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Canada's Role in Science and Technology for Development

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J. King Gordon
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Interface between Science and Technology and Socioeconomic and Cultural Development



*Vinyu V.
Vadakan, UN
Asian and Pacific
Development
Institute*

I think I may have a comparative advantage in making a statement this morning. First, I come from a developing country which puts me among the minority here. Second, I am not a member of the science and technology community: I am basically an economist, a social scientist, which leads me to believe that whatever mistakes I may be committing this morning will not easily be caught by the audience. Let me go back to a few points that Dr Sabato rightly raised last night. I will try to emphasize the particular aspects of this session that deal with the international scene and the interface between science and technology and the sociocultural aspects of development. I will also say something about what I think the needs of the developing countries are so that we can have the opportunity of discussing this further. I shall not be looking at the topic of science and technology for international development as a question of only a flow from North to South or as a confrontation, a bargaining between North and South, because we probably should look at science and technology together, from the viewpoints of both the North and the South.

I would like to make the assumption that there is no such thing as a Third World. The Third World is not a homogeneous group of countries. We all know that the North is not homogeneous, and I suggest that the South is even more heterogeneous than the North.

I would also like to point out that this meeting is a discussion among Canadians and I am addressing basically a Canadian audience. Canada is one of the few countries in the world that has not been accused of intellectual colonialism or historical exploitation of Third World countries. I would be making quite a different presentation if I were addressing a different audience. But we should keep in mind that in many industrialized countries, and this probably includes Canada, there is a tendency to be inward-looking, basically because of domestic problems — unemployment, inflation, and many others. These conditions have led to a shift in the feelings of the people in the industrialized countries, and they are starting to ask themselves why they should be doing anything for the Third World when there are enough problems at home.

That is why I suggest that when we talk about the issue of science and technology for international development we should present our case in such a way that the question is not of a one-way flow, of the industrialized countries giving something up for the developing world: it is something that could be

mutually beneficial, that could be advantageous to both parties, North and South.

When we talk about the interface of science and technology and the socioeconomic and cultural aspects of development, we recognize that it is becoming more and more accepted that science and technology are not culturally neutral. This feeling was not there even a decade or 15 years ago. But it is very much there now, and it is increasingly accepted that the sociocultural aspects have to be taken into account when we talk about the transfer of technology, when we talk about the technological progress of the Third World countries.

I would also like to suggest, from the point of view of the Third World countries, that we should not be limiting ourselves to a consideration of the transfer of technology. I think the scientific community of the industrialized world should look into two things: first, the adaptation of science and technology to local conditions, whether economic, social, or cultural, so that the Third World countries get the most benefit from the transfer of science and technology; and second, the development of indigenous technology — in Third World countries historical examinations are being conducted of the technological development that was indigenous to the countries. Both matters could be worked on jointly by the scientific communities of the Third World and industrialized countries.

Many policymakers, administrators, and decision-makers, particularly in the Third World, often complain that scientists and technologists are narrow-minded, thinking that they have problem-solving machinery that can take care of the world's problems. Until very recently policymakers in the developing countries looked at the scientific community as a group outside the development scheme, people who did not want to participate in the development process, who would not understand what development was all about. This is probably due to the training that the scientific community received until very recently and the lack of understanding by that community of the sociocultural reactions that might take place as a result of the introduction of new technology, the lack of understanding of the thinking of basically social scientists.

More recently in developing countries, the scientific community has been trying to participate in policymaking in the area of development. But because of the previous lack of interest or of historical knowledge they are not very capable of communicating with the policymakers.

The other observable trend, however, is that these things are changing. I would say that in the developing world, and this may be an overgeneralization, the trend in the past decade is that the natural scientists, the technologists, have been broadening their interests and making use of social scientists. I think the economists will probably be the first to enter the field, but other social scientists are being more and more accepted. There have been a number of instances in which economists and natural scientists have worked well together, but the latter might find it hard to work with anthropologists, political scientists, and a few others.

If the concept of an interdependent world is accepted, I think it would be very useful if both parties, North and South, knew more about each other. The kind of assistance that the Third World could expect from the industrialized countries would include, for example, help in developing their scientific and technological knowledge. This could probably be done through training programs, whether in the Third World countries or in the industrialized countries.

I should like to leave with you just one more thought. I think it would be useful when making policies for scientific and technological development to look at two target groups in the developing countries. It was mentioned this morning that technological development in the rural sector has not been given sufficient importance in view of the fact that 80% of the people of the Third World countries live in rural areas. Any technological development in rural areas would be most useful. The other target group is women. In Third World countries development has taken place much more in the urban than in the rural areas. In the latter, women constitute more than 50% of the labour force. The technological development of female-oriented tasks is far behind that of any other sector. Therefore, technological development is needed most in the rural sector and in the female labour force of the Third World countries.

Vinyu Vichit-Vadakan is Director of the United Nations Asian and Pacific Development Institute, Bangkok.