the Interior Department's Office of Environmental Project Review explains that it is not designed to justify a leasing schedule. Rather it is a "macro," or "programmatic," impact statement whose purpose is to justify an accelerated leasing program covering the frontier areas. This is part of Interior's "two-tiered" impact statement system, in which the second stage consists of statements on particular areas designated for lease sales. According to Blanchard, though, different people at Interior have differing concepts about the purpose of the programmatic statement. The impact people in the department do not believe it is adequate as a justification for a leasing schedule—the timing, locations, and scope of areas to be offered. Such a schedule, they say, would require far more detailed region-by-region impact statements whose formulation requires considerably more data—including results of the ongoing baseline environmental studies—than they now have at hand. The top people at Interior, however, apparently believe that the programmatic statement, assuming it is approved in its final form, will be sufficient to move into implementation of the leasing program. This issue will probably gain more visibility in the future, and environmental groups can be counted on to latch onto it as a means of delaying the program.

The potential of energy conservation is central to the whole OCS leasing debate. The basic philosophy of the Nixon-Ford Administration is that energy supply must be increased to meet demand. Carter proclaims himself to be as dedicated as anyone to conservation, but he takes a cynical view. The American public is not about to slow down consumption voluntarily, he says, and Congress is not about to pass legislative measures that would compel industries to adopt more energy-efficient processes or consumers to drive under 50 miles an hour. Indeed, he says, "it's not our job to force the country to change consumption patterns," and it would be downright "irresponsible" for Interior to hold back on OCS leasing "to force people to use less oil."

There is a growing body of opinion that reducing energy demand is not only inevitable in the long run, but that it can be accomplished just as fast as oil can be obtained from frontier OCS areas. Environmental Protection Agency head Russell Train and CEQ chairman Russell Peterson have contended that, with proper conservation measures, the annual growth rate in energy consumption, which now hovers around 4 percent, could be reduced to around 2 percent by 1985. The Ford Foundation's Energy Policy Project (*Science*, 1 November) agrees. The Ford project's conclusions (which Carter calls "irresponsible and wrong") are that conservation, combined with more efficient recovery methods in existing oil wells and coal mines, would make increased reliance on imports unnecessary. They say there would be no need to lease more than 1.5 million acres per year on the OCS for the next decade, and there would be no need to plunge into the frontier areas until 1985.

The 10-million-acre leasing program (dubbed "drain America first" by Senator Hollings) may have been a quick public relations ploy by President Nixon to placate the seething hordes at the gas lines last winter. It also reflects the prevailing but disputed theory that a healthy economy is based on continuous growth, and considerable optimism that new energy sources—nuclear power and solar and geothermal energy—will be sufficiently advanced to take over by the time fossil fuels are exhausted.

Most observers *Science* talked to think it will be impossible for Interior to lease 10 million acres in 1975—even if all the environmental hurdles are jumped, they say, the department is simply not equipped to administer such a large-scale plan. But the plan has served to intensify interest in controversies over oil resource development that have been going on a long time, many of which will not be resolved until the nation commits itself to a strategy that takes into account the world's dwindling resources.

—CONSTANCE HOLDEN

NIH: Robert Stone Is in Trouble with HEW

The past 8 years have been hard on biomedical research and it is common to hear scientists say that research in the United States is in "deep trouble." Some of that trouble may be as much psychological as anything else, the research community having adopted a slightly paranoid attitude about everyone on the outside—the public, the Congress, the Administration. But there is no denying the fact that in recent years several things have happened that have had a real impact on the way researchers see themselves and the way research is conducted. Those things have to do with money and leadership and the mission of the National Institutes of Health (NIH).

In 1968, James A. Shannon gave up the directorship of NIH and, when he did, the biomedical community lost its acknowledged, if somewhat paternalistic, leader. Robert Q. Marston was Shannon's successor in title only. And Robert S. Stone, NIH director for the past 18 months, still lives under the old man's shadow. Stone himself has joked that when people are looking for him, he is sure they are sometimes told he can be found "in Dr. Shannon's office."

It is not a good time to be director of NIH. And, to make matters worse, Stone today is in very real danger of losing his job. It is no secret that he is not getting along well with the brass in the Department of Health, Education, and Welfare (HEW). His relations with assistant secretary for health Charles C. Edwards are strained; so are his relations with Edwards' deputy, former National Heart and Lung Institute Director Theodore M. Cooper, the man who surprised everyone by taking the HEW job after being passed over for the post of NIH director.

Genuine differences of opinion about how NIH, and all biomedical research, fits into the total national health scene are part of the problem. Personality clashes and management style exacerbate it. As one observer close to the

three said, "You can't put Edwards and Cooper and Stone in the same pot and expect soup."

At the heart of the matter is money. During the years that Shannon was building NIH, he was frank to admit that he was fostering intellectual excellence, science for science's sake.

Then in 1966, President Lyndon Johnson put the first pinhole in the nation's biomedical research balloon by suggesting that people might not be getting their money's worth from their investment. His view of the NIH mission was that it should be geared to making sick people well.

Johnson scared the biomedical community, which protested that he did not understand the delicate and unpredictable process of research. "You can't get 'payoffs' on demand," scientists said, while also criticizing him for getting involved in research at all.

The same scientists who so vigorously insist that you cannot buy results also declare that unless more money is pumped into biomedical research there will be no progress and this country will lose its preeminence in the field. They seem to be asking to have it both ways.

The question of the proper mission of the NIH still needs to be answered, and with it the proper role of the federal government in support of that mission. Should NIH concentrate its resources on basic and clinical research, as it has done traditionally until the wars on cancer and heart disease came along? Or should NIH broaden (or dilute) its resources to include health care delivery, even on a small scale through euphemistically named "control programs" and "demonstration projects"?

If these difficult matters can be resolved, the troublesome issue of the relationship of NIH to the rest of HEW, of which it is a part, may also be dealt with. Were that to happen, one might know who is running NIH—its director or the assistant secretary for health (*Science*, 1 March).

The fact that Edwards and Stone are at odds is important for several reasons. Their troubles are symptomatic of the uneasy relationship between the federal government and the biomedical community at large. They are representative of the tension that has existed for years between the two agencies. NIH, with its near autonomy, has never fit comfortably in the giant bureaucracy that is HEW. And the strain between Edwards and Stone is indicative of the problems that may be inevitable between any assistant secretary who is trying to manage the entire health enterprise and any NIH director who is not simply a yes-man.

It is a matter of control. When Richard Nixon entered the White House in 1968, he launched an Administration intent on gaining firm control of the government. "Management" became an important concept in Washington, whether one liked it or not.

In health, the job of centralization began with Merlin K. DuVal who, when he was assistant secretary, tried to extend the authority of his office over NIH, the Food and Drug Administration (FDA), and other health agencies in HEW (*Science*, 15 September 1972). DuVal made a sufficiently good start that, when he was succeeded by Edwards, who had been FDA commissioner, the way was open for a real centralization of power. Within HEW, Edwards' office expanded and acquired new status. Health got its "h" capitalized; people at NIH began referring to Edwards' empire as "H."

It was H that hired Stone. DuVal recommended him to Edwards. The two men met and got along. Approval from the HEW Secretary and the White House was swift. Stone was appointed in May 1973. A virtual unknown to the scientific community, he had a good record as dean of the new University of New Mexico School of Medicine in Albuquerque. He was a Republican. He had actually studied management at the Massachusetts Institute of Technology.

White House advisers were frank to admit that both Edwards and Stone were chosen to be team players. Said one, "They were picked because of their approach, which is to be loyal to government, not to themselves or to a cause."

Edwards, it appears, is indeed loyal to the idea of coordinating the myriad of health-related activities of HEW; to him, NIH is just part of the picture.

Edwards frequently has observed that the United States has no such thing as a national health policy and he wants to be the man to give it one. To that end, we now have the Forward Plan for Health, covering fiscal years 1976–1980. There are those, including

Think Tank Funds Are Leaking

Because of a fit of senatorial pique most of the Department of Defense's (DOD) Federal Contract Research Centers (FCRC's) are going to have to live with less money for the current fiscal year. According to Capitol Hill observers, Senator John L. McClellan (D–Ark.), chairman of the Senate Appropriations Committee, was angered recently when his fellow senators literally amended to death a bill giving funds to the Department of Housing and Urban Development and other agencies and sent it back to his committee. Not wanting the incident repeated, McClellan on the eve of sending the DOD bill to the floor ordered the committee staff to cut $1 billion from it in small bits and pieces to assure smoother sailing before the Senate.

As a result, the FCRC's were cut, and most of the cuts survived subsequent compromise with the House. The Rand Corporation will receive only $7.6 million from the DOD in fiscal 1975, instead of the $8.7 million it got last year. The Center for Naval Analyses will receive $9.05 million, or $0.5 million less than it received in fiscal 1974. The Aerospace Corporation suffered a $1.6 million cut in its $11 million basic research budget, and will get a total of $77.2 million.

Also cut was Lincoln Laboratory which received $18 million last year and will get $15.75 million this year. MITRE Corporation, which received $8.5 million last year, will get only $7.45 million this year. Another FCRC, ANSER, will receive $2.1 million after a $300,000 reduction in its basic research program from last year.

The FCRC's have often had a rough time getting their budget requests through Congress, so McClellan's arbitrary cuts were nothing new. But some escaped the scalpel: the Applied Physics Laboratory at Johns Hopkins ($45.3 million); the Applied Research Laboratory at Penn State ($7.1 million); and the Institute for Defense Analyses ($10 million).—D.S.

Stone, who see it as a threat to NIH. The plan has five major sections; "knowledge development," which deals most directly with NIH, is the fifth.

The plan says this about research:

> While there is no serious challenge to the assertion that a major federal role in the health industry is the support of basic biomedical and behavioral research, there are growing concerns as to the size and direction of that investment. For example, there are current questions about how priorities are set for biomedical research programs, why the cost of doing research is climbing so rapidly, what the appropriate relation should be between research and health service needs, what the effect of increasing pressure for targeted programs is, and whether there is sufficient "balance" between and around the various investment targets in the research portfolio.

Those questions worry NIH officials and others who are afraid that the answers might not be to their liking.

A presidential panel will be appointed soon to address those and related questions (*Science*, 9 August). As of now, the White House is still soliciting names of candidates for six of the seven seats on the panel (by law, one of the seats goes to Benno C. Schmidt, chairman of the President's cancer panel). But if the President makes most of his choices from the lists of pro-research candidates that have been submitted by HEW,* the biomedical community has little to worry about.

Stone would like to have the results of the panel's planned 18-month analysis in hand right now. It would be particularly helpful to him to know what it will say about the proper role of the federal government in supporting research. For now, H has decided that, under the circumstances of a very tight budget, NIH is not only getting its fair share of available money but more.

Cooper explains the problem from his perspective in H. "The President has asked the agencies to hold down federal spending. We simply cannot go in and recommend cuts in programs for migrant workers or Indian health, which aren't really adequate now. Something is going to have to come from biomedical research. The question now is how NIH will set priorities."

Stone is not yet willing to accept the idea that NIH is adequately funded. "How can I," he asks, "when I can think of so many areas of research that need more support?"

And therein lies part of the problem. Is Stone a team player or isn't he? Is he a spokesman for H or a protagonist for NIH?

When Stone first came to NIH he said all the right things (*Science*, 22 June 1973). He spoke of the need to bridge the gap between scientists and managers so that each can understand the other. He said he viewed NIH as a "subsystem," as part of the H of HEW and not an autonomous body. He defended the need for good management at NIH and promised to try to create a stable environment in which scientists could work. He also deftly dodged questions about research "balance"—does the cancer institute have too much money?—by calling balance a "subjective" word; and he refused to spell out what he thought NIH's mission should be. A lot of people, including those in H, got the impression that Stone was going to "represent" H at NIH. However, it appears that during the past year and a half he has decided to be a protagonist for NIH.

Stone is a thoughtful man who one of his admirers describes as a "philosopher, not an analyst, a man not given to pat answers." Whether these qualities are strengths or weaknesses in the present arena depends on one's point of view.

As far as H is concerned, Stone is supposed to direct NIH, not be directed by it. Therefore, Edwards and Cooper and others want Stone to give them explicit answers to tough questions, to fit in, to take decisions arrived at in HEW back to NIH and apply them. There is, on this score, what is politely called a "communications problem" which, persons who work with them say, is not helped by the fact that all three men have "short fuses."

(Continued on page 667)

* Among those on the list for the biomedical panel are the following: Harold Amos, Harvard; Harriet Dustan, Cleveland Clinic; Robert Ebert, Harvard; Paul Marks, Columbia; Franklin Murphy, Los Angeles *Times Mirror*; Helen Ranney, University of California at San Diego; Lloyd Smith, University of California at San Francisco; Lewis Thomas, Sloan-Kettering; and James Wyngaarden, Duke.

POINT OF VIEW:

Kissinger on Intellectuals

The intellectual community is not at present providing work of relevance to the government policy-maker in the way that it used to in the late 1950's, Henry Kissinger believes. Asked if it was not a mistake to have abolished the office of President's Science Adviser, Kissinger agreed that it was a pity and said he hoped "that some focal point is created which will look upon the intellectual community as its constituency, and that they will be listened to." Kissinger's remarks, which occurred in a recent interview with the New York Times, *are as follows:*

As I look back, for example, at the area of strategic arms limitation, most of the creative thought with which I am familiar dates back to the late fifties and was then introduced into the government first in the Kennedy Administration and then, I hope, in ours.

Two things are lacking now: One, the same sense of relationship towards the government that intellectuals had then; now they volunteer less and participate less. Secondly, there is a lack of relevant intellectual work.

Intellectuals are now divided into essentially three groups: those that reject the government totally; those that work on pure, abstract intellectual models which are impossible to make relevant; and a third group that's too close to power and that sees its service to the government as residing primarily in day-to-day tactics. No outsider can be very helpful on the day-to-day business because he doesn't know enough of the current situation to really make a contribution.

The best service intellectuals can render is, first, to ask important questions and that's a difficult problem, and, second, to provide a middle-term perspective. But for that they need to have some compassion for the problems of the policy-maker, just as he needs an understanding of their needs. I feel the lack, and I hope that now that our domestic climate is somewhat better we can restore mutual confidence.

NEWS AND COMMENT

(Continued from page 617)

At NIH, Stone also apparently has occasional problems with communications. For example, he is said to have trouble fielding the broad questions he inevitably gets: What is your philosophy for NIH? It is the sort of question he does not like to answer and it sometimes brings people to challenge his ability to lead. And yet it is evident to other individuals that Stone's philosophy for NIH or sense of its mission is not at all obscure.

It is safe to say that Stone places a high value on NIH as focus of the nation's biomedical research enterprise; while acknowledging the reality of pressures for "service," he believes that with limited funds NIH cannot do everything and should, therefore, concentrate on what it can do best—basic science, including clinical research.

But pressures to do something useful with that research are strong, coming not only from H but from Congress. The Senate Committee on Appropriations, which has many members sympathetic to research, said this in a recent report:

> Information dissemination is a very high priority of this Committee because it directly affects just how quickly the research findings accomplished by the NIH are actually put into practice. . . . Until citizens actually receive some type of assistance from the many facets of research carried out by the NIH the total tax dollar has not been effectively utilized.

Whether the research community thinks it the ideal way to do business or not, and whether Stone stays at NIH or not, the fact is that there will have to be greater attention in the future to setting priorities, which means *not doing* some things, and to devising ways to take the fruits of research to the people. Furthermore, this is going to have to be accomplished without destroying the intellectual base of science.

If NIH is going to retain, let alone intensify, its identity as a research organization, it is going to have to find ways to collaborate with other health agencies whose mission is already clearly one of service. Not only would NIH have to abandon its aloofness; other agencies would have to "humbly" decide to seek its advice. Where egos are not in the way, it might work. But where egos are strong, as they are between HEW and NIH, cooperation is lost and science suffers.

—BARBARA J. CULLITON

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