

a pulling together of information hitherto unavailable or at any rate difficult to obtain, since at least 17 agencies, military and civilian, are involved in research and operational programs germane to weather. The report strikes a blow in the cause of better coordination of weather programs both by the agencies which administer them and by the congressional committees which authorize the programs and appropriate the money.

A subcommittee introduction to the report says that it "presents for the first time in a single public document a systematic account of weather programs of many kinds, conducted for many purposes by many different agencies, including those shared with the rest of the world as well as those benefiting only the United States."

The data are incomplete, the report concedes, because of differing record-keeping practices among the agencies. But the report should succeed in its design of being helpful to the committees of Congress, to officials of the executive branch, and to "other interested researchers and users of weather data outside the Government."

One reason for the subcommittee's requesting the study was that, in the restrained language of the report, the subcommittee "has been aware of a dispute or disagreement that existed among the Air Force, the Federal Aviation Agency, and the Weather Bureau with respect to the jurisdiction and operation of certain weather services." These ruffled relations have resulted in efforts at high executive levels to construct interagency coordinating apparatus, but these efforts have not yet solved the problem.

Involved is an annual budget of approximately \$431.5 million for meteorological services and research in the atmospheric sciences. It is estimated that some \$237.1 million of this is spent on services and \$194.4 million, on R&D. Of the \$431.5 million total, the military services spend well over half and the National Aeronautics and Space Administration, about \$103.8 million. National Science Foundation support of research in the atmospheric sciences topped \$20 million this year.

The report gives details of federal agency participation in weather programs and makes clear distinctions between the funds spent on meteorological services and those spent on atmospheric research, which in many cases only very indirectly supports endeavors such as weather forecasting or

weather modification. The report makes the point, in however restrained a way, that the state of the art is advancing so rapidly that a close link is necessary between operations and R&D.

In its first published product, the Science Policy Research Division in the Legislative Reference Service happens to have come to grips with a problem of coordination of a "multi-agency program" of the kind the division's director, Edward Wenk, Jr., was confronted with in his former post in the Office of Science and Technology, where he served as executive secretary to the Federal Council for Science and Technology. Oceanography and water research are two other subjects where "national programs" to set goals and agency roles have been deemed advisable.

The new report, to be sure, is only a first, fact-gathering step toward more effective coordination of the weather program. Future plans of the Holifield subcommittee appear to include the collection of more up-to-date information, the holding of hearings to assess this information, and then the making of recommendations on what national priorities in the weather program should be and how they should be achieved. This approach will not banish interagency and intercommittee rivalries, but the Government Operations subcommittee, as a neutral with no ties to any particular agency, has the credentials to play the honest broker.

—J.W.

### **Pollution Politics: LBJ Retreats on Opposition to Measure Curbing Pollution from Automobile Exhaust**

A few years ago, a high government science advisor was reported to have warned John F. Kennedy that the biggest domestic political embarrassments of his administration were likely to arise in the Department of Health, Education, and Welfare, a huge rambling bureaucracy whose diverse functions and functionaries have always in some measure eluded the efforts of the political leadership to coordinate and control them. The prophecy came true for Lyndon Johnson early this month when, in one of those unexplained political snafus that make the image-makers work overtime to redeem, the administration was suddenly revealed to be opposing an air pollution control measure which Johnson himself was seemingly on record as endorsing. The

administration quickly pulled back and is now supporting the measure, but not before the sincerity of the President's commitment to health and conservation goals was seriously and publicly called into question.

The bill that provoked the incident—a proposal to require auto manufacturers to equip their vehicles with devices to control emissions from automotive exhaust—had been gathering support for some time. Congressional action grew out of extensive hearings begun in early 1964 by the Special Subcommittee on Air and Water Pollution, headed by Edmund S. Muskie (D-Maine). Muskie, who became head of the special subcommittee when it was created in 1963, has used his mandate to "extensively explore" pollution problems to become one of the most knowledgeable and effective conservationists in the Senate.

When the committee was created, Congress was on the verge of authorizing a major extension of federal air pollution programs, giving the Secretary of HEW power to initiate abatement actions and sanctioning federal grants to state, regional, and municipal governments to stimulate abatement measures on a local level. The initial efforts of the new subcommittee were directed toward passage of the bill, which was passed as the Clean Air Act in December 1963. When that had been accomplished, however, the subcommittee began more detailed studies of air pollution, holding hearings in Los Angeles, Denver, Boston, Chicago, New York, and Tampa, as well as Washington, and developing considerable expertise in a highly technical field.

In a report on its investigations, issued late in 1964, the committee concluded that while air pollution posed an increasing menace there was still "an opportunity to conquer [it] before it grows to major proportions." The committee found that "automotive exhaust was cited as responsible for some 50 per cent of the national air pollution problem" and recommended legislation to provide a minimum national standard that would limit exhaust emissions from gasoline-fueled motor vehicles. It also recommended that attention be paid to the problem of diesel exhaust, that a program of grants for the construction of community solid-waste disposal facilities be established, that a Federal Air Pollution Control Laboratory be created, and that the Secretary of Health, Education, and Welfare take

steps to assure greater attention to other sources of air pollution, such as oxides of sulfur. These provisions were included in the bill (S. 306) that Muskie introduced this year with considerable bipartisan support.

Outside of Congress, also, support for efforts to curb automotive pollution appeared to be growing. Reporting to Congress on air pollution last winter, HEW Secretary Celebrezze, in a statement taken to represent the administration position, said that "... considering the present extent of the automobile air pollution problem, and the speed at which it is growing, effective control of these emissions [hydrocarbons, nitrogen oxides, and carbon monoxide] is needed now. . . . Although there is much to learn, control measures should not be delayed pending completion of all the needed research." The same theme was expressed by President Johnson in his message on natural beauty, where he stressed that "one of the principal unchecked sources of air pollution is the automobile," and stated his intention "to institute discussions with industry officials" to find means of reducing it.

With an apparent consensus behind the move to control automotive pollution, the stage appeared to be set for fairly routine hearings. The administration was expected to line up behind the measure and witnesses from the manufacturers were expected to make some attempt at opposition. But behind the scenes a stage manager appeared to have handed people the wrong scripts. Not only did Assistant HEW Secretary James Quigley, speaking for the administration, fail to support the bill, but the automobile manufacturers failed to make any very energetic opposition.

The somewhat bizarre sequence began when Quigley testified at the opening of the hearings on 6 April. His testimony was rather ponderous and evasive, but its import was summed up neatly by Muskie in a colloquy that followed the formal presentation. (The quotations which follow are all from the unedited transcript of the hearings; speakers are free to make changes in the published versions.) "On the automobile exhaust problem you say not now," Muskie said. "On the solid waste problem you say not now. On the question of extended research you say [HEW has] enough authority now but if you want to tell us to do it again we don't object. On the question



Edmund S. Muskie

of recommendations from the diesel-powered vehicle industry you say you have no objection . . . but that is hardly enough to make a solid piece of legislation. On the pollution laboratory, even there you just want us to give you general authority and then you ask us to give you authority to find some more problems." Quigley protested this interpretation, saying that the government's position was simply that Congress should hold off on setting standards for exhaust emissions until the experience from California and the government's own fleet of cars (both of which will shortly require control devices on all models) could be evaluated. But when Quigley tried to explain that the government's interest in exploring potential voluntary measures with industry did not simply represent dilatory tactics, Muskie replied "I wasn't accusing you of being dilatory. I was accusing you of reducing S. 306 to nothing."

(Congressional skepticism about voluntary agreements such as the administration proposed has been running high since the discovery last winter that the Ford Motor Company had violated a gentleman's agreement between the industry and HEW to reduce emissions from crankcases by providing all vehicles with so-called "blowby" devices. While the other companies had been installing such devices, beginning with their 1963 models, Ford evidently discontinued them on its own initiative and without notifying HEW, except on

cars being sold in California and New York, where such devices are required by state laws.)

Why, when, and how the administration decided to oppose the Muskie bill, and who actually made the decision, is still unexplained. Quigley's testimony is reported to have been cleared by the White House in a special meeting the weekend before the hearings, presumably by a Johnson aide. But it is felt, in any event, that the chain of advisors who are supposed to protect the President from such public-relations and policy mishaps failed badly. "I don't even know whether the advice came from here or from the White House staff," one HEW official commented last week, "but somebody here could have stopped it." The general feeling among observers appears to be that Johnson probably did not make the decision himself, not because there is any evidence that he either did or didn't, but because Johnson's political acumen is widely respected in Washington and most people believe, as one observer put it, that "Johnson is just too smart to have put himself in that sort of a fix. Someone else must have put him there."

Regardless of who put him there, it is reported to have been Johnson himself who finally pulled back. "The surest way to arouse the press is to take them by surprise," a Capitol Hill official commented, "and they were sure surprised this time." Newspapers and television reporters gave thorough coverage to Quigley's testimony—and the subcommittee's hostile reaction to it—and made the administration look as if it were in the pocket of the industry. A syndicated Herblock cartoon showed the administration snuggling up to the auto industry in the front seat of a fume-ridden convertible, and asked, "Was all that nice talk just a lot of hot exhaust?" The *Washington Post*, surveying reaction around the country, said that in Los Angeles a reporter alluded to a "love affair" between the President and the industry, a Chicago paper reported that the "administration apparently has taken the industry's side," and a Detroit headline was "LBJ Goes to Bat for the Auto Industry." The *New York Times* editorialized that, "There is something polluting the Administration's testimony on the Clean Air Act; and from its odor, we judge that 'something' to be politics."

What made the administration's em-

barrassment worse was the fact that Quigley's testimony contradicted that of witnesses from the auto industry who were heard at a committee session in Detroit the following day. The industry is far from anxious for government controls. Its position is that there is some question about the degree to which automobile smog contributes to the overall pollution problem, and it wants to make certain that expenditures to control vehicle emissions will actually reduce pollution to a degree commensurate with the cost. The companies are also worried about the economic penalty to individual motorists that the engine modifications and maintenance required to bring about reduced emissions entail. These could conceivably raise initial costs by as much as \$70 and add considerably to maintenance fees as well. Nonetheless the companies are well aware that the rising public interest in pollution problems could easily lead to different standards being adopted by the 50 states, which would seriously complicate production techniques, and in addition, they have done enough research to persuade them that some control over exhaust pollution is entirely feasible. Thus, while Quigley testified that more time was needed to gather experience and perfect equipment, a witness for the auto manufacturers trade association told Muskie that "... if Congress decided that all new cars should be equipped with exhaust control systems of the types now becoming available to meet standards set in California, the automobile manufacturers are in a position to manufacture and install the equipment. . . ." Muskie's analysis of the conflicting testimony, which he appeared in some measure to enjoy, was as follows: "The day before yesterday the Department of Health, Education, and Welfare indicated that although we have a problem that needs to be dealt with . . . we didn't have the know-how to deal with it now. Yesterday . . . the testimony of the automobile industry was that there is no problem that needs this kind of action now, but that if there is, the industry does have the know-how to deal with it."

Whether the conflicting testimony arose from an industry-administration plan that went awry or from the absence of a plan is a secret being tightly guarded. But even the suggestion of a deal was sufficient to discomfit the administration and force it to seek a retreat. Three days after he testified

against the bill Quigley made another appearance before the subcommittee, this time to support it, with a few modifications. "Muskie doesn't want blood," one of his aides remarked last week, commenting on the subcommittee's discreet handling of Quigley on his return performance, "he only wants an air pollution bill." And, thanks to the ineptitude of the administration which turned a minor production into a *succès de scandale* and raised public and political interest to a new high pitch, it appears that he is going to get one.—ELINOR LANGER

## Announcements

Arrangements have been concluded for a "close working relationship" between the Institute of Pharmacology of the **University of Milan** and the department of biochemical pharmacology of the **State University of New York at Buffalo**. Collaboration between the two departments will involve the exchange of staff, research students, and technicians, shared use of some types of equipment, and a joint symposium to be held yearly. The first symposium, on cell permeability and transport phenomena, will be organized from Milan, and information on it may be obtained from L. Bolis, Via Alamanni, 19, Milan, Italy. Information on the exchange arrangements are available from J. F. Danielli, chairman of the biochemical pharmacology department at Buffalo.

Syracuse University will introduce in the fall semester two interdisciplinary programs combining engineering, physics, and mathematics with the life sciences. At the undergraduate level the department of electrical engineering will offer a B.S. degree in **bio-systems**, which will enable students to obtain a strong foundation in electrical engineering and a basic knowledge of zoology and experimental psychology. Courses in the humanities also will be included. Graduate students will be offered a Ph.D. program in **sensory communications**, with the Laboratory of Sensory Communication as the focal point. The laboratory is devoted to the role of the sensory processes in human and animal communication. Additional information is available from the assistant director of the laboratory, E. J. Kletsky, Syracuse University, Syracuse, N.Y.

## Meeting Notes

The second international symposium on **basic environmental problems of man in space** is scheduled 14–18 June in Paris. It is being organized by the International Astronautical Federation and the International Academy of Astronautics. The program will be devoted to four main areas: ecophysiology, psychophysiology and engineering psychology, biotechnology, and special man-machine problems. Abstracts will be available in English, French, or Russian, and papers may be read in one of these languages, with simultaneous interpretation provided. (Conference Secretariat, International Academy of Astronautics, 250, rue Saint-Jacques, Paris 5)

A conference on research problems in the physics of **x-ray spectra** will be held 22–24 June at Cornell University, Ithaca, N.Y. Discussions will include recent experimental developments, theoretical interpretations, and promising attacks on the major unsolved problems in the fields. Both invited and contributed papers may be presented. Abstracts of all papers are required; deadline: *1 June*. (H. W. Schnopper, Laboratory of Atomic and Solid State Physics, Rockefeller Hall, Cornell University, Ithaca, N.Y. 14850)

The Oak Ridge Institute of Nuclear Studies, medical division, will present its ninth symposium 1–4 November. The topic is **radioactive pharmaceuticals**. Invited speakers will include specialists from the U.S. and Europe. (Chairman's Office, Medical Division, Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tenn.)

A national symposium on **veterinary education** will be held 25–26 June at the University of Georgia, Athens. It will be sponsored by the university's school of veterinary medicine and the American Veterinary Medical Association council on education. The meeting is aimed at helping schools to develop "modern concepts of education in the clinical veterinary sciences." (J. T. Mercer, School of Veterinary Medicine, University of Georgia, Athens)

The University of Oregon geology department and the New York Academy of Science will sponsor an international **lunar geological field confer-**

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