John Von Neumann

A Register of His Papers in the Library of Congress

Prepared by Margit Kerwin and Patrick Kerwin Revised and expanded by Patrick Kerwin



Manuscript Division, Library of Congress

Washington, D.C.

2002

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Latest revision: 2005-03-17

Collection Summary

Title: Papers of John Von Neumann

Span Dates: 1912-1996 **Bulk Dates:** (bulk 1935-1957)

ID No.: MSS44180

Creator: Von Neumann, John, 1903-1957

Extent: 11,660 items; 34 containers; 13.4 linear feet **Language:** Collection material in English and Hungarian

Repository: Manuscript Division, Library of Congress, Washington, D.C.

Abstract: Mathematician, atomic energy commissioner, and educator. Correspondence, memoranda, journals, speeches, article and book drafts, notes, charts, graphs, patent, biographical material, family papers, and other material pertaining primarily to John Von Neumann's career as professor of mathematics at the Institute for Advanced Study; adviser and commissioner on the U.S. Atomic Energy Commission; scientific consultant to government and private concerns; and author of works on ballistic research, computers, continuous geometries, logic, operator theory, quantum mechanics, and the theory of games.

Selected Search Terms

The following terms have been used to index the description of this collection in the Library's online catalog. They are grouped by name of person or organization, by subject or location, and by occupation and listed alphabetically therein.

Names:

Von Neumann, John, 1903-1957

Aldor, Eva

Aldor, Peter, 1904-1976

Aydelotte, Frank, 1880-1956

Bethe, Hans Albrecht, 1906-

Birkhoff, Garrett, 1911-

Chandrasekhar, S. (Subrahmanyan), 1910-

Dantzig, George Bernard, 1914-

Dirac, P. A. M. (Paul Adrien Maurice), 1902-

Eckart, Carl, 1902-

Einstein, Albert, 1879-1955

Fermi, Enrico, 1901-1954

Flexner, Abraham, 1866-1959

Gamow, George, 1904-1968

Gödel, Kurt

Goldstine, Herman Heine, 1913-

Halmos, Paul R. (Paul Richard), 1916-

Heisenberg, Werner, 1901-1976

Hove, L. van (Léon)

Hurd, Cuthbert Corwin, 1911-

Jordan, Pascual, 1902-

Kent, R. H. (Robert Harrington), 1886-1961

Kistiakowsky, George B. (George Bogdan), 1900-

Morgenstern, Oskar, 1902-

Oppenheimer, J. Robert, 1904-1967

Ortvay, Rudolf, 1885-1945

Pauli, Wolfgang, 1900-1958

Stone, Marshall H. (Marshall Harvey), 1903-

Strauss, Lewis L.

Taub, Abraham Haskel, 1911-

Teller, Edward, 1908-

Ulam, Stanislaw M.

Veblen, Oswald, 1880-1960

Von Neumann, Klara Dan

Weaver, Warren, 1894-

Weyl, Hermann, 1885-1955

Wiener, Norbert, 1894-1964

Wigner, Eugene Paul, 1902-

Institute for Advanced Study (Princeton, N.J.)--Faculty

Los Alamos Scientific Laboratory

U.S. Army Ballistic Research Laboratory

U.S. Atomic Energy Commission

Subjects:

Ballistics

Computers

Continuous geometries

Game theory

Logic, Symbolic and mathematical

Mathematics--Study and teaching

Nuclear energy

Nuclear energy--Government policy--United States

Operator theory

Physics

Quantum theory

Occupations:

Atomic energy commissioners

Educators

Mathematicians

Administrative Information

Provenance:

The papers of John Von Neumann, educator, mathematician, consultant, and atomic energy commissioner, were given to the Library of Congress in 1974-1975 by his daughter Marina Von Neumann Whitman. Additions were received in 1993 from brother Nicholas A. Vonneuman, 1998 from Israel Halperin, and 2001 from William McClelland.

Processing History:

The papers of John Von Neumann were arranged and described in 1992. Additions were made to the collection in 1993 and 2002.

Transfers:

A video recording has been transferred to the Motion Picture, Broadcasting and Recorded Sound Division of the Library of Congress, where it is identified as part of these papers.

Copyright Status:

The status of copyright in the unpublished writings of John Von Neumann is governed by the Copyright Law of the United States (Title 17, U.S.C.).

Preferred Citation:

Researchers wishing to cite this collection should include the following information: Container number, John Von Neumann Papers, Manuscript Division, Library of Congress, Washington, D.C.

Biographical Note

Date	Event
1903 Dec 28	Born Rudanest Hung

Born, Budapest, Hungary

1926 Ph.D., University of Budapest, Budapest, Hungary

1929 Married Mariette Kovesi (divorced 1937)

1930 Immigrated to United States

1930-1933 Visiting professor, Princeton University, Princeton, N.J.

1932 Published Mathematische Grundlagen der Quantenmechanik. Berlin: J. Springer

1933-1957 Research professor of mathematics, Institute for Advanced Study, Princeton, N.J.

1937 Naturalized United States citizen

1939 Married Klara Dan

Member, Scientific Advisory Committee, Ballistic Research Laboratory, Aberdeen, Md. 1940-1957

1943-1955 Consultant, Los Alamos Scientific Laboratory, Los Alamos, N.Mex.

1944 Published Theory of Games and Economic Behavior. Princeton: Princeton University Press

1952-1954 Member, General Advisory Committee, United States Atomic Energy Commission

1955-1957 Commissioner, United States Atomic Energy Commission

1957, Feb. 8 Died, Washington, D.C.

Scope and Content Note

The papers of John Von Neumann (1903-1957) span the years 1926-1996, with the bulk of the items concentrated in the period from 1935 to 1957. The papers pertain primarily to Von Neumann's career in the United States after he emigrated from Hungary to the United States in 1930. They feature his career as professor of mathematics at the Institute for Advanced Study in Princeton, New Jersey, 1933-1957, adviser and commissioner on the United States Atomic Energy Commission, 1952-1957, scientific consultant with various government and private concerns, and author of works on various scientific topics. The collection consists of correspondence, memoranda, journals, speeches, articles and book drafts, notes, charts, graphs, family papers, clippings, printed matter, photographs, and other materials.

The Family Papers series consists chiefly of correspondence between John Von Neumann and family members. Of particular significance is the extensive correspondence between Von Neumann and his wife Klara Dan Von Neumann concerning professional and family matters.

The General Correspondence series contains Von Neumann's incoming and outgoing correspondence with his colleagues at the Institute for Advanced Study, the Atomic Energy Commission and other government bodies, including the Los Alamos Scientific Laboratory, and various universities. Of special interest are an Albert Einstein letter and report on theoretical physics, 1937. Other correspondents include Frank Aydelotte, Hans Albrecht Bethe, Garrett Birkhoff, S. Chandrasekhar, George Bernard Dantzig, P. A. M. Dirac, Carl Eckart, Enrico Fermi, Abraham Flexner, George Gamow, Kurt Gödel, Herman Heine Goldstine, Werner Heisenberg, L. van Hove, Cuthbert Hurd, Pascual Jordan, R. H. Kent, George B. Kistiakowsky, Oskar Morgenstern, J. Robert Oppenheimer, Rudolf Ortvay, Wolfgang Pauli, Marshall H. Stone, Lewis L. Strauss, Abraham Haskel Taub, Edward Teller, Stanislaw M. Ulam, Oswald Veblen, Warren Weaver, Hermann Weyl, Norbert Wiener, and Eugene Paul Wigner.

The <u>Subject File</u> documents all facets of Von Neumann's career in the United States, reflecting his role in early computer and atomic research. The bulk of the series pertains to his work at the Institute for Advanced Study, including his tenure as director of the Electronic Computer Project. Other papers document Von Neumann's many consultantships. Of particular interest are files relating to his work at the United States Army Ballistic Research Laboratory in Aberdeen, Maryland.

The <u>Speeches and Writings File</u> reflects Von Neumann's interest in numerous scientific and mathematical subjects. The series includes his early writings in quantum mechanics and logic, his writings on continuous geometries, operator theory, ballistic research, and his later works concerning computers. Also of note is his pioneering work on the theory of games. Throughout the Speeches and Writings File are evaluations of Von Neumann's work written after his death by his colleagues. Among the reviewers were Herman Heine Goldstine, Paul R. Halmos, and Abraham Haskel Taub.

An <u>Addition</u> to the papers consists of correspondence between Von Neumann and Eva Aldor, other material relating to Eva and Peter Aldor, correspondence relating to the Poiseuille-type laminar flow, biographical material, a patent, photographs, and printed matter.

Organization of the Papers

The collection is arranged in five series:

- Family Papers, 1929-1956, n.d.
- General Correspondence, 1930-1959, n.d.
- Subject File, 1930-1974, n.d.
- Speeches and Writings File, 1926-1960, n.d.
- Addition, 1912-1996, n.d.

Description of Series

Container Series

Family Papers, 1929-1956, n.d.

Correspondence, telegrams, official documents, and other papers.

Arranged alphabetically.

BOX 2-8 General Correspondence, 1930-1959, n.d.

Correspondence and attached material with friends and colleagues.

Arranged alphabetically by name of person or institution.

Subject File, 1930-1974, n.d.

Correspondence, telegrams, memoranda, journals, logs, tests, travel orders, invitations, charts, graphs, forms, biographical data, photographs, clippings and other printed matter, and

miscellaneous material.

Organized by name of person or organization, topic, or type of material.

BOX 19-33 Speeches and Writings File, 1928-1960, n.d.

Correspondence, speeches, articles, book drafts, notes, contracts, clippings, and printed matter. Speeches have been separated from other writings, which are first arranged alphabetically by type (articles, books, reports, and miscellaneous) and therein alphabetically by type of material,

subject, or title.

BOX 34 Addition, 1912-1996, n.d.

Correspondence, biographical data, patents, photographs, a report, printed matter, and an index. Arranged by year of addition and therein alphabetically by name of person or type of material.

Container List

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	Correspondence, telegrams, official documents, and other papers.
	Arranged alphabetically.
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	Kovesi (Von Neumann), Mariette, 1937-1941, n.d.
	Kovesi, Paulette, 1937, n.d.
	Neumann, Michel J., 1939-1956
	Von Neumann, Klara Dan, 1938-1952, n.d.
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	Von Neumann, Margaret, 1937-1939, 1948, n.d.
	Von Neumann, Nicholas A., 1939-1954
	Subject file
	Divorce and marriage, 1937-1938
	Financial papers, 1933-1954, n.d.
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	Other official documents, 1930-1942, n.d.
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	Correspondence and attached material with friends and colleagues.
	Arranged alphabetically by name of person or institution.
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	Alexandroff, Paul, 1935
	Aydelotte, Frank, 1940-1945, 1956
	"A" miscellaneous, 1933-1956, n.d.
	Bay, Zoltan L., 1945-1954
	Bethe, Hans Albrecht, 1941-1945, 1953-1956
	Bigelow, Julian, 1947-1956
	Birkhoff, Garrett, 1935-1956, n.d.
	Blake, Gwen, 1934-1942
	Bohr, Niels, 1951
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	Bush, Vannevar, 1949-1950
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	Calkin, John, 1941-1945, 1955-1956
	Chandrasekhar, S. (Subrahmanyan), 1935-1942, 1950-1956
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"C" miscellaneous, 1937-1956

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Dantzig, George Bernard, 1947-1948, n.d.

Dirac, P. A. M. (Paul Adrien Maurice), 1934-1938, n.d.

"D" miscellaneous, 1944-1956

Eckart, Carl, 1945, 1952-1956, n.d.

Einstein, Albert, 1937

"E" miscellaneous, 1938-1954

Fellner, William J., 1946-1956, n.d.

Fermi, Enrico, 1949-1951, n.d.

Flexner, Abraham, 1933-1944, 1956

Frankel, Stanley, 1946-1955

Fréchet, Maurice, 1934, 1952-1953, 1959

Friedman, William F., 1952-1956

"F" miscellaneous, 1934-1956, n.d.

Gamow, George, 1940-1956, n.d.

Gödel, Kurt, 1938-1939, 1956

Godement, Roger, 1949-1950, n.d.

Goldstine, Herman H., 1944-1956, n.d.

"G" miscellaneous, 1937-1956

Halperin, Israel, 1936-1940, 1946-1952

Harrison, George R., 1945, 1956

Heisenberg, Werner, 1950

Hove, L. van (Léon), 1950

Hurd, Cuthbert C., 1948-1958, n.d.

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"I" miscellaneous, 1935-1951

Jordan, Pascual, 1937, n.d.

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Kakutani, Shizuo, 1942-1955, n.d.

Kent, R. H. (Robert Harrington), 1938-1956

Kistiakowsky, George B., 1942-1949

Koopmans, Tjalling Charles, 1945-1946, 1959

Kuhn, Harold, 1949-1953

"K" miscellaneous, 1939-1956

Leutert, Werner, 1950-1951

Loewner, Charles, 1943-1947

Lorch, Edgar, 1946-1947, 1958

"L" miscellaneous, 1933-1956, n.d.

Mayer, Joseph E., 1950

Monteiro, Antonio, 1941-1942

Montgomery, Deane, 1955-1956

Morgenstern, Oskar, 1940, 1949-1956

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DOM	Oppenheimer, J. Robert, 1955-1956
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	Overbeck, William P., 1945-1946
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	Panofsky, Hans A., 1946-1947, n.d.
	Pauli, Wolfgang, 1939-1940
	"P" miscellaneous, 1933, 1939-1957, n.d.
	Ridenour, Louis N., 1944-1948
	"R" miscellaneous, 1932-1956, n.d.
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	Strauss, Lewis L., 1945-1956, n.d.
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	Veblen, Oswald, 1933, 1939-1945, 1956-1957, n.d.
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	Wigner, Eugene Paul, 1938-1947, 1955-1956
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	Correspondence, telegrams, memoranda, journals, logs, tests, travel orders, invitations, charts, graphs, forms, biographical data, photographs, clippings and other printed matter, and miscellaneous material.
	Organized by name of person or organization, topic, or type of material.
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Machine time studies, 1954

Moore School of Electrical Engineering, University of Pennsylvania, Philadelphia, Pa., 1945-1946

Consultantships, list of, 1955

Conversations, memoranda of, 1952-1956

Einstein, Albert, 1938, 1948, 1955

Enrico Fermi Award, 1956

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German Academy of Science in Berlin, Berlin, Germany (East), 1950-1954

Institute for Advanced Study, Princeton, N.J.

Administrative, 1933-1945

Faculty, 1939, 1945-1956

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General correspondence, 1944-1954

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School of Mathematics

General correspondence, 1945-1951

Minutes of meetings, 1939-1956

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International Business Machines Corp. (IBM)

Consultant agreement, 1945-1955

Davies, William H., 1954

General correspondence, 1947-1955

Seminar on scientific computation, 1949

Invitations, 1955-1956

John Von Neumann Memorial Institute of Advanced Studies, University of California, Los Angeles, Calif., 1959

Johns Hopkins University, editorial board of the Applied Physics Laboratory of the Johns Hopkins University on Applied Mathematics and Mechanics, Baltimore, Md., 1951-1955

Journals, 1941, 1956

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Library of Congress, 1960-1963

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	Military papers
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                          Speeches have been separated from other writings, which are first arranged alphabetically by type
                             (articles, books, reports, and miscellaneous) and therein alphabetically by type of material,
                             subject, or title.
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                                    "On an Algebraic Generalization of the Quantum Mechanical Formalism"
                                    "On Relativistic Gas-Degeneracy and the Collapsed Configuration of Stars"
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1936

"On Rings of Operators"

"The Uniqueness of Haar's Measure"

1937

"Continuous Rings and Their Arithmetics"

"On Rings of Operators II"

"Quantum Mechanics of Infinite Systems"

"Some Matrix-Inequalities and Metrisation of Matrix-Space"

"Uber ein Okonomisches Gleichungssystem und eine Verallgemeinerung des Brouwerschen Fixpunktsatzes"

1938

"On Infinite Direct Products"

1940

"Discussion of De Sitter's Space and of Dirac's Equation in It"

"Minimally Almost Periodic Groups"

"On Rings of Operators III"

1941

"Distribution of the Ratio of the Mean Square Successive Difference to the Variance"

"Fourier Integrals and Metric Geometry"

1942

"Approximate Properties of Matrices of High Finite Order"

"Further Remark Concerning the Distribution of the Ratio of the Mean Square Successive to the Variance"

"Statistics of the Gravitational Field Arising From a Random Distribution of Stars"

1943

"On Rings of Operators IV"

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1946

"On the Principles of Large Scale Computing Machines"

"Symmetric Solutions of Some General N-Person Games"

1947

"Discussion of a Maximum Problem"

"The Mathematician"

1948

"Coding Scheme for the Poiseuille-Flow Stability Problem"

(2 folders)

"First Report on the Numerical Calculation of Flow Problems"

(2 folders)

"Second Report on the Numerical Calculation of Flow Problems"

(3 folders)

1949

"On Rings of Operators: Reduction Theory"

1950

"Statistical Treatment of Values of First 2000 Decimal Digits of e and pi Calculated on the ENIAC"

1951

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	"Preliminary Discussion of the Logical Design of an Electronic Computing Instrument"
	1948
	Congressional reapportionment
	congressional realphornouniens

"Planning and Coding of Problems for an Electronic Computing Instrument"
(3 folders)

1949

"Recent Theories of Turbulence"

1953

"An Analysis of the Linear Displacement of Oil by Gas-Driven Solvent"

Undated

BOX 34 Addition, 1912-1996, n.d.

Correspondence, biographical data, patents, photographs, a report, printed matter, and an index. Arranged by year of addition and therein alphabetically by name of person or type of material.

BOX 34 1993 addition

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Printed matter, 1946-1955, 1971
2002 addition

Miscellany, 1948, 1957, 1996

Shock waves (incomplete)

Papers of John Von Neumann