countries, including the United States and the Soviet Union. If it turns out that the United States has militaristic uses for weather modification, "this sort of thing would drop dead. It would undo everything that science has been able to do. It would have absolutely tragic effects."

Walter O. Roberts, director of the National Center for Atmospheric Research in Boulder, Colorado, takes a more conservative view. "I think it very unlikely that deliberate weather modification is a particularly effective weapon," he said. "I'm very concerned about international, inadvertent weather modification as a result of pollution; I don't consider meteorological use in warfare as much of a threat. But if you could visit a hurricane on somebody, I would be very opposed and consider it very serious."

Concern over the military aspects of weather modification has been expressed by a number of defense specialists and arms control experts. Many see a parallel with chemical and biological weapons, which have similar inadvertent effects on environment, and also affect both soldier and civilian. Leslie Gelb, now of the Brookings Institution, who directed from within DOD the 47-volume Pentagon study of the war, which was later leaked as the Pentagon Papers, said, "My instinctive reaction to the use of this kind of technique is negative. Like chemical and biological weapons, it deals in an area that would become essentially uncontrollable. But I have no categorical answer on it because I don't know enough of the scientific aspects."

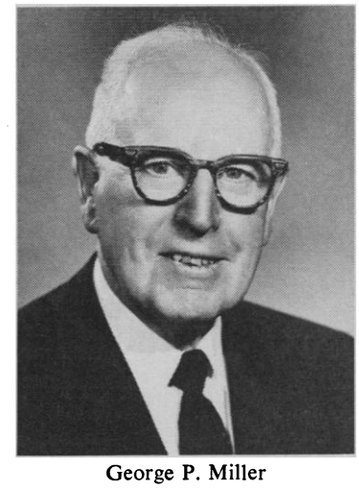
Representative Gude, who, with Cranston, has attempted to find out about Indochina weather control for over a year and has never even been offered a DOD classified briefing, says, "There's a similarity between chemical and biological weapons and weather control. You could have a snowballing effect in both cases, an effect on nature over which you lose control."

Matthew Meselson, professor of biology at Harvard, and a long-time consultant to the Arms Control and Disarmament Agency, who is identified with the successful campaign to ban biological warfare, was asked about the parallel to chemical and biological warfare. He said, "First, I have no knowledge one way or the other as to whether the United States has engaged in weather modification in connection with military activities in southeast Asia.

Space-Science Chairman Defeated

Last week's Democratic primary in California, which brought McGovern to victory, swept others to defeat, including long-time Chairman of the House Science and Astronautics Committee George P. Miller. A member of Congress since 1944, Miller was judged to have a safe seat, but his advancing years—81—seem to have been a decisive factor in Miller's loss to a candidate half his age.

Since 1961, when Miller became chairman of the committee, the Apollo program has reached fruition and starts have been made on Skylab and the shuttle. Miller was NASA's foremost advocate in the House and took pride in announcing every latest achievement of the space program. Although it is the House Appropriations Committee that has real power over NASA's budget, Miller's committee was influential in having NASA expand its investment in areas such as scientific satellites.



George P. Miller

The House committee, unlike the Senate's space committee, also has jurisdiction over science, exercised through its subcommittee on science, research, and development, which Miller set up in 1963. Under its first chairman, Emilio Q. Daddario (D–Conn.), the subcommittee was a cornucopia of thoughtful—though often stillborn—legislation on matters scientific. Miller also created subcommittees paralleling the internal organization of NASA. NASA apart, legislation in which Miller himself has taken a particular interest includes the revision of the charter of the National Science Foundation, which broadened considerably its responsibilities; the bill to establish an Office of Technology Assessment, which recently passed the House; the medal of science awards; and the proposals for converting the United States to the metric system. More recently, Miller has been active in putting together an interagency committee on solar energy.

Not flamboyant by nature, Miller preferred the tête-à-tête to the public platform as a way of doing business. Though equal to the old-style committee chairmen in years, he chose not to follow their autocratic methods in running his committee. One committee member recalls that under Miller's predecessor, Overton Brooks of Louisiana, the junior members rarely got the chance even to ask a question of witnesses appearing before the committee. Miller has encouraged participation and has been generous in setting up subcommittees for junior members and in supporting them in what they did.

Also characteristic of Miller's open style has been the commissioning by his committee of outside studies, an unusual practice for Congress. The committee has contracted with the National Academy of Sciences and the National Academy of Public Administration to perform studies on such issues as technology assessment. Another innovative measure was the appointment of two advisory scientific panels which met annually with the committee and afforded an opportunity for scientists and congressmen to mingle less formally than at a congressional hearing.

Oline E. Teague of Texas, a keen supporter of manned space flights, is next in line to succeed Miller. But if Teague decides to remain chairman of the House Veterans Affairs Committee, Ken Hechler of West Virginia will replace Miller. If the Republicans gain control of the House the new chairman will be Charles A. Mosher of Ohio.—N.W.