

publicity obviously has not been good, but the filter—if it can be marketed successfully—still represents a small fortune. The university's dilemma goes beyond a simple decision to stay in or get out. How can it exit gracefully? A strong denunciation of the filter might not only make the university look silly (how did it ever become involved if the filter is *that* bad?) but might also bring a lawsuit from Strickman. A weak statement might have little public impact and leave the university's prestige still associated with the project. There is also the matter of Strickman's feelings. He wants to set up a charitable trust with Columbia's portion of the royalties and then divert considerable sums to the Columbia medical schools; a sharp, critical statement might quickly remove Columbia as a beneficiary of the trust.

Ambiguity and delay may be Co-

lumbia's best friends. Despite the months that have passed since the Senate hearing, the university still has made no firm plans for new taste tests. The initial tests made last spring have been challenged as inconclusive, and more tests could take 3 or 4 months.

Will Strickman & Co. wait this long without going to court? More than money is at stake. At 57, Strickman would undoubtedly like to have a handsome cash reserve, but, equally important, he has, as one colleague puts it, "an incredible emotional attachment to this thing [the filter]." The strange turn of events and the countless delays have bewildered and embittered him.

Nor is this the only interest to be considered. From the beginning, a group of friends has had a share in the potential proceeds of the filter; many—perhaps most—of these men

helped Strickman bear the costs of the original research and testing. The membership of this group has never been publicly revealed, but it almost certainly includes William Suitt, the advertising man who has helped Strickman all along, and Robert Raum, a tax lawyer. In all, the Strickman group would receive nearly half the returns from the filter; during the fall Columbia tried to change this royalty distribution to its own advantage.

The Strickman-Columbia story is a strange odyssey into many tangled worlds: the controversy over smoking and health; congressional politics; university finances; network journalism; and small-time invention. No one knows where the trip leads next, but if the past is any key to the future, there will be more confusion and controversy before journey's end.

—ROBERT J. SAMUELSON

National Academy of Sciences: Unrest Among the Ecologists

Many ecologists doubt the ability of the National Academy of Sciences (NAS) and the National Academy of Engineering (NAE) to advise the government properly on problems of environmental pollution and disturbance. Moreover, some environmental scientists within NAS itself find it deplorable that, in setting up an Environmental Studies Board last year to coordinate studies of environmental problems, the leaders of NAS and NAE saw fit to include five people with backgrounds in industrial research but no one with a background in environmental biology. In the view of these critics, the environment's "despoilers" may be better represented on the new board than its "preservers."

It appears likely that in the coming months an ecologist will be appointed to the board and that much of the mistrust will be dispelled. However, if Lamont Cole of Cornell, president of the Ecological Society of America, speaks for the majority of his colleagues, clearly the gulf of misunderstanding between ecologists and the

leaders of NAS is too great to be easily bridged. "The National Academy doesn't know enough about ecology to know how ignorant it is," Cole said in an interview with *Science*.

Although Cole is outspoken and not given to understatement, he is clearly not alone in his view that NAS, in its appointment of committees and in some of its reports, has shown too little regard for ecological considerations. Ecologists, Cole indicates, think the government should not be dependent on the Academy for its principal source of advice on questions in their field. Last August, he says, the Ecological Society, which previously had shown considerable caution and timidity about intervening in political matters, reestablished and reinvigorated its public affairs committee. On several occasions members of this committee, now chaired by W. Frank Blair of the University of Texas, have visited Washington to talk with members of Congress—among others, Senator Edmund S. Muskie of Maine, a leader in the antipollution field.

Moreover, the Ecological Society will seek to have universities which have programs in ecology establish and operate a national institute of ecology, Cole says. This institute, for which a location has not yet been proposed, would (i) operate a research center or centers; (ii) advise the government on ecological questions and, on request, make studies in depth; and (iii) operate a data bank in conjunction with the research center.

Cole says that ecologists at some 15 universities are interested in having their institutions join in establishing such an institute. However, no university administrators have yet been approached. The institute, as now conceived by an Ecological Society committee, would be operated by a university consortium and could be formally incorporated once as many as five universities agreed to establish it. Its financial support might come from the universities themselves and possibly from endowment funds contributed by foundations. The institute, Cole says, would be needed "even if the Academy were competent in ecology."

According to Cole, the Academy has repeatedly entrusted studies involving ecology to committees chaired by, and largely made up of, scientists whose training and experience have been principally in other fields. He believes that in part this is so because the Academy membership includes only two scientists—G. E. Hutchinson of

Yale and Alfred E. Emerson of Chicago—who meet his definition of an ecologist. The U.S. National Committee for the International Biological Program, he observes, was set up several years ago under the chairmanship of Roger Revelle, whose scientific work has been chiefly in oceanography, although he has served as science adviser to the Secretary of the Interior and is now director of Harvard's Center for Population Studies. While Cole regards Revelle highly as a scientist, he believes this chairmanship should have gone to an ecologist because the IBP committee is deeply concerned with ecological questions. Some ecologists, however, feel that Revelle's broad experience in the environmental sciences qualified him eminently for this assign-

ment. In any event, the chairmanship is expected to pass soon to Frank Blair, a past president of the Ecological Society. Stanley A. Cain, a University of Michigan ecologist who is Assistant Secretary of the Interior for fish, wildlife, and parks, has been vice chairman of the IBP committee, and several of its members are ecologists.

The negative view that Cole takes of some of the Academy's reports seems widely shared among ecologists. The first report on pesticides issued by the Academy, following publication of Rachel Carson's *Silent Spring*, Cole regarded as a "whitewash." Later Academy reports on this subject also were poor, he feels. Another ecologist, who holds a responsible post in government, praises the Academy's 1966 report on

waste management and control, but says it might have been better still had more of the contributors been ecologists.

In view of the ecologists' sensitivity, perhaps hypersensitivity, concerning the place accorded them and their discipline in Academy affairs, the omission of an ecologist from the Academy's Environmental Studies Board is puzzling indeed. This board was appointed in January 1967 by Frederick Seitz, president of NAS, and Eric Walker, president of NAE. The board, establishment of which was recommended in a 1965 report (*Restoring the Quality of Our Environment*) by PSAC's Environmental Pollution Panel, was assigned the responsibility of overseeing and coordinating environmental studies carried on within the two academies. With this sweeping mission, the board's role is potentially one of great influence.

The initial appointees to the board were Harold Gershinowitz (chairman), former research leader and head of the Research Council of Royal Dutch Shell and former president of the Shell Development Company (now retired); Wallace L. Chadwick, vice president (retired) of the Southern California Edison Company; Frederic A. L. Holloway, president of Esso Research and Engineering Company; Robert Morrison, a physiologist and director of Cornell's division of biological sciences; John Perkins, then president of the University of Delaware; Roger Revelle, head of Harvard's Center for Population Studies; and Chauncey Starr, nuclear physicist and dean of UCLA's College of Engineering and formerly an executive and research director for North American Aviation. Later, Perkins, a political scientist, left the board when he gave up the presidency at Delaware, and two new members were chosen: Hendrik W. Bode, now professor of systems engineering at Harvard but formerly with Bell Telephone Laboratories, and Harvey S. Perloff, an economist with Resources for the Future, Inc.

Two important facts bear on the board's makeup: the board is a joint NAS-NAE body, and much of NAE's membership is drawn from industry. But although the appointment of five industrial researchers to the board thus is not particularly surprising, even within the NAS establishment there is some feeling that, for the board membership to include two men identi-

A POINT OF VIEW

Max Tishler, president of Merck Sharp & Dohme Research Laboratories, in an address, "The Public Stake in Medical Research," before the Royal Society of Medicine, London, 8 January.

I prefer to take the unpopular position that the slowdown [in public support of biomedical research] is not all bad. If we face its implications realistically, we should be able to benefit in two ways. First, we will accept the obvious: medical research is only one of a vast number of desirable alternative investments from society's point of view. . . . If we want to make faster progress with a slower rate of increase in funds, we will have to plan better, train and select better, and improve our leadership and efficiency.

One luxury we will not be able to afford. We will be robbing the future if, in trimming the budget, government plays safe and cuts off support from those who have not yet made their reputations. Under pressure, any bureaucracy is likely to follow this course. Clearly, it will be the responsibility of industry, foundations, and the universities to see that the young investigators with real promise who would otherwise be left behind are identified, encouraged, and helped. In the case of industry, this will be difficult, but we should be more willing to gamble than government.

The second benefit that will come from a slowdown in the rate of expenditures is that medical research will be forced to recognize that the public's price for partnership is a major role in decision-making. It is clear that we cannot have informed decision-making by the public in medical research until we have a scientifically informed public. . . . Science was originally responsible only to a few. It now has to adapt itself to its new responsibilities to the many. This means that scientists, in medicine and other fields, must get into public affairs because public affairs are getting into science. . . . Through government [the taxpayer] can insist on having his way. Using the power of the purse, government can undermine the roles of academic or pharmaceutical industry research, or both. Or alternatively, the academic, scientific, and medical fraternities can enter the public area with their skills at persuasion and their enormous influence to steer this new force into constructive channels.

fied with oil companies—Gershinowitz and Holloway—is unfortunate. None of the criticism of the board's makeup voiced by ecologists and other environmental scientists has been directed at any individual as such, however. One leading ecologist told *Science* that he was pleased to see industry strongly represented on the board. "The problem [of environmental pollution] has to be placed squarely in the hands of the people who caused it," he said.

The chief concern of ecologists is that, with none of their kind on the board, it may overstress viewpoints natural to industry and to people devoted to furthering resource development and economic progress. In this view, even Revelle, the one environmental scientist on the board, is regarded by some as no proper spokesman for the ecological point of view. It is noted, in this connection, that one of Revelle's chief professional concerns has been the growing imbalance in the underdeveloped countries between population on the one hand and food and other essential resources on the other.

No one has pointed with either praise or alarm to anything the board actually has done, for the board has done little. For the most part, its first year has been taken up with organizing for its task. For example, four committees—on air pollution, water quality management, noise, and solid-waste management—are being set up within the National Research Council's Division of Engineering. All are headed by engineers, and, except for the committee on solid wastes, all will be concerned initially with short-range technological solutions to the problems assigned them.

The committee on solid wastes, the only group to have begun work, is concerned with long-range as well as short-range solutions. Its membership, still incomplete, will include both scientists and engineers. According to the NAS-NAE secretariat, the committees set up by the board will change in number, makeup, and mission as study requirements change. All studies will be made by the board's special committees or by other committees and panels within the NAS-NAE-NRC structure. The board will confine itself to a coordination and review function, supposedly ensuring a proper interdisciplinary approach to all problems that demand it.

According to Seitz, the NAS president, the idea which was followed in

setting up the board was not to have all relevant specialties represented, but to have a body with the skill and insight to use specialists effectively on its panels. He noted, however, that the membership is still evolving and said that he will follow Gershinowitz's wishes as to the kind of people who should be added. For his part, Gershinowitz thinks the board needs an ecologist and says the appointment of one is likely. He would prefer an ecologist with a strong interest in human or urban ecology as well as natural history. The president of NAE, Eric Walker, who had been unaware of any complaint about the board's makeup, told *Science* that he is agreeable to the

idea of having an ecologist on the board. "Sure, let's have one," he said. "We don't want to keep anybody out."

Cole would not have one ecologist on the board, but several. Yet it seems that ecologists will soon be represented in some manner on this body, even though, for reasons that remain unclear, efforts by three senior members of the Academy to accomplish this last year were unsuccessful. However good their new board may be, the academies have left themselves open to the charge that they fail to make proper use of ecologists in dealing with environmental problems.

—LUTHER J. CARTER

East-West Visits: AEC Declines To Relax Rules for 200-Bev Lab

At the drop of an honorary degree, any member of the Atomic Energy Commission can hold forth on the virtues of international scientific cooperation, especially between East and West. But the fact of the matter is that the AEC's national accelerator laboratories have more than occasionally been the scenes of some rather nasty and embarrassing incidents concerning efforts by American scientists to gain admission for Soviet and Eastern European colleagues.

By and large, these incidents have been hushed up. Neither the would-be hosts nor their would-be guests have sought to exacerbate a long-standing and difficult situation, and, in their relations with the AEC, the hosts have wisely recognized that, since the AEC is paying the bills for the laboratories, it is in a commanding position to dictate the ground rules for visitors.

However, some glimpse of what has been going on in this area has become available as a consequence of contract negotiations between the AEC and Universities Research Association, Inc., the consortium that will build and operate the 200-Bev National Accelerator Laboratory (NAL) at Weston, Illinois. The contract, which is reported to be in final draft form following several months of negotiations, was the object

of a largely unsuccessful struggle aimed at getting the AEC to relinquish its role of traffic cop for Communist-bloc visits to the laboratory. Though the text of the contract has not yet been made public, it is understood that the AEC held firm in retaining the right to pass on visits by Soviet and Eastern European scientists to NAL. It did, however, make one concession, though it is a concession of an Alice-in-Wonderland type: Any Soviet or Eastern European visitor who shows up unexpectedly at the gate may be admitted at the discretion of the laboratory director. Since no foreigner gets into this country without a visa, and Communist-country visitors are, with rare exceptions, restricted in their travels, the traffic in surprise visitors is not expected to be heavy.

In the mysteries of the AEC security thicket, the concession to NAL brings it in line with the policies governing visits to the Cambridge Electron Accelerator, the Stanford Linear Accelerator, and the Princeton-Penn Accelerator; however, the privilege of admitting even surprise visitors without explicit permission from AEC headquarters is not accorded to Brookhaven National Laboratory, Lawrence Radiation Laboratory, Argonne National Laboratory, or Oak Ridge National Laboratory.