Development as Learning[*]

SOEDJATMOKO

More than three decades after the post-World War II development effort was launched, the world remains conspicuously and tragically beset with unacceptable suffering, want and strife. There is a lengthy agenda of social, political, cultural and organizational adjustments that have to be made which emerges from our past development experience. The central learning need of many developing societies is knowing how to deal with the challenge of poverty and the structural dualism underlying it. Until the problem of poverty is solved, all efforts at development will be of little lasting avail. Development is a much more complex process than what the early theories seemed to imply. Experience has shown that greater equity and justice do not necessarily follow economic growth. Development is, above all, learning. The needs which are now emerging concern the ability to adjust to new technologies, new demographic patterns, new modes of production, new stages of political consciousness, and new and ever more deadly forms of weaponry. It is necessary to change the balance between the urban and rural sectors in the developing world which requires a fundamental change in the distribution of economic and political power. Such a change entails grave risks for any government brave enough to attempt it. At the same time, the risks of continuing to ignore the problem may prove even more catastrophic. There is, therefore, a trade off between present and future risks.

Lessons from the Development Experience

It is safe to say that no reasonable observer of development is content with what has been achieved to date. Today, more than three decades after the post-World War II development effort was launched, the world remains conspicuously and tragically beset with unacceptable suffering, want and strife, as the gap between rich and poor continues to widen. The reasons advanced as to why development has not worked as it should are many — economic, social, ideological and historical. But I believe the most important of all the lessons to be drawn is the recognition of our failure to deal effectively with the problem of poverty. If anything, the scale of international poverty is even larger today than it was in the past despite the relatively higher growth rates some developing countries have achieved. According to the World Bank, average per capita income in the poorer countries of Africa has been falling for the past 10 years. As many as 100 million Africans are affected by hunger and malnutrition, and one out of every 200 Africans is a refugee. These facts are symptomatic of a process of economic and environmental decay which, compounded by political instability, has turned drought into famine. Average per capita

[*]A slightly adapted version of the Tenth Vikram Sarabhai Memorial Lectures delivered at Ahmedabad, India, January 19-20, 1985.

income has also been falling in much of Latin America. It has now dropped to the 1976 level in Brazil, and below the level of 1970 in Argentina. Here, the proximate cause is debt, not drought, but long-term processes are also at the root of the problem.

This failure has led to the search for alternative development theories — including the bottom-up approach, the participatory approach and the basic needs approach. None of these constitute a full fledged development strategy; all require enabling national policy frameworks for them to be effective. What is at stake essentially is the social, economic and political capacity for growth, at all levels and in all component parts of a society, that will enable the nation to reduce poverty, unemployment and inequality and to survive and evolve in an unstable, complex and increasingly competitive world. In short, I believe we need to begin to look on development not as something we *do* — through actions or acquired skills — but as something we *learn*. By learning, I mean the individual and collective enhancement of a society's ability to not only adjust to change, but also to direct change to suit its own purposes: learning to break out of the mind-set that accepts passivity as the only relevant response to centuries of oppression and powerlessness; learning that the individual has rights and learning what they are; learning that people have the right and the possibility to use new opportunities; learning, as a community, to organize for the attainment of goals that may not have been part of traditional life; learning, as a society, to enhance capacity for timely course corrections. It will not suffice to cast new learning strategies within the framework of traditional development models and approaches. Our world today would be virtually unrecognizeable to the early practitioner of development back in the 1950s. Development has been about change that is far more fundamental than was originally assumed. The development effort of these past three decades has been trying to hit a moving target.

The current of change itself can be divided into two broad streams. The first encompasses those flowing from the development process itself — that is, from the impact of science and technology, from uneven patterns of growth, and from the intrusion of alien cultures and values into traditional societies. In the second stream are changes in the national and international context within which development takes place — including increased population density, heightened political awareness, the growth of international communications systems, large-scale migrations of peoples, and sharply altered life styles and life situations. While these are, of course, in some measure also induced by the development process itself, they are for all practical purposes autonomous and cannot be wilfully altered or reversed. Both sets of changes pose their own learning needs. Those that result from the development effort itself call for mastery of skills which will permit modern science and technology to be handled constructively and adapted appropriately to social needs. Other skills are needed to keep the inevitable disparities in rates of development manageable and within morally acceptable bounds. This is particularly important within the pluralistic societies characteristic of many developing countries — especially when, as is so often the case, political organization follows communal divisions. The secular changes in the context of development provide rigorous tests of, for example, the ability of people to live together in much greater population densities; the willingness of the established to bring hitherto marginalized groups into the national mainstream without raising levels of social tension unacceptably; and the

understanding of how to benefit from the information revolution without further fragmenting cultures and fanning new instabilities. If not used wisely, the new information technologies can fuel social change to the point where the integrative abilities of cultures — socially, politically and otherwise — are pushed beyond their limits. The interactions between these two sets of changes in the very specific setting of each individual country makes any generalization about their dynamics extremely difficult. The positive or negative responses of a given culture to either internally fueled or externally induced changes are prefigured by the deep structure of each culture and shaped by the worldview underlying it as much as they are affected by the geographical, political or economic and social conditions prevailing in that particular country.

We need to begin to realize that development is not a linear process, but a complex of closely interlinked changes. The top-down approach to development has been thoroughly discredited by hard experience. In reaction to it, the bottom-up, or grass-roots, approach has gained passionate advocates, and their insistence on the importance of participation is an insight of lasting importance. Yet I think that, even here, enough bitter experience has accumulated to suggest that participation by itself is no panacea. Participation without learning can be a fruitless exercise, leaving the parties involved disillusioned and frustrated over its lack of success.

I think it is possible to distingish two broad sets of learning needs — one looking back, the other ahead. The failures of the past and the daunting challenges of the future hold the present in a vice-like grip. These two kinds of learning may, if mastered, allow us to wriggle out of that grip. One kind consists of the lessons from the successes aud failures of post-war development. The second is anticipatory learning, responding to the transformation of the human condition now underway. The two sorts of learning needs I have defined — those that derive from past experience and those that anticipate the future — are not set in their own rigid channels. They mingle and overlap, jostling for attention and priority. Similarly, the changes that arise from development and those that act on development are not neatly distinguished.

For purposes of analysis, however, I would like in this section to consider the lessons of the past three decades of development. In the second section, I want to shift the focus from learning from the past to learning for the future: that is, to discuss the new learning needs and opportunities that I see emerging from the information revolution.

Whatever the form of learning, however, let me stress that I am not talking about abstract needs or offering idealized prescriptions of what might be desirable or pleasant in some future Utopia. The need for new forms of learning springs from a very real and tragic urgency. We now are seeing, in many parts of the Third World, whole communities on the verge of breakdown. Societies are beginning to come apart at the seams, as the despair, frustrations and rage of the "have-nots," in the face of the fear, reluctance or intransigence of the "haves," erupt into religious, ethnic, tribal, racial and class violence. The rapid increase in urban criminality in many of the world's impossibly overcrowded cities is an additional manifestation of the urgent need to come to grips with the problem of domestic and international poverty. This urgency is under-

scored by the fact that the prevalence of poverty seriously reduces the margin of adjustment that is open to a society. Particularly in pluralistic societies, the rapid economic growth of some sectors while others lag behind may strain the resilience of the political system beyond its limits — leading to polarization, the collapse of the moderate centre, and, eventually, to a mutual escalation of violence. This is especially true now that arms and explosives are easily available to any group that dreams of imposing its will on other groups.

In considering the development experience to date, I do not mean to overlook or belittle the considerable accomplishments of the past three decades. There have been great successes in the developing countries — and India offers a number of examples of those successes. Indian science is today of world rank, and various elements of Indian society enjoy a much improved lot over what they did three decades ago. A number of Third World countries have been able to move from dire poverty into the range of the comfortably middle class.

The record of the development effort is mixed. There have been successes and failures. Yet one fact dominates any general assessment: the problem of poverty still stalks this earth on a vast and unacceptable scale. Hundreds of millions remain in an intolerable state of degradation and despair — ill-housed and ill-cared for, gnawed by hunger which saps their physical and mental capacities, without much prospect of productive and decently remunerated work, their real needs ignored by national development schemes. The great remaining problem is how to release the latent energies of these whom Gandhiji called "the last, the least, the lowest and the lost."

Three decades of development experience suggest that the bureaucratic approach to the poor will have to be replaced by efforts to mobilize the internal motivation that self-organization can bring. The articulation of their material, social and spiritual aspirations is an essential pre-condition for the empowerment of the poor. At the same time, these aspirations will have to be related to the constraints as well as the opportunities — economic, social and technological — of their situation. This will constitute a major learning process: the organization for new purposes, the adjustment of traditional institutions to serve these ends, and the continuous scanning for new technologies that might upgrade traditional capabilities. The role of non-governmental organizations and civic volunteers, who straddle the modern world and traditional cultures, will be crucial in this endeavour.

But the need to learn is not limited to the poor. It is the essence of the whole development process, requiring all segments and levels of society to meet new learning needs. Communities will have to learn new lessons in the management of developmental or sectoral activities — for example, the management of community irrigation or forestry projects. Government bureaucracies and institutions will have to learn to adjust to such a system of self-management. The kinds of adjustments that development and social change require today involve learning beyond that which takes place in the formal education system; these adjustments will have to be made by all layers of society. In a period when change compounds change, mutual learning processes in social, political and organizational innovation must be stimulated, in which there are no teachers and no students. It must

involve the governments as well as the citizens, the poor as well as the rich, the planners and administrators as well as their targets. Many other adjustments will have to be made — but, for the moment, it may be best to look more generally at the other lessons we should draw from more than 30 years of development experience.

One obvious new learning need arises from the urgency of living with the fact of global economic interdependence. The phrase has become a cliche, but the reality behind it has not yet been assimilated into our thinking, our actions, our policies or our institutions. The international setting of interdependence within which development takes place adds to the difficulties of adjustment and creative response. The permeability of national boundaries to information flows from the outside world strengthens tendencies to respond to change in imitative rather than in authentic and relevant ways. In addition, these transborder information flows make the process of continuous self-definition of a country's national identity even more difficult, now that national privacy is no longer possible. At the same time, interdependence provides access to a wider variety of responses than might have come from a search in isolation. The need constantly to integrate social change into one's own culture requires a constant effort to reinterpret the basic values underlying one's culture. This kind of effort in national self-reflection and dialogue is especially difficult in plural societies. At the same time, it should also be recognized that plural societies may make possible a wider variety of responses to change, the best of which may be imitated by other groups, thus enhancing the overall learning and adjustment capacity of the nation as a whole. Pluralism can therefore also be a source of strength.

The habit of constructive pluralism, however, cannot be imposed by authoritarian means. The skill of consensus-building, the art of compromise, the habit of constructive criticism, all take time to learn. This kind of social learning, in which the whole society must participate, is a particular challenge to the emerging nations. In many of them, the development of civil society was arrested, even destroyed, by colonialism. Indigenous forms of participation, indigenous vehicles of consensus and conflict resolution and indigenous sources of legitimacy have only rarely survived or been restored; indeed they have often been further suppressed by the modernizing bureaucratic state. Pluralism therefore also requires a commitment to the rule of law and equal access to legal redress for all segments of society.

We need further to consider the overall historical setting of war, revolution and political upheaval within which the post-war development effort has taken place. Something on the order of 150 wars have been fought since 1945, most of them in developing countries. Apart from outright war, many Third World societies have been rent by serious domestic conflicts along class, ethnic, religious or ideological lines. We have also seen how fear and obsession with national security have led to militarization; the rapid rise in arms purchases is only one manifestation of this. The violence that has accompanied change in recent decades demonstrates that the development process is more convulsive than any of us had imagined. We are coming to recognize the need to concentrate on conflict resolution at the level of the village and the local neighbourhood. Changes resulting from development itself — in, for example, the upward mobility of certain social groups — have disturbed the social equilibrium

and often led to conflict.   The effects of the world-wide recession have only exacerbated civil strife and violence.

One major feature of these recent decades has been the growing self-assertiveness of the traditionally powerless and of those marginalized by development. In many different ways, the "grass root" are shooting up — fertilized by an exposure to the sights but not the benefits of wealth. In some cases, groups of people have managed to move up the economic ladder, though many have met violent resistance on the way. And then, how does society deal with the violence of emerging groups themselves which they sometimes resort to when the community is perceived as not willing to accommodate their aspirations? Heightened expectations and a refusal to accept a miserable lot have also contributed to massive population movements, involving migration within and across national boundaries, and even across continents. Here in Asia alone, accepting only the more conservative estimates of internal and international migrants in recent years, some 50 million people are involved, and that number swells daily. We have here on this continent a veritable "nation of migrants" with a population larger than all but six Asian countries.

With governments simply incapable of dealing with these enormous, often inchoate, social and cultural forces, we need to consider what other kinds of institutions and modes of organization might help to fashion the learning processes necessary to deal with these forces before they engulf us totally. One problem is, of course, that we simply may not know, through any sort of ordered, rational process, which institutions may prove to be most effective. History tells us of the rise of spontaneous, unexpected currents that have altered the course of human affairs — the Gandhian movement in India is one of the classic examples of this. Such forces for change and renewal, which arise outside the normal government structure, are bound to continue. Finding ways to encourage and facilitate these impulses will test the creative abilities of established structures — including governments.

The political system must learn to adjust to new configurations of power without losing its bearings and must develop the ability to socialize hitherto marginalized groups, left out of the mainstream of national life, into the political system. This includes particularly each new generation which, given the rapidity of social change and, for the foreseeable future, the bleakness of their prospects of employment, are likely to have different perceptions and expectations of the political process — to the extent that they are not alienated from it altogether. How does a country socialize its youth into the political system when unemployment is rampant and prospects for a job minimal? What adjustments must the political system make in order to be able to accommodate the young with their different visions of society and their different values? If we are not able to integrate them into the political system as such, how might we make them feel at least part of the political culture? These are urgent questions with which political parties and political movements in the developing countries must wrestle.

Given these circumstances, those who control the machinery of the state cannot take the state itself or its continued viability for granted. Especially in the Third World, the nation-building effort is a never-ending, constantly changing task. Nation-building has proved to be a much

more complicated challenge than we thought — and its accomplishment is made all the more difficult in a time of growing interdependence and continuing economic crisis. Third World nations, furthermore, are forced to telescope the centuries-long and often bloody experience of war and oppression that Europe underwent before the concept of the nation state was finally stabilized. And they must also learn new political lessons that did not obtain during the early period of European industrialization — those that arise from the rapidly changing context in which development now has to take place. The old elites and the newly emerging elites will have to agree that the continued viability of the state is a worthy goal in itself — forcing them to try to reconcile their differences or at least keep them within manageable bounds. They will need to reconcile the centri fugal pulls with the centripetal tendencies in their societies. The penalty of not doing so is cynicism and corruption, the fragmentation of the political system, the weakening or paralysis of the state, and the likelihood that its parts will become the eternal victims of external power-rivalries. History has shown how difficult it is for any elite to learn how to share power with others, and to realize that only a constantly expanding polity will ensure the continued viability of the state — to say nothing of the continuity of their own privileged position. It further demonstrates that the resort to military power is often an admission of the elite's inability to handle certain problems. Historian Barbara Tuchman, reminding us of Lord Acton's dictum that power corrupts, notes in her recent study of the misuses of power that "We are less aware that it breeds folly; that the power to command frequently causes failure to think; that the responsibility of power often fades as its exercise augments."[1] History further shows, however, that attempts to share power are frequently accompanied by conflict and struggle; there is therefore the need for the society to develop adequate resilience to go through such crises as inevitable phases in the process of constant adjustment. Unless such resilience and flexibility are developed, conflict may pass beyond the point of no return, and lead to the breakdown of the moderating centre, to polarization and a continuously escalating spiral of violence.

The lessons thus far would further seem to suggest that there are a host of insufficiently explored cultural factors that bear on a society's response to modernization. These touch upon such matters as the often alternating choices between isolation and openness, on the capacity to maintain national and social cohesiveness in the face of profound change, or the ability of a society to incorporate innovation, science and technology in ways that are consonant with its own sense of moral purpose. If this is violated, manifestations such as the upsurge in religious fundamentalism can emerge. Cultures that can only respond dysfunctionally to change may be doomed to stagnation, decay or irrelevance. These are all matters that involve social learning, but this has been little recognized in development planning to date.

The pervasive influence on development of traditional notions of power, and the role of the state in the development effort, also need sustained study. Too often, supposedly new political and developmental institutions are simply new bottles for the old wine of traditional concepts of power. Traditional factors have been instrumental in determining what is perceived as a proper relationship between the governing and the governed, between state and society. They explain a great deal about the difficulties in turning a colonial bureaucracy, dedicated primarily to preserving order

and collecting revenue, into a developmental bureaucracy dedicated to public service. Modern training in development administration, with its emphasis on efficiency and technique, has unwittingly tended to strengthen deeply-rooted colonial and pre-colonial paternalistic notions about the official's relationship to the public. It has further reinforced the elite's disinclination to accept the legitimacy and importance of people's participation, self-management and self-reliance as essential vehicles for development. We have seen large programmes of rural development mounted by international agencies that have resulted in the increase in the power of the local bureaucracy and the police while stifling the potential for local leadership. Projects that started in the name of development have sometimes produced other kinds of unanticipated consequences as well.

One final point needs to be made in considering our lessons from the development experience: both the successes and failures of the development experience have shown that the organised pursuit of material improvement does not automatically bring in its wake freedom, human dignity, justice and civility. These values have in fact often fallen victim to the development endeavour, even when the provision of basic services includes access to education and legal protection. This has been true, it would seem, whether one started from the philosophy of growth—which motivated many of the earlier development strategies—or that of equity. The growth models tended to founder on the resistance of elites to sharing the new wealth that came to them with this approach. The pursuit of equity led to the bureaucratization of society without accompanying economic growth. We now have a lot of experience in developing countries to show that neither growth nor equity follows each other automatically—whichever you take as your starting point. We need instead explicit strategies for democratic structural change that would enable people to liberate themselves from the oppressive social structures which perpetuate their dependency and their powerlessness. This could help build societies with the resilience and the capacity for autonomous creativity and continuous redefinition—the conditions essential for survival in a crowded, competitive and rapidly changing world.

In the efforts of these last three decades, development strategies have too often overlooked the immense political pressures that have built up as a result of the persistence of severe poverty or the destabilizing impact of the development process itself. An urban success story can prove to be an alluring—and dangerous—magnet. The more successful it is, the greater the influx of people from outside it will attract, further straining already overburdened city services while emptying the countryside of its most ambitious people. Very often as a result, the urban dwellers have become the most important political constituency, to the neglect of the rural areas and agricultural production. The challenge that is raised is how to develop strong constituencies that will speak for the poor in the countryside and not be drowned out by the urban voice or the rural elite. We must recognise that it is no longer possible, in many countries, to respond to urban problems without some accompanying response to rural constituencies. Fully representative constituencies can only be developed with long-term viability through democratic processes. This means giving rural residents free access to information—to let them learn and think for themselves—rather than doing what is perceived as good for them by that unfortunate yet so often paired team: the insecure bureaucrat and the quick-fix technocrat.

The fruits of economic development are seldom spread evenly among all groups within a society. The shifts of relative positions can be deeply destabilizing, with violent resentment expressed by those who are the relative losers and an edgy defensiveness, which may also turn violent, on the part of an achieving minority. There are responsibilities on both sides of this unhappy equation: for upwardly mobile minorities to demonstrate their allegiance to the welfare of the whole society rather than to their own group exclusively, and for others to recognize the right of the upwardly mobile to enjoy, in a non-exploitative manner, the fruits of their success. There is also here a role for government, to protect the rights of even an unpopular minority, but also to insist that they respect the law and to some extent the conventions of the society in which they live.

Such political problems all have to do with learning—the urgency of learning how to integrate politically different segments of society at different levels of advancement or sophistication. The assumption has been that development would automatically socialize people into the existing political system. We are now beginning to recognize—in the unceasing flare of violence and strife we see between recent achievers and those who feel left behind—that this assumption was incorrect. These tensions are, of course, all the more capable of erupting into murderous retaliation and counter-retaliation when a regressive economy makes the gaps between the two rival groups all the more apparent and harder to close. Whatever the situation, however, this is a problem that has driven home forcefully our need for mutual tolerance in different religious and social groupings.

The enhancement of capacity for cohesiveness is an area which social science has generally neglected. In the past, social scientists concerned with social cohesion based their work on assumptions of convergence and increasing secularism. Now, however, they must contend with a far richer and more intricate brocade woven of religious and ethnic strands, each crying for equal visibility. New capabilities will have to be learned to attain cohesion in such a situation.

All of the evidence we have accumulated from these past three decades—during which the global community has evolved into some 160 nation-states beset by swirling configurations of power; rising ethnic, religious and cultural tensions; and millions afoot fleeing fear and hunger and in quest of a better life—should teach us finally just how complex a thing the development effort is. Gone are our comfortable technocratic illusions that development success simply means achieving a kind of critical mass of skills, machinery and capital. We are realizing instead that the ultimate purpose of development is to make the population of a country—especially its weak and poor—not only more productive but also more socially effective and self-aware. Truly humane development also requires human growth in the sense of people becoming freer human beings, liberated from their own sense of powerlessness and dependency.

Poets have a way of capturing the essence of truth. Rabindranath Tagore wrote that, "Man is a born child, his power is the power of growth." That power I take to mean the emergence of people who feel capable and free to assume responsibility for their own lives and those of their families and communities. Human growth means that the socially weak have the capacity to regain their sense of dignity and—armed with that inner security—to recognize the basic dignity and humanity of others.

There is thus a lengthy agenda of social, political, cultural and organizational adjustments that have to be made which emerges from our past development experience. In order to adjust successfully, we will have to learn to develop the will, the commitment to values, and the mechanisms needed to bring about a better society. Learning, here, very much means social innovation and inventiveness. And as I hope to have been able to suggest in this section, the central learning need of many of our developing societies is knowing how to deal with the challenge of poverty and the structural dualism underlying it. And make no mistake about it—until we solve the problem of poverty, all our efforts at development will be of little lasting avail.

This agenda would be unidimensional, however, if we did not simultaneously set in motion other learning processes to deal with the new array of concerns that the microprocessor, the communications satellite, the laser and other accoutrements of the information age are now setting before us. Perhaps if we could somehow magically stop the world and get off in 1985, we might consider that concentrating our efforts on what we have learned thus far from our development mistakes was enough. But new and powerful forces are already unleashed which will have great impact on the shape and texture of the future global society and on the place of the developing countries in it. In the next section I want to turn to an examination of how we must learn to harness those forces to the greater benefit of us all.

New Learning Pathways to Development

In the previous section, I have discussed the lessons which we might draw from the generally disappointing results of development since the end of World War II. In particular, I have examined the implications of the failure to resolve the problem of poverty in the Third World. The experience of post-war development is full of non sequiturs, which illustrate that development is a much more complex process than the early theories seemed to imply. For example, as I have already mentioned, that experience has shown that greater equity and justice do not necessarily follow economic growth. This conclusion now seems so obvious that it is hard to recall the naive faith in "trickle-down" that was once held even by people of good will. Indeed, economic growth does not necessarily bring in its wake even a better physical quality of life for the majority. If there is one lesson to be learned from the last few decades, it is that development cannot be equated with growth, nor with the sheer accumulation of wealth. Some of the wealthiest countries, in terms of natural resources, are least developed, and the converse is also true. If development is not growth, not resources, not wealth alone — what is it? As I have tried to suggest in the first section, I think it is, above all, learning In this section I would like to dwell on the kinds of learning that embody development, and on the learning needs that are emerging for the future.

The needs which are now emerging concern the ability to adjust to new technologies, new demographic patterns, new modes of production, new stages of political consciousness — and new and ever more deadly forms of weaponry. There are many different types of learning — and it might be well once more to enumerate some of them. There is, first, knowledge: the accumulation of wisdom and lore from over the centuries which comes to us in many ways, both formally and informally. There is

learning of the skills by which people acquire or produce the necessities of daily life. There is also, learning of how to plan, organize and manage the support systems which undergird the human endeavour. Formal education has its role in the learning process, but we are increasingly recognizing that it is only part of that process. Its deliberate pace and structural rigidities may even impede adjustment to rapidly changing conditions.

The form of learning that lies at the heart of development is the rather elusive process that might be called *social learning*. One observer has described this as a learning form unique to the human species in that it presumes a learning environment characterized by interaction with other learning organisms [2] I take it to be a collective process by which neighbourhoods, villages, communities — and ultimately the nation-state — prepare themselves for living in the future. This world, on the door step of the 21st century, will begin that next century with another two billion people crowded into a shrinking global village already beset by violence, hunger, poverty, environmental deterioration and constantly shifting, frequently bewildering rules of play.

Demographers make projections about our cities very easily, and we have read projections of the future size of the primate cities in Asia — a Bombay, for example, of 17 million people by the year 2000. It is an illusion, however, to assume that people know how to live in such conglomerations at the level of income that is likely to prevail in our societies. We will have to learn new ways to make urban communities function, concerning ourselves not only with how these mega-cities can be assured of their food, energy and housing needs; but also with the ways in which human communities of such size and density can function effectively and with civility, avoiding violent conflict and retaining their creativity. Demographic increase will bring about significant changes, not only in the density of population but also in the distribution of age cohorts, particularly in the Third World. The numbers of elderly people will increase, but the median age will decline since the ranks of young people will swell even faster.

This latter growth will have immense implications for the employment situation. It has been estimated that work must be found for some 500 million new entrants to the global job market between now and the end of the century, with some 440 million of these new jobs needed in the Third World — and that is if one accepts a really unacceptable unemployment rate of 15 per cent in developing countries. In order to reduce unemployment to six per cent, another 120 million new jobs will have to be found, bringing the total to well over half a billion. The difficulty in creating new jobs is, of course, compounded by technological developments. Industrial research tends to focus on lowering production costs by improving the productivity of each worker; it is biased against the creation of new employment. This implies that the growth of employment is unlikely to keep pace with the growth of production, so that even an expanding economy may leave great numbers of new entrants to the labour force without jobs. Those affected are bound to put tremendous pressure on the political system, especially in countries where the welfare state cannot provide a safety net for the unemployed and their dependents.

Few governments have proven to be capable of dealing with such

challenges. Life is changing in ways that have unsettled the sense of moral order and raised questions about the ultimate purpose of development. The changes have helped spark the rise of religious and moral objections to the very notion of development and modernization, and by implication, to the legitimacy of its official sponsors.

Despite the growth of mega-cities, for most developing countries the bulk of the population will continue to reside in the countryside. There, increasing rural density is driving people to exploit marginal lands more intensively. In many cases, rural communities have traditional ways of working productively within ecological limits. But the increase in human numbers is not being matched by an increase in the resources, techniques, or options available to the people who live off the land. For the sake of short-term survival, they are forced to violate ecological rules, even though in many cases they understand that to do so is to court disaster in the longer run. The scientific basis of a more productive, sustainable way of life is already available for many kinds of ecological conditions. But the knowledge has not yet reached the people whose very survival depends on it — and their communities are not organized to use scientific knowledge even when it is available.

In both city and countryside, there is little question that increasingly sophisticated communications have sharply affected aspirations and life styles, and led to higher levels of political consciousness. They have brought on shifts in values so profound that, in many cases, one can speak in terms of generational quantum jumps. It is worth reminding ourselves that when the post-war development experience began, say in 1950, the modern communications age was just dawning. The transistor had only been invented a short while before, the first Sputnik was not yet launched, and the first communications satellite was five years beyond that feat. Microchips had not yet been devised; the typical computer was enormously expensive, very large, and accessible only to a relative handful of specialists. But the new information and communications technologies proliferated at an astonishing speed. During the late 1950s and 1960s, according to UNESCO statistics, radio ownership increased by more than a hundred-fold in Latin America, by more than two hundred times in Asia, and more than four hundred-fold in Africa. Television, with its even greater power to stir hopes and expectations, followed apace.

Today, new technologies for processing an ever-increasing volume of information are putting great pressure on cultures to somehow absorb new knowledge and information and weave them into the fabric of everyday life — and this is leading to dissonance. A recent conference on the socio cultural aspects of the information revolution concluded that the "ecology of knowledge" is outpacing cultural adjustment. New kinds of gaps between information "haves" and "have nots" are developing which only exacerbate existing disparities. Inequalities in access to information is a prime example of change in the context within which development is taking place. Exposure to new information triggers both increases in political consciousness and heightened expectations on the part of different social groups. The inevitable unevenness of the development process itself is thrown into high relief, and often destabilizes and upsets traditional social equilibria.

Yet I take these dangers as hurdles to be overcome, and not as reasons to forswear the use of the new information technologies in Third World communities. I believe that we are now moving into an age of "the survival of the best informed" (to use Jeremy Rifkin's phrase[3]), and the developing countries dare not be left behind. A third industrial revoluti n is now taking place, based on advances in biotechnology, materia° technology, microelectronics and information technology. If the coulsries of the South do not develop the capacity to participate in this revnt lution, they will become even more vulnerable and dependent on the Noorth than they are now. We in the developing countries cannot confine ourselves to thinking in terms of closing a knowledge gap. Rather, we must attempt to leap over a whole generation of outmoded technologies and theories of organization. We do not have time to repeat the mistakes of the North, or even to follow passively in its footsteps picking up techniques that it has outgrown or discarded. We must cultivate the art of innovation, or invent it in a form that is both consonant with the real needs of Third World societies and with the new information landscape that is being shaped by advances in technology. Only in this way will we be able to benefit from the fruits of the information revolution in their totality — not merely for the new technological aspects which can appear so inviting, but also for their potential ability to spur the growth of knowledge and the creative expression of values in our own countries.

The new information technologies intensify interdependence. Yet, paradoxically, they also are capable of powerfully reinforcing the independence of the individuals and associations that have access to them. They enlarge the universe of information available to the user and allow the user to make a selection without an intermediary filter. There is, in this, some danger of fragmentation: if all the members of the community are selecting different tailor-made information packages, their common ground of knowledge and mutual understanding may erode, and social cohesion may suffer. Indeed, I think this process can already be observed: one of its most familiar manifestations is the generation gap. But on balance, provided the lines of communication are kept open between groups, this proliferation of micro-information environments is a healthy development. Access to information is itself a kind of power, and the empowerment that independent access brings is multiplied when information can be exchanged as well as received. New information and communication technologies, ranging from those as simple as the cassette tape to those as complex as the communications satellite, hold out this promise. They can be organized in a way that not only permits people to choose information from a larger and more varied menu, but also permits them to participate in programming, in reporting news relevant to themselves, and in sharing what they have learned with others.

The opportunity to organize and manage and profit from one's own endeavours creates a motivation to learn, and, very often, a motivation to communicate one's acquired knowledge — in other worlds, to teach. Obviously, this kind of teaching is not something that takes place only in a classroom. It is the kind that takes place, when the circumstances encourage it, between neighbours, business associates, farmers in contiguous fields, and so forth. And it is the kind of teaching, and learning, that has transformed some voluntary associations into the most powerful development agencies that operate in some parts of the developing world.

Mothers' clubs, traditional savings associations, funeral societies, irrigation or forestry co-operatives, mutual-assistance housing pacts, marketing co-operatives and so forth all provide examples of the successful mobilization of local initiative. It is important for governments to encourage and enable such initiatives to operate, but governments have rarely been successful in creating them. Too often, political and bureaucratic institutions have been a source of obstruction rather than encouragement to local initiatives. We might as well face squarely the fact that because they are outside the framework of bureaucratic programmes, spontaneous movements that organize and share information independently are often seen as a threat to central control. They are, in some respects, a threat, so it takes a degree of courage for governments to encourage them whole-heartedly. I am utterly convinced that the reward for relinquishing all-embracing control is worth the risk: it is the possibility of unleashing a kind of energy that is the most essential development resource.

In trying to characterize this kind of energy, I am reminded of a conversation that I had last summer at home in Indonesia with a Balinese painter. The Hindu island of Bali is the home of a rather distinctive culture within Indonesia. It is a poor island, but the society is well-integrated, dynamic, creative and supremely adaptive — and my painter-friend seemed to embody all of these qualities personally. I was impressed enough to ask him to explain to me what inspired him. He told me that his life, like his culture, had three sources of inspiration. One was religion, which nourished the soul. The second was art, which nourished the heart and feelings. The third, he said, was the customary and ritual interactions of the community, which generated what he called "social energy." I asked myself then — and these reflections in this paper are part of my continuing questioning — how can social energy be mobilized, encouraged, and put to work on the scale required?

Part of the answer must be supplied by the poor themselves — which means that more privileged people must learn the art of listening and be willing to recognize past mistakes. Too often in the past, local bureaucrats, taking their cue from the national bureaucracy, have been averse to listening to ordinary citizens. Many of the projects created and managed by governments, moreover, leave little decision-making to citizens, and thus generate little popular participation and support. Frequently the best-intentioned "participative" development strategies falter because they rely on a bureaucracy unable to respond to community needs and unwilling to rely on community skills and problem-solving capacities. Yet it is just such resources that, time and again, have proven to be very rich. Various studies of development "success stories" demonstrate the importance of a learning process in which local residents, both male and female, and programme experts share their knowledge, and display a willingness to learn from mistakes and make adjustments accordingly.

In helping to create the micro-information environments in which co-operation between villager and project-worker could flourish, we should explore a variety of ways to extend the learning process. The response of formal education systems has thus far been inadequate even in the conventional sense of education — and far from what is called for in this much broader learning process. In many places, a number of other institutions and organizations have gotten into the business of education — including corporations, labour unions, the military, governmental and private

agencies, libraries, museums, and professional associations. In Japan, both newspapers, and department stores run educational and cultural training-programmes. In the United States, the educational programmes of the giant communications company, AT&T, enrolled nearly half a million people in 1979 before the company was broken up. This total exceeded that of the largest university system in the world, the State University of New York.[4]

Technological change and longer life expectancy give added urgency to the recognized need for continuous lifelong learning. Many people will want or need to prepare for second careers, or to seek retraining in order to keep abreast of new skills and job opportunities. But even the most innovative educational programmes must be monitored carefully to ensure that they remain in tune with the changing contexts in which their participants, will have to operate. Training should cultivate the capacity for innovation, for improvisation, for recognizing emerging opportunities in new social and technological situations that cannot be precisely foreseen.

Local learning environments could be greatly stimulated, for example, through the establishment of decentralized radio stations and citizen-band systems through which farmers, for example, could exchange information on local crop prices, weather and market conditions. Through the use of video tapes, we may be able to revitalize oral traditions and bring even the illiterate into the information age. Markets have always been important loci of information. It is interesting to note that even in several countries where private capital is not accepted as a legitimate basis for economic activity, the mechanisms of the marketplace are increasingly valued for their information-clearing functions.

Similarly, in both socialist and capitalist as well as mixed economies, innovation seems to be most at home in relatively small enterprises that are allowed to exercise initiative, take risks, gather and dispense information. The resilience of an economy depends, to a large extent, on such small enterprises. The problem, however, has been to organize the small entrepreneurial units into networks large enough to benefit from larger marketing systems, quality-control methods, technological innovations, credit systems, and other possible economies of scale.

Here, the role of planning cannot be overlooked, but I would like to emphasize that the planning should be specific to the qualities of the enterprise, the region and the cultural context. It requires sensitivity to and interaction with the people who are expected to carry out the plan. In other words, planning is also a learning process — at least, successful planning is.

There are working models of decentralized, participatory organization that are well worth study. In the Prato area of Italy, for example, there are some 15,000 to 20,000 textile firms, most of them very small, employing only a few workers.[5] In these businesses, which provide work to 70,000 people directly, and to another 20,000 in supporting services, traditional forms of production, social relations and technologies survive side by side with very advanced production technologies and marketing systems; there is a blend of old and new technologies in an industry which is deeply rooted in the local historical tradition and social structures. The Prato experience — and similar experiences, for instance in the Sakaki

region in Japan — suggest possibilities for dispersed rural industrial production systems in developing countries, which would be competitive with urban production centres. This would ensure that the urban areas would no longer monopolize new economic opportunities. This in turn might lead to new and more equitable urban-rural configurations, a central issue the solution to which has so far escaped all development efforts aimed at poverty reduction. The prospects of this kind of rural industrialization hinge on a systematic effort constantly to modernize existing technologies and continuously integrate old and new technologies. It also depends on linking up traditional crafts and social infrastructures with modern, even computerized, quality control and marketing systems. One could think of a number of areas in the developing world where the preconditions for such an effort seem to exist.

To meet the learning needs of development, there obviously must be an unprecedented flow of information into the villages and urban neighbourhoods, capable of reaching the poorest residents as well as the traditional channels of communications such as the village headman, the extension services, and the school system. What is urgently called for is the transformation of the neighbourhood from a traditional society to an "information community," capable of acting and responding creatively to the information reaching it, and capable also of seeking out and generating that information.

The information environment in its totality — including every medium from wall-posters and folk-plays to television and computer data banks — must be shaped in such a way that it is accessible to all. Material that is only comprehensible to more highly educated residents works to the relative disadvantage of less educated groups and would only serve to widen the income gap. Villagers and urbanites also need specific information about their rights as citizens. Ideally, this should be allied to the knowledge of where and how to obtain legal redress for injustices, but even the basic information about individual and collective rights may encourage people to assert themselves. Above all, and this cannot be emphasized too strongly, the information channels must include new or improved mechanisms for dialogue and interaction — in short, for mutual learning.

The problem of equal access to information is by no means confined to the developing countries. One recent critique of the American educational system, by Clifton Wharton, pointed out that the information revolution, and the educational system's response to it, is bringing about a new dualism in U.S. society — one which breaks, like the old dualisms, along lines of race, ethnicity, income, employment and education. This arises from the fact that fields requiring the most sophisticated training today generate the fewest jobs; the majority of job openings are in fields requiring little skill. Most of the desirable jobs go to members of the privileged social groups. With little variation, these same observations apply to many Third World nations. All levels of formal education have a responsibility to do what they can to combat what Wharton calls "technological feudalism."[6]

Educational systems in the Third World, however, face a broader set of challenges. Let me emphasize four of them:

The first is to move away from the common emphasis of schools and universities in the developing countries on learning by rote. While I would be the last to denigrate the importance of the study of history, philosophy or classical writings from all cultures, we simply cannot go on treating textbooks as if they were sacred texts. In such a fast-changing world as our own, positive knowledge is very quickly outdated. The schools now need to take up the challenge of teaching the art of learning, preparing minds for an on-going, lifelong process of education.

Universities, in particular, must reconcile the conflicting pulls on them to be both at the cutting edge of modern science and technology and deeply engaged in the problems of poverty which continue to affect the majority of the people in the Third World. Without the former emphasis on building capacities in the basic sciences, major new dependencies are likely to develop. Without the latter, the universities' work will have relevance to the suffering communities in their countries.

A third challenge is for education to break out of the narrow disciplinary approaches which can so easily ignore the political, social and cultural complexities of development problems. Responding to the explosion in scientific knowledge will mean building a much greater capacity for critical judgment, selectivity and synthesis.

Fourth, there is the challenge posed by increasing pressure for higher enrolments at all levels of the educational system. This reflects a growing hunger for knowledge on the part of people at various levels of society, as well as sheer population growth. Responding to this challenge will require innovative approaches to extend learning beyond the conventional classroom. These challenges cannot be met by the educational system alone. A number of other organizations and systems must also be enlisted to meet the new learning needs we face.

Government bureaucracies, for example, must make adjustments to enable civil servants to break engrained habits that can stifle creativity, perhaps through such arrangements as sabbatical leaves similar to those in academic life. Planner should be regularly expected to work in the field, in order to encourage a two-way flow of information. District administration office could be the locale for expertise in 'conflict resolution, perhaps working through local ombudsmen who could train and call on volunteer mediators. India already has a legacy of enormous value in this respect, growing out of the Gandhian tradition. It is necessary, of course, to select as ombudsmen people who have already acquired legitimacy as sympathetic listeners with a real interest in helping people. In this context, it will not suffice for the government merely to appoint someone without consulting the people; the major role of the government would be to provide services to aid the ombudsman in doing his or her job.

The central need, however, is that the new policies now come to grips with structural impediments to change. As I pointed out in the first section, the policies that have guided development to date — and perhaps *misguided* is a fairer description — have tended to create and reinforce powerful political constituencies among the urban elites, and to neglect, relatively, the rural masses. Changing the balance between the urban and

rural sectors in the developing world, and integrating into the national mainstream the previously disenfranchised and marginalized, will amount to a fundamental change in the distribution of economic and political power.

I do not wish to sound naive. I realize fully well that such a change entails grave political risks for any government brave enough to attempt it. Given the fragility of many governments in the developing world — despite the authoritarian character of a great number of them — their capacity to make a fundamental adjustment of this kind within a short period is limited. At the same time, the risks of continuing to ignore the problem may prove even more catastrophic. There is therefore a tradeoff between pesent and future risks.

I have tried in this paper to raise some questions about the kind of society we want for our children, the difficulties we have had in striving for it, and the new challenges we must face. The specific nature of the challenges will be different for each society, shaped by its own distinctive culture, history, and aspirations. But let me mention five general qualities, which I believe will characterize the leaders and institutions of those societies that adapt successfully to the challenges of the future.

— First, they must be flexible and innovative, not frozen in old rigidities, and must be prepared constantly to take up new initiatives and directions;

— Second, they must possess a working familiarity with the latest achievements in science and technology;

— Third, they must be firmly rooted in the cultural soil of the society they seek to serve, and able to relate society's goals to currents on the international scene;

— Fourth, they must approach their very difficult learning tasks in a spirit of humility, cognizant that human endeavour is as capable of folly as wisdom;

— Fifth, and finally, the leaders and institutions of the future must be keenly aware that development is much more than a quick technological fix; it is driven also, in very important ways, by the inner impulses of the human spirit which often are reflected in religious or moral convictions.

It will be appropriate to end this paper with a quotation from a great scientist who was also a great humanist, Albert Einstein. In 1937, Einstein said:

"Our time is distinguished by wonderful achievements in the fields of scientific understanding and the technical application of those insights. Who would not be cheered by this? But let us not forget that knowledge and skills alone cannot lead humanity to a happy and dignified life. Humanity has every reason to place the proclaimers of high moral standards and values above the discoverers of objective truth... What these blessed men have given us we must

guard and try to keep alive with all our strength if humanity is not to lose its dignity, the security of its existence, and its joy in living."

REFERENCES

1. Tuchman, B. *The march of folly*. New York: Knopf, 1984, 32.

2. Dunn, E.S. Jr. In D.C. Korten and R. Klauss (Eds.), *People-centred development*. W. Hartford: Kumarian Press, 1984.

3. Rifkin, J. *Algeny*. New York: Viking, 1983, 223.

4. Wharton, C.R.Jr. Education 1984: Renaissance and reform. Address to Education Commission of the States, St. Paul, Minn., August 2, 1984.

5. Mazzonis, D. Colombo, U. and Lanzavecchia, G. Co-operative organization and constant modernization of the textile industry at Prato, Italy.

6. Wharton, Education 1984.

Manuscript received on May 16, 1985.

CALL FOR PAPERS

PERSPECTIVES IN EDUCATION invites papers and articles representing an interdisciplinary approach in understanding education, especially based on Third World experiences. The contributions should largely belong to one of the following categories :

1. Issues and Trends: Theoretical and Empirical Essays, View Points and Review Articles

2. Reports of Research Studies

3. Critiques of articles published in this journal

4. Brief Communications on Educatianal Policies, Problems and Practices in Third World countries

5. Brief Critical Reviews of Books and Articles

Manuscripts for consideration should be submitted to :

Editor
PERSPECTIVES IN EDUCATION
46, Harinagar, Gotri Road
BARODA 390 007
INDIA