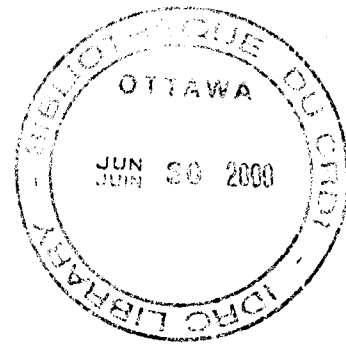


Brief from the International Development Research Centre (IDRC)
to the Special Joint Committee Reviewing Canadian Foreign Policy



**A NEW LOOK AT INTERNATIONAL DEVELOPMENT:
The Critical Role of Knowledge**

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Most of us have always believed that we knew the meaning of the word progress, whether it was progress in the First World, progress in the Third World - or wherever progress wished to raise its pretty head. And since we understood the meaning of the word progress, we also thought we understood the meaning of the word development.

The difficult transformations that the world is currently undergoing - as well as our limited successes in international development over the past 30 years - are forcing some of us to reexamine how we can best define progress and development.

THE WESTERN DEVELOPMENT MODEL

The whole idea of development has been based on decency, as well as enlightened self-interest. The industrialized world thought it had the closest thing to a formula for the creation of plenty and happiness. Since the formula was predicated on growth, we decided that we would help less fortunate countries catch up by including them in the growth chain. While we would do that for humanitarian reasons, we would also do it in the interests of a more stable world.

We were nothing if not ambitious. We thought that, within a generation, we could help guide the poor nations toward a standard of living comparable to what we had achieved over three or four generations.

We were also purer than the driven snow. We were determined that all this progress would be accomplished without all the social costs that had helped us climb the economic ladder. Those would include slavery, subjugation of native peoples, colonialism, forced migrations, use of child labour, and subordination of women.

In retrospect, we were too optimistic, and probably would have been even if our formula for growth had made as much sense as we thought it did. As we sit here trying to think of how to reinvigorate Canada's Overseas Development Assistance program, even the formula is looking suspect.

The pot at the end of the development rainbow was supposed to be filled with the benefits of a Western standard of living. Problem 1 proved to be the difficulty of getting most of the world's population within shouting distance of the end of the rainbow. Problem 2 may be even more disturbing: some very intelligent and hard-headed people, with their feet planted

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firmly on the ground, are beginning to question the long-term value of some of the things in the pot.

For a start, the western life style - which I am sure I enjoy as much as anyone in this room - has clear ecological consequences. It is true that many of the world's environmental problems are being caused by overpopulation, and in that regard it's hard to lay too much of the blame on western societies, given their shrinking birth rates.

It is also true that the current best guess is that a baby born in the United States - where consumption patterns are similar to Canada's - will have a negative impact on the world ecology that is 35 times that of a baby born in India, 140 times one born in Bangladesh or Kenya, and 280 times one born in Chad, Haiti or Nepal. Because of our high level of consumption.

BEYOND MATERIALISM

The environment isn't the only problem. Our development model, I think you will agree, has concentrated on material ends. It has done so with some justification: food, clean water, decent clothing and adequate housing are all material needs that must be met if human beings are going to live in any degree of dignity.

Our model has never pretended to focus on the social, cultural and spiritual dimensions of human development. That also made some sense. After all, we weren't 18th-century missionaries. We made a case for democracy, but, in general, we didn't think of ourselves as colonialists, trying to impose our own strict set of cultural and social values.

In the end, of course - along with benefits we transferred such as lower infant mortality rates, higher literacy rates and higher average incomes - we did end up transferring some down-home values, some good, some bad, some difficult to measure.

The good part is that there is probably more world-wide respect for concepts such as democracy and human rights as a result of our efforts. On the other hand, we may have had something to do with the fact that the main objects of worship for millions - if not billions - of young people around the world now seems to consist of consumer brand names and rock stars.

This raises two questions: Given the pluses and minuses, are the values we have exported superior to the ones that they have replaced? And, even if they are, what will it mean to all of our futures if the vast majority of the world can't afford to buy what they have learned to want from the material world? And if they could, our ecology would be even *more* threatened?

The rise of religious fundamentalism - as well as the cultural motivation behind some of the fiercer conflicts being waged around the world - should tell us something. It should remind us that, in addition to the hundreds of millions of young people singing the Coke song, there are also hundreds of millions of well-meaning people sharing the planet with us whose

interest in creature comforts is limited to basics - either because they can't afford any more than basics, or that other things are more important to them.

These people mean a lot to us, and our definition of progress doesn't work for them. Any person here today can imagine a future in which our traditional definition of progress is going to start seeming either

- (a) more inaccessible, or
- (b) more non-sensical

to greater numbers of people around the world. The population pressures alone are likely to push people in this direction. Not to mention the fact that the fierce pressures of the global marketplace are prompting corporations to use less labour, and to jump from developing country to developing country to access the labour they do use.

If our traditional definition of progress does start to seem even more inaccessible and more non-sensical to huge numbers of people, we are going to witness more and more hostility toward our way of doing things.

The fact that Soviet-style communism appears to be a spent force does not mean that western-style materialism is going to fit the bill for much of the world's population - especially if the massive influx of young people coming onto the labour market over the next two decades can't get jobs.

Which suggests to me - and I hope suggests to you - that perhaps we should be more creative in our approach to development, less determined to making it a pipeline to ship out our goods and values, more open to making the people we are trying to help the agents of improving their lives.

Perhaps there should be fewer shipments of food and widgets. Perhaps we could concentrate more on stimulation of local research, local development, locally-relevant solutions. There are now people out there with the managerial, scientific and technological capacity to spearhead this kind of activity, and there is now the communications capacity to offer them support from around the world.

THE NEED FOR FLEXIBILITY

We all applauded when the bipolar, international structure that we lived with for five decades collapsed as we entered the '90s, and so we should have. Fewer people live under tyranny as we have traditionally defined it, and the Doomsday Clock has been moved back.

But what was a terrifying and wasteful rivalry did produce a measure of stability that has largely disappeared. We are faced with trying to keep a handle on forces that are often unfamiliar, complex, and unpredictable.

Shifts in trading patterns, the globalization of financial markets, changes in the nature of work, and breathtaking technological advances are creating profound changes to the world

economy. Established economic practices are being challenged daily. We search for models and strategies that will make the future seem less ominous, but we are confounded by the scope and the unfamiliarity of the terrain.

I think we need to be more flexible, and I think the tools are in place to allow us to be more flexible. I suggest that we take advantage of a confluence of two phenomena:

- (a) we are finally recognizing that our traditional development model is not measuring up to the world's needs;
- (b) the capacity that has been developed to transfer massive amounts of knowledge almost instantaneously is transforming the way the world does business.

This confluence presents an ideal opportunity to expand our cooperation with developing countries, to stimulate them to develop solutions to their own problems, through applied research and access to knowledge. I am convinced that these countries **MUST** contribute to global solutions.

I would not use the word **MUST** if our development model could do the job for these people. Perhaps, in a selfish sense, I wouldn't even use the word **MUST** if our futures weren't so intertwined with theirs. But in a world in which economic and ecological borders are disappearing, cooperation is going to be the very essence of enlightened self-interest, in the same way that geopolitical security was in the post-war era.

Nor would I even bother with this concept if there were not the people in place in developing countries to respond to the challenge. But they are there now, many of them in relatively remote places, eager for the kind of input that will help them make a worthwhile contribution toward developing their communities.

In short, thirty years ago we thought that *they* had to smarten up, and we could help them do it. Now we're starting to recognize that we've *all* got to smarten up, and that we have to help guide each other, or societies are going to continue to unravel all around the world. We are trying to make IDRC a vehicle for this kind of symbiosis. But our agency is not big enough to make much of an impact on its own.

INSTITUTIONAL RENEWAL

We need institutional change and renewal, both at the international level and in Canada. Having done my best to renew one international institution and one Canadian institution in recent years, I can tell you that the process can seem a lot like pulling teeth with drug store tweezers. But it can be done.

We must ensure that global institutions such as the UN and its agencies, including the Bretton Woods organizations, are equipped to respond adequately to a world with new needs. And we have to do the same with our Canadian institutions.

We are in the process of making some significant changes at IDRC - particularly in an attempt to assure that good research leads to good application. CIDA is far bigger, and that makes meaningful adjustments more difficult, but I know there are people there committed to refocusing Canada's definition of development.

CAPACITY FOR CHANGE

Over the past decade, knowledge-based industries have climbed to the top of the business world. Information and ideas - and the technology to transfer them - mean economic strength in the corporate world. Those who have access to the products of scientific and technological research, as well as the capacity to understand, absorb, and make use of them, are exerting an ever-increasing influence over the conduct of human affairs.

International development institutions must do their best to ensure that the generation and transfer of knowledge, ideas and technology is not confined to an elite set of countries favoured - at least for the moment - by corporate giants. Excluding the world's poor from our international channels of intelligence will only lead to more poverty, more alienation.

What we are witnessing, at the moment, is a growing gap between nations in terms of their capacities to generate and utilize knowledge. Unchecked, this will create a new global apartheid that will apply both within nations, and within individual societies.

The "North-South" axis of poverty and marginalization is fast shifting to two camps, the "included" and the "excluded." The global marketplace has helped create pockets of "included" people in the South. It is also creating growing and not insignificant pockets of "excluded" people in the North, although the vast majority of the world's undervalued people continue to live in the South.

In the interests of humanity everywhere, governments must do their best to give the "excluded" a change to take advantage of the unprecedented opportunities being created by innovative technologies. It will be both ironic and tragic if the world's exciting new capacity to communicate valuable information ends up polarizing people rather than strengthening our global community.

The opportunity before us is mouth-watering. The worldwide growth of scientific and technological capacity is dizzying. In many countries, even developing countries, the rate of growth in the number of scientists, engineers and other professionals exceeds the population growth - which is saying something.

From an historical perspective, humankind appears to be on the steepest part of the learning curve for understanding of the universe, our plan, and the biological systems of which we

humans are an integral part. Harvey Brooks, distinguished Harvard University professor emeritus of science, says the transition we are undergoing will lead, and I quote:

"either toward catastrophe and social disintegration or toward a sustainably growing world society"

The latter, as you probably know, is a society growing in per capita welfare, with declining population growth.

Brooks argues that the opportunities can be seized and that catastrophe can be avoided *if* R&D is placed on an intensive world-wide footing.

I think you know that R & D is IDRC's *raison d'être* . Our job is to get R&D into developing countries and allow it to unfold in the hands of indigenous people. As I suggested, we try to do that, but we are a very small shop.

What chance is there that governments, and corporations, and NGOs, will create enough R&D opportunities in developing countries to connect these countries to the global technological revolution? I am an optimist, so I will say there is some chance. And I think Canada should do everything it can to try to make that happen. But it won't be easy.

- Approximately 84% of the world's population live in developing countries. At the beginning of the 1990s, less than 5% of global R&D spending took place in these countries.
- Developing countries are home to more than 20% of the world's R&D scientists and engineers, but they often work in isolated conditions, with inadequate infrastructure.

The new technology could change all that. But will it?

The challenge before us, however we go at it, is get developing countries more involved in solving their own problems. Nobody in this room believes that we can do what needs to be done from here. There is still a place for traditional food aid and technology transfer programs, carefully selected. But we're kidding ourselves if we pretend that these countries will be part of the action in years to come if their own scientists and technicians are not integrally involved in sorting out what will work and what won't in various settings.

Problems get solved through ingenuity. We don't have a patent on ingenuity. What we should be doing more of is trying act as catalysts to ensure that "the ingenuity gap" doesn't swamp developing societies. The "ingenuity gap" is how Thomas Homer-Dixon, of the University of Toronto, defines the threat that survival skills will be redefined so quickly and cause such upheaval that some societies will be unable to adapt.

I return to my main theme. The OECD has concluded that the primary objective for

developing countries must be "to help establish genuine *indigenous* science and technology capabilities . . . " Canada already has a comparative advantage, both in terms of its institutions and experience, in this critical field. This approach should be a big part of Canada's future definition of development.

RESEARCH FOR SUSTAINABILITY

If we are going to aim for "sustainable and equitable development," we must have a clear sense of what has been useful and what has been destructive in development efforts around the world.

The impetus for the Earth Summit emerged from a consensus from the global scientific community that the degradation of the world's resource base is threatening our future. Without the evidence of thousands of researchers around the world, the Summit would never have taken place.

Rio launched a worldwide process of searching for better ways of doing things. The research done will be critical, as will application of the research results. We haven't left ourselves a lot of time.

As this process unfolds, we must remember that science and technology are only part of the puzzle, but an essential part. Political will and changes in social and cultural attitudes will also be essential. But without the scientific push, the evidence required for change won't be there.

We must never forget, of course, that while our environment cannot be allowed to die at the hands of our economy, neither can our economy be allowed to die at the hands of environmental rehabilitation. We have to be able to sustain people in the short term as we work toward long-term renewal. We can't afford a dichotomy here. We already have evidence of situations where environmental improvements can lead to economic improvements. We need more evidence, and more efforts to combine the two. The evidence that will lead to these kinds of crucial combinations should be gathered where progress is most important to us, by people with a handle on the needs and aspirations of their societies.

OUR CAPACITY? THEIR CAPACITY? WHOSE CAPACITY?

The capacity to find solutions to global and local problems and to find new, more sustainable ways of doing things is critical, both in Canada and overseas. All healthy societies need the capacity to acquire, generate and use scientific and technological knowledge. To deny any society that capacity is to create some parts of the world where people are able to decide and act independently, and some part of the world where they cannot.

To use knowledge requires "ownership" - not necessarily in a proprietorial sense, but so that people feel they are in control. It cannot simply be applied from elsewhere. It has to be

appropriated and internalized within countries and communities if it is to be applied with any energy. In economic terms, the experience of the Asian "tigers" demonstrates this.

Individuals, communities and organizations need knowledge for their development. Some will come from within the community - and there is increasing understanding of the richness of indigenous knowledge in many parts of the world. Some knowledge from elsewhere must be adapted to fit specific conditions and aspirations. Some must be newly discovered.

The kind of "interactivity" that research and development projects stimulate leads to some depth of understanding, some capacity to apply what is being ingested, often to the benefit of the community.

That is *active* absorption, and active response. You have all seen examples of *passive* absorption, as close as the vacant eyes sitting in front of television sets in African shantytowns, in native Canadian communities, or southern Canadian rec rooms. At some point the passivity becomes destructive - the transfer of information worthless.

Local populations are finally being involved in determining strategies for the management of the Sierra de los Tuxtlas, Mexico's last remaining rain forest. I submit to you that if they had not become involved, the chances of saving the rain forest would be far more remote.

RESEARCH FOR A PUBLIC PURPOSE

Much of what will be required in research and capacity-building terms will continue to require public funding from sources in both industrialized and developing countries, in areas such as:

- support to food systems in ecologically fragile regions
- minimizing the health effects of environmental pollution
- ensuring that technologies used by enterprises are environmentally sound
- preservation and conservation of crucial habitat and interconnected species in places such as coastal and mountainous areas, wetlands, mangrove swamps and rainforests

New approaches to funding are being experimented with, and there has been some success in involving the private sector, particularly in the application of successful research. But I think it would be naive to expect that a great deal of this kind of research will be initiated without government funding in the near future, unless vast numbers of enlightened corporate citizens start popping out of the woodwork sooner than most people expect.

This kind of government expenditure, however, does often prime the pump for international cooperation in science and technology in areas of mutual interest. And as recipient countries mature economically, as Korea has, the cost need no longer come out of the ODA purse.

IDRC: KNOWLEDGE FOR DEVELOPMENT

Parliamentarians have already been briefed on IDRC's efforts in terms of institutional change and renewal in the 1990s. You have heard about our new strategy, staff cuts, new basis for Agenda 21 programming, increased leveraging of funding. The results are encouraging. Some examples of gains to Canada and to developing countries from the type of research support that has been provided are mentioned below. More detail is available in other material.

THE PAY-OFF

Development usually proceeds through incremental gains. An accumulation of gradual improvements broaden people's options and increase their well-being. Third World R&D may occasionally lead to dramatic breakthroughs. More often, improvements fit into a chain of progress.

Some advantages of research funding to Third World Countries:

- Better use of resources: examples include the more careful management of ecosystems, or improved crops, such as the new Goldfinger banana or more disease-resistant beans
- Stronger economic management: including more rational tax systems that enable developing countries to replace protectionist customs duties, which hurt exporters and consumers
- Greater human well-being: such as better access to clean water brought about by IDRC's new "fog-catching" technology, developed in the Andes mountains in Chile.
- Application and adaptation of existing technology: such as giving health professionals in remote areas timely access to information via satellite.
- More experienced, better-trained scientists and stronger scientific institutions.
- A stronger input from various parts of society, such as NGOs and community groups, into discussions of priorities and policies, as encouraged by IDRC.
- Options for political development in sensitive situations: such as economic policy development in Chile during the transition to democracy, and the development of political policy options within the democratic movement in South Africa while apartheid was still in place.

- Links with scientists in other developing countries and in Canada, and stronger grounding for input into global forums: such as support for preparations by African scientists for the conference and convention on desertification.

CANADIAN BENEFITS

Beyond humanitarianism and promotion of a more rational and secure international society, Canadians often receive direct benefits from particular research projects:

- Canadian scientists and institutions benefit from networking with scientists and projects in other countries. Canadians need to be alert to new approaches to problems in a variety of settings.
- Canadian technology is upgraded in the process of scientific exchange: for example, IDRC is building on existing Canadian expertise to develop an electric atlas of Agenda 21, which will allow testing of scenarios for the planning and implementation of sustainable development measures.
- Canada will benefit directly from some of the technology developed, such as water-testing methods for rural communities and the development of improved varieties of canola.

CONCLUSION

The Western world has made a significant impact on developing countries over the past three decades, sometimes for the better, but not nearly as often as we would like. The time has come to recognize that if future successes are going to be widespread, many of them will have to be far more dependent on legitimate partnership.

International Development is not going to be successful unless there are people in place in the Third World charged with the responsibility of helping to it work. These people must believe that they represent a significant part of the process.

We are involved in a global transformation based on the transfer of knowledge. The vision is of a world in which people can live their lives better because they have more access to all this knowledge.

Those who do not participate in the transformation will be even more marginalized, and in the end, even more alienated, than hundreds of millions of people already are today. If the marginalized prove to be the vast majority of humanity, the chaos that some futurists are already predicting will be borne out.

The technological resources are at hand to allow the West to play a significant catalytic role in assisting scientists and technicians in the Third World to take a greater control of their own destiny, and to help produce genuine development on a more consistent basis.

Scientific and technological partnership does not represent a magic solution to the enormous developmental problems that the world faces today. There *are* no magic solutions. But it represents a far more promising path than many of the crumbling roads we have been following.^I