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Technology Assessment

Should the U.S. build the SST, the commercial supersonic airplane? Arguments over this question illustrate why members of Congress want to increase congressional competence to assess the consequences of technological developments and proposals. The noise of early airplanes was no more annoying than their payloads were profitable. But now the physiological and social costs of the SST's continent-wide and ocean-wide sonic boom must be weighed against its effects on transportation efficiency and on the nation's balance of payments. Decisions about the SST must be made after the country has awakened to the undesirable consequences of other technological developments: pollution, health hazards to man and animals, killed lakes, lost estuaries, noise, and ugliness. We have long known the benefits of advancing technology. Recently we have become more acutely aware that some of the consequences are undesirable. We know, too, that the increasing scale and scope of technological power increase both the potential benefits and the potential harm. What, congressmen are asking, can Congress do to become better able to assess the consequences of technology?

The question should be considered not as a new kind of problem but as a new example of an old problem. What Congress needs in deciding about the SST or other technological matters is essentially what it needs in deciding about taxes, military affairs, education, or other matters with which it deals: ability to ask the right questions and ability to evaluate critically the information it receives from advocates and opponents of proposed actions.

The necessary competence cannot be secured by assigning technology to a committee of each House, as agricultural or tax matters are assigned; the uses and the effects of technology are too pervasive. So other solutions are being discussed: special committees, a joint committee of the two Houses, an ancillary agency similar to the Science Policy Research Division of the Legislative Reference Service, and others (*Science*, 18 August).

Last month the House Committee on Science and Astronautics met with ten invited consultants for a seminar on technology assessment. The participants did not try to agree on the means to be adopted, but they did agree that Congress needs a greater competence of its own in order to weigh and balance the arguments of the advocates and opponents of a particular proposal and the work of the many public and private bodies that are already engaged in some kinds of technology assessment.

Two characteristics of the new means—whatever form it takes—seem clear. First, the professional competence required will not be confined to technology itself. Social and economic and even moral and esthetic values must be considered. The relations of the federal government with industry, with states and communities, and with other nations will sometimes have to be considered, and new legal or social policies may be necessary. Broader wisdom than is to be found in any one specialty will be required.

Second, the new agency will inevitably become involved with national goals. Congress is not alone in setting national goals, but Congress has great influence in determining priorities and time schedules and in allocating national resources. If decisions on these matters are to be made realistically, attention must often be given to the state and trends and potentialities of technology. Moreover, at least some of the criteria for evaluating a technological proposal must be based on analysis of how it is likely to support or to interfere with the attainment of accepted goals. Congressional assessment cannot ask only, "Where is technology taking us?" but must also ask, "How can technology help us get where we want to go?"—DAEL WOLFLE