implementation of the ban than he has before, but made clear that he would not stand for a simple shifting of location of research projects. With the matter of definitions still in doubt, the dialogue may well continue.

Because of the light it throws on congressional attitudes and Pentagon reactions most of Mansfield's statement and the two letters from the *Congressional Record* are printed below.—J.W.

MR. MANSFIELD.

Mr. President, it will be noted . . . that the Office of the Secretary of Defense passed the word throughout the Defense Department that any project which does not comply with section 203 must be terminated in an orderly way as soon as possible. In addition, the Department is reviewing all current studies and projects as well as the selection criteria used to evaluate proposed work to assure that the criterion will be applied explicitly in every case. Furthermore, in addition to the internal review now begun, the National Academy of Sciences has been asked by the Defense Department to carry out a complete examination of all projects and studies in the gray area—those projects and studies that do not have a readily apparent military application—and to adjudge independently which do not meet the criteria of section 203.

The gray area, in my judgment, would certainly be larger than those projects presently sponsored under the heading of basic research. In other words, some applied research certainly would fall within the possible challenge of section 203.

Dr. Packard's response is positive and constructive, and is to be commended. I am well aware of the magnitude of the change required by section 203, but I am encouraged by his attitude that its implementation can go forward in an orderly, thoughtful way. With such a positive attitude, precipitate, last-minute action that might seriously disrupt research projects can be averted. Our joint emphasis will be the orderly transfer to other agencies of projects that do not meet the criteria of section 203.

Several points bear repeating. Section 203 is not intended to cause needless disruption of high quality research; nor is Secretary Packard's attitude indicative of an intended overresponse.

Section 203 has the positive aim of reducing the dependence of basic, scientific research upon military appropriations. Let us be specific on this point. It affects military support of those scientists who pursue the uncovering of new knowledge in whatever direction and way they find most interesting. This is the basic research of which Dr. Vannevar Bush wrote so eloquently in his report to President Truman about scientific research after World War II. Section 203 contemplates that scientists whose interests and way of work focus upon solving problems may continue to receive military funds provided their research has a direct and visible relationship to military needs.

Section 203 does not ban the Defense Department from sponsoring research in universities, or in not-for-profit research institutions. The Defense Department retains ample authority to fund research by university scientists who wish to apply their talents to solving problems of national defense.

Section 203 is not intended to disrupt the work of any scientist simply because his work now funded by defense appropriations does not meet the new criteria. The cooperative attitude apparent in Secretary Packard's letter encourages me to expect that the Defense Department, the civil departments and agencies, the Bureau of the Budget and Congress can arrange for the orderly transfer of quality research projects that should be continued by other agencies, and for appropriate funding arrangements.

Section 203 makes it abundantly clear to students, to scientists, to officers of universities and not-for-profit institutions and to industrial contractors that money received from defense appropriations for research is needed to carry out a specific military need or function and is directly related to the defense needs of this country. No need is of higher importance. The work that will be sponsored by the Defense Department will be able to stand on its own feet and meet the true and open test of a valid need of the Department. The National Science Foundation and other civil agencies will be charged with the responsibility for continuing the investigations that expand our existing base of knowledge in the various scientific disciplines.

As I said on November 6, the performing of research to meet the needs of defense is honorable work. Scientists and universities who receive defense funds for a valid defense need should be proud, never ashamed. It is only when the sponsorship of a project is questionable or the subject matter of

NEWS IN BRIEF

● **SENATE KILLS FOUNDATION CURBS:** The Senate last week killed a section of the tax reform bill that would have limited the tax exemption of foundations to 40 years. The amendment to delete, sponsored by Senator Walter F. Mondale (D–Minn.), was carried 69 to 18. The House version did not contain such a restriction (*Science*, 5 December), so it seems unlikely that the longevity limit will be revived.

● **BRITAIN CURBS ANTIBIOTIC FEED:** Britain has placed a strict control on the use of antibiotics in animal feed. A committee, appointed by the government and chaired by Michael M. Swann, University of Edinburgh, reported that some antibiotics could lead to the emergence in humans of bacterial strains resistant to antibiotics. The committee recommended that "feed" antibiotics, given to promote growth and with little or no medicinal value to humans, continue to be available without prescription. On the other hand, "therapeutic" antibiotics such as penicillin, chloramphenicol, and tetracyclines, given to cure and possibly to prevent disease, will be available on prescription only.

● **HOPE FOR HURRICANE SEEDING:** Scientists in the Commerce Department and the Navy announced last week that, for the first time, they have probably successfully weakened a hurricane by seeding it. Several hours after hurricane Debbie was seeded with silver iodide on 18 August, the storm's maximum speed fell from 98 to 68 knots, a 31 percent drop. On 19 August, there was no seeding and the storm intensified. On 20 August, Debbie was seeded again and diminished 15 percent in intensity. Scientists said they could not be absolutely sure that the seeding had caused the change. But only 1 in 11 hurricanes changes speed on its own by 31 percent in a day, and about one in two has a 15 percent change, so the odds are at least 22 to 1 that the results were not a matter of pure chance. Scientists are encouraged about the prospects of substantially reducing hurricane coastal damage, since the force of a hurricane varies with the square of its speed. In seeding experiments, the scientists work only on hurricanes expected to remain at least 50 miles offshore for 24 hours after seeding.