

not to attend very regularly. At the same time in the council it is vital to have coverage of universities for the grant programs. At the present time Dr. Jane is president of Shawinigan Chemicals but he came up through the research route and has attended very regularly and has been a great strength to us. We have found, Mr. Chairman, that it is better if we can keep the council for scientific review of staff, work and policy, and make it as strong as possible from a strickly scientific point of view, and then get some industrial advice by appointing industrial members to our review subcommittees for each division; for example, the chemistry division is reviewed by a committee which over the year has had members from most of the chemical industry on it. There are 500-odd members on the associated committees. That is one method by which we get advice from the industries, and in fact we feel that we get better results by having the council aimed at picking the leading scientific people and getting industrial relations established through, first, working arrangements, since all our people have very intimate relationships with the industry, and, second, through the review committees, and, third, through the associate committees.

*By Mr. Murphy (Lambton West):*

Q. You mentioned that it is so difficult to get them to take continuous part as members of the advisory board and I suppose one reason for that is that so many of the industries in this country are subsidiaries of foreign corporations and they rely on foreign corporations for their research work. Would that be one reason why they lack the interest?—A. Of course it is only relatively recently that there has been any large research effort on the part of Canadian companies. There have always been a few spectacular exceptions. However, this is growing and I think that there is no question but that industrial research is developing very rapidly. As far as the pulp and paper industry is concerned, we have always had very intimate relations with the Pulp and Paper Institute in Montreal and I think through this we have kept in quite close touch with the industry.

Q. Doctor, there are two or three more questions which I would like to ask and then I will give way to some other member. The next question is in respect to grants to universities and scholarships. I wonder, Mr. Chairman, if we could have on the record the grants for scholarships and to universities over the last five years or something like that?—A. Surely.

The CHAIRMAN: We could have that tabulated and put in evidence by the witness on that subject when he is here.

*By Mr. Murphy (Lambton West):*

Q. That will be satisfactory.—A. Would you like this by the federal government as a whole of by the National Research Council, or both?

Q. I think it would be better to have both.—A. It is essential to take grants and scholarships together. I think they mean the same thing.

Q. You mean the grants to universities?—A. Yes.

Q. I would like to see them separated?—A. When we give a grant to a university man, he employs, very frequently, graduate students under that grant, and of the number of graduate students which we support in the universities twice as many are supported through grants than through scholarships. If you take the scholarship alone it gives a false impression.

Q. You mean for those going through university?—A. Yes.

Q. Take them separate, and then take the grants to the university separate. Would that be all right?—A. We only give grants to people; we do not give grants to universities. The direct grants that are given by the federal government do not come through us. Our grants are either to a university professor—