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# Canada's Role in Science and Technology for Development

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## Institute for Scientific and Technological Cooperation

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Princeton Lyman,  
ISTC

As an American coming to Canada I was warned by my brother, who taught a few years at the University of British Columbia, that I should be very sensitive to intercultural communications, and particularly to references about things south of the border. And so I have tried hard in the first few days here to be very much aware of these considerations. I think I have understood what has been said for the last few days, and I will relate my understanding of it to show you that cultural differences are not a bar to communication. On the first day we heard a great deal about the North-South dialogue, which I, of course, immediately understood to be between Canada and the United States. We were told that this is more now an area of negotiation than of cooperation, whereas between North and North, which I assumed was between Canada and Scandinavia, there are mutual interests. We were being urged very strongly — and I found this very interesting — for more South-South cooperation, which I assumed meant between the United States and the United Kingdom. The only thing I couldn't figure out as I sat listening to the talks was why this advice was coming most strongly, not from Canadians or Americans, but from Sabato of Argentina and Nettleford of Jamaica. But I finally figured *that* one out as well because in the changing context of international relations we are now getting back the same kind of friendly advice about our affairs that we have been freely dispensing to the Third World over the last 30 years!

However, let me turn more seriously to an institution in the United States that has not yet emerged but has been planned over the last year. It had its origins in a number of studies in the United States over the last decade but it has drawn particular inspiration from the experience of IDRC in Canada and SAREC in Sweden. I must add to the comments made yesterday about the tremendous reputation that IDRC has and the important precedent it has set in the type of cooperation and the type of operations it has fostered in international development.

In his comments, Nettleford was very perceptive in his understanding of the differences between the U.S. and Canada, and he preempted much of what I would have said about the reasons that the United States was not able to consider an organization quite the same as IDRC. We were, in fact, caught in a dilemma. As one of our critics, a staff member of one of the congressional committees, said to us: "Now the IDRC, that's a real model, but we can't pass that in the Congress of the United States, so let's not do it at all." We didn't take that option; we tried to fashion something we thought was appropriate to the

realities and the strengths of the United States, drawing as much as we could from the particularly impressive operations of other organizations.

The name of this Institute has changed a number of times. It is now, as of the passing of the first half of our Bill by the House of Representatives, the Institute for Scientific and Technological Cooperation, which is our third name in the last 9 months. I think that this time the name will persist.

Let me just briefly tell you the status of this Institute. It was presented to Congress in February of this year as a proposed agency, separate from the Agency for International Development (AID), which is the U.S. counterpart to CIDA, and to be coordinated under yet another new mechanism President Carter has proposed. Basically the Institute would be an autonomous agency devoted to promoting research into critical development problems and building up scientific and technological capacity in developing countries. The House of Representatives has passed the authorized legislation, much to our joy because it is not an easy year in the United States to propose something new in the field of foreign assistance. It has received the approval of the key committee in the Senate, which reported favourably to the floor, and we expect a vote in the Senate in June. Should all this go well, and should the appropriations committees of the Congress not do us too much damage, we expect that the Institute will open its doors on 1 October, which is the beginning of our next fiscal year.

I mentioned that the Institute has two purposes. We hope that they are symbiotic purposes and will be mutually supportive, but there may be some tension and some competition between them. They reflect two concerns. One was that much of the scientific community in the United States has not been mobilized and has not focused much attention on the problems of development. (Some of you, I'm sure, heard at the Jamaica symposium last February that approximately 1% of the civilian research and development in the world is devoted to the problems of the poorest billion people in the world. It was shifting that balance even in a minor way, and shifting the attention of the scientific and technological community of the United States to the problems of development that helped motivate us.) But the second and increasingly important consideration was the recognition that the scientific and technological capacity in the developing countries was a determining factor in progress in this regard.

In planning over the last 9 months, we have moved very decidedly away from the concept of transfer of technology. We hardly ever use the term anymore, although, when I joined, it was tossed around as the basic purpose of the Institute. We don't talk that way anymore because we think less in terms of transfer of technology than in building up capacity to use technology. That may involve transfer, adaptation, innovation, etc., but the primary emphasis is no longer transfer.

Now the Institute will differ somewhat from IDRC in that it is being proposed as the major research and development arm of the U.S. foreign development program. That means that in addition to making grants to build up capacity in developing countries and to develop the countries' institutions for a wide variety of research, the Institute would take over the funding for international agricultural research centres and other long-term research that the U.S. AID program has provided within the United States and abroad. That transfer from AID will constitute next year, in our estimate, as much as \$65 million in ongoing funding. What we have asked Congress for is \$25 million in addition, primarily for research into areas that have been neglected, with emphasis on that research in developing countries.

The Institute hopes to establish a style and a process that are significantly different from other instruments in the U.S. government and are modeled, we hope, on some of the successful elements of IDRC. The programing system we have planned for the Institute is one that emphasizes a collaborative process with developing countries in identifying the problems for research and establishing programs for both research and training. These procedures, which we are now working on, will be the heart of the Institute. There has been in the past in the United States — and some of you will be familiar with some of the AID financing of research in the United States, such as through Title XII, an arrangement with partially agricultural universities in the United States — some tension between financing of research, the ideas for which originate in the United States, and programing of research from ideas and through institutions that are based in the developing countries. That tension will probably continue within the Institute, but we hope to establish a style that places the emphasis on ideas, programs, and institutional links that originate and are maintained in the developing countries.

Let me then talk briefly about some of the main elements of the Institute as we see it. First of all, as I mentioned, it will be a separate agency of the United States government. It will be under a new coordinating mechanism, the International Development Cooperation Agency, which will set overall policy and budget allocations for all U.S. foreign assistance activities. But within that guidance it will be autonomous in program decisions and choices.

Second, it will have a very strong Advisory Council. We debated long and hard about having a Governing Board, and there were many strong advocates in the Congress for a Governing Board looking particularly to the experience of IDRC. We had to trade off two things in the U.S. political context: we wanted very much to have developing country representatives on whatever council or board existed, and, frankly, we did not feel that it would be possible to get through Congress an international governing board for the institution. So we chose, instead, to advocate a very strong Advisory Council, one that must be consulted before the director can make any decision on new programs. Up to one-third of its members would be from developing countries, up to five representatives would be from U.S. government agencies, and the balance would be from the private U.S. science communities, technology, industry, etc.

A third feature of the Institute is that it will have a program for bringing developing countries' scientists and technical experts to work directly on the staff of the Institute through fellowships. The fellowship is not intended to bring someone in to study; it is intended to bring someone in to work directly on the staff of the Institute, to help program the Institute's funds. We are conscious that we might be looked upon as contributing to the "brain drain" by doing so. Up to 10 fellowships a year would be for persons from developing countries, but we hope we can manage that and gain the benefits of having professional collaboration on the identification of problems and the programing of research directly within the Institute.

The next, and a particularly important, feature of the Institute is that it will have a problem focus, not a country focus; that is, it will be organized around a series of critical problems that are agreed upon through collaboration to be major ones for emphasis. The mandate of the Institute extends beyond the so-called basic human needs. It can encompass problems of global concern, and that is particularly important to us because this Institute is based on the concept of mutual interest rather than simply what we consider a slightly outdated concept of foreign aid.

Finally, the Institute is to have a set of flexible procedures. It will be able to move relatively rapidly. We should be able to program funds, sometimes small amounts, to vital, interesting research or capacity-building efforts going on in developing countries. We estimate that up to 20% of our funds will be used outside the problem focus, so we will be able to respond to interesting opportunities that don't necessarily fit within the major problems identified, opportunities to support research in developing countries.

In conclusion, let me just mention what I think will be some of the dilemmas that the Institute will face. I've mentioned one, and that is the tension between focusing on problems that need to be solved — and, therefore, trying to give money to the best researchers for the job — and building capacity, which is a different matter. It's a long-term thing. You are building up, as someone said yesterday, "the right to make mistakes."

Second, there will be some tension between putting research funds through and into high-powered American institutions and putting research funds directly into the hands of developing country researchers. And, finally, there will be some tension between the Institute's attempt to focus on particular global problems, building up a network of researchers from a number of developing countries focusing on a problem, and the more intense need that each country will have, institutional and otherwise, to build up its science and technology infrastructure, for which the Institute will not have sufficient funds.

So these are the dilemmas the Institute will be working at and, we hope, will solve.

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