January 1h, 1960

Dr. F. Joachim Weyl, Director Mathematical Sciences Division Office of Naval Research Washington, D. C.

Dear Dr. Weyl:

I am happy to report to you that Professor Taub's work on the von Neumann papers is almost complete. You will be receiving his report under Contract Nonr 1358(06) in the near future.

May I refer you to our correspondence in December, 1957. In my original proposal to the Office of Naval Research I submitted a budget of approximately \$20,000 plus 15 per cent overhead. In your reply you suggested that this contract be awarded in two annual subventions, and this was done. The original contract ran from 15 January 1958 to 14 January 1959 in the amount of \$11,500.

At the time of our proposal for an amendment, we had spent very little money, and we therefore asked only for a twelve-months' no cost extension, running to 14 January 1960. We find that this was a little too optimistic and that the total costs will run to an additional \$1,500 to \$2,000, or a total of \$13,000 to \$13,500. The reason that we are below the original estimate of \$20,000 is that the Institute has contributed almost the entire secretarial services (for which \$7,000 was budgeted).

This letter is a formal request for a second amendment to Contract 1358(06) to provide for a ninety-day time extension and an additional \$2,000.

Very sincerely,

Robert Oppenheimer

CC sent 2/24/60 J. H. Levy

# HISTORICAL STUDIES LIBRARY THE INSTITUTE FOR ADVANCED STUDY PRINCETON, NEW JERSEY 08540

ITEMS REMOVED: VON NEUMANN JOHN - PUBLICATION OF COLLECTED WORKS

- 1) Advertisement Pergamon Press of 1961 with announcement of publication of John Von Neuman's The Collected Works.
- 2) Herman H. Goldstine and Eugene P. Wigner, "Scientific Work of J. von Neuman," reprinted from Science, Vol. 125, No. 3250, April 12, 1957: pp. 683-684. (Two Copies.)
- 3) Johann von Neumann, "Mathematische Grundlagen der Quantenmecyanik," Verlag von Julius Springer, Berlin.

Records of the Office of the Director / Faculty Files / Box 35 / von Neumann, Joh From the Shelby White and Leon Levy Archives Center, Institute for Advanced S

5/12/60

Dr. Oppenheimer:

The attached is a contract amendment to Nonr 1358(06) (von Neumann papers). The amendment simply grants us 40% overhead without audit, which is just fine.

It is in order.

Ley.

Ro. signed 5/12/60



#### DEPARTMENT OF THE NAVY

OFFICE OF NAVAL RESEARCH WASHINGTON 25, D. C.

ONR:432:LB:1gb NR 043-201

Dr. Robert Oppenheimer Office of the Director The Institute for Advanced Study Princeton, New Jersey

Dear Dr. Oppenheimer:

We are pleased to inform you that your request of 14 January 1960 for renewal of Contract Nonr 1358(06) entitled "The Unpublished Scientific Works of John von Neumann," has been scientifically approved by the Mathematics Branch of this Office for an amount not to exceed \$2,000 for the period 15 January 1960 to 14 April 1960 and has been forwarded to our Contract Division for negotiation. You may expect to hear from a representative of that division in the near future.

As the obligation of funds is the function of the Contract Division, this notification of scientific approval should not be construed as authorizing commitments under the pending renewal.

Sincerely yours,

Leila Bram

LEILA BRAM, Acting Head Mathematics Branch By direction of Chief of Naval Research

Copy to: ONR/New York ONR/ResRep/J. H. Levy, Princeton University Professor A. H. Taub, University of Illinois



#### DEPARTMENT OF THE NAVY

OFFICE OF NAVAL RESEARCH WASHINGTON 25, D. C.

IN REPLY REFER TO

ONR:432:etm NR 043-201

R R DEC 1950

Mr. M. C. Morgan, Jr. General Manager Institute for Advanced Study Princeton, New Jersey

Dear Mr. Morgant

We are pleased to advise you that your request of 2h November 1958 for a no-cost extension of Contract Nonr-1358(06) has been approved by the Mathematics Branch of this Office and forwarded to our Contract Division for negotiation. You may expect to hear from a representative of that Division in the near future.

Sincerely yours,

ARTHUR GRAD Head, Mathematics Branch By direction of Chief of Naval Research

Copy to: Dr. A. H. Temb Dr. R. Oppenheimer ONR/New York

#### THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

November 24, 1958

Dr. F. Joachim Weyl, Director Mathematical Sciences Division Department of the Navy Office of Naval Research Washington 25, D. C.

Dear Dr. Weyl:

May I refer to your letter of 23 December 1957 to Dr. Oppenheimer regarding the work by 1. Taub on the von Neumann papers. At your suggestion the Contract Nonr 1358(06) was drawn for one-half the amount of the proposal and for one year from 15 January 1958 to 14 January 1959, in the amount of \$11,500.

The work has not gone forward as rapidly as we predicted, but Dr. Taub now expects to spend the major portion of the next summer at the Institute on the project. The funds we have remaining in the original contract should be sufficient to cover his work for the coming twelve mosths. We, therefore, respectfully request a no cost extension of Contract Aonr 1358(06) for the period of one year from 15 January 1950 to 15 January 1960.

We will review the budget and Dr. Taub's progress next fall and at that time we may request the remaining one-half of the funds in our original proposal for the calendar year 1960.

Cordially yours,

Minot G. Morgan, Jr. General Manager

cc. Or. Oppenheimer Mr. Levy

MCM/dmb

UNIVERSITY OF ILLINOIS
DIGITAL COMPUTER LABORATORY
URBANA, ILLINOIS
October 22, 1958

Dr. J. R. Oppenheimer The Institute for Advanced Study Princeton, New Jersey

Dear Dr. Oppenheimer:

Enclosed you will find copies of correspondence between Dr. Grad of ONR and myself. My letter to him is essentially a report on the status of the work on the von Neuman manuscripts.

I am sending this material to you for your information.

Sincerely yours,

A. H. Taub

AHT: je Encs.2 October 17, 1958

Dr. Arthur Grad Head, Mathematics Branch (Code 432) Department of the Navy Office of Naval Research Washington 25, D. C.

> ONR:432:mm.j Re: NR 043-201

Dear Dr. Grad;

This letter is in response to your request of September 25, 1958 for a summary of the work done on OMR contract No. NR O43-201. I am afraid that I cannot report any final results on the work involved in this contract, namely the editing of the von Neumann manuscripts. However, you may be interested in the following remarks on the status on this work.

On the basis of various visits to the Institute for Advanced Study I estimate that there is published material for about six volumes of about five hundred pages each. Four volumes will contain papers published by von Neumann before 1940. Two volumes will consist of:

- a. Papers published since 1940
- b. Government and other reports

These six volumes will not contain all the technical published material left by von Neumann of scientific interest. There are various fragmentary notes, partial drafts of unpublished papers, and early versions of unpublished papers. They will be collected, cataloged, and kept at the Institute for Advanced Study. They should be made available to scholars acceptable to the Institute. The catalog will be published either with one of the volumes mentioned above or separately.

It is planned to ask various people to write short reviews of the items in the catalog. These reviews will be similar to those written for Mathematical Reviews. It is presently planned that the material in the last two volumes will be organized in terms of subject matter, whereas that in the first four volumes will be more or less chronological. The last two volumes will be organized in terms of the following subjects:

- 1. The design of computers and theory of automata
- 2. Game theory and economics
- 3. Hydrodynamics and related topics
- 4. Numerical analysis and computation
- 5. Speeches and general articles
- 6. Statistics and applied statistics

(cont'd.)

- 2 -

I am presently planning to spend the summer of 1959 at the Institute for Advanced Study and hope to complete the organization of this material by the end of that period.

Sincerely yours,

A. H. Taub

AHT:je

DEPARTMENT OF THE NAVY OFFICE OF NAVAL RESEARCH WASHINGTON 25, D. C.

> ONR:432:maj NR 043-201 25 September 1958

Professor A. H. Taub Digital Computer Laboratory University of Illinois Urbana, Illinois

Dear Professor Taub:

We will shortly begin preparation of our annual report. This report is to contain a summary of the significant contributions in the program of contract research during the past year.

In order to assist us in preparing the report, will you please submit a short description of the most important results obtained under your ONR contract this year. Since our own report must be brief, it would be convenient for us if you selected critically from among your accomplishments and summarized as concisely as possible. In addition, please include a bibliography of all technical reports, published papers, and books prepared wholly or partially under the contract. Will you also inform us of any honors or awards received.

It will be most helpful if you would make your report self-sufficient, without reference to previous technical or status reports. We would appreciate receiving this information by the lst of November.

Sincerely yours,

ARTHUR GRAD Head, Mathematics Branch

Records of the Office of the Director / Faculty Files / Box 35 / von Neumann, John / Publication of C From the Shelby White and Leon Levy Archives Center, Institute for Advanced Study, Princeton, No.

Mike says for the ONR Taub-Von Neumann contract we need a "project director", whose function would be to sign multiple copies of papers from time to time. Mike thought you might be glad to be relieved of this, and suggested asking Montgomery, who does a great deal of this. (Montgomery was on the original committee to consider publication, so was Gödel and Pais). Would this be agreeable to you?



#### THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

OFFICE OF THE DIRECTOR

February 6, 1958 WY AMI

Dear Dr. Cohen:

The Institute for Advanced Study is hereby making a preliminary but formal request for the assistance of the National Science Foundation. The undertaking involves the study, editing, and publication of such of the works of John von Neuman as have not hitherto been accessible in the scientific literature, and as are, in the opinion of the editor and his consultants, suitable for such publication.

The Institute has designated Professor A. H. Taub of the University of Illinois as editor. This choice has the concurrence of Professor von Neumann's widow and estate, and has been endorsed by von Neumann's colleagues at the Institute. We have been assured of the active collaboration of several former collaborators of von Neumann: Dr. Ulam, Dr. Kakutani, Dr. Eckhart, and Dr. Goldstine, for example. It is estimated that this work should be completed within two years. The Institute will be the headquarters for this work, and Professor Taub will devote to it an increasing proportion of his time, as his obligations to the University of Illanois permit.

Our estimate is that this work will involve an expenditure of about \$10,000 in each of two successive years, starting July 1, 1958. During the first year the expenses will be primarily for consultation, secreterial work, and travel. During the second year we shall have higher costs for publication, and probably a direct contribution for the support of Professor Taub. A very preliminary estimate of budget for the two year period would be:

Salaries and editorial fees \$6,000.
Direct costs of publication 3,000.
Travel for Professor Taub and consultants 4,000.
Secretarial services 7,000.

It would be in accordance with our usual practice to ask for an overhead of 15 per cent of the sum requested above, which would be an additional \$3,000.

There may be questions left unanswered by this letter. I should be glad to try to answer them should you so desire. You should also feel free to communicate directly with Professor Taub.

Very sincerely,

Dr. L. W. Cohen National Science Foundation Washington 25, D.C. Robert Oppenheimer

#### NATIONAL SCIENCE FOUNDATION

WASHINGTON 25, D. C.

December 16, 1957

Dr. J. R. Oppenheimer Director The Institute for Advanced Study Princeton, New Jersey

Dear Dr. Oppenheimer:

Abe Taub writes that he has discussed with you the problem of publishing selecta from von Neumann's mathematical papers.

This question was discussed by the Advisory
Panel for University Computing Facilities shortly after
his death. At that time it was not clear what steps
should be taken and it was felt that NSF should stand by
to render assistance when the time was right. I will
appreciate your views as to what should be done and assure
you that I will make every effort to accomplish what is
required.

Sincerely yours,

Lens wi Cohen

Leon W. Cohen Program Director for Mathematical Sciences

CC: Dr. Taub

26 December 1957

Ref: ONR: 430: FJW: ssz

Dear Dr. Weyl:

Thank you for your letter of December 23rd. Professor Taub and I are well pleased with the procedures you outline, and gratefully look forward to the help you are offering us. Professor Taub will actually start work here in the second half of January, and the timing you suggest is therefore quite suitable.

Very sincerely,

Robert Oppenheimer

Dr. F. Joachim Weyl, Director Mathematical Sciences Division Office of Naval Research Washington 25, D. C.

Copy to Professor Taub

## FOR INFORMATION ONLY

DEPARTMENT OF THE NAVY OFFICE OF NAVAL RESEARCH CONTRACT NUMBER: Nonr-1358(06)

#### RESEARCH AND DEVELOPMENT TASK ORDER

CONTRACTOR:

The Institute of Advanced Study

15 JAN 1958

AUTHORITY:

NR 043-201/1-8-58 (Mathematical Sciences Division)

APPROFRIATION: 17X1319.88 Research & Development, Navy

(Expenditure Account 46032) (Object Classification 079) Bureau Control Number 80501

Bureau Accounting Activity Number 14

ESTIMATED COST: \$11,500.00

This Task Order is established under, and constitutes a part of Contract Nonr-1358(00), which sets forth the basic contract provisions applicable hereto. In case of any conflict between the provisions of said Contract Nonr-1358(00) and the provisions hereof, the latter shall control.

SECTION A - The Contractor shall furnish the necessary personnel and facilities for and, in accordance with any instructions issued by the Scientific Officer or his authorized representative, shall conduct research on and edit the works of John von Neumann in pure and applied mathematics.

SECTION B - The Scientific Officer under this Task Order is the Head, Mathematics Branch, Mathematical Sciences Division, Office of Naval Research.

SECTION C - The estimated cost of the performance of this Task Order is eleven thousand five hundred dollars (\$11,500.00).

SECTION D - Subject to the provisions of clause 53 of the contract, the following percentage shall be applied with respect to this Task Order in the amount or amounts. and for the period or periods, specified below:

Period for which Applied From Through

40% provisionally of the salaries and wages reimbursed under clause 24(a)(2) of the contract.

15 January 1958 30 June 1958.

SECTION E - The Contractor shall submit a final report upon completion of work hereunder, making full disclosures of all research conducted, and shall submit CONTRACT NUMBER: Nonr-1358(06)

such other reports as are required by the Scientific Officer. In material submitted hereunder as technical reports, there shall be affixed to the front of the face page of each such technical report a statement to the effect that "reproduction in whole or in part is permitted for any purpose of the United States Government."

SECTION F - It is agreed that this Task Order shall be of no force or effect until the Contractor executes Amendment 7 to Contract Nonr-1358(00).

SECTION G - The performance of work under this Task Order shall commence on 15 January 1958, and shall be completed on 14 January 1959.

This Task Order is made pursuant to the provisions of 10 U. S. C. 2304(a)(5) and any required Determination and Findings with respect thereto has been made.



#### DEPARTMENT OF THE NAVY

OFFICE OF NAVAL RESEARCH WASHINGTON 25, D. C.

IN REPLY REFER TO

ONR: 430: FJW: ssz 23 December 1957

Dr. J. Robert Oppenheimer, Director Institute for Advanced Study Princeton, New Jersey

Dear Dr. Oppenheimer:

I was delighted to receive your letter of 17 December with the news that all around satisfactory arrangements have been completed by the Institute for undertaking the collection, editing, and publication of John von Neumann's dispersed and as yet not generally accessible writings. Using your letter as a basis, we shall proceed at once with the necessary steps leading to the negotiation of a contract, and you will hear from our Contracts Division in the near future on this matter.

I should like to suggest that we set 15 January 1958 as the tentative starting date of the contract and write it for an initial period of one year with one half the total amount of your preliminary estimate for the two-year period. Once the work is well under way, it should be easier to determine what additional funds will be required to complete the project. An amendment of the contract, to extend the period and to increase the allotted funds by an amount to be determined at the time, could then be negotiated as early after 1 July 1958 as this may be desirable. I shall expect to hear either from you or from Professor Taub, should this suggestion in anyway conflict with present plans for the operation of the project.

Sincerely yours,

F. Jondin We F. JOACHIM WEYL, Director

Mathematical Sciences Division

Copy to: Professor A. H. Taub, U. of Illinois Code 432

A - NAW

co her lengan

17 December 1957

Dear Dr. Weyl:

The Institute for Advanced Study is hereby making a preliminary but formal request for the assistance of the Office of Naval Research. The undertaking involves the study, editing, and publication of such of the works of John von Neumann as have not hitherto been accessible in the scientific literature, and as are, in the opinion of the editor and his consultants, suitable for such publication.

The Institute has designated Professor A. H. Taub of the University of Illinois as editor. This choice has the concurrence of Professor von Neumann's widow and estate, and has been endorsed by von Neumann's colleagues at the Institute. We have been assured of the active collaboration of several former collaborators of von Neumann: Dr. Ulam, Dr. Kakutani, Dr. Eckhart, and Dr. Goldstine, for example. It is estimated that this work should be completed within two years. The Institute will be the headquarters for this work, and Professor Taub will devote to it an increasing proportion of his time, as his obligations to the University of Illinois permit.

Our estimate is that this work will involve an expenditure of about \$10,000 in each of two successive years. During the first year the expenses will be primarily for consultation, secretarial work, and travel. During the second year we shall have higher costs for publication, and probably a direct contribution for the support of Professor Taub. A very preliminary estimate of budget for the two year period would be:

Salaries and editorial fees	\$ 6,000.
Direct costs of publication, including	
100 reprints of each article for the	
Office of Naval Research	3,000.
Travel for Professor Taub and consultants	4,000.
Secretarial services	7.000.

It would be in accordance with our usual practice to ask for an overhead of 15% of the sum requested above, which would be an additional \$3,000.

There may be questions left unanswered by this letter. I should be glad to try to answer them should you so desire. You should also feel free to communicate directly with Professor Taub.

Very sincerely,

Robert Oppenheimer

Dr. F. Joachim Weyl, Director Mathematical Sciences Division Office of Naval Research Washington, D. C.



#### DEPARTMENT OF THE NAVY

OFFICE OF NAVAL RESEARCH WASHINGTON 25, D. C.

IN REPLY REFER TO

ONR:430:FJW:ssz 2 December 1957

Professor A. H. Taub Digital Computer Laboratory University of Illinois Urbana, Illinois

Dear Abe:

Thank you for your note of 22 November, advising me that the Institute for Advanced Study might welcome Office of Naval Research assistance in its endeavor of making generally available the many as yet unpublished results of Johnnie von Neumann's scientific work during the war and post war years. Only a minimum of formalities would be required towards this end. All we need is the usual kind of proposal which would describe the project as presumably having the purpose of collecting and editing for publication the scientific posthumous papers of John von Neumann, identify the person in charge as well as other participating key individuals, and conclude with a budget indicating how much will be needed for what. Secretarial assistance, travel expenses, and editorial salaries could all be properly charged to such a contract.

In addition, we should like the estimated requirements to include an item for the reproduction and distribution reports, adequate to cover the cost of 100 copies of the resulting publication which the contract would stipulate to be delivered to the Office of Naval Research as the final project report.

Hoping that this proves helpful.

Sincerely yours,

F. JOACHIM WEYL, Director Mathematical Sciences Division

Copy to: Dr. J. R. Oppenheimer, Institute for Advanced Study

#### THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

November 22, 1957

Dr. F. J. Weyl, Director Mathematical Sciences Division Office of Naval Research Washington 25, D. C.

Dear Joe:

When I saw you in Washington yesterday you very kindly remarked that if it should prove desirable, you could assign some O.N.R. funds to a project involving the preparing for publication material left by John von Neumann. I have talked to Dr. Oppenheimer about this and it turns out that it would be very desirable if some agency such as yours could help support the travel of people who would have to be consulted on various things, and some other expenses connected with this publication matter. Is there anything that Dr. Oppenheimer or I should do in the way of making a formal request for funds?

I shall be in Trbana beginning Monday for the next few weeks.

With very best regards,

As ever.

A. Taub

ATesg cc: Dr. Oppenheimer

#### DRAFT

Dear Dr. Weyl:

The Institute for Advanced Study is hereby making a preliminary but formal request for the assistance of the Office of Naval Research. The undertaking involve the study, editing, and publication of such of the works of John von Neumann as have not hitherto been accessible in the scientific literature, and as are, in the opinion of the editor and his consultants, suitable for such publication. The Institute has designated Professor A. H. Taub of the University of Illinois as editor. This choice has the concurrence of Professor von Neumann's widow and estate, and has been endorsed by von Neumann's colleagues at the Institute. We have been assured of the active collaboration of several former collaborators of von Naamann: Dr. Ulam, Dr. Kakutani, Dr. Eckhart, and Dr. Goldstine, for example. It is estimated that this work should be completed within two years. The Institute will be the headquarters for this work, and Professor Tabb will devote to it an increasing proportion of his time, as his obligations to the University of Illinois permit. Our estimate is that this work will involve an expenditure of about \$10,000 in each of two successive years. During the first year the expenses will be primarily for consultation, secretarial work, and travel. During the second year we shall have higher costs for publication, and Brobably a direct contribution for the support of Professor Taub. A very preliminary estimate of budget for the two year period would be:

Salary to Professor Taub	\$ 6,000.
Direct costs of publication, including	
100 reprints of each article for the	
Office of Naval Research	3,000.
Travel for Professor Taub and consultants	4,000.
Secretarial services	7,000.

The Institute would be glad to receive overhead, since we shall be providing the housekeeping for this undertaking; but we will be more than pleased accept the contract without overhead.

There may be many questions left unanswered by this letter. I should be glad to try to answer them should you so desire. You should also feel free to communicate directly with Professor Taub.

Very sincerely,

Robert Oppenheimer

### PROPOSAL FOR A ONE YEAR CONTRACT

OFFICE OF NAVAL RESEARCH
SUBMITTED BY THE INSTITUTE FOR ADVANCED STUDY, PRINCETON, N.J.

Purpose: The publishing of such works of John von Neumann as have not been available in the scientific literature, and in the opinion of the editor and his consultants warrant publication.

Editor: A. H. Taub

Estimated budget, academic year 1958-1959

Salary: A. H. Taub
Secretary
Travel expenses
Reproduction and distribution
of reports (100 copies to ONR)
Overhead (25 percent of above)

Total

FACULTY	SPONSOR	(S)

APPROVED FOR INSTITUTE FOR ADVANCED STUDY

Director

#### THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

OFFICE OF THE DIRECTOR

13 December 1957

Dear Dr. Weyl:

The Institute for Advanced Study is hereby making a preliminary but formal request for the assistance of the Office of Naval Research. The undertaking involves the study, editing, and publication of such of the works of John von Neumann as have not hitherto been accessible in the scientific literature, and as are, in the opinion of the editor and his consultants, suitable for such publication.

The Institute has designated Professor A. H. Taub of the University of Illinois as editor. This choice has the concurrence of Professor von Neumann's widow and estate, and has been endorsed by von Neumann's colleagues at the Institute. We have been assured of the active collaboration of several former collaborators of von Neumann: Dr. Ulam, Dr. Kakutani, Dr. Eckhart, and Dr. Goldstine, for example. It is estimated that this work should be completed within two years. The Institute will be the headquarters for this work, and Professor Taub will devote to it an increasing proportion of his time, as his obligations to the University of Illinois permit.

Our estimate is that this work will involve an expenditure of about \$10,000 in each of two successive years. During the first year the expenses will be primarily for consultation, secretarial work, and travel. During the second year we shall have higher costs for publication, and probably a direct contribution for the support of Professor Taub. A very preliminary estimate of budget for the two year period would be:

Salary to Professor Taub

Direct costs of publication, including
100 reprints of each article for the
Office of Naval Research

Travel for Professor Taub and consultants
Secretarial services
Overhead (15% fabre)

\$ 6,000.

The Institute would be glad to receive overhead, since we shall be providing the housekeeping for this undertaking; but we will readily accept the contract without overhead.

There may be questions left unanswered by this letter. I should be glad to try to answer them should you so desire. You should also feel free to communicate directly with Professor Taub.

Very sincerely,

Robert Oppenheimer

Dr. F. Joachim Weyl, Director Mathematical Sciences Division Office of Naval Research