Original data collected in 2005