

Section I

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The Office of Technology Assessment is coming of age. Its record of producing authoritative, even-handed assessments of the social, environmental, economic, and political impacts of technological applications is increasingly attracting favorable attention, not only from Members of Congress, but from other Government and nongovernment organizations, private enterprise, the press, and from foreign countries.

Many changes have taken place at OTA during 1978: new quarters, new management, new organizational structure, a new method of establishing project priorities, a new ONE-PAGER digest of each report issued, greater outreach, and dinner-seminars. I'll touch briefly on these and other items of special note in this statement.

OTA moved into its new quarters at 600 Pennsylvania Avenue southeast of the Capitol just as I assumed the job as the second Director of OTA, succeeding Mim Daddario. The new offices have made it possible for staff members to work together more effectively and thereby bring their interdisciplinary skills to bear on our broad, comprehensive assessments.

When the year began, 24 members of the staff of 130 were reporting to the Director. Since then, OTA has been restructured into three major divisions, each headed by an assistant director who reports to me.

The three divisions have been designated as: (1) Energy, Materials, and Global Security; (2) Health and Life Sciences; and (3) Science, Information, and Transportation. The program areas which fall within each of these divisions are shown in the chart on page 75.

Lionel S. (Skip) Johns, formerly Energy Program Manager at OTA, was promoted to Assistant Director in charge of the first division. Dr. Joyce Lashof, a medical doctor who was formerly Deputy Assistant Secretary at the Department of Health, Education, and Welfare and, prior to that, Professor of Preventive Medicine at the University of Illinois and a member of the Governor's cabinet in Illinois, was named Assistant Director for the second division. A geophysicist, Dr. Eric H. Willis, accepted appointment to head the third division. He had been Deputy Assistant Secretary for Energy Technology at the U.S. Department of Energy, Assistant Administrator for Institutional Relations at the Energy Research and Development Administration, and Director of Nuclear Monitoring Research at the Department of Defense. Dr. Willis also has had experience directing research at the University of Cambridge and in industry as Vice President and Director of Research for Teledyne Isotopes.

This major reorganization was made easier by the increased authority given to the Director by the Board. Their cooperation has been essential in redirecting OTA's energies.

Renewed emphasis was placed on staff training. An employee orientation program has been developed using videotaped films featuring experienced OTA professional staff members who describe the overall OTA process. In-house training sessions are conducted to orient employees on the management of an assessment

project. Biweekly seminars were established to permit project leaders to submit the status of their current projects to the review of their peers. A senior editor was hired to upgrade the quality of our reports. To keep our OTA family better informed, a monthly newsletter was launched.

The OTA Congressional Fellowship Program, established in 1977 with the appointment of three Fellows in the health area, was broadened to include other disciplines. This year eight Fellows, selected from a nationwide competition, were assigned to various program areas. Among the disciplines represented are: physics, economics, oceanography, biochemistry, ecology, psychology, and the law. The Fellowship Program is designed to provide opportunities for individuals with outstanding ability in research or management to gain a better understanding of the way in which the Congress establishes national policy related to science and technology areas.

Until this year, nearly all assessments undertaken by OTA have been in response to requests from chairmen or ranking minority members of congressional committees. In an effort to fulfill to a larger extent our mandate to provide Congress with “early indications” of the beneficial and adverse impacts of technological applications, we undertook in the spring of 1978 a major program to develop a priority list of issues of critical concern to the United States and the world. From this list we will select items for specific project proposals for Board approval.

This priority-setting exercise involved soliciting suggestions from many sources in the broad community—from members of the Technology Assessment Board, from the Congressional Research Service and the General Accounting Office, from congressional committee staffs, from businesspeople, academicians, futurists, private citizens, as well as OTA staff members. The Technology Assessment Advisory Council played a principal role in the development of the list—defining criteria for selection, proposing projects, and reviewing and critiquing the list.

The more than 1,400 responses that were forthcoming were evaluated, summarized, and sorted out according to these criteria:

1. Does the assessment involve the impact of technology?
2. Is there congressional interest?
3. Does the technology have a significant impact on human needs and quality of life?
4. Would the assessment provide foresight?
5. Can OTA do the assessment?

By the year’s end, OTA’s first official priority list of 30 items had been compiled with short writeups on each one. The list appears on page 69 of this report. All items on the list are emerging technological issues that Congress is likely to face and that involve decisions affecting the lives of this and future generations. It is planned that the list will be revised at least annually.

To improve OTA’s ability to respond to the needs of congressional committees, we have inaugurated the procedure of meeting regularly with the staffs of all committees. By year end, we had pretty much completed the first round of such meetings. Out of the closer relationship resulting from these meetings, OTA’s important responsibility to committees can be more effectively met.

Seventeen new projects were initiated this year. The new projects cover a wide range of technological applications and take OTA into several new areas—telecommunications, the military, genetics, world trade, and space. A complete list of on-going assessments is given on page 86.

A major broad study of the national R&D enterprise, which was previously directed by the Technology Assessment Advisory Council, was reassigned to the Director and focused on three studies: "Federal Regulations and Technological Innovation," "Technology and Local Development," and "The Impact of Technology on Inflation, Productivity, and Employment."

Fifteen assessment reports were completed during 1978. They are listed on page 87.

To assure that projects approved by OTA's Board are delivered on time, within cost, and with high quality and technical excellence, new management and budgetary accountability procedures have been set up. They require that once an assessment project budget has been approved by the Board, any significant change in the budget or time schedule must be taken back to the Board for approval.

OTA continued to be limited during 1978 to a ceiling of 130 salaried employees, plus 10 additional professionals for the alternative energy futures assessment. This provides for about 65 professionals for assignment to the assessments—too few to properly handle the many projects in widely diversified fields we are asked to cover. Each project leader with only one or two other professionals must define the project, sign up and work with an advisory panel of 15 to 25 experts from around the country, hire and supervise consultants and contractors, integrate the inputs from many sources—including other Government agencies—write the reports in an even-handed, comprehensive, authoritative, and readable manner, and maintain close contact with the several congressional committees interested in the project.

In all, OTA obtains assistance from more than 600 advisory panelists, 140 consultants, and numerous contractors. I have been gratified to observe the high percentage of experts in the private sector who are eager to accept when invited to serve on our advisory panels. They describe OTA as an effective conduit for providing Congress with objective, nonpartisan information, and find participation in our holistic, long-term, integrative assessments a valuable learning experience, one that better fits them for decisionmaking in their own field. Thus, in the process of fulfilling its statutory assignment of advising Congress, OTA also appears to be speeding and strengthening the development of more holistic approaches to issues and problems in our pluralistic society.

Another important source of expertise, particularly on social values and attitudes, is obtained through broad public participation—providing citizens' groups and individuals who are likely to be affected by a technological application to have inputs to OTA's assessments. This year we conducted training courses and workshops for OTA staff members to help them better understand both the rationale and the methods of public participation, to define its objectives, and to provide the staff with adequate tools for carrying out this part of our assignment.

In appreciation of the great demand for the time of Members of Congress, we developed the technique of providing them with an OTA ONE-PAGER for each

report we issue, so that they and their staffs can see in 2 to 3 minutes what the report covers. This approach has markedly increased the awareness of our product and the demand for it.

The composition of the Technology Assessment Board has changed during the year. Senator Adlai Stevenson of Illinois was appointed to fill the vacancy left by the death of Senator Hubert Humphrey. Two others—Senator Clifford Case and Congressman Olin Teague—left Congress at the end of 1978 and were replaced early in 1979 by Senator Charles Mathias, Jr., and Congressman John Dingell.

One member of the Technology Assessment Advisory Council—Dr. Eugene Odum—resigned in 1978. The Board replaced him with Dr. James Fletcher, Whiteford Professor of Technology and Energy Resources at the University of Pittsburgh, and formerly Administrator of the National Aeronautics and Space Administration.

To provide better and closer communications with the Board members and committee staffs as well as the Technology Assessment Advisory Council, the OTA Liaison Office was established.

The extensive oversight hearings on OTA, which were begun in 1977 by the Subcommittee on Science, Research, and Technology of the House Committee on Science and Technology, were concluded in 1978. In its report, *Review of the Office of Technology Assessment and Its Organic Act*, the subcommittee summarized its hearings as follows:

OTA has been set up to do a job for the Congress which is: (a) essential, (b) not capable of being duplicated by other legislative entities, and (c) proving useful and is already relied upon. OTA should retain its basic operating method of depending to a large extent on out-of-house professional assistance in performing its assessments. Continued Congressional support for OTA is warranted. *

The report does point to some problems that have been experienced during OTA's startup phase and makes recommendations on how they might be dealt with by the Board, Director, and Advisory Council. These recommendations will provide basic guidelines for OTA's future direction and development. The subcommittee's chairman, Rep. Ray Thornton, observed upon issuing the report that the survey "doesn't leave much doubt that the Office is a valuable asset to Congress." We are encouraged by this evaluation of OTA's performance to date.

A series of dinner-seminars has been inaugurated at OTA to provide an informal setting in which Members of Congress, senior congressional staff, heads of congressional and executive agencies, and leaders from the private sector can interact. These dinner-seminars are funded by a trust account to which OTA staff members contribute honoraria received for lectures, speeches, and articles. During 1978, speakers at the seminars, included Joseph Slater, President of the Aspen Institute for Humanistic Studies; Dr. M. King Hubbert, energy expert and former research geophysicist with the U.S. Geological Survey; and Daniel Bell, Professor of Sociology, Harvard. One seminar in the fall centered on public interest organizations and

*Subcommittee on Science, Research, and Technology, House Committee on Science and Technology. 95th Cong., 2d sess., report, *Reviews of the Office of Technology Assessment and Its Organic Act*, 1978, p.] 03

provided a forum for leaders of these organizations to bring citizens' views to the attention of decision makers.

None of us knows what the future will be like. But we can be sure that the decisions made today in Government and industry regarding the options for technological applications of our vast scientific knowledge will greatly influence the quality of life for this and for future generations. OTA has the assignment of providing guidance to Congress on the support, management, and regulation of technological applications, as well as advising Congress on the adverse and beneficial impacts of technological applications. In addition, OTA has the responsibility for advising Congress on alternative strategies for achieving societal goals other than technological ones. OTA needs to pose policy options for Congress in such a way as to make explicit how those options are likely to influence the course of technological change.

This assignment is both demanding and rewarding, and one in which members of the OTA staff derive much job satisfaction.

The growing need to restrain the growth of the Federal budget calls for increased attention to improved decisionmaking so that the dollars are expended more effectively. OTA has the potential to be a valuable tool in helping Congress to choose the right goals and programs for most effectively spending hundreds of billions of Federal dollars. In my view, the investment in OTA will provide a very high return to our country and especially to our children and grandchildren.

Working together with the Board and Advisory Council, with the other congressional support agencies, and with the committees of Congress, OTA anticipates in the year ahead further significant gains in providing Congress with the kind of authoritative, objective information required for sound decision making.



RUSSELL W. PETERSON
Director