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We estimate that approximately \$11 million is required to enhance research communication in this country—that is, to make it possible for researchers to find out what other researchers are doing through journals, meetings, travel, and that kind of activity.

We believe that the council needs about \$43 million to be invested over five years in strategic programming—that is, targeted programming—to assist in the resolution of important policy issues and social problems facing the country. We have a strategic program in which we identify things like management, women and work, family and social change, and a number of the really pressing problems facing the country. We estimate that about \$43 million of target money is required in those areas.

Our five-year plan emphasizes the need which the government is now coming to realize for the strengthening of centres of excellence. We have estimated that about \$20 million is necessary for the council to create the kinds of centres of excellence in this country that are required for the social sciences and humanities.

That is a rough breakdown of what the \$200 million represents.

Senator Stewart (Antigonish-Guysborough): I have four main questions.

You referred just now to the need for doctoral training in the social sciences and the humanities. Is there a good market for people with this training at this time? Are they getting jobs?

Dr. Heintzman: The answer to that is, yes, although they are not all necessarily getting jobs in universities. In the universities the situation varies from discipline to discipline.

There is a question of university demography. As you are well aware, there is a perceived need for an increase in the faculty hirings in the 1990s to replace a professoriate that will be aging and possibly retiring at that time. We believe that a significant investment in training is required for that purpose.

One of the reasons why we launched the CRF program, for example, was precisely to be able to hold in the research community some of the best researchers in the country, in order to provide a pool for hiring in the 1990s.

Senator Stewart (Antigonish-Guysborough): What is the CRF program?

Dr. Heintzman: It stands for Canadian Research Fellowships, to which I referred earlier.

Senator Stewart (Antigonish-Guysborough): Assuming that we do not train our own, are you saying that Canadian colleges and universities will have people in their classrooms, teaching Canadian government, economics and sociology, who will come from faraway places? Is that what is likely to happen?

Dr. Heintzman: I am not sure the council would take responsibility for it, but a number of responsible researchers

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have estimated that in these disciplines there will be a shortfall of manpower available to be hired for Canadian faculties in the 1990s. If our graduate schools are not producing enough persons, I can only assume that hiring will have to come from abroad.

Senator Stewart (Antigonish-Guysborough): It has been argued—and I wonder if you would agree—that it is more important that we should be able to provide jobs for people who have been trained in Canada in these disciplines, than to provide jobs for those trained in engineering, physics or medicine.

Dr. Heintzman: I do not think there is any doubt that that is the case. That point goes well beyond the particular issue of fellowships and training. I think it has to do with the overall importance of research in the social sciences and humanities.

Although it may not be a wise thing to do, technological know-how is something that we can import. We cannot import knowledge of our country, of its institutions and of the social matrix which might make that work.

The Chairman: On that question, is it very easy to import people in particular disciplines? Are they available from all over the world, or is that resource being reduced?

Dr. Heintzman: That varies from discipline to discipline. For example, in the business faculties there would be a significant problem because there is a comparable shortage, or perhaps even a worse one, in the United States. In other disciplines, I think the difficulty would not be so great. We certainly have had experience of a period in which, as a result of a shortfall in training manpower in this country, the universities had to turn to other countries in order to hire, and they were able to do so.

Senator Stewart (Antigonish-Guysborough): When Dr. May appeared before the committee on April 21, he described the program we are now discussing. He said that it affected the natural sciences and the National Engineering Research Council of Canada. At page 20 of the record of that day he said:

There are two channels through which private sector countributions to universities can generate matching dollars for NSERC and for the other granting councils. First, through our university-industry programs which involve joint funding of university research activities by NSERC and the private sector and, second, through R & D contributions or donations directly to the universities without the involvement of NSERC in funding, for example, fundraising campaigns or revenues or endowments which are used for research.

My question is: Do both of those channels apply in the case of your council; and, if so, what is the weighting as to their importance in terms of matching dollars?

Dr. Heintzman: We do not have the university-industry program in the sense that NSERC does. As I mentioned a little earlier, one of the possibilities that we are exploring is new