

Preface

The present volume is a collection of selected letters written by John von Neumann (1903, Budapest, Hungary; 1957, Washington, D.C., U.S.A.). Apart from a short volume containing von Neumann's letters (written and published in Hungarian) to Rudolf Ortway [36], the present volume is the first and only substantial published collection of letters by von Neumann.

While substantial, this is a strongly *selected* volume since von Neumann had written hundreds more letters. Many of those not selected for the volume are not suitable for publication for one reason or another, many could in principle have been included however. The guiding principle of selection was that the letters published here should contribute to our understanding of John von Neumann as a scientist – broadly interpreted – and as a public figure. The volume also should be interesting for historians of science, especially of mathematics and mathematical physics. Accordingly, letters of exclusively private nature or content are not included in the volume. Also excluded from the collection are letters of reference written on behalf of colleagues – irrespective of whether the persons involved are still alive. Some of von Neumann's letters are still classified hence not accessible for scholarly research, and there may exist letters in private property, not available in archives, which could have been included in the volume had they been known to me. Keeping the volume within a reasonable size also restricted the number of letters that could be included. Thus the selection has been both disciplined and determined by contingent factors.

The letters published here vary in content, style and length. Some are on very general issues that are easy to understand but some concern very technical topics in mathematics and mathematical physics and, naturally, not all technical letters are self-contained. The “Introductory Comments” are intended to facilitate reading the collection, especially the technical letters, by giving brief and concise reviews of the related technical background and by putting some of the letters into perspective. The organization of the introductory comments is orthogonal to the organization of the rest of the volume: while von Neumann's letters are arranged in alphabetic order of the addressees (given an addressee the letters are arranged in order of their dates) the comments are thematically grouped.

Some of the letters are not dated completely. When the year of writing cannot be found on the letter, but can be guessed to be year 19XY, we use the notation [19XY ?]. If no educated guess can be made, then the year of the date is replaced by four question marks: [????].

In reproducing the letters, the original text and punctuation of von Neumann has been followed carefully – even when the original contains obvious typos or misspelled words. In some cases, for instance when the typos and misspellings might lead to misunderstandings, footnotes have been inserted to clarify the text.

All editorial footnotes inserted into the letters end with the word “The Editor”. Authors of other footnotes are given explicitly.

With few exceptions the letters are published here for the first time. The originals of the letters are deposited in the following archives:

- John von Neumann Papers, Manuscript Division, Library of Congress, Washington, D.C., U.S.A.
- Oswald Veblen Papers, Manuscript Division, Library of Congress, Washington, D.C., U.S.A.
- Harvard University Archives, Pusey Library, Cambridge, Massachusetts, U.S.A.
- Archives of Scientific Philosophy, Special Collections, Hillman Library, University of Pittsburgh, Pittsburgh, Pennsylvania, U.S.A.
- “Philosophisches Archiv” of the Library of the University of Konstanz, Konstanz, Germany
- John Hay Library, Brown University, Providence, Rhode Island, U.S.A.
- Library of the Institute for Advanced Study, Princeton, U.S.A.
- Institute Archives, California Institute of Technology, Pasadena, California, U.S.A.
- S. Ulam Papers, American Philosophical Society Library, Philadelphia, Pennsylvania, U.S.A.
- “Staatsbibliothek zu Berlin”, Berlin, Germany
- Department of Manuscripts and Rare Books, Library of the Hungarian Academy of Sciences, Budapest, Hungary
- Gödel Archive, Manuscripts Division, Department of Rare Books and Special Collections, Princeton University Library, Princeton, U.S.A.

The “originals” are often genuinely original, hand-written or typed letters and sometimes carbon copies of typed letters. In the present volume no distinction will be made between these cases and the term “original” will be used indiscriminately to refer to any type of document deposited in an archive. The majority of the original letters are deposited in the John von Neumann Papers of the Library of Congress. At the end of each letter the archive is given in which the document used for the volume is deposited, together with the bibliographic data of a previous publication, if any.

I wish to thank the curators, archivists and librarians that helped me in locating and collecting the letters in these archives:

Dr. Len Bruno, Curator of scientific part of Manuscript Division, and the whole library staff of the Manuscript Division of the Library of Congress helped me during my numerous visits to the Manuscript Division of the Library of Congress and called my attention to the Oswald Veblen, Harry Wexler and Robert Oppenheimer papers at the Library of Congress. Lisa Coats and Marcia Tucker located and made available for inspection and copying the von Neumann documents out of thousands of other archival items in the Institute for Advanced Study Archives of the Historical Studies-Social Science Library of the Institute for Advanced Study in Princeton. J. Cox, Curator and Valerie-Anne Lutz, Assistant Curator at the Library of the American Philosophical Society helped to search the S. Ulam Papers. Dr. Brigitte Parakenings at the “Philosophisches Archiv” of the Library of the University of Konstanz, Germany and Brigitte Arden, Associate Curator of the Special Collections of Hillman Library, University of Pittsburgh, made accessible the Archives of

Scientific Philosophy and the Archive for the History of Quantum Physics. Bonnie Ludt, Curator of the Institute Archives of the California Institute of Technology provided an item from the H.P. Robertson Papers. Dr. Mark N. Brown, Curator, John Hay Library, Brown University, made available von Neumann's letters to M. Stone.

Some letters were written in Hungarian or German, these have been translated into English for the volume; in such cases the name of the translator(s) are also given at the end of those letters. I wish to thank especially A. Lenard, retired professor of mathematics at Indiana University, for making available his translation of von Neumann's letters to Ortway. I was helped with some of the translations by K. Wehmeier; I wish to thank him for his help. A number of other colleagues also have generously helped me in one way or another in preparing the volume. I am very thankful to all: G. Bana, F. Conway, R. Dudau, G. Hon, T. Matolcsi, D. Petz, J. Siegelman and M. Stöltzner. I also thank L. Cole, the copy editor of the manuscript, and S. Gelfand, acquisition editor of the American Mathematical Society for their editorial help and patience.

The copyright of all unpublished von Neumann papers and letters is with Marina von Neumann Whitman, the literary heir of John von Neumann. I would like to thank Marina Whitman not only for her permission to publish the letters but also for her encouragement and support to carry out the project of editing and publishing the volume. In addition to Marina Whitman's permission to publish, a number of specific permissions related to individual letters are listed separately after this Preface.

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Miklós Rédei

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