

COMMENTARY

As a consequence of the reorganization of the National Research Council, the Division of Engineering has been dissolved and the Transportation Research Board has been transferred to the new Commission on Socio-technical Systems. As suggested by its name, the commission will concern itself with systems such as transportation, building, communications, community facilities, and the like. To help in its assessment of the existing units that it has inherited, the commission is attempting to determine the long-range objectives of each unit and to this end has asked for a brief description of what the Transportation Research Board would like to do if there were no restraints of funds or time.

Our response to the commission is reproduced here in the hope that readers of Transportation Research News will send along their ideas as to how TRB might be more effective in the future. The following paragraphs are from our letter to the commission.

I believe such objectives would be stated by our Executive Committee and by our present and likely future sponsors as a continuation and possible expansion of our present objectives. These can be paraphrased from our existing purpose and scope:

To advance knowledge concerning the nature and performance of transportation systems through the simulation of research and dissemination of information derived therefrom, and to give attention to all factors pertinent to the understanding, devising, and functioning of transportation systems and their interrelationships with other aspects of society.

Within the broad context any subject dealing with transportation and its interaction with society can be addressed. With our recent name change from the Highway Research Board to the Transportation Research Board, we are as you know already reaching out to seek means to fulfill our broadened scope, primarily drawing in air, rail, barge line, and pipeline specialists, and to address their problems as they are part of the overall transportation system. In this respect, however, I see two restraints:

1. Not all transportation-societal problems are appropriate for NRC consideration; and
2. Some appropriate problem areas in the transportation field are being well considered by other governmental or nongovernmental agencies, and duplication would serve no one well.



There are, of course, scores of areas in which our committees would like to have resources with which to broaden and extend our activities. Similarly, we have identified specific problems that we feel would respond to research in the 10-year time frame provided that an additional \$100 million could be made available now and provided that the institutions to do such work could be expanded or developed. Solutions are desperately needed today to problems related to the maintenance and upgrading of existing transportation systems, the use of energy and impacts on the environment, and the public good as to urban form and land use and as to the allocation of natural resources. I would guess that roughly half of the research could be classified as physical and the other half as socioeconomic.

Perhaps the most general problem—whose solution, although seemingly impossible within a decade, is one in which we would like to have resources for meaningful participation—is the formation of a national transportation policy that includes policy for the nation and for regions and subregions within the nation. Such a policy can be formulated only through the construction of and careful consideration of the output from a massive model of the overall system of transportation of people and goods. The model must include consideration of the interaction of transportation with social and economic needs. Although such models have been attempted with some success, they cannot yet be effective because of an abysmal lack of data. We simply do not know where people are traveling and why, nor do we know what goods are being shipped and where, by what mode, at what cost, and during what time. Do not be misled by those who claim that we do have this information (they usually cite the 1 percent railroad waybill sample). We do not.

An excellent study by the Office of the Secretary of the U.S. Department of Transportation released in May 1969 pointed to the need for these kinds of data and estimated that to collect them within 5 years would cost \$36 million and to maintain them would cost \$6.5 million per year (in 1969 dollars). The point is that we cannot evolve a rational transportation policy for the future in the absence of knowledge as to who and what is going where and why on the present system, nor can we apply the kinds of benefit-cost analyses that would be necessary to test possible trade-offs in support for one system or mode over another.

One of the many highly valuable products of a systematic transportation policy (based on rational models working with factual data) would be complete information (social, economic, convenience, impact) on alternative systems for urban people and goods movement. Rational choices could be made among available alternatives such as improved highways, dedicated bus lanes or streets, rail transit, and new technology and among alternative strategies such as staggered work hours, rearrangement of urban patterns, congestion pricing, and the like. Such decisions are now influenced more by emotion and special-interest politics than by reason.

One would be starry-eyed to believe that any policy or any models however well-conceived would have universal acceptance, but we believe that this is the way the nation must go and TRB believes it could have an effective role but one that can hardly be touched within our present resources.

—W. N. Carey, Jr.