financial interpretation of conflict of interest has become.

Although strong on ethical appearances, the new law will not affect what is becoming one of the most critical problems of the government's technical advisory apparatus. The difficult case is no longer one where an official's judgment is colored by an opportunity for private financial gain through the award of a particular contract to a particular firm—although that is still a problem. More subtle problems of judgment arise which are in no way, or scarcely, affected by an advisor's opportunity for profit. The award of a research contract to a university chemistry department is not likely to bring a particular professor a great fortune. But it is likely to reflect on him both directly—in the sense that he may become the hero who brought the bacon home to his department—and indirectly, in the sense that it enhances the prestige of his department, attracts graduate students, may lead to the purchase of costly equipment, and so on.

Disqualification procedures included in the new law cover just this sort of situation; in this respect the law more or less ratifies what has been standard practice in the National Institutes of Health and the National Science Foundation for several years. The solution in these institutions has been to adopt the childlike procedure of "leaving the room" when a grant to the advisor's home institution is being discussed. There is thus no bodily conflict of interest, but it is unlikely that such an environment will remain entirely free of "horse-trading" tendencies, or that judgment will be completely free, when one judge is lurking behind the door one moment, another the next.

The limited size of the manpower pool from which government must lure advisors in a number of fields poses an additional hazard of orthodoxy or circularity in the advisory system, although it is not strictly a conflict of interest problem. When most of the handful of seismologists are already working for the government on methods of identifying underground nuclear explosions, it is difficult for the government to get an independent evaluation of their work.

The shadow of conflicting interest falls also on the legally inscrutable relationships between the government and the nonprofit corporations that supply it with scientific and technical talent it would have difficulty attracting on its own. The Institute for Defense Analysis, for example, maintains in the Pentagon, a section of its operations called the Weapons Systems Evaluation Division. WSED parallels the Weapons Systems Evaluation Group (WSEG) of the Pentagon itself, and is, in effect, the technical staff of the Joint Chiefs on WSEG matters. Since the WSED staff is employed by the Institute, not by the government, its members are freed from certain government restrictions, mainly on salaries. Until last year, an Institute employee actually held the Pentagon title of Director of Research for WSEG, though he served without compensation in that capacity. A similar relationship existed until a few years ago between the Pentagon's Advanced Research Projects Agency and IDA's Advanced Research Projects Division. Like the Rand Corporation, which was established by the Air Force, IDA and several other nonprofit organizations exist solely or almost exclusively to service the government; they would have little or no life without it. The government, in turn, is dependent on them.

If some of the new science-government relationships appear ethically ambiguous when judged by the traditional concept of conflicting interest, that is more because the concepts have not caught up with change than because the relationships are in any way sinister. No more effective ways have yet been invented for the government to receive the maximum amount of top-level advice in the maximum possible number of instances. The novel forms of the conflict of interest problem now apparent, grow in part out of the state of science, in part from the needs of government. They will not be affected by the new laws.—ELINOR LANGER

Announcements

New York Medical College has established a graduate school of **medical sciences**, headed by Warner F. Bowers, professor of clinical surgery at the college. The school's program will lead to the M.S., Ph.D., and D.Sc. degrees.

Harvard University's school of public health has announced plans for a center for **population studies** as an expansion of its recently formed department of demography and human ecology. The center seeks to attract specialists in biological, physical, and social sciences who have not previously worked on population studies. They will join experts in the field who are already at Harvard. Funds are on hand for an endowed professorship to head the center, and an additional $2.4 million is being sought for endowments and construction of facilities.

The center will specialize on the effects of public measures on quality and density of population and on efforts by governments and local groups to regulate population growth. John C. Snyder, dean of the university's faculty of public health, will act as head of the department until a director for the center is appointed.

The U.S. Coast and Geodetic Survey has established a **seismological data and analysis center** in Washington. Information on earthquakes and other seismic disturbances will be sent to the center from 125 recording stations in approximately 60 countries. The seismograms will be stored on 70-mm film clips from which full-sized reproductions can be made on request; the information is unclassified. The director of the center is Thomas Modgling. For further information write to the Director, U.S. Coast and Geodetic Survey, Washington 25, D.C. Attn: Seismological Data Center.

Courses

Two courses in **electron microscopy** will be offered simultaneously at the University of California, Berkeley, 8–19 July. One course, on biological materials, is designed primarily for senior investigators, post-doctoral fellows, advanced graduate students, and professional technicians. Participants may conduct individual projects during the course. The other course, on inorganic materials, is intended for university instructors, advanced graduate students and industrial technicians concerned with the physics of solid-state metallurgy. Persons registered may attend lectures in both courses.

Advance registration is required; the $250 fee includes all class and laboratory materials. Deadline for applications: *14 June*. (Engineering and Sciences Extension, Univ. of California, Berkeley 4)

A program in **laboratory animal medicine** has been established at the University of Michigan Medical School. Both pre- and postdoctoral training is offered. Postdoctoral training period is 2 years. Veterinarians accepted for the

program may work toward the master's or doctor's degree in the university's graduate school.

Predoctoral summer fellowships are available to students who have completed at least 2 years of veterinary school. (B. J. Cohen, Dept. of Physiology, Univ. of Michigan, Ann Arbor)

Grants, Fellowships, and Awards

The 1963–64 Nininger Meteorite Award has been announced by Arizona State University. Graduate or undergraduate students in American colleges may submit reports of up to 10,000 words describing **original meteorite research**. The $1000 prize is offered "to stimulate interest in research in meteoritics as an important phase of the current investigations in space exploration." Deadline for receipt of papers: *1 July*. (C. B. Moore, Dept. of Chemistry and Geology, Arizona State Univ., Tempe)

Postdoctoral fellowships in public health and medical laboratory **microbiology** are available at Temple University School of Medicine. Applicants must be U.S. citizens, and hold degrees of M.D., Ph.D., or Sc.D. Fellowships range from $5000 to $8000. (K. M. Schreck, Dept. of Microbiology, Temple University School of Medicine, Philadelphia 40, Pa.)

A $1000 award is offered by the journal *Industrial Medicine and Surgery* for "the most outstanding original manuscript" on the future of **health in industry**. (*Industrial Medicine and Surgery*, P.O. Box 306, Tamiami Station, Miami 44, Fla.)

Meeting Notes

More than 200 papers will be presented at the ninth meeting of the American **Nuclear** Society, 17–19 June, in Salt Lake City, Utah. The meeting will feature recent accomplishments in the peaceful uses of the atom. Approximately 1000 nuclear scientists and engineers are expected to attend the conference. (R. E. Lightle, A.N.S., P.O. Box 521, Idaho Falls, Idaho)

The Oak Ridge National Laboratory will sponsor a conference on analytical chemistry in **nuclear technology** 8–10 October in Gatlinburg, Tenn. The topics to be covered include instrumentation, instrumental methods, analytical spectroscopy, and gas chromatography. Scientists who wish to present papers must submit a 500-word abstract. Deadline: *10 July* (C. D. Susano, ORNL, P.O. Box X, Oak Ridge, Tenn.)

Approximately 1000 persons are expected to attend the 16th conference on **engineering in medicine and biology**, to be held 18–20 November in Baltimore, Md. It is sponsored by the Institute of Electrical and Electronics Engineers and the Instrument Society of America. Persons who wish to present papers at the technical sessions should submit a 2-page digest manuscript. Deadline: *1 August*. (16th Annual Conference, Jenkins Hall, Johns Hopkins Univ., Baltimore 18, Md.)

Scientists in the News

The Fund for the Behavioral Sciences has presented this year's Stanley R. Dean research award to **David Shakow**, chief of the psychology laboratory at the National Institute of Mental Health. The $2000 prize cites Shakow for "basic research accomplishment in the behavioral sciences contributing to our understanding of schizophrenia."

Lawrence W. Drabick, formerly at the University of Connecticut, has become research associate professor of agricultural education and rural sociology at North Carolina State College.

Sol L. Garfield, former professor of medical psychology at the University of Nebraska college of medicine and chief of the psychology division, Nebraska Psychiatric Institute, has been appointed principal research scientist at the Missouri Institute of Psychiatry and research professor of psychology, in the Washington University graduate school of arts and sciences.

The president-elect of the American Psychiatric Association is **Daniel Blain**, director of development for psychiatric services, Pennsylvania Hospital.

The first Meltzer award of the Society for Experimental Biology and Medicine has been presented to **DeWitt Stettin Goodman** of the department of medicine, College of Physicians and Surgeons, New York. The award includes a medal and $500 honorarium.

Edward L. Hunt, a psychologist at the U.S. Naval Radiological Defense Laboratory, San Francisco, Calif., has received the laboratory's Gold medal for scientific achievement in studying the effects of ionizing radiation on the mammalian nervous system. The laboratory's Silver medal was awarded to chemist **Monte H. Rowell**, for his discovery and characterization of ion exchange in molten oxides.

Earl A. Alluisi, of the Lockheed-Georgia Co., Marietta, has been named professor of psychology at the University of Louisville, Ky., effective in September.

Philip A. Briegleb, director of the U.S. Forest Service's Southern Forest Experiment Station, New Orleans, La., has become director of the Pacific Northwest Forest and Range Experiment Station, Portland, Ore. He succeeds **Robert W. Cowlin**, who has retired after 33 years in Forest Service research.

Robert J. Glaser, dean of the school of medicine and vice president for medical affairs at the University of Colorado, has been named professor of social medicine at Harvard University, as of 1 July. He will also serve as president of the Affiliated Hospitals Center, Inc., a coordinative body of Harvard Teaching Hospitals.

Ralph H. Long, Jr., formerly with the National Science Foundation, Washington, D.C., has been appointed professor and head of the mechanical engineering department, Lehigh University.

Irwin G. Cohen, formerly with Arkwright-Interlaken, Inc., Fiskeville, R.I., has become senior chemist at the Itek Corporation, Lexington, Mass.

E. L. Harder, manager of Westinghouse Corporation's advanced systems engineering and analytical department, has been awarded the Lamme Gold Medal for 1962. The medal, awarded by the Institute of Electrical and Electronics Engineers, was instituted in 1928 for "meritorious achievement in the development of electrical apparatus or machinery."

John P. Gillin, of the University of Pittsburgh, has become research professor of anthropology at the university.

(Continued on page 923)

(Continued from page 884)

Edwin R. Fisher, pathology professor at the University of Pittsburgh, Pa., and chief of laboratory service at the Veterans Administration Hospital, Pittsburgh, has received the American Society of Experimental Pathology award for his research in cancer and diseases of the kidney and blood vessels. The award carries a citation and a $1000 honorarium from Parke, Davis & Co.

H. O. Hartley, professor of statistics at Iowa State University, has been named director of the newly established Graduate Institute of Statistics at Texas A&M College.

Victor A. Babits, formerly professor of electrical engineering at Rensselaer Polytechnic Institute, has become manager of applied research at General Dynamics-Astronautics, San Diego, Calif.

Richard B. Bishop, research associate at Holy Cross College, Worcester, Mass., has received the President's Cup of the Society of Plastics Engineers, for "outstanding and meritorious service to the Society."

The newly elected president of the World Meteorological Organization is **Alf E. Nyberg**, director of the Swedish Meteorological and Hydrological Institute.

Harold A. Dundee, assistant professor of zoology at Tulane University, has been elected president of the southeastern section of the American Society of Ichthyologists and Herpetologists.

Howard F. Raskin, formerly at the University of Chicago, has been appointed associate professor of medicine at the University of Maryland.

John C. Rose, professor of physiology and biophysics at Georgetown University, has been named dean of the university's school of medicine, effective 1 July. He will succeed **Hugh H. Hussey**, who will become director of the American Medical Association's division of scientific activities.

Norman P. Willett, formerly with the Bzura Chemical Co., has been appointed microbiologist at Food and Drug Research Laboratories, Maspeth, N.Y.

The Borden award in the chemistry of milk has been presented to **Serge N. Timasheff**, of the U.S. Department of Agriculture's Eastern Utilization Research and Development Division, Wyndmoor, Pa. The award includes a gold medal and a $1000 honorarium.

Recent Deaths

Harold F. Dorn, 56; chief of the biometrics research branch, National Heart Institute; 7 May.

Herbert S. Gasser, 74; director emeritus of the Rockefeller Institute and winner of the 1947 Nobel Prize in medicine; 11 May.

John M. Goggin, 46; chairman of the department of anthropology at the University of Florida; 4 May.

Sidney S. Negus, 71; emeritus professor at Virginia Medical College; 17 May. A fellow of AAAS, he had directed press relations for all Association meetings since 1938. Dr. Negus retired last June from the Medical College of Virginia, where he had been head of the department of biochemistry for 35 years. He was a consultant to the U.S. Atomic Energy Commission's public information service, and former director of public relations for the Federation of American Societies for Experimental Biology. The scientist-writer was on the board of directors of the Virginia Institute for Scientific Research. He had received the 1949 distinguished service award from the Virginia section of the American Chemical Society. This month, he received the distinguished service award from the Virginia Academy of Sciences, of which he was a past president.

A native of Dudley, Mass., Dr. Negus studied at Clark University, Harvard, and Johns Hopkins, where he took his Ph.D. degree in 1923.

He suffered a stroke last week while in New York to attend the Lasker awards luncheon.

George H. Penn, 44; professor of zoology and editor of *Tulane Studies in Zoology*, Tulane University; 10 May.

Clayton Ulrey, 78; former research physicist at Westinghouse Lamp Co.; 29 April.

Erratum: The first international symposium on radiosensitizers and radioprotective drugs [*Science* **140**, 207 (12 Apr. 1963)] is scheduled for 23–24 May 1964.

Erratum: In the cover photo caption [*Science* **140**, 441 (3 May 1963)] the roles of two of the species of oceanic zooplankton should be reversed. *Cavolinia inflexa* (lower center) is one of the two that feed on particulate matter by means of mucus, and *Carinaria japonica* (bottom) is one of the predators.