

**The Chairman:** Well, we do not want to know all your secrets.

**Senator Carter:** Mr. Chairman, I hope you will permit me to make a brief preamble to my question. It will be short. I have compiled my own definition of science policy because this is the framework in which I want to pose my questions. Like Senator Grosart, I found the semantics somewhat disconcerting because I found that there was some confusion or, at least, a lack of clear distinction in the minds of the officials, or possibly the minister—whoever worked on the brief—between science per se and science policy, and that accounts for these straw men that Senator Grosart referred to. That confusion is carried over into the ministry's own definition on page 5, where it states that "the Cabinet has now agreed that Federal Government science policy includes the sum of policies in three distinct areas." This is still the sum of policies in the area of science—and I could spend 15 or 20 minutes arguing about science and technology and engineering because apparently science, as they have defined it here, includes technology and includes engineering, which are three entirely different things.

The point I want to make to the minister is this, that you cannot avoid having a science policy. Even though you may say that "science policy" is not a meaningful concept, it may not be meaningful to you, nevertheless you cannot avoid having some science policy because even the absence of a science policy is in itself a science policy. There is nothing in this definition, and there is nothing that I could find in your brief based on your definition to show that we have got away from a science policy by accident, which is what we are trying to avoid and what the whole burden of the committee's recommendation was trying to avoid. But there is nothing here to show me that these policies in these areas are still not policies by accident, and it seems to me that what has happened is that you have taken the policies already in existence and repackaged them in three parcels and called them "science policy in three areas". For that reason I have compiled my own definition of science policy and it is this: Science policy is a planned course of action to acquire and to use scientific and technological know-how in the solving of problems and the attainment of goals in such a way as to secure maximum value for the dollar spent.

Now, Mr. Chairman, the committee conducted an extensive inquiry and it found, amongst other things, a number of shortcomings. In the first place there was no science budget, and it was difficult—impossible—to assess even government expenditures which were in the hundreds of millions of dollars and possibly up to a billion dollars. When it came to the private sector, it was even more difficult. Furthermore, the committee found that the distribution of scientific effort as between government, universities and industry was quite different from that of other industrialized countries and our competitors. We found also that government, university and industry activities were three solitudes—they were not talking to each other. No one of them was familiar with what the others were doing. We also found that there was no inventory, no way to identify what was being done or what overlapping existed. There were no criteria for the assessment or evaluation of projects or for reviews with the object of discontinuing useless projects, or projects that had already outlived their usefulness. There was no planned course of action directed to solving specific problems. There was no assessment of return on our R&D

dollar, and millions of dollars were wasted on R&D, which were chopped off at some stage short of innovation and not carried to the ultimate stage of marketable products.

The committee having found that to be the situation, the new department was set up. If I were minister, this is how I would proceed with the situation. I want to list a number of things that I would do, and I would ask the minister what he has done.

The first thing I would expect the minister to do would be to find out what dollars were available, because that is our framework. The three elements of our framework are dollars available, the problems to be solved, and the organization and procedure for solving them. The first thing would be to find out what dollars are available now and in future years.

Secondly, I would see how the dollars available compared with other industrialized countries, particularly those of our competitors. For comparison, I would suggest the top ten of the OECD countries, or even the smaller countries, Norway, Finland, Denmark and other countries of that nature.

Having identified the discrepancies, I would expect a plan to be developed to correct the discrepancies. That would mean a planned budget over a period of years, to increase our budget to take care of the discrepancies, or to reallocate the distribution of the dollars.

I would then check the distribution of the scientific dollar in Canada among the universities, government and industry, and again make a comparison with the distribution in other countries. Whatever discrepancies were found, I would expect steps to be taken to correct them.

Next I would compile a list of problems or goals. After that I would compile an inventory of the R&D effort in Canada, from which I would make a selection of priorities. For example, one of our big problems today is unemployment; we have seven per cent unemployment. Job creation should surely be a top priority, and one of the best ways of creating jobs is through innovation, new marketable products.

Finally, there would be a criterion for selection assessment, evaluation and review, and discontinuance, if necessary, of projects that are either unnecessary or have outlived their usefulness.

**The Chairman:** I am glad, senator, that you have arrived at your final point.

**Senator Carter:** I want to start by asking the minister what he has done on each of these. What dollars are available now, and what dollars do you see available, say over a period of five or ten years? What is your planned budget, or is there one?

**Hon. Mr. Drury:** There is not one.

**Senator Carter:** There is not?

**Hon. Mr. Drury:** So I have failed.

**The Chairman:** You have failed the first test.

**Hon. Mr. Drury:** That is right. You say that one of the best techniques for job creation is the innovation of new marketable products. Let me recite an experience with which most Canadians are familiar. Largely as a consequence of the government making resources available, we