

described Volume I as, "wrong, dreary, hopeless and a literary disaster". The Leader of the Official Opposition in the other place could keep this quotation in his files and use it in his comments on the next Speech from the Throne. Perhaps the Leader of the Opposition in this place could do the same.

Hon. Mr. Smith: They originated it.

Hon. Mr. Flynn: It was probably taken from a speech of the Leader of the Opposition in the other place.

Hon. Mr. Lamontagne: I had always been under the impression even at the beginning of my long academic career that scientists did not use such language, at least in public, when talking about a serious matter. Moreover, since I contributed to the writing of the English version of the report, I was sorry to learn that my English style was a disaster. I might decide with my colleagues of the committee to release Volume II only in French. Then Dr. McTaggart-Cowan might accuse me of using "joul" which would at least give me some support in certain separatist circles in Quebec.

Hon. Mr. Flynn: That would be something new.

Hon. Mr. Lamontagne: Some other attacks were made, more moderate in their language but which were also rather sterile and difficult to deal with because they were not accompanied by any real attempt at substantiation. I will mention only three of them just as illustrations, and because they are fairly representative of the vocal minority. They came from Dr. Herzberg, an NRC physicist, Dr. Gunning, a professor of chemistry, and Dr. Reuber, a professor of economics at the University of Western Ontario. Dr. Herzberg of NRC has said that:

—the senators perhaps do not understand science or scientists and they certainly do not understand how scientists work or how science is organized.

Dr. Gunning, head of the Department of Chemistry at the University of Alberta, expressed the same view in almost similar terms:

The Senate report falls into all too many parochialisms that scientists associate with the great mass of scientifically illiterate politicians. The present Senate committee undoubtedly knows a great deal about economic theory, but its insight into science and scientists leaves very much to be desired. And, as usual, the void of ignorance is filled with prejudice.

I wonder why these two great scientists did not even bother to appear before the committee. Perhaps their presentation would have contributed to reduce our scientific illiteracy and to fill our void of ignorance, or perhaps what they expect from the illiterate politician is not understanding but more funds.

I would like finally to quote Dr. Grant Reuber, a professor of economics at the University of Western Ontario. He says:

In several ways, I find (the report) a simplistic and tendentious document. I think that it is somewhat lacking in perspective, that it draws a number of

[Hon. Mr. Lamontagne.]

unwarranted conclusions about past performance, that it too uncritically accepts current conventional clichés about science and that it is weak in its analysis.

Professor Reuber, in his capacity as past-president of the Canadian Economics Association, appeared before our committee. I wish he had read again the brief submitted to us by his association and himself before writing these comments about our report. He might have been less olympian and more humble.

I will not dwell on this type of sterile criticism because there was so little of it. I did want to refer to it, however, to show that this is not the way to engage in an intelligent and useful debate on science policy and that those who pursue this line of criticism can do a lot of damage not only to their colleagues but to the cause they are trying to serve. Criticism which appears to be only the reflex response of a vested interest, or the primitive but all too human response of preserving the status quo, and preventing change at all cost, will find little support by a public, which more and more perceives that there are only two alternatives in the face of today's exponentially growing number of problems: change by the organized wit of man, or change eventually wrought by chaos and anarchy.

The criticism brought to bear on the problems of Canadian science policy must be coloured, I believe, by a thoughtful and humble appreciation of the contemporary human predicament, as well as being based on the study of the growing literature concerning science policy. I say this only because if the debate were not to extend in the direction of a thoughtful dialogue, we, as politicians, could use pretty strong and immoderate language too, and this would provoke a serious misunderstanding which would prevent the partnership between the scientist, the engineer, the technologist and the politician, to which we refer in our report as an essential relationship if we want to develop a balanced and dynamic science effort in Canada. As far as I am concerned, as chairman of the committee, I am satisfied that we did not use such language in our report and that we attempted to substantiate to the best of our knowledge our critical analysis.

Before I come to the more serious criticisms which have been made against the report, I should like to comment on another point, raised by Dr. Gunning, and which is basic to the whole discussion on science policy. Dr. Gunning, in his article published in the April issue of *Science Forum*, comments with a sarcastic tone on the distinction made in our report between the search for scientific discovery which we described as being contemplative and passive and the search for new technology which is creative and active.

Dr. Gunning adds with his sarcastic tone, "The foregoing (distinction) is important since it illustrates the level of understanding of science that the committee has acquired after three years of hearings and deliberations." I would be tempted to use the same sarcastic tone and to say that if Dr. Gunning refuses to accept this distinction, he has also a lot to learn yet about the theory of knowledge.