in news releases, but it expressed the conviction that the "public ought to know, when a newsworthy development occurs during a research project, that their tax moneys contributed to it, and how much."

Having surveyed the manner in which the federal agencies operate, the committee next turned to the receiving end of the grants process and asked 1400 universities for comments. As might have been expected, there were many complaints, criticisms, and suggestions for improving the system. These included a proposal, from "the assistant research coordinator of a small State university," to the effect that grant applications should contain neither the name of the investigator nor his institution. "This procedure," it was stated, "would make it easier for a young scientist to get support for a meritorious project, as well as keep some established scientists on their toes in planning research." The committee, while describing itself as "sympathetic," concluded that "such a 'faceless application' system . . . could fast devolve into a word game for 'brochuresmen'." And, in what may have been a laymen's bow to the mysteries of science, it added, "It is not uncommon to find the most gifted researchers writing the vaguest of research designs or proposals, and producing brilliant results."

A number of institutions made pleas for the establishment of programs to provide small and administratively simple grants. (In examining this suggestion, the committee noted that, in fiscal 1959, NIH awarded 9166 grants, averaging $15,569 each; in fiscal 1963 it awarded 15,230 grants, averaging $28,287 each.)

There were also pleas for administrative uniformity among the agencies supporting research, for reducing paper work, for permitting greater flexibility once a grant is awarded, and for speeding up the decision-making process on grant applications. But the remarkable thing is that when the institutions were asked to express their "level of satisfaction" in reference to the administrative practices of the granting agencies, they overwhelmingly indicated that they are quite satisfied.

Table 2, which is a tabulation of these responses, is based upon approximately 1000 replies from questionnaires sent to 1400 institutions. Since the questionnaire was sent to the president of the institution and in most cases was filled out by him or by the director of research or the business manager, the responses may not accurately reflect the viewpoint of the man at the lab bench, but it appears to say that at least the administrative levels feel they can live with present procedures. For example, only 19 percent found NIH "difficult" in matters summed up under the heading of "administrative red tape." Ninety-two percent found NSF "excellent" or "reasonable" in "length of decision-making." And, in "fairness of selection process," 22 percent termed NASA "difficult," but all the other major research supporting agencies were marked excellent or reasonable by more than 90 percent of the respondents on the "fairness" question. The grant process should of course be improved wherever possible, but it is difficult to see how these responses can be reconciled with the view that the system is overwhelmed by administrative problems.

On the longstanding problem of overhead allowances, the committee noted "inconsistent and sometimes conflicting rules and practices." And it proposed that matters be simplified by uniform use of the Bureau of the Budget's overhead regulations. In addition, it proposed a system under which an institution could elect to receive a flat 15 percent applied to total direct costs, without itemized justification, rather than itemizing the overhead to qualify for the existing 20 percent maximum.

In concluding its survey of the administration of grants, the committee came forth with a number of recommendations. It strongly supported strengthening of the Science Information Exchange, which is operated by the Smithsonian Institution, as a means for reducing unnecessary duplication and spreading information about research activities. It also recommended that every federal research grant be listed in a "central catalog or docket" in each House of Congress, and "reproduced in some general publication," and that all grants be reported to the congressional committees with jurisdiction over the granting agency. This might seem to be a fairly radical proposal, with implications for encouraging Congress to play a larger role in the details of science administration. But the fact is that any member or committee inclined to play such a role can easily obtain a rundown on who is getting grants for what, simply by pulling together a number of separately issued publications. It would simplify matters to have it all in one binder, and it might possibly encourage improved cooperation among the federal agencies, but Congressmen and their staffs are now inundated with government reports and other reading matter, and it is not likely that the proposed compilation, by itself, would foster any significant changes in Congress' relations with science.

At this point the future of the Elliott Committee remains in doubt. The resolution that established the committee expires at the end of this year, and Elliott himself will depart Congress at the end of the session as the result of his defeat in the Alabama primary. There is no sign that any of his four Democratic colleagues on the committee are interested in taking on the chairmanship. —D. S. GREENBERG

Research Indemnification: New VA "Insurance" Policy Offers Greater Security to Researchers

Although medical research has expanded rapidly in recent years, a legal framework governing research involving human patients has developed more slowly and unevenly. The absence of a legal structure has left not only researchers but all connected with a research project uncomfortably vulnerable to legal action arising from the conduct of an experiment, and in some cases it has actually hindered research. Some government agencies, notably the Department of Defense and the National Institutes of Health, have taken steps to protect their programs by indemnifying their contractors against claims growing out of a research project. A bill just passed by Congress and now awaiting the President's signature provides to contractors of the Veterans' Administration the same degree of security now afforded contractors of the other agencies. The bill, requested by the VA, gives the agency the authority it has heretofore lacked to indemnify contractors involved in experimental research on human subjects.

In recent years, the VA has encountered some difficulty in obtaining equipment or drugs for research purposes, apparently because of the fear among suppliers that they could be held liable for death or injury resulting from use of the material in question. While the law on the subject is not clearcut, the timidity of drug and device suppliers has increased recently because of the implications of a series

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of court decisions apparently extending the legal doctrine of implied warranty of a manufactured product. In at least one case, the development by the VA of a plasma expander which, according to VA chief J. S. Gleason, Jr., "holds great promise of drastically reducing the amount of whole blood required for open heart surgery," research was held up for many months because of the refusal of the supplier to sanction its use on human subjects without some provision for his protection in the event of a mishap. Private insurance has heretofore been available to cover damage possibilities both to researchers and to companies and will be utilized in addition to the government indemnification in future VA contracts. Private insurance, however, is apt to be prohibitively costly, particularly for individuals, and it has not come into general use. The VA anticipates that the provision for government indemnification will ease the worries of contractors and end this particular set of problems. —E.L.

Political Campaign: Scientists and Engineers Organize for LBJ

The formation of a bipartisan committee of scientists and engineers supporting the election of President Johnson was announced in Washington last week. The committee, called Scientists and Engineers for Johnson, includes Jerome Wiesner, science adviser to President Kennedy, and George Kistiakowsky, science adviser to President Eisenhower. It also includes Detlev Bronk, president of the Rockefeller Institute and an active supporter of Eisenhower in 1952 and 1956, and a number of other scientists who have previously supported Republican candidates or who have not been active in politics. As was reported in these pages last week, no similar organization supporting Senator Goldwater is now planned. The address of the Johnson committee is 1106 Connecticut Avenue, NW, Washington.

The following is a list of individuals in addition to those named above currently associated with the committee. It is expected that the committee will be expanded as the campaign progresses.

Luis W. Alvarez, professor of physics, Lawrence Radiation Laboratory, University of California, Berkeley.

Harrison S. Brown, Division of Geological Sciences, California Institute of Technology, Pasadena.

Owen Chamberlain, professor of physics, University of California, Berkeley.

Kenneth B. Clark, professor of psychology, City College of New York.

Rufus Clements, president, University of Atlanta.

W. Montague Cobb, professor of anatomy, Howard University.

Michael E. De Bakey, professor of surgery, Baylor University.

Sidney Farber, founder and scientific director, Childrens' Cancer Research Foundation.

Richard Buckminster Fuller, chairman of the board of trustees, Fuller Research Foundation.

Michael Ference, Jr., vice-president for scientific research, Ford Motor Company.

Gen. James M. Gavin, U.S. Army ret., president, Arthur D. Little, Inc.

Peter C. Goldmark, president, CBS Laboratory Division.

William J. Halligan, chairman of the board, Hallicrafters Company.

Milton Harris, vice-president and director of research, Gillette Company.

Richard E. Horner, senior vice-president and general manager, Northrop Space Laboratories.

Kelly Johnson, vice-president, Lockheed Aircraft Corporation.

Dan A. Kimball, vice-president, General Tire & Rubber Company, and chairman of the board, Aerojet General Corporation.

Polykarp Kusch, professor of physics, Columbia University, New York.

Charles C. Lauritsen, professor of physics emeritus, California Institute of Technology.

Russell Z. Lee, president, Palo Alto Medical Research Foundation.

Katharine McBride, president, Bryn Mawr College.

George A. Miller, professor of psychology, Harvard University.

Clark B. Millikan, director, the Guggenheim Aeronautics Laboratory, California Institute of Technology.

Samuel M. Nabrit, president, Texas Southern University.

William A. Nierenberg, professor of physics, University of California, Berkeley.

Gerard Piel, editor and publisher, *Scientific American*.

Emanuel R. Piore, vice-president, IBM.

Kenneth S. Pitzer, president, Rice University.

Admiral W. F. Raborn, U.S. Navy, ret., vice-president, program management, Aerojet-General Corporation.

Roger Revelle, director, Scripps Institution of Oceanography, La Jolla, California.

John H. Rubel, vice-president, Litton Industries.

Chauncey Starr, vice-president, North American Aviation, Inc.; and president, Atomics International Division.

Helen B. Taussig, professor of pediatrics, Johns Hopkins University.

George S. Trimble, Jr., vice-president, Martin Company.

Ralph W. Tyler, director, Center for Advanced Study in the Behavioral Sciences, Stanford, California.

Harold C. Urey, professor of chemistry at large, University of California, San Diego.

Warren Weaver, vice-president, Alfred P. Sloan Foundation.

Paul Dudley White, emeritus professor, Harvard University Medical School, and consulting physician, Massachusetts General Hospital, Boston.

Vladimir K. Zworykin, honorary vice-president, RCA Laboratories. —E.L.

Announcements

Plans are being made to drill a hole **about 4000 feet into a basalt plug** near Uvalde, Texas, starting next month or in October. The major purpose of the drilling will be to test equipment to be used in drilling the Mohole. The minimum size of the core will be 2 inches. Scientists who wish to obtain basalt core from the hole may contact H. S. Ladd, U.S. National Museum, Washington, D.C. In requesting cores, it is necessary to indicate the amount needed, desired depth if significant, and the purpose for which the core will be used.

Scientists in the News

Verner E. Suomi, professor of meteorology at the University of Wisconsin, has been appointed chief scientist for the U.S. Weather Bureau. He will serve for a year beginning in September.

Alden Cutshall, geography professor at the University of Illinois, Chicago, has been appointed head of the new geography department, as of 1 September.