

THE GREATEST ENGINEERING ACHIEVEMENTS OF THE 20TH CENTURY

PROFESSIONAL BIOSKETCH of H. GUYFORD STEVER

Dr. H. Guyford Stever, a scientist, engineer, educator, and administrator, has served universities, government and industry. This broad experience, combined with his research and teaching in a number of different fields in which he was engaged in the first three decades of his professional life, provided the base of his institutional leadership and his science policy work of the last three decades. As a CalTech graduate student, a member of the wartime MIT Radiation Lab and the OSRD London Mission, an Aeronautics and Astronautics professor and head of two MIT engineering departments, a member and later chairman of the Scientific Advisory Board and Chief Scientist of the Air Force, and a consultant to the United Aircraft Corporation and Space Technology Laboratories, he contributed professionally in aeronautical, missile, and spacecraft engineering, cosmic rays, electronics and radar, gas discharge and gas dynamics, compressible aerodynamics and two phase flow, science and engineering education, and science policy.

Dr. Stever's presidency of Carnegie Mellon University was marked by significant change and growth in the institution, including the merger of Carnegie Institute of Technology and Mellon Institute to form CMU, the establishment of a College of Humanities and Social Studies, the addition of the School of Urban and Public Affairs, the formation of a Department of Computer Science and a Statistics Department, and a Transportation Research Center. His work at CMU, combined with his earlier work at MIT, prepared him for the Directorship of the National Science Foundation.

As Director of the NSF, he strengthened NSF's highest priority mission as supporter of basic research, primarily conducted in universities by peer-reviewed principal investigators. This was, and still is, NSF's most important contribution to our nation's strength and well being. A secondary NSF role emerged, resulting from the OPEC Oil Embargo of 1973. He rapidly increased NSF's non-fossil and renewable energy sources research, later transferred to ERDA and DOE. Energy systems studies were increased, conducted by an energy policy group, enlarged to handle the NSF's Director's dual roles as Science Advisor, especially his Chairmanship of the White House Energy R&D Advisory Commission. A new science policy group, STPO, addressed newly emerging issues such as loss of international competitive strength. Also, NSF's growing biological and social science activities were separated from the physical and math sciences into an independent division.

As Science Advisor, after he helped convince President Ford to reestablish the White House science structure, Ford directed him to work with Vice Pres. Rockefeller, Congress, and OMB to that end. The 1976 S&T Act created the office of the Science and Technology Policy with the President's S&T Advisor as Director. So appointed, Stever put in place the White House OSTP in 1976.

In international science exchange, Stever began in WWII in London with radar and guided missile liaison with British ministries, labs and armed services; he did seven technical intelligence missions in Europe following advancing Allied forces to Normandy, Brittany, Paris, Eindhoven, Cologne, Leuna and Gottingen, and Jena. For two post-war decades he frequently represented the Air Force and DOD in exchange with our NATO allies in air defense, ballistic and anti-ballistic missileery, and space satellites. At NSF, S&T policy exchanges with more than two dozen countries around the world resulted from many responsibilities such as Chairman of the US-USSR Commission on S&T Cooperation; and Founding Chairman of the US-Israel Bi-national Science Foundation.

In two decades since 1977, Stever established himself as an independent corporate board member, a non-profit organization trustee, and an S&T consultant; he contributed to management, research, manufacturing technology, and product development of a dozen corporations, particularly TRW, Goodyear, and Schering Plough. As a member of the National Academy Sciences, the National Academy Engineering, and the Carnegie Commission on Science, Technical, and Government, president of Universities Research Association, he was a member, often chair, of many wide-ranging, S&T policy studies.

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POSITONS HELD

Staff Member--Radiation Laboratory, MIT, 1941-42.

Scientific Liaison Officer--London Mission, OSRD, 1942-45.

Faculty Member--MIT, 1946-65 (Assistant, 46-51; Assoc 51-56; Professor of Aeronautics and Astronautics, 56-65).

Head--Mechanical Engineering Department and Naval Architecture and Marine Engineering Department 60-65.

Chief Scientist of the US Air Force--On leave from MIT, 1955-56.

President--Carnegie Mellon University, 1965-72.

Corporate Director and Consult--Unit. Aircraft; Koppers; Fisher Science; Koppers; et al., variously, 56-72.

Government Advisor--Member, Vice Chmn, Chmn, USAF Science Adv. Board; Pres Commission on Patent Sys.;

DOD Defense Science Adv. Bd.; National Science Board; Advisory Committee to the House of Representatives'

Committee on Science and Astronautics; NASA's Missile and Spacecraft Aerodynamics Committee; DOE's Energy

Research Advisory Committee and Fusion Policy Committee; et al.

Director--National Science Foundation, 1972-76; and concurrently Science Advisor to the President, 1973-76.

White House Science and Technology Advisor to the President; Director of the Office of Science and technology

Policy, and Chairman of the Federal Coordinating Committee for Science, Engineering, and Technology. 1976-77.

Self-employed corporate director and/or S&T consultant--Goodyear Tire and Rubber; Schering-Plough; TRW;

Caterpillar; Bethlehem Steel.

Trustee--Universities Research Association; Univ. Consortium for Atmospheric Research; Wood Hole Oceanographic Inst.; Science Service.

Chairman--Assembly of Eng.; and Comm. on Eng. and Tech. System, and Member of Governing Board, National Research Council, 1984-88.

President--Universities Research Association, 1982-85.

Foreign Secretary--National academy of Engineering, 1984-88.

President--Convocation of Academies of Eng. and Tech. Science, 1986-87.

Member--Carnegie Commission on Science, Technology, and Government, 1988-93

Chairman--Policy Division, NRC, 1995-