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## Scientists and Engineers in the World of Lawyers, Legislators, and Regulators

In a technological society, the professional roles of many scientists and engineers become inextricably intertwined with those of lawyers, legislators, and regulators. As the use of technology, particularly high technology, expands, increasing numbers of scientists and engineers will become professionally involved in the legal, legislative, and regulatory affairs of the nation. Advances in science and technology raise societal issues related to the quality of life of this and succeeding generations and to the fundamental rights of individuals.

Society depends on scientists and engineers to carry on the investigations that lead to an enhanced understanding of ourselves and our physical, biological, social, economic, and political environment, and to enhanced capabilities for developing technological options and developing or modifying social, economic, and political systems. Society also depends on them to provide specific scientific and technological information essential for legislative, regulatory, and legal actions. I share the concern of many scientists, engineers, lawyers, legislators, and regulators that scientists and engineers who become so involved be prepared to fulfill the responsibilities of the roles they accept, and that lawyers, congressmen, and regulators endeavor to cast scientists and engineers in roles that are appropriate. The counterpart of this concern is that lawyers, legislators, and regulators have the background to understand the nature of scientific knowledge and the process from which it is derived.

These are, of course, not new concerns. AAAS national meetings frequently include symposia on related issues. At the annual meeting held this year in Detroit there will be at least three such symposia: The Role of Scientific Evidence in Policy-Making (27 May), Expert Claims and Social Decisions (27 May), and Science and the Federal Rules of Evidence (31 May). The first, arranged by Jurgen Schmandt, from the Lyndon B. Johnson School of Public Affairs, University of Texas at Austin, will address the use of evidence derived from the natural sciences. The second, arranged by Rachelle D. Hollander, National Science Foundation, and Theodor D. Sterling, Simon Fraser University, will emphasize issues of professional ethics and accountability. The third symposium has been arranged by the National Conference of Lawyers and Scientists, an organization established in 1974 by the AAAS and the American Bar Association to facilitate communication among lawyers, scientists, and engineers.

I have been involved with the American Chemical Society (ACS) in activities related to the implementation of the Toxic Substances Control Act. The ACS participation is designed to assist the Environmental Protection Agency in evolving regulations that are consistent with available knowledge, and it involves bringing together scientists and engineers with the expertise to provide scientific and technological information and critically evaluate proposed regulations. In this low-profile involvement, scientists and engineers are comfortable and effective.

The adversarial environment of courts and some hearings is a different matter. In these high-profile roles, scientists and engineers are frequently uncomfortable and sometimes ineffective. Misadventures do occur. The barriers to effective participation in such situations are not well understood, and it might be worthwhile considering the formation of a section of AAAS devoted to the analysis of this and related matters.

Misadventures in the utilization of expert witnesses deprive society of the contribution these witnesses could make and may contribute to a negative public image of scientists, engineers, science, engineering, and technology. The scientific and technological community cannot walk away from its responsibility to participate in the resolution of societal issues.—ANNA J. HARRISON, *Mount Holyoke College, South Hadley, Massachusetts 01075*