oscillations could be as severe as those caused by a science policy model frozen in some once appropriate but now irrelevant stance, unresponding to change.

The Committee believes the recent decisions of the U.S. government endanger the development of the science policy "authority" called for by the congressional subcommittee. To Canadian eyes, these decisions look like a retrograde step that might well create a situation similar to what existed in Canada when NRC was reporting to the Minister of Trade and Commerce and was responsible, among other duties which included the funding of academic research, for advising the government on science policy matters. As we showed in Volume 1, that system did not work in Canada, and we doubt it will work in the United States under more complicated conditions.

Whatever future U.S. conditions may be, we conclude from U.S. experience that the co-ordination approach with its central advisory machinery has not significantly affected the decision-making process, nor has it produced an overall science policy in that country. The main deficiency of this approach is that it provides a weak central machinery of a purely advisory nature.

## THE CENTRALIZED MODEL

The frustration induced by the co-ordination approach in the U.S. has fallen heavily on science advisers to the President. Some of them, once they had left their posts, were so patently disenchanted with a purely advisory central organization that they went to the other extreme and publicly advocated a big Department of Science responsible for major civilian R&D programs. Mere co-ordination did not correct the imbalances of pluralism and could not produce a satisfactory science policy, they argued. The alternative was to integrate and concentrate the bulk of government R&D activities and support programs in a special department where a powerful management could enforce the integration associated with true co-ordination. The justification for this second approach was summarized in the report on Centralization of Federal Science Activities:

First, organizational neatness is an appealing goal when the confusing, disordered, diverse and uncoordinated array of science activities is displayed on a government-wide organization chart. Benefits are assigned to tidying up and simplifying lines of control and authority after a quarter century of evolution growth.

Second, proponents of reorganization believe that the necessary funding support can only be assured by combining presently fragmented requests in a highly visible cabinet-level position from which science can compete on more even terms. . . .