

## Brief Biography of Richard L. Garwin

February 10, 1978

RICHARD L. GARWIN was born in Cleveland, Ohio, in 1928. He received the B.S. degree from Case Institute of Technology, Cleveland, in 1947, and the Ph.D. degree in Physics from the University of Chicago in 1949.

After three years on the faculty of the University of Chicago, he joined IBM Corporation in 1952, and is at present IBM Fellow at the Thomas J. Watson Research Center, Yorktown Heights, New York, and Adjunct Professor of Physics at Columbia University. In addition, he is a consultant to the U.S. government on matters of military technology, arms control, etc. He has been Director of the IBM Watson Laboratory, Director of Applied Research at the IBM Thomas J. Watson Research Center, and a member of the IBM Corporate Technical Committee. During 1974 Fall Semester he was a Visiting Professor of Applied Physics at Harvard University, working also on Arms Control in the Program for Science and International Affairs.

He has made contributions in the design of nuclear weapons, in instruments and electronics for research in nuclear and low-temperature physics, in the establishment of the nonconservation of parity and the demonstration of some of its striking consequences, in computer elements and systems including superconducting devices, in communication systems, in the behavior of solid helium, and in military technology. He has published about 75 papers and been granted 24 U.S. patents. He has testified to many Congressional committees on matters involving national security or transportation.

He was a member of the President's Science Advisory Committee 1962-65 and 1969-72 and of the Defense Science Board 1966-69. He is a Fellow of the American Physical Society and of the American Academy of Arts and Sciences, and a member of the National Academy of Sciences, the Institute of Medicine, and the Council on Foreign Relations.

He is a member of several university departmental visiting committees, of the Council of the Institute for Strategic Studies (London), and is Chairman of the Panel on Public Affairs of the American Physical Society.

His work for the government has included studies on antisubmarine warfare, new technologies in health care, sensor systems, military and civil aircraft, and satellite and strategic systems, from the point of view of improving such systems as well as assessing existing capabilities.

## Brief Biography of Richard L. Garwin

March 11, 1977

RICHARD L. GARWIN was born in Cleveland, Ohio, in 1928. He received the BS degree from Case Institute of Technology, Cleveland, in 1947, and the PhD degree in Physics from the University of Chicago in 1949.

After three years on the faculty of the University of Chicago, he joined IBM Corporation in 1952, and is at present IBM Fellow at the Thomas J. Watson Research Center, Yorktown Heights, New York, and Adjunct Professor of Physics at Columbia University. In addition, he is a consultant to the US government on matters of military technology, arms control, etc. He has been Director of the IBM Watson Laboratory, Director of Applied Research at the IBM Thomas J. Watson Research Center, and a member of the IBM Corporate Technical Committee. During 1974 Fall Semester he was a Visiting Professor of Applied Physics at Harvard University, working also on Arms Control in the Program for Science and International Affairs.

He has made contributions in the design of nuclear weapons, in instruments and electronics for research in nuclear and low-temperature physics, in the establishment of the nonconservation of parity and the demonstration of some of its striking consequences, in computer elements and systems including superconducting devices, in communication systems, in the behavior of solid helium, and in military technology. He has published about 70 papers and been granted 23 US patents. He has testified to many Congressional committees on matters involving national security or transportation.

He was a member of the President's Science Advisory Committee 1962-65 and 1969-72 and of the Defense Science Board 1966-69. He is a Fellow of the American Physical Society and of the American Academy of Arts and Sciences, and a member of the National Academy of Sciences, the Institute of Medicine, and the Council on Foreign Relations.

He is a member of several university departmental visiting committees, of the Council of the Institute for Strategic Studies (London), and is chairman-elect of the Panel on Public Affairs of the American Physical Society.

His work for the government has included studies on antisubmarine warfare, new technologies in health care, sensor systems, military and civil aircraft, and satellite and strategic systems, from the point of view of improving such systems as well as assessing existing capabilities.

Biographical Sketch of Dr. Richard L. Garwin

← *of note*

Dr. Garwin is an industrial physicist whose contributions range from elementary particles to new construction techniques, from low-temperature refrigerators to new kinds of lasers, from military aircraft systems to new types of space propulsion.

Dr. Garwin was born in 1928 in Cleveland, Ohio, to Mr. and Mrs. Robert Garwin. He attended public schools in Cleveland and the suburbs. His brother Edward is a physicist at the Stanford Linear Accelerator Center, Stanford, California.

Dr. Garwin is married to the former Lois E. Levy. They have three children Jeffrey, Thomas, and Laura.

He received his B.S. degree in Physics from Case Institute of Technology in 1947, the M.S. in 1948 at the University of Chicago, and the Ph.D. in physics under Enrico Fermi in 1949.

From 1949 to 1951 he was an Instructor in Physics and in 1952 Assistant Professor in the Department of Physics and at the Institute for Nuclear Studies at the University of Chicago. From 1952 to 1965 and from 1966 to the present, he has been a member of the Senior Staff of the IBM Watson Laboratory at Columbia University, and since 1957 Adjunct Professor of Physics at Columbia. From 1965 to 1966 Dr. Garwin was Director of Applied Research of the IBM Thomas J. Watson Research Center, Yorktown Heights, New York. Since 1967 he has been an IBM Fellow at the IBM Watson Laboratory. During the year 1959-60 he was a Ford Foundation Fellow at CERN (European Organization for Nuclear Research, Geneva, Switzerland). Dr. Garwin is a member of the National Academy of Sciences, a Fellow of the American Academy of Arts and Sciences, a Fellow of the American Physical Society. From 1962 to 1966 he was a Member of the President's Science Advisory Committee under Presidents Kennedy and Johnson. In 1969 he was reappointed to that same committee.

From 1966 to 1969, he was a member of the Defense Science Board of the Department of Defense.

Since 1950, he has been a consultant to the Los Alamos Scientific Laboratory, where his involvement has ranged from the measurement of fundamental cross sections to the design and construction of thermonuclear and fission weapons, as well as to experiments for the observation of the performance of nuclear weapons. In addition, he has contributed to the work on controlled thermonuclear reactions.

He participated in a study at Massachusetts Institute of Technology (Project Lamp Light) sponsored by the United States Navy, September 1954 to February 1955. The study was directed toward the improvement of the effectiveness of the continental air defense of the United States.

## Biographical Sketch of Dr. Richard L. Garwin

Dr. Garwin is an industrial physicist whose contributions range from elementary particles to new construction techniques, from low-temperature refrigerators to new kinds of lasers, from military aircraft systems to new types of space propulsion.

Dr. Garwin was born in 1928 in Cleveland, Ohio, to Mr. and Mrs. Robert Garwin. He attended public schools in Cleveland and the suburbs. His brother Edward is a physicist at the Stanford Linear Accelerator Center, Stanford, California.

Dr. Garwin is married to the former Lois E. Levy. They have three children Jeffrey, Thomas, and Laura.

He received his B.S. degree in Physics from Case Institute of Technology in 1947, the M.S. in 1948 at the University of Chicago, and the Ph.D. in physics under Enrico Fermi in 1949.

From 1949 to 1951 he was an Instructor in Physics and in 1952 Assistant Professor in the Department of Physics and at the Institute for Nuclear Studies at the University of Chicago. From 1952 to 1965 and from 1966 to the present, he has been a member of the Senior Staff of the IBM Watson Laboratory at Columbia University, and since 1957 Adjunct Professor of Physics at Columbia. From 1965 to 1966 Dr. Garwin was Director of Applied Research of the IBM Thomas J. Watson Research Center, Yorktown Heights, New York. Since 1967 he has been an IBM Fellow at the IBM Watson Laboratory. During the year 1959-60 he was a Ford Foundation Fellow at CERN (European Organization for Nuclear Research, Geneva, Switzerland). Dr. Garwin is a member of the National Academy of Sciences, a Fellow of the American Academy of Arts and Sciences, a Fellow of the American Physical Society. From 1962 to 1966 he was a Member of the President's Science Advisory Committee under Presidents Kennedy and Johnson. In 1969 he was reappointed to that same committee.

From 1966 to 1969, he was a member of the Defense Science Board of the Department of Defense.

Since 1950, he has been a consultant to the Los Alamos Scientific Laboratory, where his involvement has ranged from the measurement of fundamental cross sections to the design and construction of thermonuclear and fission weapons, as well as to experiments for the observation of the performance of nuclear weapons. In addition, he has contributed to the work on controlled thermonuclear reactions.

He participated in a study at Massachusetts Institute of Technology (Project Lamp Light) sponsored by the United States Navy, September 1954 to February 1955. The study was directed toward the improvement of the effectiveness of the continental air defense of the United States.