THOMAS PARKE HUGHES, Ph.D.

Thomas P. Hughes (1923-2014) was widely regarded as the nation’s pre-eminent historian of technology. He dedicated himself to better understanding and communicating about the relationship of technology and culture. “Technology,” writes Hughes, “is messy and complex…. In its variety, it is full of contradiction, laden with human folly, saved by occasional benign deeds, and rich with unintended consequences.” In his books, his narratives told of creative genius, scientific achievements, engineering feats, managerial expertise, and entrepreneurial risks in designing and managing large-scale technological systems. He wrote of America transformed by technology. He contributed to the concepts of [technological momentum](http://en.wikipedia.org/wiki/Technological_momentum), [technological determinism](http://en.wikipedia.org/wiki/Technological_determinism), [large technical systems](http://en.wikipedia.org/wiki/Large_Technical_System), [social construction of technology](http://en.wikipedia.org/wiki/Social_construction_of_technology), and introduced [systems theory](http://en.wikipedia.org/wiki/Systems_theory) into the history of technology.

**Publications/ BOOKS**

Elmer Ambrose Sperry: Inventor and Engineer. Baltimore, MD: The Johns Hopkins University Press, 1971 and softback 1993. Dexter Prize for outstanding book in the history of technology, Society for the History of Technology, 1972.

Networks of Power: Electrification in Western Society, 1880-1930. Baltimore, MD: The Johns Hopkins University Press, 1983. Reprint 1988. Softback 1993. Dexter Prize for outstanding book in the history of technology, Society for the History of Technology.

American Genesis: A Century of Invention and Technological Enthusiasm, 1870-1970. New York, N.Y.: Viking, 1989. One of the three finalists for the Pulitzer Prize in History, 1990. Hughes proposes that technology played a greater role in shaping America than did political achievements or free enterprise. “Americans created the modern technological nation; this was the American genesis.”

American Genesis. New York: Penguin USA, 1990. Softback.

Die Erfindung Amerkas. Munich: Beck, 1991. Translation of American Genesis.

Rescuing Prometheus. New York: Pantheon, 1998. Rescuing Prometheus is about managing the creation of large technological systems, including SAGE, ARPANET/Internet, and Boston’s Central Artery/Tunnel.

Human-Built World. Chicago, Ill.: University of Chicago Press, 2004. Explores technology and culture in the western world – its philosophical underpinnings, recalling ideas about technology expressed by influential thinkers who understood its complexity and explored its creative potential.

**Books (editor):**

The Development of Western Technology Since 1500. New York: Macmillan, 1964.

Lives of the Engineers: Selections from Samuel Smiles. Cambridge, Mass: M.I.T. Press, 1966.

Changing Attitudes Toward American Technology. New York: Harper and Row, 1975.

The Social Construction of Technological Systems. Editors: Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch. Cambridge, Mass: MIT Press, 1987. Paperback, 1989.

The Development of Large Technical Systems. Editors: Renate Mayntz and Thomas P. Hughes. Frankfurt and Main: Campus Verlag, 1988.

Lewis Mumford Public Intellectual. Editors: Thomas P. Hughes and Agatha C. Hughes. New York: Oxford University Press, 1990.

Systems, Experts, and Computers. Editors: Agatha C. Hughes and Thomas P. Hughes (Cambridge, Mass.: MIT Press, 2000).

**Honors**

Texas Institute of Letters: Best Book in the Fields of General Knowledge, 1971 (Sperry biography).

Dexter Prize, 1972. Society for the History of Technology. Outstanding book in the history of technology. (Sperry biography)

Phi Beta Kappa, of Virginia, 1980.

Abbott Payson Usher Prize, 1981.Society for History of Technology. Outstanding article. "The Electrification of America: the System Builders."

Fellow, American Academy of Arts and Sciences, 1982.

Society of Scholars, Johns Hopkins University, 1984.

Dexter Prize, 1985. Society for the History of Technology. (Networks of Power).

Leonardo da Vinci Medal, 1985. Society for the History of Technology.

George Sarton Lecturer, American Association for Advancement of Science, 1986.

Royal Swedish Academy of Engineering Sciences, Stockholm, Sweden. Foreign Member, 1987-

Frederick Jackson Turner Lecturer, The Johns Hopkins University 1986.

George Sarton Memorial Lecturer. American Association for

the Advancement of Science and the History of Science Society, 1986.

National Lecturer, History of Science Society, 1986-87.

Guggenheim Fellowship, 1987

Honorary Professor of Sociology, Keele University, Keele, U.K.,1988-

The John Desmond Bernal Award, Society for the Social Studies of Science, 1990.

The Kenan Enterprise Award, 1990.

Miller Lecture, MIT, 1993.

Page-Barbour Lectures, University of Virginia, 1995.

Kranzberg Lecture, International Committee for the History of Technology, 1999

Gould Distinguished Lecture, University of Utah, 1999

Nordlander Lecture, Cornell University, 2000

Morison Prize Lecture, MIT, 2000

Honorary Doctorate in Engineering, Royal Institute of Technology, Stockholm, Sweden, 2000

Honorary Doctorate in Humane Letters, Northwestern University, 2001

U.S. National Academy of Engineering, 2003

American Philosophical Society, 2004

**Academic Positions**

Mellon Professor Emeritus, University of Pennsylvania (1994- )

Andrew W. Mellon Professor, History and Sociology of Science University of Pennsylvania (1987-1994).

Professor, History and Sociology of Science, University of Pennsylvania (1973-1987).

Visiting Professor, Massachusetts Institute of Technology (1990, 1992)

Distinguished Visiting Professor, Massachusetts Institute of Technology (1994-)

Visiting Research Professor, Wissenschaftszentrum Berlin (1987-)

Torsten Althin Professor, Royal Institute of Technology, Stockholm,

Sweden (1986-1991).

Distinguished Visiting Professor, Lang College, The New School, New York, N.Y. (1987)

Professor, History of Technology, Institute of Technology, Southern Methodist University (1969-73).

Visiting Associate Professor, The Johns Hopkins University (1966-69).

Previous positions at other colleges/universities from 1951-1966

**Academic Grants and Fellowships**

Research Grants: Southern Fellowship Fund (Summer 1955); University Center in Virginia (Summer 1960); John M. Glenn Fund (Summer 1958 and 1961); MIT Humanities Department (Summer1965)

National Research Council Travel Grants (1956, 1971, 1974, 1981)

Fulbright Postdoctoral Research at Technische Hochschule and Deutsches Museum, Munich (1958-59)

American Council of Learned Societies, Smithsonian Fellowship (1969)

Social Science Research Council Grant (summer 1972)

National Science Foundation Research Grant (summers 1973-76); fall semesters 1975 and 1977)

Rockefeller Foundation Humanities Grant (1975)

American Philosophical Society Research Grant (1977)

Fellow, Zentrum fur Interdisziplinare Forschung, University of Bielefeld, Federal Republic of Germany (fall semester, 1978)

Fellow, Institute for Advanced Study, Berlin (1983-84)

Mellon Foundation Research Grant for Study of Large Technological Systems (1991-97)

Visiting Fellow, Max Planck Institute für Wissenschaftsgeschichte, Berlin (1995)

**Professional Activities**

Editorial Advisor, Technology and Culture (1960-65).

Advisory Editor, Business History Review (1973-77); (1985- ).

Editor, Monograph Series, Society for the History of Technology (1974-77).

General Editor, History of Technology, The Johns Hopkins University Press (1972-86).

Consulting Editor, American Heritage of Invention and Technology (1985-)

Advisory Editor, Philosophia naturalis (Frankfurt am Main) (1988- )

Editorial Advisory Committee, ISIS, (1989-92)

Editorial Advisory Committee, Tractrix (The Netherlands) (1989- )

Editorial Advisory Committee, Science in Context (1988- )

Editorial Advisory Committee, History and Technology (1992- )

Editorial Advisory Committee, Technology (Franklin Institute)(1995- )

**Professional Committees and Offices:**

Society for the History of Technology:

Founding Member; President (1979-81); Vice-President (1977-79); Executive Committee (1971-74); Chairman of the Nominating Committee (1971-74); Advisory Council (1966-69); Executive Council (1963-66); Program Chairman (1961).

U.S. National Committee of the International Union of the History and Philosophy of Science (1973-79):

American Delegation, Tokyo International Meeting (1974). Chairman, U.S. National Committee of IUPHS (1976-77) Chairman, U.S. Delegation to XVI International Congress of the History of Science (Rumania, 1981).

Historical Advisory Committee, United States Atomic Energy Commission (1973-77).

Historical Advisory Committee, National Aeronautics and Space Administration (1973-79); Chairman (1977-79).

Consultant, Education Development Center, Cambridge, Mass. (1973-76).

Consultant, British Broadcasting Company.

National Science Foundation, History and Philosophy of Science Review Panel (1973-77).

Member Advisory Council, History of Science Society (1977-80).

American Institute of Physics, Advisory Panel (1978-81).

Advisory Committee of Thomas Alva Edison Papers Project (1979- )

Member of the Advisory Council to the Administrator of National Aeronautics and Space Administration (1978-79)

Member of National Academy of Sciences Engineering Education Delegation to the Peoples Republic of China (1978).

Member of Pennsylvania Humanities Council, 1983-1986.

Member of Council, Smithsonian Institution, Washington, D.C., 1984-1985.

Themenfindungskommission, Wissenschaftszentrum, Berlin, 1986-87.

Advisory Board, Deutsches Museum, Munich (1986- )

Advisory Council to the Secretary, Smithsonian Institution, Washington, D.C. (1985-1991)

Scientific Advisory Committee, Cite des Sciences et de l'Industrie, Paris, France (1986-)

Board of Overseers, Lang College, The New School, New York, (1986-1989)

Steering Committee, Symposium Series on the Dynamics of Large Technical Systems (1986- )

Member of the Berlin Committee for the History of Science (1988-)

Organizer of Walther Rathenau Conference, Berlin (1988)

Delegate to American Council of Learned Societies (1988- 92)

Fellowship Advisory Committee, The Hagley Foundation (1988- 92)

Governor's Committee: Awards for Excellence in the Arts, Humanities, and Sciences (Pennsylvania) (1989, 1990)

Chairperson of Rathenau Postdoctoral Fellowship Program, Berlin, Germany, (1988- )

Organizer of Rathenau Summer Academy, Berlin Germany (1993)

Consulting Scholar, Wissenschaftszentrum Berlin (1993)

Advisory Committee, Boston Computer Museum (1994)

Chair, Committee on Lessons from the History of Computers and Information Science, National Research Council, (1995- )

**University Activities/ University of Pennsylvania:**

Chairman, Department of History and Sociology of Science, (1977-80).

Dean Search Committee, School of Engineering (1981)

Chairman, Dean Search Committee, Arts and Sciences (1983)

Dean's Advisory Council, Arts and Sciences (1983-84)

Meyerson Chair Search Committee (1988-89)

Dean Search Committee, Graduate School of Fine Arts (1990)

Organizer, Lewis Mumford Conference (1988)

**Education**

University of Richmond (1940-42)

Bachelor of Mechanical Engineering (1947), and Ph.D., Modern European History (1953), University of Virginia.

**Personal**

Born: Richmond, Virginia, September 13, 1923.

His wife, Agatha Chipley Hughes, died in 1997.

He is survived by a son, Lucian Hughes of Palo Alto, CA; a daughter, Agatha H. Hughes of Philadelphia; four grandchildren; and his long-time companion, Mary Hill Caperton of Charlottesville, VA.

A memorial service will be held in Charlottesville, VA, in April.