

an extraterrestrial civilization would be so enormous as to justify the expenditure of substantial efforts," says one of its resolutions. The resolution also points out that less ambitious projects can be initiated at modest cost. The equipment could also be used for many other studies in radio astronomy.

So important is the search, the conferees felt, that it should be done in the name of all mankind and be subject to international coordination. The con-

ference suggested formation of an international committee to coordinate national programs and promote progress and named Frank Drake (U.S.A.), N. S. Kardashev (U.S.S.R.), Philip Morrison (U.S.A.), B. M. Oliver (U.S.A.), R. Pešek (Czechoslovakia), Carl Sagan (U.S.A.) and I. S. Shklovsky, G. M. Tovmassyan and V. S. Troitsky (U.S.S.R.) as an interim working group.

Why should any civilization look for

others? Says Sagan: "All they need is one Margaret Mead."

If another civilization were found and a message sent, it might be centuries before a reply was received. "It's not what you might call snappy dialogue," quips Sagan. But Seeger expresses the feeling of many, when he says he would be content if the discovery were made and a message sent in his lifetime. His great-great grandchildren might receive the answer. □

### NRC auto emissions study: Scope too limited?

Scientific advisory committees have frequently been criticized for being more responsive to governmental and corporate powers than to the public interest. A closely related issue is whether committees often are too narrowly restricted in scope.

Last year, for instance, a National Research Council committee on sulfur oxide pollution summarized the technological problems in admirable detail. But it made only a tiny venture into discussing the more serious problem of funding for research and development—and there it succumbed to some corporation shibboleths that would not have stood up for a moment if a knowledgeable economist had been present (SN: 7/31/71, p. 82).

The automobile and its role in American society is a far broader question than sulfur oxide pollution. But the NRC has now announced the appointment of what appears to be yet another narrow-purpose committee—to study the technological feasibility, or lack thereof, of auto companies' meeting 1975 and 1976 emission standards.

The committee was established under the 1970 amendments to the Clean Air Act, the same ones that established the emission standards. NRC spokesmen maintain that the limited function of the committee is strictly according to its limited mandate from Congress. But the fact is that NRC and its parent, the National Academy of Sciences, could, if they wished, establish their own mandate, one that would go far beyond the one supplied by Congress. In fact, it is valid to ask whether the new committee even fulfills the Congressional mandate. Whether the auto companies can meet the emission standards is surely in part a technological question; but the larger and more important question certainly will be: Can money be found to pay for the expensive emission-control devices, and, if so, who will pay,

consumers or the auto companies? Desperately needed here is a study of some possible tradeoffs. For instance, would halting annual style changes be a viable way of paying for the emission controls?

The committee's membership right now appears to be predominantly technological. Of its 15 members, 8 are from industry (although none are from the automobile industry), 5 from academia (mainly from technologically oriented departments) and the rest from entities (such as Stanford Research Institute) somewhere in between.

There are no economists. But, says J. E. A. John, executive director of the committee, economists may be appointed later. "The broader economic issues are of concern to the committee," he says. The committee will make no "value judgments"—annual style changes vs. emission controls, for instance. But, he adds, "Cost is a prime consideration, and I think all the facts will be laid out."

**Committee chairman** E. L. Ginzton of Varian Associates was unavailable for comment, but J. A. Hutcheson, retired Westinghouse vice president and vice chairman of the committee, insisted that the committee, in general, brings together "a combination of talents pertinent to the problem at hand." And he, too, claimed there would be full consideration of economic factors.

Hutcheson referred back to the "mandate" of the committee. "The requirements imposed upon us by Congress and by the Environmental Protection Agency [which will make decisions on extension of deadlines for emission controls] are the ones we are dealing with," he says. Thus it is difficult to tell from the two committee officials' statements to what degree economic factors will be given consideration. If an economist should be appointed to the committee, it will be significant whether he is one critical of conven-

tional corporate values—such as Harvard's John Kenneth Galbraith—or one who is a spokesman for such values.

Urgently needed is a systems study, conducted by representatives of *all* relevant disciplines, including the social sciences, of the effects of the automobile on American urban life. Such a study could outline the real choices. Conceivably one of them would be to restrict autos in urban areas and substitute urban mass transit. Such a choice might make the emission controls, although desirable, of far less importance than now.

"I'd be all for this kind of study," says Hutcheson. He adds that Academy is "just in the process of getting cracking" on creating a broad-based Division of Transportation, which could make such studies.

But it may be that Congress will have to be the catalyst. Scientific advisory committees traditionally have advised executive agencies exclusively, often leaving Congress in the dark—especially when study results were controversial. Although Congress established the vehicle emissions committee, an aide to Sen. Edmund Muskie (D-Me.) says the provision for the committee slipped into the 1970 amendments during a conference committee hullabaloo over deadlines for emission standards, and the Senate representatives let it become part of the bill in order to buy other concessions from House conferees. But Muskie and others, says the aide, will certainly now insist the committee's work be meaningful.

Congress and the people are demanding a larger role in technological decision-making. The NRC bows to this trend in a Sept. 21 invitation to the public to comment on the auto emission studies. But it admonishes prospective comment writers that the "Academy is concerned solely with the 'technological feasibility' " of emission controls. □