

did in 1958): "We are, in fact, one of the few countries which has recognized the fundamental fact that the control of a scientific organization must be in the hands of scientists," and could add that the National Research Council had "enjoyed far-sighted treatment from the governments of the day which has left it free from many of the normal aspects of government control and interference."<sup>4</sup> Dr. Steacie could have added that this freedom that was allowed in NRC also applied to scientists in other government establishments and to the administration of government support programs for academic research and training.

The concept of the Republic of Science is still popular today among the pure scientists in universities and government laboratories, as can be seen in an extract from a recent speech by Dr. A. E. Douglas, director of the applied physics division of NRC:

[Science] will not necessarily advance in directions suited to Canadian needs. The choice is not whether or not Canada can mould science to suit her particular economic and social needs; this is impossible; the only choice is whether or not Canadian scientists, both pure and applied, will be working in the forefront of the new developments such that Canadian industry and society can take advantage of new discoveries. The proposal of the Science Council that we should shape our laboratories to meet predetermined social and economic objectives is one which will effectively bar many Canadian scientists from the most profitable areas of science. It is the fear that our instructions and our budget will be designed to force us into these backwaters of science which has done much to undermine morale.<sup>5</sup>

It is when the concept of the Republic of Science is proposed as a general strategy for the organization of the national R&D effort that it becomes completely unacceptable. As such, it rejects government intervention in this whole field, except to finance it. This doctrine has the same origin as economic liberalism. Indeed, industrial *laissez-faire* asserts, to paraphrase Polanyi's statement, that "the pursuit of profit by independent self-co-ordinated initiatives assures the most efficient possible organization of economic progress." It is now widely recognized that society cannot rely exclusively on the "independent self-co-ordinated initiatives" of private producers to maximize economic and social progress. Yet the limitations and deficiencies of the Republic of Science are even more serious than those attributed to economic *laissez-faire*.

For one thing, the basic assumption underlying that doctrine is more unrealistic than the hypothesis of pure competition on which the model of economic liberalism rests. In the real world of today the number of researchers is vast and continues to grow and it is not true to say, as Polanyi assumes, that "each scientist keeps making the best contribution of which he is