

IWOKRAMA RAIN FOREST PROGRAM

First Foundation Day Lecture

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INTRODUCTION: THE LION AND THE MOUSE

While thinking about an appropriate theme for this lecture, I was reminded of the fable about the lion and the mouse. Those of you who remember this story from your school days will remember that the lion -- responding to an eloquent plea from the hapless mouse -- agreed to spare the tiny creature's life. The lion clearly did not believe that the little rodent would ever have the occasion, the desire, or the ability to keep its promise to return this act of kindness. But "the king of the jungle" eventually saw the mouse, using its teeth, free him from the hunter's net. Today, there is a growing sense that the lion of the developed world has ensnared itself in an environmental net.

Much as I would wish that it were the case, I am not about to suggest that the Iwokrama program by itself will have enough teeth to free the lion from that net. It is, however, important to ponder a statement made in this city a little over a year ago by Dr. M.S. Swaminathan, the distinguished Indian scientist and chairman of the Interim Board of Trustees of the Iwokrama International Rain Forest Program. He described Iwokrama as one of the world's largest programs linking conservation and development. That a small country like Guyana could make such a noble contribution to global wisdom in the areas of biodiversity and sustainable development is evidence of your far-sightedness. The recognition elsewhere of the importance of Iwokrama is indicative of an era in which the lion of the North is coming to the realization that the world's problems require shared answers and that the lion is no longer omnipotent.

I come from Canada, a country of the North. It was one of your countrymen, Sir Shridath Ramphal, who was kind enough to suggest that:

"...because of Canada's assiduous, and often courageous, pursuit of policies of internationalism conditioned by morality and not overborne by doctrine, Canada's credibility today stands high with the countries of the Third World."



If, in this sense, Canada is a peculiar Northern country, I have the honour to be President of an even more peculiar Canadian institution, the International Development Research Centre. IDRC was founded by the Parliament of Canada on the simple proposition that development -- whatever it may or may not be -- is something that people do for themselves, not something that others do to, or for, them. The corollary to this simple proposition is that no permanent development can occur unless people can find, through research, their own answers to their own problems. I say all of this to underscore how very pleased IDRC is to be associated with the Twokrama Program. Indeed, I am deeply honoured that His Excellency the President, Dr. Cheddi Jagan, should see fit to invite me to deliver Twokrama's First Foundation Day Lecture.

There are three things I would like to try to do in the course of this presentation. The first is to offer a few, highly selective reflections on problems of wealth, poverty, and interdependence. Second, I would wish to outline, with some trepidation, my views of the important role Twokrama can play in addressing some of these problems. Third, and less cautiously, I want to speak about the role of my own agency, IDRC.

TWO WORLDS?

On almost any given day, our news media informs us that we live in two worlds: a world for the rich and a world for the poor. On the same day, we are also told that we live in one single and interdependent world. Both views are, of course, correct. It all depends on the yardstick with which you measure.

That there are two worlds may be inferred from the fact that the developed countries of the North, with 20 percent of the world's population, consume 80 percent of its commercial energy and metals. The document **Reshaping the International Order**, known as the **RIO Report**, graphically describes this duality:

"The inequities of the international system are of tremendous significance. They have given rise to essentially two worlds and the disparities between them are growing. One is the world of the rich, the other the world of the poor... A poverty curtain divides the worlds materially and philosophically."

These are strong words, but they do not mean -- to me at least -- that the picture is entirely bleak. Even though the 1980s were rightly called the "lost decade" in international development, the gains in developing countries until that time -- beginning in the early 1960s -- were, as a whole, impressive. During that time, GDP growth in the developing world exceeded that of the industrial North. Thus, although average incomes fell during the last few years, they are significantly higher than they were in the 1950s. The gains in literacy, nutrition, life expectancy, infant mortality, and agricultural output are all part of the historical record.

History provides further hope by testifying to the speed with which development, as measured by per-capita output, can occur. It took the United Kingdom, beginning in 1780, 58 years to double its output per person. After 1945, Brazil doubled its per-capita output in 18 years, Indonesia in 17, Korea in 11, and China in 10 years.

These figures are encouraging; but, with few exceptions, the signs of a narrowing gap between the North and the South are hard to find. The intranational and international inequities, that we have fought against since the Second World War, seem set to go with us into the 21st century. More disturbing are the indications that those inequities are getting worse.

Let me mention only two of these indicators: population, and the new technologies of information and communication. When our parents and grandparents welcomed the 20th century, they did so with 1 billion other people. When we say farewell to this same century in 6 years, there will be more than 6 billion of us.

As significant as is this rapid growth in population, its distribution is equally important. By the year 2010, a mere 16 years away, over 90 percent of the world's population will live in countries we currently call "developing". Five years after that, by the year 2015, over 95 percent of the world's active labour force will be in those same countries. At that same time, around 700 million new job seekers will be entering the labour market in one year alone. 700 million! That figure is staggering when we realize that less than 50 million will knock on the doors of the global labour market this year. And many are finding that those doors are closed and locked. 700 million new job seekers in one year! That is almost half the entire population at the beginning of the 20th century.

The explosion in information and communication technologies is the other element increasing the difficulty with which the poor of the world attempt, in the words of former Jamaican Prime Minister Michael Manley, to go "up the down escalator". Increasingly, both in individual societies and at the global level, the attributes defining rich and poor are, respectively information capability and information deprivation. Stories of a doctor in Chicago, say, listening to a child's heartbeat in Brazil have gone from impossible, to rare, to commonplace. The same move from science fiction to reality is taking place through the emerging information superhighway --- the integration of computer, television, and telephone. These will combine to create virtual realities, virtual offices, and virtual businesses. In the process, the leveraging power of raw materials and surplus labour will be reduced dramatically.

The question is not whether this will happen. The technology is here and much of humanity is going to be wired. The questions are: How widely available will this technology be and, more fundamentally, who will benefit? One thing is certain: those who are unable to participate will be further marginalized. Former Tanzanian President Mwalimu Julius Nyerere once said that while some countries were trying to reach the moon, many Third World peoples were trying to reach their own villages.

Countries like your own, and organizations like my own, must ask whether there will be a lane on the so-called information superhighway for poorer countries and for the poorer sections of developed societies. Or, are the very few who are now rich and technologically advantaged really migrating to the moon, in a technological sense, while leaving the poor still searching for the village?

OR IS IT ONE WORLD?

So we have two worlds and there are serious signs that the gap between the two is widening at an ever-increasing rate. In a deeper sense, however, we live not in two worlds, but one. In putting both positions before you, I feel a little like the young man who was being interviewed for a job as a geography teacher. One of the interviewers asked him whether he thought the world was round or flat. The young man really wanted the job, and so he replied: "How do you teach it here? I can teach it either way."

The two propositions are, of course, not contradictory. To return to the fable with which I began, we have the separate worlds of the lion and the mouse. But they are together, entangled in the same net, increasingly interdependent. Before I get into the interdependent aspect of my argument, though, I want to refer briefly to three distinguished writers -- one from your country, one from my own, and the third from France. Your national poet Martin Carter, in his poem, All Are Involved, tells us:

Like a jig
shakes the loom
Like a web
is spun the pattern
all are involved
all are consumed!

Canadian Margaret Atwood, in her poem They are Hostile Nations, says:

It is cold and getting colder
We need each others'
breathing, warmth, surviving
is the only war
we can afford, stay
walking with me, there is almost
time / if we can only
make it as far as
the (possibly) last summer.

Jean-Paul Sartre -- French novelist, playwright, and existentialist -- reflected the same concern and passion of Carter and Atwood in his preface to Franz Fanon's great work, The Wretched of the Earth. Sartre stated:

"And when one day our human kind becomes full grown, it will not define itself as the sum total of the whole world's inhabitants, but as the infinite unity of their mutual needs."

I find it reassuring -- even hopeful -- that three sages of our time, writing from three different perspectives, could hold such identical philosophies and could call our attention with equal poignancy to our interdependence and our shared vulnerability.

I am, alas, unable to craft words into the powerful music of Carter, Atwood, or Sartre, although I share deeply their passion about our shared vulnerability. Let me try nevertheless to make a modest contribution by placing their hopes and fears for an interdependent world in the context of development as it has been widely understood and practised.

For the better part of the last five decades, the post-war period, the "philosophy" and the instruments of international development have derived from, and depended upon, the Western faith in progress through science and technology. The development model in both capitalist and communist worlds was built on an essentially technocratic view, which held that the resources of the Earth were unlimited, that human ingenuity to exploit these resources was equally unlimited, and that the capacity of the

Earth to absorb waste products was also infinite. It is this strong faith in progress and its inevitability, principally through advances in science and technology, that is today fast eroding as we confront the interdependence of which Carter, Atwood, and Sartre spoke so eloquently.

Let me try to set the context in a little more detail. There are, I believe, six new or rapidly changing features that define the current context not just for "development" in the South but also for all aspirations for improving the human condition. They are: a dramatically changed political context; economic globalization; wholesale changes in the content and direction of international trade; the unprecedented pace of scientific and technological innovation; major global shifts in sociocultural value systems; and environmental globalization. Although the word "globalization" appears only twice in that list, any close examination of these features points clearly to the reality of interdependence, of a shared human drama.

Let me take the first two features together: the changed political context and economic globalization. These are, at one and the same time, the easiest to recognize and the most difficult to decipher. Much deeper than the end of the Cold War and the breakdown of ideology is the supplanting of the nation-state itself by the new forces of transnational and supranational entities. The effects of these new forces cross all boundaries. They are fast rendering meaningless the intellectual basis for differentiation along a North-South axis. A more accurate reflection of what is happening between and within societies is increasingly to be found on an "included-excluded" axis.

In his book The Work of Nations, Robert Reich tells us forcefully that these new forces will:

"bestow ... ever greater wealth on the most skilled and insightful, while consigning [others] to a declining standard of living."

Reich is correct. The poorest segments of the world, whether they are in the United States or Canada, or in countries with annual per capita incomes of \$300, are likely to face a declining standard of living. The investments of transnational and supranational entities are unlikely to be the kinds of investments that the poverty-riddled parts of the world require: basic infrastructure, health, education, and fundamental services for the integration of populations into their own economies and societies. Since the 18th century, these are the kinds of investments that have been made by the nation-state.

Some of the technological developments that I earlier described as worsening inequities between North and South are also creating new discrepancies within rich societies. Discarded people are part of the New World Order, which is not exactly unfolding as advertised. The New World Order no longer defines those "included" in prosperity as those who live in the North, and the "excluded" from prosperity as those who live in the South. The new order is in the process of spreading the "included" around a little more. There are going to be quite a few of them in the South, where much more

manufacturing is now being done, particularly in Asia and parts of South America. But the new order is also spreading the "excluded" around more -- a higher percentage of them are going to live in the North. While the "excluded" of the North, unlike those in the South, will have the advantage of social security nets, those nets are showing signs of wear and tear.

The content and direction of international trade is such a large subject by itself that I will make no effort to deal with it here other than to note that trade in commodities, which are largely products of the South, are being supplanted increasingly by trade in high-tech goods and services, which are largely products of the North. It is, of course, true that the globalized marketplace is shifting some jobs to countries of the South. But that shift will not be enough to enrich the growing army of unemployed in the South and, moreover, that shift is making the discarded workers of the North poorer and very, very angry.

ENVIRONMENTAL GLOBALIZATION

Allow me now to make a few comments on environmental globalization. This feature is our best evidence that we have -- in the words of Sonny Ramphal's book -- "one world to share". It also shows that -- as Margaret Atwood would say -- survival (meaning, of course, collective survival) is "the only war we can afford."

In examining the environmental problem, it is important to note, first and foremost, that its seriousness needs to be recognized, no matter where we live. There was a time when the North sought to impose on the South the responsibility to save the environment by delaying its own development. The South resisted, arguing that the North had polluted the environment and must deal with it rather than seeking to deny the South its day in the sun: And everybody thought, in any case, that it was thousands of years before any of this really mattered. But, suddenly, we have warning signs of the tremendous impact humans are having on the planet. These are making environment a quintessentially global issue.

What are these signs? The 1980s was the warmest decade this century. Scientists agree that emissions from industries and power plants could lead to changes in the Earth's climate over the next 50 years greater than in the past 10 thousand years. Should current emissions of carbon dioxide and other gases continue, the increase in temperature could raise the levels of seas, including, possibly, the Caribbean Sea, to levels that could lead to unwelcome consequences, to put it lightly, for plants, animals, and worldwide ecosystems. The danger caused by the hole in the ozone layer, serious enough where I live, is believed to be at least as great a concern, if not greater, where you live. And where, in the past, many regarded ecologists and environmentalists as getting in the way of economic growth, we now know that environmental degradation has severe social and economic costs that, unfortunately, do not show up in national income statistics.

The idea of global interdependence has been dangerously slow in taking root, but it is happening. The United Nations Conference on Environment and Development -- the Earth Summit at Rio -- was evidence of this. Of the 182 nations who came to discuss the future of the world, 105 were represented by their heads of government. Also in attendance from all parts of the world and as major new players in international negotiations were non-governmental organizations, youth, and indigenous peoples' movements. Yes, there were different agendas. Yes, some came saying "the problem is in developing countries where population is growing too fast." Yes, some argued that "the villains are industrial countries where consumption is out of control." But, equally true is the fact that they came and that in some modest way some initial building blocks were laid for a global framework. Conventions on carbon-gas emissions and biodiversity were signed. Statements on forestry principles were promulgated, "Agenda 21" was announced as a global action plan, though one that was much watered down because it was in the end what it had to be: an intergovernmental, consensus document. But whatever its defects, "Agenda 21" is a global action plan that assumes interdependence.

So there is good news and we need to remind ourselves of that because we live in a world that badly needs good news. The question that remains is: Is the good news enough? Is it enough to make the critical difference? Certainly, we know that consumption patterns will have to change in rich countries if there is to be enough good news. And those consumption patterns comprise a way of life that is not easily amenable to change. The problem, of course, is much larger than current consumption patterns. Those same unsustainable patterns are spreading rapidly throughout much of the world. Until now, most of the carbon dioxide emitted from power plants and industries has come from the rich countries. But -- just to choose one example -- in China with double-digit growth the demand for energy is growing by leaps and bounds. China has plans to build up to 300 new coal-burning power plants over the next few decades. The resulting carbon dioxide increases would dwarf any savings that we in the OECD countries could make under the framework established at the Earth Summit in Rio.

What this means is that, in addition to significant changes in patterns of consumption in richer countries, the developing world will need to find financial resources and newer, more relevant, and more environmentally friendly technologies if they are to solve their parts of the puzzle. And it follows equally that failure on either side will have profound and disastrous effects on all of us.

Tropical Rain Forests

Let me now turn more specifically to rain forests and to the Twokrama program. More than on any other issue involving developing countries and environment, world attention has centred on rain forests. I know that the apparent obsession of the North with the destruction of tropical rain forests is often a subject of great annoyance to people in the developing world. The Prime Minister of Malaysia, for example, has made very public his outrage on this matter. The issue is, of course, one of ownership -- over who has the right to tell whom what to do with natural resources. There is really, however, no substantive disagreement on the importance of rain forests to the world.

Many of the products we use every day come from the rain forests. There is the chicle which gives that chewy character to our chewing gum; xate palm leaves, used for floral arrangements; wood for furniture or for disposable chop sticks; and edible oils for margarine and mayonnaise.

Indeed, the rain forests of places like Guyana, which form a skirt around the equator, constitute a veritable life-saver. Nearly three-quarters of the three thousand plants that, according to the National Cancer Institute of the United States, have cancer-fighting properties originate in the rain forest.

The rich harvest of gifts yielded by the rain forest should not surprise us. Rain forests, after all, have a greater variety of plants and animals than any other of the Earth's ecosystems. While covering only 2 percent of the earth's surface, they provide a home for more than 40 percent of its 5 to 10 million species. In a typical 4-square-mile piece of rain forest in one tropical country, scientists located some 15 hundred species of flowering plants and hundreds of different species of mammals, birds, amphibians, reptiles, and, of course, butterflies.

Rain forests, therefore, are home to an astonishing range of species biodiversity. This means that when a rain forest is being harvested, an uninformed bulldozer could easily destroy the only existing examples of an important species. All modern rice plants contain a gene that is resistant to the grassy stunt virus, a devastating rice disease. This gene which has been and continues to be imperative to rice production was discovered 25 years ago in two tiny seeds from central India and it has not been observed in a wild state in any other seeds since that time. Who knows if, even as we speak, that unlettered bulldozer is destroying somewhere in Madagascar, Costa Rica, or Zaire the one remaining plant with the property needed to provide a cure for AIDS? We all need to think about this. And tropical deforestation could have disastrous results for the world's weather patterns.

Given all of this, it is hardly surprising that rain forests are a highly emotional issue. If we are to have a common future -- which is really the only future we can hope to have -- the rain forests, with all the diversity and secrets of life that they contain, must be preserved. Yet, according to some of the most conservative estimates, the total acreage of rain forests decimated or lost permanently in the course of one year is close to the size of Guyana. The Chinese proverb holds that if we don't change directions we'll get to where we're going. Well, without a change in direction, most of the world's rain forests will be permanently destroyed by the middle of the next century.

IWOKRAMA - WHAT CAN A LITTLE MOUSE DO?

I started this presentation by referring to the fable about the lion and the mouse. Now, I want to turn my attention to the Twokrama Rain Forest Program. I do so briefly, and with considerable modesty -- for there is nothing that I can tell this audience about Twokrama that it doesn't already know. I am, however, tempted to extend the fable with which I began by referring to Twokrama in the form of a question: What can the little mouse do?

A popular idea these days is, "Think globally, act locally." If the Twokrama Program succeeds in meeting its potential, it will be one of the finest examples of that idea in action.

I admire the proactive nature of the Twokrama approach. You see, it's easy to see the solution to the problem of forest degradation either as a call to stop using the resources of the forests or in boycotts against countries whose harvesting procedures we dislike. The problem with both these approaches is that they ignore another essential problem -- the problem of poverty. Poor people will exploit whatever resources they have in order to survive and extreme poverty is one of the principal causes of extreme environmental destruction. If poor people are forced by boycotts to abandon the export of wood from rain forests they will turn to even more environmentally damaging practices such as slash-and-burn agriculture. Slash-and-burn, according to the Food and Agriculture Organization, accounts for a much higher percentage of the deforestation of primary tropical forests than does logging. Cattle ranching and permanent agriculture account for an even higher percentage.

So, the answer does not lie in the simple application of boycotts. The answer lies in the much more complex and difficult use of forests to help eradicate and prevent poverty -- and to foster development -- among local populations, but to do so in a way that is sustainable. The problem with sustainable use of forests is that we don't know exactly what that means. We in the North certainly have no lessons to teach in this regard. By some estimates, our northern forests are likely to be depleted many decades before those of the South. The point is that we all need to discover what is needed to use our forests -- North and South alike -- in a sustainable manner and in a manner which reduces poverty. Twokrama is being dedicated to the search for that discovery. And we must hope that the lessons learned at Twokrama will impact on both development and sustainability in many countries of the world.

There is another purpose to Twokrama. Part of the reserve has been set aside as an Amazonian Wild Forest Reserve to preserve the biodiversity and the genetic resources of the area. The decision to protect a major portion of what we might call Twokrama's "ecoscape" from the ravages of that uninformed bulldozer is of inestimable importance and the entire world must commend you for this.

I am particularly proud of IDRC's involvement in the information and communication aspect of the program. An International Environment Communications Centre is proposed as an essential component of the Twokrama project. A study on this aspect was commissioned by the Interim Board of Trustees. The study, which is now complete, was financed by IDRC, and, coincidentally, prepared by two Guyanese consultants. It has been accepted in toto by the Board of Twokrama.

In accepting the report, the Board has asserted the value of involving a wide range of groups, in a very intimate manner, in the development and execution of its activities. These groups include, importantly, the Amerindian communities living near to the program site. In the past, the traditional knowledge of indigenous people was regarded as a hindrance to their development. Today, such knowledge is slowly being recognized as the intellectual starting point for development. Other groups to be involved include: the Guyanese forestry companies; the local and international research communities; the teachers and students who will make sure that the lessons learned at Twokrama are available to many; the political community; nongovernmental organizations and others interested in environmental matters; the local and international media; and a range of international groups which could have an impact on the success of the undertaking.

IDRC: A MISSION OF PARTNERSHIP

Before I close, I want to say a few words about IDRC. It is, I hope, already very clear that we believe Twokrama can be a precedent-setting initiative and, as I have mentioned, we are most pleased to be associated with it. The word "interdependence" is used with great frequency today. But, like a lot of talk, the word does not necessarily have a lot of meaning. In my opinion, the fact of the matter is that interdependence is a concept of enormous complexity; and we will need a lot of fresh thinking if we are to understand it.

Those of us who are scientists or students of science are competent in **description and explanation**. But we easily overlook the fact that **description and explanation do not amount to understanding**. The former -- description and explanation -- has to do with knowledge and that is the stuff of science. The latter -- understanding -- has to do with meaning and that is the stuff of enlightenment. I believe that I can describe and explain interdependence, but I know that I do not understand it. I do not understand, for example, what interdependence means to our economic and social theories. I do not understand what the boundaries of interdependence would look like in terms of lifestyles and in terms of the relationships between lifestyles and physical ecology. The Twokrama project is a potentially powerful symbol of interdependence and, properly managed, it can help lead us to a better understanding of what interdependence really means.

It is this quest for understanding through research, through and beyond science and technology, that has been the mission of IDRC since its inception almost 25 years ago.

There is an urgent -- indeed critical -- need in our world today for new knowledge and new

understanding. The wrenching transformations that the world is undergoing are forcing us to reexamine, in fundamental ways, the meanings of development and/or progress. Accelerated economic, social and cultural changes have turned upside down the time-honoured assumptions that underpinned the social order in many parts of the world, and particularly in the developing regions and the former socialist countries. The complex web of human values and interpersonal relations that keep communities together has been subject to unprecedented strains, and in some instances has broken down with tragic consequences.

But, if this is a time of unprecedented problems, it is also a time of unprecedented opportunities to take advantage of the possibilities for learning, understanding, innovation and change. Humankind, as a whole, from an historical perspective, is on the steepest part of the learning curve for basic understanding of the universe, our planet, and the biological systems of which we humans are an integral part. Harvey Brooks, distinguished Harvard university professor emeritus of science, tells us that we are experiencing:

"... a transition leading either towards catastrophe and social disintegration or towards a sustainably growing world society..."

Brooks argues that the opportunities can be seized and that catastrophe can be avoided IF R&D is placed on an intensive worldwide footing. The mission of IDRC is to help move R&D in the direction of that intensive worldwide footing. We support carefully-targeted research in developing areas on critical questions of sustainable development and we try to help in the dissemination of the results of research in order to encourage responsible action and to allow us to learn from one another.

Given all that I have said today, I think you will understand why we at IDRC will follow with keen interest the development of the Twokrama Program. The future of Twokrama, of course, is in the hands of the leaders of the Program. But I trust there will be further opportunities for collaboration with IDRC.

CONCLUSION

I leave this rostrum with the question I brought with me to Guyana. Whether lions or mice, we are all caught today in the same environmental net. And the efforts of all will be needed if we are to escape. But will we? That is the question. Will we bequeath a sustainable world to future generations? We can. But it will not be easy and it will not be done without new thinking, new habits and new practices. As Einstein observed many years ago, "We cannot solve the problems we have created with the same thinking that created them."

I was drawn recently to the words of Jenny Damayanti. Jenny, a young Indonesian girl, was among a small group of youths invited to receive the Brundtland Report at its official launching in London, England. In an emotional plea, she told the members of the Commission and the wider international community:

"Please, presidents, prime ministers, and generals, listen to the poor, to the voice of the hungry people who are forced to destroy the environment. Listen to the silent death of dying forests, lakes, rivers, and the seas, the dying soil of the Earth, poisoned and trampled by human greed, poverty and inequality. We, the young, hear them loud and clear."

TwoKrama is potentially a testament to the world that the people of Guyana are also hearing loud and clear. I am proud to be head of an agency that prides itself on listening to the Earth and its peoples, and hearing their messages loud and clear. We look forward to working with you to produce results that might induce yet others to listen. We can do no more. The survival of our species -- and of the other species with which we share the Earth -- demands no less.