of the pulp and paper industry. Another example is the $35 million titanium-dioxide industry recently established at Sorel to extract titanium-dioxide slag and iron from the ilmenite deposits near Allard Lake. Although titanium metal itself - owing to its light weight and great strength - has a very large market potential, no really good process is available at present for extracting it from ilmenite. However, large expenditures have already been made in an attempt to find such a method and good progress has been achieved. If and when a efficient commercial process is discovered, the value of the Allard Lake deposits will be immensely enhanced. New products have also been derived from phosphoric acid, acetylene and petroleum, and plants under construction will produce many others. The development of such important Canadian industries as synthetic rubber, plastic and nylon and synthetic textiles was initially largely based on foreign research. But now Canadians are playing their full part in the further development of these fields.

The Atomic Energy pile at Chalk River is making a substantial contribution to industrial research with its pile-produced isotopes. You have all heard about the "cobalt bomb" and its contribution to the fight against cancer. Canada is in the forefront of research into the medical applications of atomic energy. In fact, our country is the only nation in the world now manufacturing cobalt bombs on a commercial scale. We are not keeping these discoveries for our own exclusive use. One of the first cobalt bombs we produce will go to the States, and as more become available we should be able to meet some of the many requests that have come to Canada from all over the world. There are many other Canadian contributions to medical science, foremost, perhaps, being the discovery of insulin.

Research carried out by the National Research Council is helping Canada to maintain her leading position in the production of electronic equipment, as in many other fields. A compact and cheap radar set suitable for the use of small vessels has been developed by the Council and is being manufactured in Canada under license by the R.C.A. Victor Co. The development of a simple and inexpensive micro-wave aid to navigation intended for ships too small to have their own radar was announced recently by the Council and is expected to be produced commercially also.

Now these are just some of the things that have been done in Canada. They justify us in saying, I believe, that Canadian scientists have fulfilled remarkably well the trust put in them. The point I want to emphasize has been put very well by Dr. O. M. Solandt, the Chairman of the Defence Research Board: "Experience has shown that we in Canada do first class research and development in almost any field, provided we limit the scope of the job to the scale of our resources." (1)

The Growing Interchange of Industrial Research

To turn now to the second question I raised concerning Canada's dependence on foreign research: does it really sap our own initiative and sense of national achievement to have the benefit of research done elsewhere?

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(1) Address to the Professional Institute of the Public Service of Canada, Ottawa, March 22, 1952.