

ernment's program which can stimulate research. One thing they do, and it is expensive to do it, is to maintain for themselves extensive research facilities like the National Research Council and the other research activities that go on in government. Another aspect of it is contributions to universities, hospitals, medical research and all the rest of it. There is also sponsored specific project research. The Defence Research Board may come up with some idea that they want a particular company to develop for them. It is not a question of size but the question of the individuals concerned and their ability. But apart altogether from these aspects I say there should be a general incentive scheme for general industry, not to the exclusion of these other things but in addition to these other things, and the general approach that I would recommend would be a tax deduction approach as opposed to a system of approval of individual projects.

**Senator Grosart:** Do I understand you are not recommending this tax incentive as the whole Government policy in respect of industrial research?

**Mr. Mackenzie:** No, surely not. This is one aspect of it.

**The Chairman:** Do you think it will be possible also to further encourage co-operative effort in industrial research in smaller companies or smaller firms?

**Mr. Mackenzie:** I do not know about this, I am not at all sure such plans will work. There are certain areas in which it is abundantly clear that the research has to be done in a centralized place. Agriculture is a very good example. You cannot expect an individual farmer to set up a research establishment; that can be done only by some organization. The same applies in fisheries and so on. However, when you get to industrial research, pulp and paper seems to be able to do this but whether it is practical in any other industries I am not at all sure. I have yet to be satisfied on that score. I do not think so.

**Senator Aird:** One of the problems we have discussed at previous meetings is the difficulty in taking inventory in the ever-changing technological scene. Presuming the validity of your point that the Government should have no control over the inception of R and D, for instance in Chemcell, do you think there comes a point when there should be a sharing

of this? Previously I asked why the paper industry was related to the chemical industry. I think there are many self-evident answers, which you have now given. From the Canadian point of view a multiplicity of products is emerging. It seems that in the chemical industry there are overtones of other kinds of facets and usages; certainly arms, ammunition, emanate from the chemical industry.

Given that background and our problem of inventory—I hesitate to use the word “control” because I am not sure that is what the Government is looking for, but perhaps direction; the Government is addressing itself to the problem of direction—do you not think that at some stage, even for a company such as Chemcell, there gets to be a sharing, a disclosure, so that people can know and make up their minds, so that in effect the Government can make up its mind about the priorities you discuss in your brief?

**Mr. Mackenzie:** I quite agree. Chemcell, for instance, at one time had three or four individual projects which had been approved by the National Research Council, of which the Government was sharing about half the cost. They were projects we dreamed up, if you like, which went to the National Research Council who felt they were useful and were prepared to go along with them. That is a highly desirable part of this program. I am saying I do not think the whole of government encouragement for industrial research should be based on that approach, where you need individual approval of the individual projects. I think that over and above that you need this general incentive which we had until a few years ago.

**Senator Aird:** I am presuming the validity of your argument and that at its inception your R and D should go forward, because I happen to agree that there are not too many frivolous research enterprises undertaken by industry generally. However, there gets to be a stage—and I think this is the centre of our problem—of deciding what can be done to effect this common knowledge with the priority that we are seeking. This follows on Senator O'Leary's (Carleton) line of questioning. It seems to me that we do get to that stage.

**Senator O'Leary (Carleton):** Would there be a solution in the company reporting its findings to the National Research Council?