

States. There is a similar division on the possibility that the Europeans will impose nontariff barriers such as licenses and taxes on information operations which would fall heavily on U.S.-based companies.

The picture is likely to be clearer when the Council of Europe draft is finished—possibly at the end of the year—and the OECD guidelines completed. The OECD is aiming to have its final draft by next summer. If accommodation cannot be reached on reciprocity in data protection, there could be trouble.

State and Commerce department officials in this country have been negotiating on the transborder data flow issues, with American computer and software industries and their trade associations providing advice and, for the most part, urging the government to take a firm line.

Some edginess has developed in the relationship. Invitations from government to industry to provide information on transborder data flow restrictions have produced few citations of chapter and verse. This may not mean, however, that companies operating abroad have felt no pressure. As one government official said, "If you ask the government to help you, the biggest risk you run is that you may get it." What he meant was that intervention by U.S. officials may offend host country officials and prejudice future negotiations for the company. In addition, some companies shy away from

confiding sensitive information to the U.S. government which, in some instances, has been known to slip up in protecting that kind of privacy.

The transborder data flow controversy has another major dimension. Less developed countries (LDC's) complain that the industrial nations, especially the United States, have kept the LDC's in a state of information dependence both by pricing and contracting policies on computers and related equipment and by denying them access to the technology which would allow them to establish their own information technology base.

The grievance is linked both to the LDC's discontent over technology transfer in general and to a broad set of issues which they regard as collectively constituting "information colonialism." The LDC's see Western global domination of news gathering and dissemination and control of communications networks as blocking economic development and threatening political and cultural self-determination in the LDC's (*Science*, 11 August 1978).

Unesco has provided a forum for the LDC's to develop their case, and sentiment for collective action by them to apply pressure on industrial nations to meet LDC needs has gathered some momentum. At a recent meeting of the Intergovernmental Bureau for Information in Spain, for example, some African nations sought to lay the groundwork for a

regional computer industry. And discussion of applying of direct pressure on the industrial nations by restricting the flow of data across LDC borders was serious enough for delegates to vote a formal study of this strategy.

For the U.S. government, transborder data flow issues present complex problems for international negotiation. Existing U.S. domestic laws affecting data protection afford negotiators little room for maneuver and Congress has not assigned a high priority to action on privacy questions either domestic or international. The importance to the U.S. economy of the information technology industry here maintaining its remarkable momentum is at last winning wider recognition. And the transborder data flow question will provide an important test of American ingenuity and determination for both industry and government.

At the same time the United States can hardly ignore the fact that European nations, and Canada perhaps even more, regard what they see as an information technology gap as a threat not simply to national pride but to national survival. And U.S. relations with LDC's increasingly center on the American control of technology which the LDC's both resent and wish to share. U.S. diplomacy, to put it briefly, then must learn to deal better with the difficult fact that, to update Francis Bacon, information is power.

—JOHN WALSH

"Radwastes": Leading Policy Role Recommended for Science Adviser

The radioactive waste management issue arouses high controversy, but an ad hoc "radwaste" discussion group drawn from industrial, environmental, and academic circles is demonstrating that a surprising degree of consensus is possible at least on one important point. It is that federal policymaking in the radwaste field has lacked credibility and effectiveness under the leadership of the Department of Energy (DOE) and should be reassigned, at least temporarily, to the science adviser in the Executive Office of the President.

The group is pushing this recommendation hard despite the fact that it is

strongly opposed by science adviser Frank Press as well as by John M. Deutch, DOE's director of energy research and head of the Interagency Review Group (IRG) on waste management established last March under a presidential directive.

The radwaste discussion group was put together by Robert W. Craig, president of the Keystone Center for Continuing Education at Keystone, Colorado, and former head of the Aspen Institute for Humanistic Studies. Craig, who has had a long-standing interest in the rad-waste problem, invited about 15 persons to take part in the group's first 2-

day meeting, held at Keystone in August.

They included some prominent industry figures, most notably Alexander Trowbridge, Jr., vice chairman of the board of the Allied Chemical Corporation (and a former Secretary of Commerce), and James Buckham, president of Allied/General Nuclear Services; also present were a number of academicians including Dorothy Zinberg and Irwin Bupp of Harvard and Charles Hollister of the Woods Hole Oceanographic Institution, together with two environmentalists prominently involved with radwaste issues, Terry R. Lash of the Natural Resources Defense Council and Peter Montague of the Southwest Research and Information Center in Albuquerque, New Mexico.

Members of the group wasted little time arguing over their differences and, in an amicable manner, got down to discussing what could be done to move radwaste policymaking forward as a matter critical to the survival of the nuclear industry. The upshot of this August meet-

ing was that a letter was dispatched to Press and Deutch, which said in part:

... the President should announce the establishment of a decisionmaking procedure that is widely seen as credible. Creating a central focus within the federal structure is crucial to establishing a credible procedure. In our opinion, no existing agency outside of the Executive Office of the President, unfortunately, could be the central focus. Creation of a wholly new agency for the purpose of centralizing federal waste management authority probably would lead to intolerably long delays in light of the desirability of moving rapidly to improve programs. Therefore, although we recognize that officials in the Executive Office usually do not have so-called operational responsibilities, we urge consideration of designating the presidential Science Advisor as the senior policymaker and overall coordinator of federal activities on radioactive wastes. No other alternative appeared to be satisfactory to those at the Keystone meeting.

The group, which reiterated the above recommendation in a second letter to Press and Deutch after meeting again in mid-September, also proposed that a science advisory committee on radwaste management be established, with its members drawn from active research scientists from industry, academe, and government who have special training relevant to reprocessing and waste isolation in geologic media. "Our impression is that to date too few active researchers have been involved in the government's programs for management and isolation of radioactive wastes," the Keystone group said.

Indeed, the crux of the credibility gap as the group seems to perceive it is that, after more than two decades of effort, the waste management program carried

on by the Atomic Energy Commission and its successor agencies has continued to place primary emphasis on geologic disposal of spent fuel (or high-level wastes from fuel reprocessing) in salt formations in the absence of a scientific consensus that this is the way to go. Much of the problem is attributed to a lack of openness and peer review in technical decisionmaking (although the Keystone group credits Deutch and the IRG with releasing working papers and drafts for review and making "strong efforts . . . to obtain outside advice and assistance"). Besides calling for the creation of the science advisory panel, the group also recommended that a public advisory committee be established to ensure effective two-way communication between the government and the concerned public on radwaste issues.

Deutch Dissents

In an interview with *Science*, Deutch was emphatic in his disagreement with the recommendation that the science adviser take over direction of the radwaste program. "I think that would be unsuitable," he said. "The senior policymaker has got to be the head of the agency that manages the waste program." Although Deutch said he strongly supported keeping the radwaste program under competent scientific peer review, he questioned whether a new science advisory committee is needed inasmuch as panels such as the National Academy of Sciences' Committee on Radioactive Waste Management are available already.

Philip M. Smith, a top assistant to the

science adviser, told *Science* that Press, too, feels that to turn over responsibility for radwaste policymaking to the science adviser would be a mistake, both in terms of what is best for radwaste management and of how the science adviser and the Office of Science and Technology Policy can best serve the President.

Moreover, Smith expressed confidence that DOE will prove effective in radwaste policymaking, and that all that is called for are further improvements in program management and a continuation of the recent emphasis on more openness and better peer review. In the latter connection, Smith said that the group's proposal for a scientific advisory committee may have merit.

The Keystone group has asked for a meeting with Press and Deutch and other members of the IRG executive committee in late October. This would be before the IRG submits its final report and recommendations to President Carter, who is expected to issue a major statement on radwaste policy by the end of the year.

The group, which is seeking foundation support for further meetings and conferences, believes that the government should try to identify, by January 1980, candidate sites for radwaste repositories of small to intermediate scale in several different geologic media. These facilities could then be built at the same time to test the suitability of the various media and formations for full-scale repositories.

—LUTHER J. CARTER

New Laetrile Study Leaves Cancer Institute in the Pits

Torn by doubt as to whether an after-the-fact study of Laetrile users really shows cases of improvement, the Decision Network Committee of the National Cancer Institute (NCI) gave on 25 September a half-hearted recommendation that a clinical trial of the controversial drug be conducted by NCI. The committee's vote was 14 in favor of a trial, 11 against.

According to Vincent Oliverio, chairman of the committee, the unusual toss-

up vote showed "much concern" by the committee over the vague results obtained from a retrospective study of 67 Laetrile-using cancer patients. The committee often makes unanimous decisions. Commissioned by NCI last January, the study combed the country for medical records of cancer patients who showed some remission of the disease after taking the controversial apricot pit derivative. Six such patients were found. Debate at the committee hearing raised

the specter that some of the positive responses stemmed from incomplete or forged records or that "biological background noise" could explain the improvement of six cancer patients taking Laetrile. The positive recommendation of the committee, however, raises the possibility of a full-fledged clinical trial of Laetrile. The committee's recommendation now goes to Arthur C. Upton, director of NCI, who will make the final decision for or against a clinical trial. Upton hoped that a clear-cut retrospective study would make that decision easier, but, as it turned out, the data are of practically no help at all.

The Network Committee's recommendation comes after 2 years of increasing clamor for a clinical trial. Laws legalizing the use of Laetrile have now been passed in 17 states and are under consideration in several more. Congressional