think he [Gofman] was doing really scientific work. He was not publishing anything in the literature. He was being supported to the tune of about $330,000 a year and we had nothing to show for it." Totter was also quoted as saying that Tamplin's handbook is "not very well accepted—large parts of it are not well accepted in the scientific world." Totter is quoted as saying he was warned by other staffers almost as soon as Tamplin started work: "Watch out for that guy. He's not very good and he's going to cause you trouble."

What is one to make of all this name-calling and all the charges and countercharges? One obvious conclusion is that there have been verbal excesses on both sides. Gofman and Tamplin have raised an important issue with regard to the adequacy of existing radiation standards, but unfortunately they may weaken their case by indulging in verbal overkill that alienates their peers and undermines their credibility. On the other hand, if the AEC has really taken punitive action against them—and one must admit that circumstantial evidence suggests this may indeed be the case—then something must be done to right the situation, not only for the sake of Gofman and Tamplin, but for the sake of all future dissidents who want to challenge the agency they work for as well. Gofman's charge that the AEC has "partially succeeded in silencing our presentation of the radiation hazards issue" should be investigated by an impartial party. And his complaint that AEC experts promote nuclear energy at government expense while citizen groups must pay to obtain testimony from nuclear critics like himself and Tamplin seems valid. It may well be true that the Livermore laboratory's mission does not properly include support for a large number of public appearances by Gofman and Tamplin. But if American society is to benefit from hearing both sides in these highly technical debates, then some mechanism must be found to support the technological critics.

—PHILIP M. BOFFEY

Science Adviser: DuBridge Retires, David Nominated as Successor

Lee A. DuBridge's departure from his post as science adviser to President Nixon is being accomplished in a manner very much in character for the former Caltech president. The ceremonial farewells with the President went off in a friendly if slightly formal way, and the announcement of DuBridge's retirement was smoothly timed to coincide with the nomination of a successor, Edward E. David, Jr., currently executive director of communications systems research at Bell Laboratories.

Since there were no visible signs of dissatisfaction on either side, DuBridge's resignation came as more of a surprise than most midstream changes at the White House. The federal budget squeeze has proved an obvious source of frustration to DuBridge during his 19-month tenure as science adviser and director of the Office of Science and Technology (OST), and observers have diagnosed a decline in the status and influence of science in White House councils. But DuBridge's relationship with the President does not seem to have deteriorated, and they parted with expressions of mutual esteem. In explaining his retirement in his letter of resignation, DuBridge wrote, "I have always been convinced that I should retire well in advance of my 70th birthday in 1971. Hence I suggested to you this summer that you should begin the search for my successor and allow me to retire at a date convenient both to him and myself."

David, the product of this search for a successor, at 45 is 23 years younger than DuBridge. In two major ways David's appointment represents a break with the past. He is the first to come to the science adviser's post from industry rather than the university, and he is not of that group who were initiated into the public service in the mobilization of scientists in World War II and have maintained influence since then. David's professional credentials are strong. In addition to his executive post in the highly regarded Bell Labs he is a professor of electrical engineering at Stevens Institute of Technology and a consultant to several universities. He is a member of both the National Academy of Sciences and the National Academy of Engineering and has served as a consultant to a variety of

Lee A. DuBridge (right), retiring science adviser, with his successor Edward E. David, Jr.

federal and civilian agencies on both defense and civil matters.

In a 20-year career with Bell Labs he has demonstrated considerable versatility, originally working on microwaves and underwater acoustics and later becoming a computer expert. He has been active on the NAE's committee on education, has been co-director of its Engineering Concepts Curriculum Program, and is given a major share of credit for shaping a high school course based on teaching principles underlying modern technology.

David is well known in his own field, but his name is hardly a household word in the scientific community. He has not served on the President's Science Advisory Committee (PSAC), which is regarded as the place where scientists are likeliest to influence major policy. This lack of experience will have to be made up on the job. David has a solid reputation as one of the younger regulars among federal consultants, however, and at Bell Labs he is regarded as being very able and, as one colleague put it, "hardworking and hard-headed" without being abrasive.

An instant appraisal of the stewardship of the man David replaces is difficult. DuBridge's term in office was comparatively brief, and on many of the issues which his office tackled the reports are literally not in. DuBridge was determined that the OST would be an advisory, not an operating, agency, and this makes it harder to judge the depth of the imprint he and his staff made on policy decision.

DuBridge's first year in office coincided with the advent of the environmental issue as a major matter of national concern, and he and his staff were involved in attempts to cope with specific problems such as the Santa Barbara Channel oil leak, and even more directly with efforts to strengthen Executive apparatus to deal with environmental issues. The Administration formula of a cabinet-level interagency council was trumped by congressional passage of a plan for creation of a special Council on Environmental Quality, to be lodged in the Executive Office of the President, and OST is still involved in working out its relations with the council.

DuBridge is credited with having had a main hand in the task force report which influenced the Administration to set a middle course for the space program in the next decade, and he and his staff seem to have played a less influential role in the still unresolved debate over the supersonic transport. DuBridge's awareness of energy problems enabled him and his staff to anticipate the crisis in electric power generating capacity and to initiate some steps to meet it.

According to insiders, DuBridge and his staff contributed much more heavily than is generally recognized to the President's renunciation of biological warfare last year and to the recent move for ratification of the Geneva protocol on chemical and biological warfare.

The state of basic research has been a preoccupation of DuBridge's since he took office, and he is credited with having assisted the modest recovery in the fortunes of the National Science Foundation. He has, however, been a target of criticism from university scientists because of the continued decline in federal support of science. Apparently stung by the reproaches of his old colleagues, he has frequently and often tartly defended the record. In his letter of resignation to President Nixon he repeated the gist of his argument saying, "These past 19 months have, of course, been difficult times in many ways. One result of the fiscal problems has been the slowdown (which began in 1967) of the nation's scientific and technological enterprise has not been reversed. Much of this lag in the past year has been the result of the failure of the Congress to appropriate the full amount of the funds you requested in FY 1970 for scientific research. There is evidence that in fiscal 1971 your request for increased scientific funding will be more fully met. I hope so, and I trust that our mutual desires for the continued welfare of science will be fulfilled."

Perhaps because budget stringencies dramatized the need to make optimum use of resources for science, DuBridge has been more active than any of his predecessors were in pushing initiatives toward building workable machinery for making science policy (*Science*, 24 July).

DuBridge brought to the office of science adviser experience and personal qualities which were probably unique. His familiarity with the corridors of power was that of someone who had helped lay out the floor plan. Because of his prestige and personality he was neither insecure nor office-proud. DuBridge was director of the near-legendary Radiation Lab at Cambridge during World War II; at Caltech he presided over unprecedented expansion which confirmed that institution as one of the country's two preeminent technical universities. He was a member of the scientists' unofficial privy council which, especially during the 1950's, heavily influenced American strategic policy. One view is that the post of science adviser capped a distinguished career for DuBridge, but to others it appeared that he accepted the job more as a duty than an honor.

Nobody who saw DuBridge perform the public functions of his post doubted his energy or his grasp of the issues, and as a future member of PSAC and in other ways he is likely to continue to make a vigorous contribution. But he belongs to that generation of scientists who were 40 or older at the time of World War II and maintained positions of remarkable influence for more than two decades. DuBridge is the last of his contemporaries to hold a major policy post, and his departure signals the end of an era in science affairs in this country.—JOHN WALSH

ABM: Senate Approves Expansion, but Hope Seen for Arms Curb

Before the Senate vote on the antiballistic missile system last year there was much talk in Washington about senators having adopted a tough, skeptical, "gimlet-eyed" attitude toward the military's request for new weaponry. The Pentagon had had it too easy for too long, it was said. The senators opposing deployment of the ABM ultimately failed by one vote. However, the decision was close enough to suggest that the Senate was in fact taking a hard new look at weapons procurement questions. Last week, the Senate ended a new round of debate on the ABM. What it decided was to extend the ABM system to two new installations, despite disturbing questions raised about the system's effectiveness and despite the fact that the two installa-