

Soviet missile lead. The point came, however, at which it was apparent that both systems were successful; nevertheless, neither Wilson nor his successor would make a decision in favor of one missile over the other, though the two were similar in capability. As a result, both went into production—at a total cost estimated at over \$1 billion each. It has now been revealed that both missiles saw remarkably brief service before they were rendered obsolete by more advanced systems. Britain has decided to dismantle the 60 Thors which were installed there in 1959–60. Dismantling will start shortly on the Jupiter squadrons which were completed last summer in Turkey and on those completed only a year before that in Italy.

Since there is no bargain-basement approach to the costly business of nuclear deterrence, neither the Jupiter nor the Thor venture can be written off as a total loss; in addition, the Thor has proved to be the most reliable of American boosters for scientific space loads, and part of its development cost has thus been returned in very visible fashion. Nevertheless, a hard decision might well have been made somewhere along the way—long before the \$2 billion mark had been reached. Congress and a lot of voters have been demanding just such decisions, and now that McNamara is providing them, the general reaction is a favorable one, despite the raucous reaction to the TFX decision.—D. S. GREENBERG

Science Foundation: Leland Haworth of Atomic Energy Commission Named as Successor to Alan T. Waterman

A year-long search for a new director of the National Science Foundation ended last week with the selection of Leland J. Haworth, a physicist and administrator with long and distinguished service in and out of government. The appointment, a crucial one in the increasingly complex and controversial area of federal support for science, has elicited nothing but warm approval from the wide range of persons who have been awaiting the administration's decision.

Haworth, a member of the Atomic Energy Commission for the past 2 years, will succeed Alan T. Waterman, who has headed NSF since it came into being, in 1951, after 5 years of bitter fighting within Congress and the scientific community. Waterman reached the



Leland J. Haworth

statutory retirement age of 70 last June and has continued as director at the discretion of the President. Under his leadership, the Foundation weathered the anti-intellectualism of the McCarthy era, slowly won over a doubting Congress, and quelled the scientific community's fears of federal control accompanying federal support. Eventually it emerged as the least politically motivated and perhaps the most significant of the government organizations that promote basic scientific research and education. Its first budget, after a small appropriation for getting started, was \$3.5 million; this year it received \$322 million, and for the coming fiscal year the Foundation is asking Congress for \$589 million.

The feeling has been widespread, though, that 12 years is a long time for any man to remain at the helm of as influential and significant an organization as NSF, and Waterman's retirement has come about, not as a reflection on his vigor—which is impressive—but simply in response to the belief that it's time for a change; that a new man is likely to produce a beneficial stir. While there is no substantial dissatisfaction with the operations and policies of the Foundation, there is nevertheless a fairly widespread feeling that it has played an unnecessarily restrained role in promoting science.

The search for Waterman's successor, which was mainly in the hands of the President's science adviser, Jerome Wiesner, was directed toward two categories—elder statesmen of science who would bring prestige and stature to the job, and young and upcoming science administrators who have shown promise but have not yet had an opportunity to

demonstrate their full powers. Eventually it was decided that the first group offered the best recruiting ground. Before an offer was made to Haworth, feelers were put out to several other persons, and it is known that a firm offer was rejected by a physicist who is an executive with a major industrial organization. However, in the rarefied atmosphere of recruiting for the summit, first and second choice tend to be rather meaningless; the fact is that persons associated with the government and universities feel that the administration has come up with an admirable choice.

Haworth, who is 58, was born and educated in the Midwest and spent his early career there—a fact duly noted by some of the not inconsiderable number of scientists who feel that Cambridge and Berkeley get all the plums. He began his career as a high school teacher in Indianapolis, and received his bachelor's degree at Indiana University in 1925 and his master's degree there a year later. In 1931 he received his doctorate at the University of Wisconsin, where he remained on the faculty until he went to M.I.T. as a Lalor fellow in physical chemistry in 1937. In 1939 he joined the physics faculty at the University of Illinois, where he remained until 1941, when he went on leave to M.I.T.'s Radiation Laboratory. At the end of World War II he rejoined the Illinois faculty. In 1947 he became assistant director of Brookhaven National Laboratory. A year later he became director and also served on a variety of scientific and defense advisory committees for the government. Haworth held the directorship post and, in addition, was president of Associated Universities, which operates Brookhaven, when he was appointed to the AEC in 1961. The White House has announced that his AEC post will be filled by Gerald Tape, who was Haworth's successor as president of Associated Universities.

Ahead of Haworth lie innumerable problems, not the least of which is the still undefined relationship between NSF and the youthful but vigorous White House Office of Science and Technology. There is nothing to indicate anything but the likelihood of harmonious relations, but the field of government and science is big, the power relationships are far from settled, and the two organizations, though different in purpose, size, and structure, frequently operate in the same territory.—D.S.G.