building on Constitution Avenue, and moved to the main Navy building across 17th street where it occupies the offices off several long corridors on the fourth floor. Up there in the "attic" ONR people seem to have felt a certain isolation, from one another and from professional colleagues on the outside. Leydon has regarded the talk that one hears of isolation as a "canard."

Upon his arrival at ONR, Leydon found that the agency's budget had almost ceased its modest upward climb and was leveling off. The Office of Defense Research and Engineering, aware that NSF support of basic research had grown enormously, and sensitive to congressional sentiment that the military should narrow the focus of its research, was being anything but free-handed.

Meanwhile, the strengthening of the oceanography program was becoming of increasing concern to the Navy. The difficulties encountered in finding the remains of the *Thresher*, which was lost in 1963, had pointed up how limited the Navy's capabilities were for deep undersea operations. Confronted by a static budget and requirements for stronger oceanographic research, Leydon, far more than his predecessors, had to give close attention to budget priorities.

According to Sidney Reed, ONR's director of research, all programs outside the field of oceanography have received less money than the scientists responsible for them wanted. Leydon is sympathetic to the scientists' desire for more money for their programs, but he feels that, without additional personnel of high quality, ONR is getting all the money it can spend effectively. The ONR budget for fiscal 1967, now awaiting final approval by Congress, is roughly the same size as last year's. No major cuts in the ONR budget request have been made this year either at higher echelons in the Navy and Defense Department or in Congress.

Reed disagrees with Leydon's view that funds should not be increased until the staff is strengthened. "I do not feel that we have reached a saturation point at all," he told *Science*. Weyl, on the other hand, feels that, at present staff strength, ONR should improve the use of existing research funds rather than assume the burden of administering additional funds.

If more funds for research should be sought the amount would be about $7 million, Leydon says. Although contracts in oceanography sometimes exceed $1 million, those in other fields usually involve comparatively small sums, often no more than $20,000. This being so, a budget increase of only a few million dollars, assuming the money is properly spent, can increase significantly the research program's vitality.

Leydon stirred some emotion among ocean scientists last December with a speech in which he said that ONR was shifting a larger fraction of its support for oceanographic research to areas of "direct Navy relevance." The technology for research at sea had advanced to the point where truly significant experiments could be conducted, he said. Such experiments, he added, would require important and continuing support and plans setting forth well-defined scientific problems.

According to Leydon, his speech raised apprehensions among some scientists that ONR would be looking over their shoulders. These fears, he believes, were allayed by the appointment of John B. Hersey, a distinguished Woods Hole oceanographer, as head of ONR's new ocean science and technology group. ONR will not interfere in the research of ONR-sponsored investigators, but their work must have clear objectives, Leydon says.

Unless ONR's budgetary and personnel problems somehow are resolved, the demands of the oceanography program, to which the Navy will give increasing support, surely will result in continued rebuffs to those who seek additional funds for other areas of research. This is likely to be especially true of investigations which, at their present stage, can be only vaguely related to the Navy's predictable requirements.

Many ONR staff scientists undoubtedly would endorse the view expressed at the ONR convocation by Harvey Brooks. Science cannot be divided up into neat little packages, each of which is related uniquely to the mission of one agency, Brooks observed. "Scientific work involves a multiplicity of choices of direction, many of which depend on very small influences in the mind of the investigator," he said. "Even in a system of complete scientific freedom the cumulative effect of the small biases placed in the mind of the investigator by his sponsor can have a profound effect on the direction and impact of his research."—LUTHER J. CARTER

Announcements

The University of California has opened its **Bodega Marine Laboratory** at Bodega Head, a pensinsula with ocean conditions on one side and a sand- and mud-flat harbor on the other. The laboratory, about 65 miles north of Berkeley, will be used primarily by faculty and students from the Berkeley, San Francisco, and Davis campuses. Cadet Hand, a zoology professor at Berkeley, is the director.

Costs for building and equipping the laboratory totaled nearly $1.5 million, much of which came from an NSF grant. The site includes, in addition to the class and research facilities, dormitory room for 40 people and dining space for about 50.

Discussions of environmental pollution, management of natural resources, and technical information are presented in a new publication from the Engineers Joint Council. The 44-page booklet "National **Engineering** Affairs," summarizes a 2-day seminar held in Washington in January; condensed versions of 18 papers are included. Copies of the booklet are available for $1 from EJC, Department P, 345 East 47th Street, New York 10017.

Scientists in the News

Vikram A. Sarabhai is the new chairman of India's Atomic Energy Commission and Secretary of the Department of Atomic Energy for the Indian Government. He succeeds **H. J. Bhabha**, who was killed in a plane crash in January. Sarabhai, a professor of cosmic ray physics at the Physical Research Laboratory in Ahmedabad, has been director of the laboratory since 1965. He is also the first chairman of the Indian National Committee for Space Research.

General Maxwell D. Taylor (U.S. Army, ret.), former U.S. ambassador to Vietnam, will succeed **J. P. Ruina** as president of the Institute for Defense Analyses (IDA) in September. Ruina, a professor of electrical engineering at MIT, returns there this month as vice president for special laboratories; he had been on leave since 1964.

Gordon J. F. MacDonald, chairman of the department of planetary and space science at UCLA, has been named vice president for research at IDA, effective 1 September; he will be

on a 2-year leave of absence from UCLA. He will replace **Elliott W. Montroll,** who has been appointed Einstein professor of physics at the University of Rochester.

IDA, in Arlington, Virginia, near Washington, is a nonprofit corporation sponsored by a dozen universities across the nation; it performs operations research, technical analyses, and economic and political studies for the federal government, primarily for the Defense Department.

Robert G. Loewy, on leave from the University of Rochester as chief scientist of the U.S. Air Force, will become director of the university's space science center, effective 1 September.

Recent Deaths

S. Leroy Brown, 85; professor emeritus of physics at the University of Texas; 15 March.

Arthur Clay Cope, 56; professor of chemistry at Massachusetts Institute of Technology and chairman of the board of American Chemical Society; 4 June.

E. Yale Dawson, 48; plant taxonomist in the botany department of the Smithsonian Institution; 22 June.

Panchanan Maheshwari, 62; chairman of the botany department, University of New Delhi, India; 18 May.

Ann H. Morgan, 84; professor emeritus of zoology at Mount Holyoke College; 5 June.

Charles K. Otis, 56; professor of agricultural engineering at the University of Minnesota; 10 June.

Donald W. Patrick, 60; retired director of the NIH Clinical Center; 5 June.

Richard E. Paulson, 47; program director for special projects, NSF division of undergraduate education in science; 11 June.

Julius M. Rogoff, 82; president and director of the medical research laboratory of the Rogoff Foundation for Research and Training, and professor emeritus of endocrinology at the University of Pittsburgh; 26 June.

Erratum: In a note to his review [*Science* **152**, 746 (6 May 1966)] of C. E. Lindblom's *The Intelligence of Democracy: Decision Making Through Adjustment*, Amitai Etzioni was incorrectly identified. He is a fellow at the Center for Advanced Study in the Behavioral Sciences, Stanford, California. The identification given in the note pertains to Lindblom.

Erratum: In the report "Nonthrombogenic plastic surfaces" [**152**, 1625 (17 June 1966)], the name of one of the authors was omitted. The authors should have been listed as follows: R. I. Leininger, C. W. Cooper, M. M. Epstein, R. D. Falb, G. A. Grode.

NEWS IN BRIEF

• **CONGRESS AND SCIENCE:** Senator Gordon Allott (R–Colo.) has introduced S. 2599 to establishd a Joint Congressional Committee on Science and Technology. The measure would require the President to submit a report each year setting forth the major policies, plans, goals, and programs of science and technology in government and, insofar as it is known, in nongovernmental organizations, which would be reviewed by the joint committee. The proposed setup would be similar to that of the Joint Economic Committee that reviews the President's Economic Report. The bill was referred to the Committee on Labor and Public Welfare, but no hearings have been scheduled.

• **HUMAN EXPERIMENTATION:** The Public Health Service has issued a new directive governing clinical research involving human subjects. The directive, effective this month, applies to all PHS-supported research, training, and demonstration projects and emphasizes that rights and welfare of human subjects in research projects are the responsibility of the institutions to which the grants are awarded. Preliminary review is suggested prior to application but certification is required —by a group review made by the grantee's institution—of individual projects in which humans are used. The directive is based on a resolution passed by the National Advisory Health Council in December 1965. It states that PHS-supported research should be reviewed by the grantee's institutional associates in order to assure safeguard of humans involved in the investigation. In February the Surgeon General issued a policy statement in which methods to safeguard humans involved in PHS-supported clinical research were listed. The new resolution extends the regulations to all PHS grants and awards for research involving human subjects.

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In a related development, the PHS has awarded a $100,000 grant to the American Academy of Arts and Sciences in Boston to support inquiry into the "moral and ethical basis" for research involving human subjects. The study will involve a series of conference discussions—in which lawyers and sociologists, as well as physicians and scientists, will participate—based on prepared analyses of various aspects of the problem. A report of the discussion will be published in a special issue of *Daedalus*, the journal of the Academy, in late 1967 or early 1968.

• **HUMANITIES AWARDS:** Allocations totaling $4.5 million have been made by the National Endowment for the Humanities for fellowships and grants for various projects. These include a project to publish classics of American literature in accurate and well-edited form to be sold at moderate prices, and a pilot study for the improvement of educational radio and television. Although Congress allowed the Endowment only $2 million of a $5-million request for the current fiscal year, there was $2.5 million left from last year's appropriation. The first batch of fellowships—200 for summer fellowships for young scholar-teachers, 100 for longer fellowships, and 50 to "mature humanistic scholars," teachers, and writers—are to total $2 million. Recipients of all the fellowships have not yet been named. According to the Endowment's declaration of purpose, there will be an effort made to seek out talent and not to limit the assistance to established scholars. A director of fellowships is to be appointed, as well as advisory boards. The Endowment has stipulated that no institution may have more than one fellow and each state must have at least one. The additional $2.5 million has been allocated for grants for the various humanistic projects. At the Washington meeting last month, Barnaby D. Keeney, who resigned as president of Brown University, took over as permanent chairman of the Council. Henry Allen Moe has served as interim chairman.

• **GRAND CANYON DAMS:** A group of engineers at Caltech has protested the proposed construction of Marble Canyon and Bridge Canyon dams in the Lower Colorado Basin Project (*Science*, 17 June). In a letter addressed to the House Subcommittee on Irrigation and Reclamation, the engineers at the W. M. Keck Laboratory of Hydraulics and Water Resources at Caltech suggested an alternative steam power project and a "proper" engineering study of other alternatives to Marble and Bridge Canyon dams.