

cent in 1975, which will show the nature of the expansion of the demand for this kind of manpower arising from the growth of our economy and the expansion of the science-based industries which are using this manpower.

As far as the engineers and scientists who are covered by the survey are concerned, we do not at the moment find much evidence of any under-employment—that is, in the normal sense in which people are out of work; nor do we find much evidence of under-utilization, to the extent there are people not in the labour force. For example, of the people covered by our survey, 97 per cent were either in employment or were occupied as students in preparing themselves for employment, and only 3 per cent were outside the labour force—housewives or retired people.

**Senator Bourget:** How have you got this information, through questionnaires or different organizations? Let us take engineers for a moment, did you get in touch with the Corporation of Professional Engineers?

**Mr. Pankhurst:** The survey was conducted by means of the questionnaire, which a committee member referred to a few minutes ago, being sent directly to individuals, but it was done with the co-operation and collaboration of all the pertinent professional associations—for example, the Canadian Council of Professional Engineers and the Chemical Institute of Canada.

**Senator Bourget:** Our own Association of Engineers do the same kind of work. They send a questionnaire out every year about our salary, what we are doing, in what field we are. I was wondering whether, once again, there is no justification for this.

**The Chairman:** I do not think this is the only area where there is possible duplication. It seems to me there are a lot of agencies within the federal Government which are involved in trying to measure or make surveys on professional manpower in Canada. We have been told, for instance, that NRC has been conducting surveys in this field. The Public Service Commission is conducting, for its own purposes, surveys in this field. The Science Secretariat has been making surveys on manpower supply and demand. Then there is the Science Council. Of course, your department and also the Dominion Bureau of Statistics are interested in this.

**Dr. Dymond:** I do not think they are making any surveys.

**The Chairman:** The census.

**Dr. Dymond:** Yes, the census.

**The Chairman:** But it seems to me at some stage, especially since you lack good people in your own area and this is your specific field of responsibility, there should at least be more co-ordination in the field around your operation than seems to be existing at the moment.

**Dr. Dymond:** I think I would say I would not disagree with that remark. This survey has a very long history, in the sense that it grew out of the Wartime Bureau of Technical Personnel and has been conducted periodically, and it has expanded its coverage somewhat over the years since then. This is the latest version of the survey.

I might say that I think we are somewhat at a crossroads in respect of this survey in that we have to decide whether to extend it to further fields of professional and highly qualified manpower or not, and how frequently to conduct it. To really find out, in the sense you are talking about now, what are the interests of various groups that are concerned with policy and the data. We have to decide whether it should be extended, for example, to supporting groups to scientists, engineers, and other professionals—because the problem of utilizing highly qualified manpower embraces the support that they have and the problem of whether we have adequate and proper ratios of supporting personnel to professional personnel. There is a whole range of questions about the future of data collection in this field.

There is the question of bothering this element of the population with a variety of questionnaires from a variety of sources. People get more and more impatient with filling them in. This was expressed by Senator Cameron, I think. In the department we would appreciate any kind of guidance we can get on work in this area.

**The Chairman:** Have you been interested also in forecasting our future requirements in this field?

**Dr. Dymond:** Yes, I think Mr. Pankhurst has been expressing some very preliminary forecasts we have been making as part of a larger forecast of the total requirements for manpower. I think we have a feeling that in the field of science and engineering and social science you really have to use a common methodology, and have it within a co-ordinated context; that you really have to do some detailed work, field by field, in co-operation with the people in the field, or with associations and professional bodies which know the field pretty intimately.

In other words, we have the feeling that we do not have the resources at the moment to do that detailed work. We can provide some co-ordination and support, and a context in which this work can be done. There needs to be detailed study field by field.