ing: "We will do our best to take care of previously recommended grants with as little hardship as possible, but we do not have the funds to take on any further obligations.")

For the foreign scientists who have come to look upon U.S. agencies as sources of ever-growing support, the prospects are understandably displeasing. But, though U.S. funds going abroad will diminish over the next few years, U.S. support will continue to be provided, and it is altogether erroneous to assume that the United States is abandoning its programs of support for foreign research. The amount of dollars is going down, but simultaneously, the nations receiving these funds have been increasing support for their own scientists. (In the United Kingdom, for example, funds for biomedical research have nearly doubled since 1959.)

It is now an established policy for U.S. agencies to support research abroad. It has been argued by some persons that the affluent nations of Western Europe and Scandinavia could quite easily make up the relatively small sums that have been coming from the U.S. and the fact that they could, if they wanted to, has no doubt contributed to the feeling of unease among foreign scientists. But there is no political or economic pressure for the U.S. to abandon its foreign research programs. The programs obviously provide dividends in science and international good will, and it is therefore reasonable to assume that they will continue.

—D. S. GREENBERG

Democratic Platform: "Science" Section Stresses Work in Space, Oceanography, and Atomic Energy

Unlike its Republican counterpart, the Democratic platform devotes a separate section to "science." But for the Democratic platform writers, science seems to manifest itself principally in such achievements as manned space flight, nuclear-powered weather buoys, and other examples of splendid technology.

It should be remembered, of course, that campaign platforms are among the least influential and least enduring political prose, and, therefore, no one should, and few do, take them seriously. But since it is necessary for the platform composers to go through a selection process, it is sometimes instructive to see what view of the past and vision of the future they choose to select among the various possibilities. In the case of the Democrats, it is plain that the platform writers, in quest of the greatest political mileage from the federal government's investment in research and development, fell in line with the popular assumption that science shows itself in gadgetry and spectacular machinery.

At platform hearings prior to the Democratic convention the platform committee received statements from three representatives of Scientists and Engineers for Johnson (*Science*, 21 Aug. 1964): George Kistiakowsky, professor of chemistry at Harvard, who was President Eisenhower's science adviser; Emanuel R. Piore, vice president of IBM, and Michael DeBakey, professor of surgery at Baylor.

The statement they presented included such recommendations as the adoption of a "dynamically long-range position in favor of committing a greater share of the nation's scientific resources to the service of humanity." And it called for "ever greater exploitation of the nation's scientific and engineering capacity, particularly research." In addition, they called for keeping the nation militarily strong while working for disarmament, they supported the test ban treaty, and they came out for civil rights and for governmental programs against poverty.

But on the matter which has been causing science a great deal of political and financial trouble over the past few years—namely, the distinction between basic research and the far costlier developmental activities—the platform writers received virtually no guidance; nor were they offered any guidance on the scope and achievements of the nation's research activities, outside of space, atomic energy, and oceanography.

Again, platforms aren't terribly important, and by themselves they rarely have any effect on what comes in the form of legislation, but since many members of Scientists and Engineers for Johnson are themselves troubled by political factors affecting research, it is unfortunate that they didn't make good use of an opportunity to give the politicians a fuller view of relations between science and government.

The Democratic platform employed a format of pledges for future action and an accounting of the past 4 years. Under the former, references to research and development were woven into discussions of various other matters, such as, under "Freedom and Well Being," "We will go forward with research into the causes and cures of disease, accidents, mental illness and mental retardation." The section headed "science," which follows in its entirety, was presented as part of the "record" of the past four years. (In the Republican platform, which was discussed in the 14 August issue of *Science*, there were many references to research activities, but they were not taken up under a separate heading.)

SCIENCE

In 1960, we declared—

"We will recognize the special role of our Federal Government in support of basic and applied research," mentioning in particular Space, Atomic Energy, and Oceanography.

Space. Since 1961, the United States has pressed vigorously forward with a 10-year, $35 billion national space program for clear leadership in space exploration, space use, and all important aspects of space science and technology.

Already this program has enabled the United States to challenge the early Soviet challenge in space booster power and to effectively counter the Soviet bid for recognition as the world's leading nation in science and technology.

In the years 1961–1964, the United States has:

*Successfully flown the Saturn I rocket, putting into orbit the heaviest payloads of the space age to date.

*Moved rapidly forward with much more powerful launch vehicles, the Saturn IB and the Saturn V. The Saturn IB, scheduled to fly in 1966, will be able to orbit a payload of 16 tons; and Saturn V, scheduled to fly in 1967 or 1968, will be able to orbit 120 tons or send 45 tons to the moon or 35 tons to Mars or Venus.

*Mastered the difficult technology of using liquid hydrogen as a space rocket fuel in the Centaur upper stage rocket and the Saturn I second stage—assuring American leadership in space science and manned space flight in this decade.

*Successfully completed six manned space flights in Project Mercury, acquiring 54 hours of space flight experience.

*Successfully flight-tested the two-man Gemini spacecraft and Titan II space rocket so that manned Gemini flights can begin late in 1964 or early in 1965.

*Developed the three-man Apollo spacecraft which will be able to spend up to two months in earth orbit, operate out to a quarter of a million miles from earth, and land our first astronaut-explorers on the moon.

*Taken all actions to conduct a series of manned space flights in the Gemini and Apollo programs which will give the

United States some 5,000 man-hours of flight experience in earth orbit, develop U.S. capabilities for rendezvous and joining of spacecraft in orbit, and prove out man's ability to perform valuable missions during long stays in space.

*Made man's first close-up observations of another planet during the highly successful Mariner II flyby of Venus.

*Obtained the first close-up pictures of the moon, taken and relayed to earth by Ranger VII.

*Initiated an ambitious long-range program for scientific investigations in space utilizing large, versatile spacecraft called Orbiting Observatories for geophysical, solar and stellar studies.

*Operated the world's first weather satellites (Tiros).

*Set up, under the Communications Satellite Act of 1962, the Communications Satellite Corporation, which is well on the way to establishing a global satellite communications system to provide reliable, low-cost telephone, telegraph, and television services to all parts of the world.

In short, the United States has matched rapid progress in manned space flight with a balanced program for scientific investigations in space, practical uses of space, and advanced research and technological pioneering to assure that the new challenges of space in the next decade can also be met, and U.S. leadership maintained.

Atomic energy. The number of civilian nuclear power plants has increased from 3 to 14 since January 1961; and now the advent of economic nuclear power provides utilities a wider choice of competitive power sources in many sections of the country.

The world's largest nuclear power reactor, the Atomic Energy Commission's Production Reactor near Richland, Washington, achieved a controlled, self-sustained nuclear reaction on December 31, 1963.

The first deep-sea anchored, automatic weather station powered by nuclear energy has gone into unattended operation in the Gulf of Mexico, and the first lighthouse powered by nuclear energy flashes now in Chesapeake Bay.

Nuclear energy was extended to space for the first time in 1961. Compact nuclear generators supplied part of the power for instruments in two satellites, and in 1963 provided all of the power needs of two other satellites.

Vigorous support has been given to basic research in atomic energy. The world's highest energy accelerator, the AGS, has come into productive operation.

Oceanography. For the first time in history the United States is building a fleet expressly designed for oceanographic research. Since 1961, 29 ships have been completed or are currently under construction. Shoreside facilities and training programs have been established as part of a major government-wide effort, begun in 1961, to capture the enormous potential rewards of research in this area which until now have been almost as remote and inaccessible as space itself.

—D. S. GREENBERG

Science Advice: New Division for Science Policy Research Set Up in LRS to Aid Congress

The most conspicuous result, to date, of the growing demand for more and better science advice for Congress is the establishment of a new Science Policy Research Division in the Legislative Reference Service (LRS) of the Library of Congress.

The LRS is the research arm of Congress, created to answer specific requests from congressional committees and individual members on matters related to legislation and public issues. Science and Technology is the area in which the LRS business has grown most rapidly in recent years, without, until now, a corresponding expansion in staff to handle this increase.

To head the new division, Librarian of Congress Quincy L. Mumford has appointed Edward Wenk, Jr., a member of the LRS staff for 2 years before he moved from the Library in 1961 to the Executive branch to serve as assistant to the President's science adviser. When the Office of Science and Technology was established in the Executive Office of the President in 1962, Wenk became a member of the staff and technical assistant to the director of OST.

According to the Library of Congress announcement of his appointment, Wenk "will serve in the Legislative Reference Service as a Congressional consultant in scientific and technical developments that affect public policy, and he will also serve the Library as a whole, in his capacity as special adviser to the Librarian and as coordinator of science information services furnished to Congress."

The bestowal of a second hat to principal scientists in government agencies is becoming a common practice, apparently because the adviser-to-the-chief role serves to give science more emphasis in the agency and to give the scientist higher status.

When Wenk went to work for the LRS in the late 1950's he was the first "senior specialist" in science and technology to fill a post which had been created in the aftermath of the Sputnik alarm. (Senior specialists are a group of researchers holding higher pay grades and occupying separate status in LRS. The group, representing about a score of varied specialties—agriculture, conservation, education, international trade, taxation, and so forth—was set up to provide Congress with consultants of a competence comparable to that of the experts in the Executive agencies.)

Wenk holds a master's degree in applied mechanics from Harvard, and bachelor's and doctoral degrees in engineering from Johns Hopkins. Between 1942 and 1956 he served as researcher and administrator at the Navy's David Taylor Model Basin in Washington. In naval engineering his particular field has been stress analysis, and he has contributed substantially to the development of deep-diving submarines. At OST he held a pivotal job as secretary of the Federal Council for Science and Technology. He served as staff director for the so-called Gilliland panel, which made recommendations for Federal policy on graduate education in science and technology (*Science*, 21 Dec. 1962), and has worked on various long-range planning projects at OST. Wenk has also been OST's man on oceanography.

With Wenk as chief of the new division it is not surprising that some observers on Capitol Hill expect the new LRS division to become a "Congressional OST." Such a development would please those who feel that the Executive has had a monopoly on information and expertise in science and technology.

No New Departures

This expansion of the Legislative Reference Service in science and technology builds on existing foundations rather than creating new entities, as had been suggested in some other proposals for ways to improve science advice for Congress. And Congress is more comfortable with minor adjustments than with major alterations in its machinery.

The new division will face some possible disadvantages as well as advantages in being a part of the well-established LRS. The prime purpose of the LRS is to serve Congress, and that means having 535 bosses. Many of the requests which go to LRS are trivial when measured on the scale of value to national legislation, but they may not seem trivial to the senators and congressmen who are, periodically, candidates as well as legislators.

On the one hand, the LRS staff makes background studies and produces reports which often contribute decisively to legislation. On the other hand, LRS must cope with a barrage of congressional requests for information to relay to constituents. A major category in-