

#### GORDON SPEEDIE

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& bare publicled

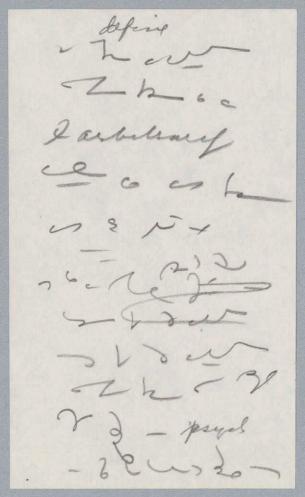
in London.

Dr Frank told kim to talk & Prof. dreiner.

This office is mi -3 -3548

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## NATIONAL SCIENCE FOUNDATION WASHINGTON 25, D. C.

[Ca Jan, 1958]

Dear Colleague:

National Science Foundation Senior Postdoctoral Fellowships are offered as one means of aiding established scientists to improve their competence in science. The program is being kept flexible so as to provide for several kinds of persons, including both those of unquestioned eminence and those whose current circumstances do not provide optimum opportunities for their scholarly growth but who possess the capacity to profit substantially from a fellowship experience.

There are many qualities necessary for success in science and some of these are not yet measurable by objective means. We feel that one of the best means of identifying scientific talent is to solicit the aid and opinions of respondents who are practicing scientists, deans, and others who are responsible for assessing the capabilities of faculty members and other scientists. Therefore, we will appreciate your confidential evaluation of the applicant whose name appears on this form. We should also like to be provided with as much of the specific data upon which your evaluation is based as you can give us. Your opinion as to the degree to which the applicant is likely to profit by the fellowship activities he has outlined herein and your remarks as to his present status and potential as a scientist or science teacher will be especially helpful.

Selection of National Science Foundation Senior Postdoctoral Fellows will be made solely on the basis of ability from among those who have demonstrated competence and special aptitude for advanced training and productive scholarship, and who have held a doctoral degree in science for at least five years or who have the equivalent in research experience and training.

E.J.A.

Sincerely yours,

alan T. Waterman

Alan T. Waterman Director

P.S. They want to have this by 13 Jan.



PUBLISHED BY

INTERNATIONAL BUSINESS MACHINES CORPORATION 590 MADISON AVENUE NEW YORK 22, N.Y.

OFFICE OF THE EDITOR

January 2, 1958

Dr. Norbert Wiener Professor of Mathematics Massachusetts Institute of Technology Cambridge, Massachusetts

## Dear Dr. Wiener:

I was so impressed by the importance of the speech you made, "The Role of the Small Cultural College in Education of the Scientists," at Wabash College on October 10, 1957 that I have been trying to find a way in which, within our space limitations, I could present the gist of your speech to our 90,000 readers. I have taken the liberty of shortening the mimeographed transcript of your speech and I enclose herewith the short version for your consideration. In trying to reduce the length, we had to eliminate some details and some paragraphs, and this in turn created its own problem of keeping the speech smooth and unified. To solve this problem I decided to try a different beginning for the speech which I offer for your approval.

I hope you will like our shorter version. I think it carries faithfully the message of your original speech and I hope you will approve of it. I would like to run it in our February issue as it stands or with any changes you care to make. I hope to hear from you favorably very soon.

Sincerely yours,

mull

Eaux 1/13/57]

James B. O'Connell Managing Editor

JBO:wvd attachment

Dr. Berndt Berlin Schoneberg Kufsteiner Strasse 69 Berlin, Germany

Dear Dr. Berndt:

Many thanks for your patience in being willing to accept a delay in my sending you the radio talk for which you have asked. I have written it in English because the problem of translating it into German is rather ticklish owing to the technical nature of the vocabulary I am using, and to the need of a precise translation of philosophical terms.

I hope the enclosed manuscript will meet your needs.

Sincerely yours,

Norbert Wiener

NW: AD Enc.

[and 1/20/58]

Mr. H. R. Coish Associate Professor University of Manitoba Winnipeg, Canada

Dear Sir:

I am sorry that your letter to Professor Wiener dated November 4th has remained so long unanswered.

There are no copies of his speech available, although it is possible that you might obtain one through Wabash College.

Very truly yours,

Mr. H. R. Coish Associate Professor University of Manitoba Winnipeg, Canada

Dear Sir:

I am sorry that your letter to Professor Wiener dated November 4th has remained so long unanswered.

There are no copies of his speech available, although it is possible that you might obtain one through Wabash College.

Very truly yours,

Mr. Ray Radebaugh R. R. Nč. 2 Box 48 Edwardsburg, Michigan

Dear Sir:

Your letter of December 9th to Massachusetts Institute of Technology has been referred to Professor Norbert Wiener. He wishes me to inform you that there is no course in cryogenic engineering at this institution.

Very truly yours,

Mr. Melvin E. Salveson 16 Parish Road New Canaan, Connecticut

Dear Mr. Salveson:

Many thanks for the compliment of inviting me to contribute to your handbook. I am afraid that I cannot accept as I have so much uncompleted research work on hand which represents my primary obligation.

Sincerely yours,

Norbert Wiener

NW:AD



Selig S. Harrison, ASSOCIATE EDITOR

January 3, 1958

Professor Norbert Wiener Massachusetts Institute of Technology Cambridge 39, Massachusetts

1 1 1 1 h

Dear Professor Wiener:

We at The New Republic have given increasing thought in recent months to the tendency for federal support of university research to result in research in which much of the direction and emphasis comes from the supporting agency rather than from the individual investigator. Indeed, I suppose it is fair to say in a more general sense that similar direction and emphasis comes from supporting agencies other than the federal government. We are very anxious to present a far-reaching discussion of this problem and related problems such as the proliferation of research of a highly organized or team nature.

It occurred to us that you might well have given thought to this problem and we wondered whether you would consider The New Republic as a forum for any thoughts you may wish to express in this connection. I have suggested the area of such an article only in the most general terms and we would, of course, be interested in whatever you may have to say without reference to the particular formulation above. In the event that you are interested, the length and treatment would be entirely up to you.

We hope to hear from you.

Sincerely,

Selig S. Kurrisn

[ang 1/13/58]

Selig S. Harrison

Telephone: REpublic 7-8656 Cable Address: NEWREPUB

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# BRAMPTON, ONTARIO

# CANADA

28 Meadowland Drive

January 4,1958.

Dear Professor Wiener :

41 × × 0.

Thank you for your letter of January 2,1958,achknowledging receipt of my MS "The Statistical Appraisal of Chess".

When returning the MS will you kindly mail it directly to the address of

| Miss | Toni | . Strassman    |
|------|------|----------------|
|      |      | Representative |
|      |      | 19th Street    |
| New  | York | 3, N.Y.        |

This saves tedious customs procedures.

Yours sincerely

St. R. Frisch

H.R.Frisch

Professor Dr.Norbert Wiener Dept.of Mathematics Mass.Inst.of Techn. Cambrdige 39, Mass. USA. CIRCOLO MATEMATICO DI PALERMO VIA ARCHIRAFI. 34 - PALERMO

Palermo, 4 gennaio 1958

Prot.3

abert

Prof. N. WIENER MAssachussets Institute of Technology CAMBRIDGE 39 (Mass.) U.S.A.

Italy

## Caro Prof. Wiener

Le inviamo ancora una volta le bozze della Sua Memoria "The definition and ergodic properties of the stochastic..." che apparirà nel fasc.2º del Tomo VI dei "Rendiconti", che è già pronto per la stampa.

La preghiamo di volere ritornare le bozze corrette per via aerea.

Abbiamo preso nota che il Prof. E.J.Akutowicz desidera altre 100 copie degli estratti a pagamento, oltre i 100 gratui= ti.

Distinti saluti.

Frank de Franking

[ans1/14/58]

DNakulower Hi 7 Host Wed. of this.

The City College

CONVENT AVENUE AND 139TH STREET NEW YORK 31, N. Y.

DEPARTMENT OF PHILOSOPHY

January 5, 1958.

Professor Norbert Wiener Department of Mathematics Massachusetts Institute of Technology Cambridge 39, Mass.

Dear Professor Wiener,

On behalf of the Program Committee I should like to thank you for your participation in the Philosophical Association meetings. We all enjoyed the session very much and profited from the discussions. May I add my personal appreciation of what seemed to me the perfect proportion in which you blended the philosophical problem, the technical background, and the sense of the possible impact of future developments.

Very sincerely yours,

Abraham Edd

Abraham Edel for the Program Committee, Eastern Division, American Philosophical Association.

Dia Trop, Weiner: I hope you have time to alliese me on the most ecanonical approach to a basic understanding Info Theory and fai as time, money Al effort is concerned. Is and in orthoday bugineering grad with math thom elementary D. E. S. I have rem into the sematic king of Sunday supplements in my own navigation in this field. Thus I appeal to you for seeing eye aid . Currently I am in Europe and any hoping to take CK Ogden's 850 work horses of English and set nife German French etc, synonyme as well as structure them pictorially. also a pronounciation spectrum Which shows the vowel flow in all the languages expect to cover. baking you can give me a basic In O cyberneting J Dam 9 Succeedy yours Slorge Clo Marg 2212 American Bldg Eans [13/58] Rideo City 20 my.



THE CURTIS PUBLISHING COMPANY PHILADELPHIA 5

JOHN KOBLER

January 6, 1957

Professor Norbert Wiener Department of Mathematics Massachusetts Institute of Technology Cambridge 39, Massachusetts

Dear Professor Wiener:

With regret I return a photostatic copy of your article. The original was somewhat mutilated by our efforts to edit it for the lay reader. While we were able to grasp the nature of the work you describe, we could find no way to convey the significance clearly even to a highly intelligent reader. I do not say that this cannot be done, but it clearly lies beyond our powers.

Many thanks for the privilege of seeing the manuscript.

Sincerely yours,

John Wobler

[ano 1-13-58]

JK:ps

Enc.

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CAMBRIDGE 39, MASS.

DEPARTMENT OF MATHEMATICS

January 6, 1958

Professor Norbert Wiener Rm. 2-276 M.I.T.

Dear Professor Wiener:

A very bright physics undergraduate, Mr. Coleman Peter Wolk, may get in touch with you this week to discuss the possibility of doing a Masters thesis on Statistical Aspects of Communication Theory under your supervision if you are willing. Wolk has just won a fellowship to the Rockefeller Institute in New York City for next year. He is interested in physics, mathematics, and biology and hopes to use the Masters thesis as an opportunity to learn more about applications of mathematics to problems in biology. I believe he has also had some laboratory experience during summers while he has been a student at M.I.T.

Mr. Wolk proposed speaking to you about being his thesis advisor. If he were a less able student I would have discouraged him from taking up your time, but he really is a very courteous person as well as being an able one. If, however, you feel he is not prepared to work with you, I think we may recommend to him that he consult Professor John Nash. Wolk would plan to spend approximately 24 hours per week during the spring semester on a thesis and would hope to finish it by next May.

B B Thomas

G. B. Thomas, Jr.

GBT:pr

Dr. Eduard Luedicke 675 Coleraine Renfrew Ontario, Canada

Dear Dr. Luedicke:

In reply to your letter of December 22nd, Professor Wiener has asked me to write you that Friday, January 31st or Saturday, February 1, would be the time most convenient for him to see you.

Since driving conditions at this time of year are so uncertain, if you are delayed will you be good enough to keep in touch with this office so that he may know the time of your arrival. The office telephone number is UN-4-6900, Extension 198, and his home phone is IV-4-0021.

Very truly yours,

Secretary to Norbert Wiener

[ans1/14/58]

Mr. William G. Madow Stanford Research Institute Menlo Park, California

Dear Mr. Madow:

In checking over the files in this office I find that there appears to be no reply to your letter to Professor Wiener dated November 29th, and trust you will pardon this oversight. I wish to inform you, however, that there are no reports on his work on the electroencephalograph at the present time.

Very truly yours,

Mr. Merrill K. Riddick Box 231 Philipsburg, Montana

Dear Mr. Riddick:

In going over my files recently I have come across some material you sent me as long ago as last April regarding "Some Aspects of Applied Ecology". I do not find a reply to your letter, and am very sorry this has been overlooked.

Due to pressure of work I am unable to devote the time necessary to express an opinion on this, and am returning the enclosure herewith. I trust you will overlook this oversight and my inability to comply with your request for an opinion.

Sincerely yours,

Norbert Wiener

NW: AD Enc.

Mr. C. W. Rosenthal Bell Telephone Laboratories Murray Hill Laboratory Murray Hill, New Jersey

Dear Mr. Rosenthal:

In checking over my files I find a letter written by you on September 17th regarding work in electrocardiogram analysis to which there appears to be no reply. I am very sorry this has been overlooked, but wish to inform you that at present there are no written records on this subject.

Sincerely yours,

Norbert Wiener

NW: AD

Dr. C. M. Williams Royal Victoria Hospital Montreal 2, Canada

Dear Dr. Williams:

In checking over my files I find a letter from you dated January 15, 1955 which does not appear to have been answered. I am very sorry this has been overlooked, and trust you will forgive the delay. I am not free at the present time to give this proper attention, and so am returning it to you herewith.

Very truly yours,

Norbert Wiener

NW:AD Enc.

January 10, 1958

Dr. Ernst von Schenck Basel, Sevogelstr 40 Switzerland

Dear Dr. von Schenck:

I have just come across your letter of September 7th which has unfortunately been mislaid.

Thank you for your invitation in connection with the written discussion that is in progress. However, I am at present so overloaded with work that I will be unable to participate in any way for quite some time.

Sincerely yours,

Norbert Wiener

NW:AD

NAMUR. LE II janvier 1958.

ASSOCIATION INTERNATIONALE

DE

# CYBERNETIQUE

Secrétariat permanent - Secretaryship 13. RUE BASSE MARCELLE NAMUR (BELGIQUE) TEL. 279.81 - 279.82

Nº 7058 JI/AL.

Cher Monsieur Wiener,

Nous avons l'honneur de vous faire savoir que le Conseil d'Administration de l'Association Internationale de Cybernétique a décidé d'organiser à Namur (Belgique), du 3 au IO septembre I958, le 2ème Congrès International de Cybernétique.

Cette initiative se place dans le cadre des activités de l'Association telles qu'elles sont définies à l'article 3 des statuts:

" L'Association a pour but d'assurer une liaison permanente " et organisée entre les chercheurs qui, dans les divers pays, " poursuivent des travaux relatifs aux différents secteurs se " rattachant à la Cybernétique.

" Elle s'efforce de promouvoir le développement de cette scien-" ce et de ses applications techniques ainsi que la diffusion " des résultats acquis dans ce domaine. Elle met en oeuvre " tous moyens adéquats pour réaliser les objets ci-dessus."

Nous vous rappelons que le Congrès de 1956 avait groupé 800 participants venus de 22 pays. Le Congrès de 1958; tenant compte des échos qui nous sont parvenus jusqu'ici, aura une ampleur plus grande encore.

Il comportera six journées de travail: les 3,4, 5,8,9 et IO septembre, interrompues par deux journées de détente.

.../..

Monsieur WIENER 53, Cedar Road <u>B E L M O N T (Mass.</u>)

Full term m) 7 start left. 22, 1958

Les travaux seront organisés de la manière suivante:

- a) Le matin aura lieu une conférence d'ordre général à laquelle tous les participants du Congrès auront la possibilité d'assister.
- b) L'après-midi, les participants se répartiront en sections en vue de l'étude de problèmes spéciaux délimités comme suit:
  - I) L'information.

- 2) L'automatisme (applications de la Cybernétique aux machines).
- 3) L'automation (utilisation de l'automatisme dans l'organisation du travail).
- 4) Les effets économiques et sociaux de l'automation.
- 5) La Cybernétique et les sciences sociales.
- 6) La Cybernétique et la biologie.
- c) A la fin du Congrès, un colloque de synthèse s'efforcera de tirer les conclusions des travaux.

Le Conseil d'Administration souhaiterait vivement que vous puissiez accepter la présidence générale du Congrès et donner à la séance d'ouverture une conférence consacrée aux origines de la Cybernétique et à ses perspectives d'ávenir.

Tenant compte de votre rôle essentiel dans la naissance et le développement de la Cybernétique, vous comprendrez certainement tout l'intérêt que nous attachons à une réponse favorable de votre part.

Il est bien entendu que vos frais de déplacement et de séjour seront supportés par notre Association.

Afin de nous permettre de prendre toutes les mesures d'organisation nécessaires, nous vous saurions gré de bien vouloir nous faire connaître votre accord, que nous espérons, dans le plus bref délai possible.

Nous vous prions de croire, cher Monsieur Wiener, en l'assurance de nos sentiments les meilleurs.

L'Administrateur-délégué,

. LEMAIRE.

c. Le Président,

G.R. BOULANGER.

[ans 2/11/58]

Association Internationale de

Cybernetique

13 Rue Basse Marcelle Namur, Belique

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O P Y

Namur, Le II Janvier 1958

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  - 5) La Cybernetique et les sciences sociales.
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Nous vous prions de croire, cher Monsieur Wiener, en l'assurance de nos sentiments les meilleurs.

L'Administrateur-delegue,

Le President

J. Lemaire

G. R. Boulanger

1932 Emerson Avenue Dayton 6, 0410. 1958 January 11th.

Dear Norbert,

For a long time my conscience has been preikingme- did ) write to you when I first came over here? Did I tell you what I was doing? However, whether I did or nor, I felt a double shot of guiet this past summer. (you will see why, later.). Just in case I did <u>not</u> write and kell you, I came over here 2th years ago, to work at Wright Field. The reasons why are rather ancient history and I will not bore you with them.

My last year in England was spent in the Physiology Department at St. Bartholomew's Hospital in London, and bore unimediake fruit in the st shape of a couple of papers, later fruit in the long Report which accompanies this letter, for I could not let the problem go, and continued it in such time as Leoued spare. The results of this acturity (which I like to think offsets a little my working on problems of wholesale murder) you see between these yellow covers. I am very dissatisfied with it. There are many misprints and errors. (a list of errors is being prepared - I have corrected some of the worst by hand) I am already at work rewriting the whole thing from beginning to end, hying to improve the exposition, in the hope of making it into a monograph or something.

With all its faults, I think it is a work of major importance, for these reasons:

This is the first unified treatment bringing pulse-transmission, oscillatory flow and variations in diameter during the pulse cycle into one infellectual spincture. It shows that the on as a model of the arkeny, the tube with strong longitudinal constraint is better than the feely-moving tube (norme else trans 'done' the tube with longitudinal constraint) and it is the first time that the mole thing has been computed out from top to bottom. I thave also done some perfurbation theory to show that certain non-linear effects are small. The simple theory seems to do very well. I have recently fested it against some results done by Merrill Spencer at Bowman Gay in North lardina. These measurements were taken by an enfirely different method from MeDonald's, and the agreement is stut good.

There is a little more personal history to kellyon. Last Spring I fell very ill with a serious bladder complaint, and the worst was feared. However, the USAF flew me back to England, and my nife cabled my friend McDonald at Barts, and I was put in these under the care of Basil Hume, the Service Surgeon. My wife and two younger daughters followed in a few days. As I think I told you, my eldest daughter has stayed in England to finish her medical studies. She qualified December '56, and has just completed her first year as an inferne.

Apparently the thing that was wrong with me is rather rare. When fully diagnosed, they took a slice out of the top of my bladder, served the edges together, and that was that. Once the job was done, my recovery was rapid and complete. I then spent two months rusticating down in

-2-

Sussex near Arundel, and came back larr September. The Royal Society supported me during this time, and I did some more work on blood flow.

At the present time I am occupied with the mathematics of space-havel (rather dull old stuff) but when) can) put in a little time on blood flow, stat. I have not given up hope that ) may yet be able to spend all my time on the mathematical physics of biological problems, but one thing I am quite determined about. I am not leaving my present job except to my financial advantage. If this biological stuff is worth doing it is worth paying for. Though there are advantages in doing it this way, in one's spare time, especially with the computing facilities that) have available.

I hope you will be able to spare a little fune to read some of the report, if only the 'Infroduction' and the "Conclusions".

With all good wishes

Yours Sincerely John Womensley.

P.S. I see that Dorothy Sayers has just died - at the comparatively early age of 64. throther landmark gone!

[and 1/16/58]

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TELEPHONE: ENDICOTT 2-5351

EDWARD LASKER, M.E., E.E. 18 West 86th Street New York 24, U.S.A.

January 13, 1958

Professor Norbert Wiener, 53 Cedar Road, Belmont, Massachusetts.

Dear Professor Wiener,

A strong Philadelphia chess player, a lawyer by the name of Winkelman, made some silly remarks on chess playing computers and on cybernetics in an article which appeared in CHESS REVIEW. He will never get a case from me. Since I took the liberty of quoting you in a reply which Chess Review also published, I am sending you the two articles (under separate covers) and I hope you will be amused. Ted Shedlovsky was.

Kindest regards,

Yours sincerely, Bdward Lasker

P.S. LIFE MAGAZINE photographed a chess game which IBM's computer model 704 played with me a couple of weeks ago. If the pictures turn out well, they will be published, probably in March.

The machine overlooked a checkmate and made several curious moves which showed clearly how very many qualifications must be embodied in a program based entirely on evaluations suggested by greater or lesser mobility of the pieces. Apparently it did not want to play Kt-KB3 because a diagonal of the Queen is shortened. Food for Winkelmänner. The programmer, a very gifted young mathematician (Alexander Bernstein) is making the necessary changes.

January 13, 1958

Mr. Selig S. Harrison The New Republic 1244 19th Street, N. W. Washington 6, D. C.

Dear Mr. Harrison:

I am enclosing an article on "Big Science and Sound Science" for The New Republic. I hope it meets your needs. I am very glad to express my opinions through the medium of your publication.

Sincerely yours,

Norbert Wiener

NW: AD Enc.

[ ana 1/15/57]

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CAMBRIDGE 39, MASS.

DEPARTMENT OF MATHEMATICS

January 13, 1958

Mr. John Kobler The Saturday Evening Post The Curtis Publishing Company Philadelphia 5, Pennsylvania

Dear Mr. Kobler:

Many thanks for your letter of January 6th. I am not inclined to modify my article in the direction of greater popularization. I was always very doubtful of the desirability of submitting the manuscript to the Saturday Evening Post, as I felt that I could only do so at a cost of the modification of the emphasis of what I wish to say which would in the long run submit me to the danger of being the mouthpiece of ideas and points of view not my own. In this matter the large offer made for the article was in my eyes a disadvantage, as it would lay me open to the suspicion in the minds of others, and even in my own mind, of shading my ideas and points of view in a way financially advantageous to me.

I am sending the article to the Italian Journal, "Scientia" which had already requested some literary scientific material.

Sincerely yours,

Norbegel resign

Norbert Wiener

NW:AD

Mr. John Kobler The Saturday Evening Post The Curtis Publishing Company Philadelphia 5, Pennsylvania

Dear Mr. Kobler:

Nany thanks for your letter of January 6th. I am not inclined to modify my article in the direction of greater popularization. I was always very doubtful of the desirability of submitting the manuscript to the Saturday Evening Post, as I felt that I could only do so at a cost of the modification of the emphasis of what I wish to say which would in the long run submit me to the danger of being the mouthpiece of ideas and points of view not my own. In this matter the large offer made for the article was in my eyes a disadvantage, as it would lay me open to the suspicion in the minds of others, and even in my own mind, of shading my ideas and points of view in a way financially advantageous to me.

I am sending the article to the Italian Journal, "Scientia" which had already requested some literary scientific material.

Sincerely yours,

Norbert Wiener

NW:AD

Mr. George A. Maag 212 Americas Building Radio City 20, New York

Dear Mr. Maag:

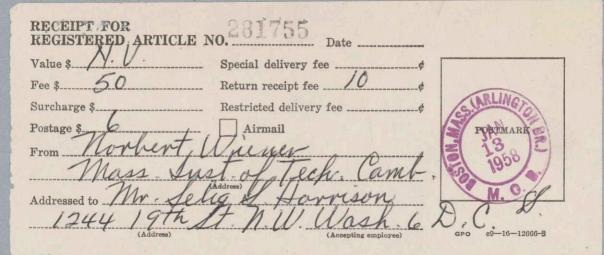
I have your letter of January 5th.

It would be quite impossible for me to answer your various questions in a letter. It seems to me that you would probably require a four year college curriculum.

Sincerely yours,

Norbert Wiener

NW: AD



Mr. James B. O'Connell, Managing Editor THINK 590 Madison Averue New York 22, New York Dear Mr. O'Connell:

I have your letter of January 2nd with its enclosure of a revision of my speech at Wabash College. I would very much prefer not to have my speech published in any form and so must ask you not to use it in your publication.

Sincerely yours,

Norbert Wiener

NW: AD

2817 RECEIPT FOR REGISTERED ARTICLE NO. Date Special delivery fee \_\_\_\_\_¢ Value \$ Fee \$. Return receipt fee \_\_\_\_\_¢ Surcharge \$\_\_\_\_\_ Restricted delivery fee \_\_\_\_\_¢ Postage \$\_\_\_\_\_ Airmail 2000 place From (Address) aun Addressed (Address) (Accepting employee) 09-16-12666-8 GPO

Scientia L-6300 Via Marangoni 3 Milan, ITALY

Gentlemen:

In accordance with your request, I am enclosing an article on "Time and the Science of Organization". I hope you will find it suitable for your purposes.

Sincerely yours,

Norbert Wiener

copy infolder with return speeches,

NW: AD Enc.

Taus 2/9/587

Dr. Philip Solomon, Harvard Medical School Department of Psychiatry 57 Chatham Street Brookline 46, Mass.

Dear Dr. Solomon:

In reply to your letter of December 20th, as far as I know at present I shall be able to accept your invitation to participate in a Symposium on Sensory Deprivation in Boston on June 20 and 21, 1958. I am highly honored by the request.

Sincerely yours,

Norbert Wiener

NW:AD

Professor Auriel Wintner Johns Hopkins University Baltimore, Maryland

Dear Professor Wintner:

Professor Wiener has asked me to inquire as to whether you remember doing an article with him last summer on "The Perturbed Clock" and if you recall filling in the formula on a copy. He would also like to know whether it was sent on to the Editor of "Science". Very truly yours,

> Secretary to Professor Norbert Wiener

[ans 1/16/58]

RECEIPT FOR GG L Date ..... Value \$\_\_\_\_ Special delivery fee \_\_\_\_\_¢ Fee \$. Return receipt fee \_\_\_\_\_ Surcharge \$\_\_\_\_\_ Restricted delivery fee \_\_\_\_\_¢ Airmail Postage \$. From Addressed (Accepting employee) -16 - 12666 - 8(Addres

Professor F. de Franchis Circolo Matematico di Palermo Via Archirael 34 Palermo ITALY

Dear Professor de Franchis:

We are returning the proof sheets with a few final corrections. Thank you very much for your consideration in sending us the sheets again.

Sincerely yours,

Norbert Wiener

NW:AD Enc.



Helen Fuller, MANAGING EDITOR

January 15, 1958

Professor Norbert Wiener Department of Mathematics Massachusetts Institute of Technology Cambridge 39. Massachusetts

Dear Professor Wiener:

We are very glad to have your article and are putting it into type immediately. Because we have made a few changes for purposes of clarity I am eager that you see proofs before the article is finally put into page form on Friday of this week, the 17th. Would you please check over the proofs as soon as they reach you, probably on Friday morning, and telephone us collect if there is some important change which should be made.

I know that our readers will appreciate what you have to say, and I will be glad to send out copies of the issue to any special individuals you would like to have receive them.

incerely, Helen Fuller

Prof. Arenes talked on lelephone to mens Fuller giving corrections of proof.

Telephone: REpublic 7-8656 Cable Address: NEWREPUB

4 8

Simon and Schuster Inc. Rockefeller Center 630 Fifth Avenue New York City, N.Y.

Gentlemen:

2 coloursaled

Professor Wiener would like to have, if possible, three or four copies of his book "Ex-Prodigy" which was published by you in 1953. Would you be kind enough to advise whether you have any copies available, or if not where they can be obtained.

Very truly yours,

Secretary to Professor Norbert Wiener

## RCA VICTOR COMPANY, LTD.

RENFREW, ONTARIO CANADA



Jamary 16, 1958 PLEASE REPER REPLY TO.

Dr. Eduard Luedicke 675 Coleraine Renfrew / Ontario Canada

Massachusetts Institut of Technology Department of Mathematics

Secretaryship of Prof. Dr. N. Wiener Att. Miss A.R. Dewsrop

Cambridge 39, Mass.

Dea r Miss Dewsrop:

1. 1

Thank you very much for your letter, Jan. 2,58. I expect to be at your Office on January 31,58 at 3 30 P.M. I am then for Prof. Wiener's disposal at any time after 3 30 P.M.

If driving conditions or other matters prevent my arrival at this time, I will informe you per wire or telephone prior January 31,58 1130 A.M.

Very truly yours,

Pued the

Dr. E. Luedicke

#### CASE INSTITUTE OF TECHNOLOGY UNIVERSITY CIRCLE CLEVELAND 6, OHIO

#### DEPARTMENT OF MATHEMATICS

L" IN

January 16, 1958

[ans1/21/58]

Professor Norbert Wiener Department of Mathematics Massachusetts Institute of Technology Cambridge 39, Massachusetts

Dear Professor Wiener:

I have recently talked on the phone to Armand and to Edwin. Armand is planning to visit with me here at Case Institute on two different occasions before summer and we will spend these times together working on the book.

Edwin assures me that the last week of this month is a good time for him to meet with me and so I am planning to visit M.I.T. throughout that week.

I hope that Ed and I will find you and Professor Martin free during part of that week to give us your latest ideas on the book.

I will also be able to visit M.I.T. during the week beginning March 31.

Armand and I have asked Technology Press to help us with travel expenses on these trips, because we think some more discussions will be very helpful. We are sure this will be all right with you.

In hopes that I will see you on January 27th or a little later ---

Sincerely,

Bayard Rankin

BR:sk

AMERICAN JOURNAL OF MATHEMATICS THE JOHNS HOPKINS UNIVERSITY BALTIMORE 18, MARYLAND

January 16, 1958

Dear Professor Wiener,

you have probably heard by now, but Mrs. Wintner asked me A mite and tell your that Dr. Wintner had a heart attack and died early yesterday afternoon. January 13 to Dr. Wintur arrived this morning. Sincerely, Ruth Raherson

[ano1/20/58]

[ana 1/18/58]

Mr. John Womersley 1932 Emerson Avenue Dayton 6, Ohio

Dear Womersley:

I am delighted to hear from you, even though I don't think you did write me when you first came over.

I am very much interested in the sort of physiological mathematics you are doing. I have not looked at it yet, but I imagine that the discussion of blood flow involves non-linear partial differential equations. These equations are often rather a headache. One thing that I should be on the lookout for with waves of this sort is the possibility that fory large amplitudes one might develop something of the nature of a shock wave. This phenomenon is also suggestive of the bore which you find in a wave when the tide comes in and the speed of the wave in the full river is enough greater than the speed at low water so thet the wave falls over its own front. This sort of phenomenon might be very interesting as a possible sort of circulatory pathology. I can imagine circumstances where you might get a water hammer in the blood vessels that could lead to an aneurism or other catastrophe.

I am sorry to hear of your ill health, but I am delighted that you are now better.

I am working on biological problems, too, in connection with brain waves. We hope to develop quite a project here, and it may be that if it goes it might be profitable for you to work with us for a time.

I agree with you that it is a tragedy that we have lost Dorothy Sayers. Now we never shall learn what happened to Lord Peter Winsey in his later years.

With best regards,

NW:AD

1932 Emerson Avenue Dayton 60410

1958 January 18th Sat.

Dear Norbert,

It was a great pleasure to receive your letter and to hear that you are at work in the biological vineyard. Someone told me that Warren McCulloch was at M.1.7. working on problems connected with the action of nerves. I believe ) wrote to him, but heard nothing (my memory is a bit rague) so concluded ) had been mistaken. I would like to know where he is - to send him a copy.

As a matter of fact, the mathematics I have done on this problem happens to be fairly elementary. The important thing is that it works. -is. that I found some experimental results to which it could be applied, and showed that a simple thin walled elastic tube, under longitudinal elastic constraint, is a good enough model. Also that pressure- diameter measurements taken by Lawton demonstrate that under dynamics conditions there seems to be no evidence of elasto - viscous damping in the wall. The non-linear effects ) have looked into by a simple perpurbation theory and shown them to be small. the wavelength of the pulse wave is very long - about 2 meties, so there is hardly room to see a whole wavelength in the body. Now there may be a converse effect - where the fluid velocity could become greater than the wave-velocity and a shock-wave situation could develope. However, such calculations as I have made are against this - the reason being that the pulse-velocity seems to rise in the smaller

ardenies. In the thoracic aorta, and in the fernoral, the maximum velocity at systole lies between the limits  $\frac{1}{7}$  #  $\frac{1}{4}$  of the pulse-velocity - the larger fraction seems to apply in the aorta.

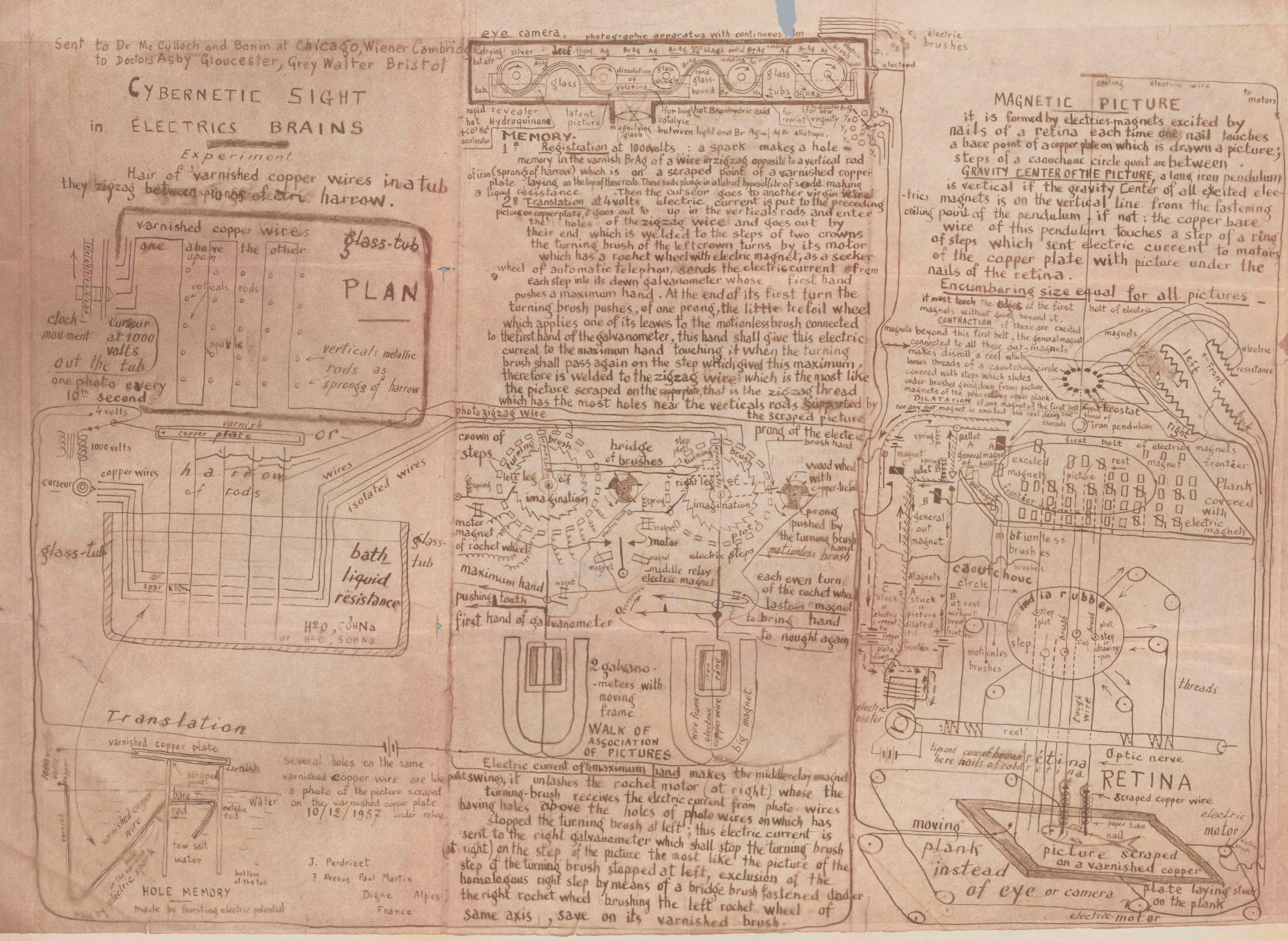
The astonishing thing is how well this simple theory works.) think the challenge now is to the experimentalisti to bust it open, so that I can make a better one. At the moment I am busy "tidying up", and am at work on a somewhat longer account which will have a more leisurely exposition, more and better companisons with experiment, and other minor improvements.

The work you are doing sounds fascinating. Nothing would give me greater pleasure than to join you - though now being a Federal Civil Servant we would have to "square" the authorities somehows! For your amusement tendore something I said recently.

John Womersley.

yours Very Sincerely

Anyone who attempts to bridge a gap between two widely different intellectual disciplines may very well not merely fait between two stools, but come perilously near self-mutilation in the process. The application of mathematics to problems of biological origin, apart from the resounding success of mathematical statistics over the past fifty years and one or two other notable exceptions, has seen a number of these acts of self-immodation. These have always been uncomfortable for the victims and of doubtful value either to mathematics or to the biological sciences. The present work is less ambitious. It is not so much an effort to bailed agap bridge a gap, as a cautious attempt to build out from one side. The motion of the blood in the great arteries suggests certain problems in hydrodynamics, and it is with these that we shall be concerned. Their solution suggests a plausible simplified model of an arteny which it is hoped will be useful to physiologists who are occupied with the circulation of the blood.



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IMPRIME

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Sir Norbert Wiener

Institute of technology department of mathematics 39 Mass

CAMBRIDGE CAMBRIDGE USA

# UNIVERSITY of PENNSYLVANIA

### PHILADELPHIA 4

The Moore School of Electrical Engineering Research Library

January 20,1958

Massachusetts Institute of Technology Library Cambridge 39, Mass.

Attention: Reference Department

Gentlemen:

We have been asked to locate the following:

Wiener, N. "Mathematical problems of communication theory." Mass. Inst. of Technology. (Lecture notes)

We have checked here at the University Libraries but have been unable to locate this reference. We thought perhaps these "Lecture notes" had appeared as a chapter in a book, but were unable to find anything that way.

Could you give us any information? Or could the inquire by referred to the author?

Any help you can send us will be appreciated.

Very truly yours,

[ mp a/11/58]

(Miss) Anna Louise Campion Research Librarian

ALC/

Research Library

January 20,1958

Massachusetts Institute of Technology Library Cambridge 39, Mass.

Attention: Reference Department

Gentlemen:

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Could you give us any information? Or could the inquire by referred to the author?

Any help you can send us will be appreciated.

Very truly yours,

(Miss) Anna Louise Campion Research Librarian

ALC/



EINE FREIE STIMME DER FREIEN WELT

#### Luftpost

Herrn Prof.Dr.Norbert Wiener Massachusetts Institute of Technology Cambridge 39, Mass./USA.

BERLIN-SCHONEBERG · KUFSTEINER STRASSE 69

| IHRE ZEICHEN | IHRE NACHRICHT VOM | UNSERE ABTEILUNG                     | UNSERE ZEICHEN | DATUM   |
|--------------|--------------------|--------------------------------------|----------------|---------|
|              | 2.1.58             | Kulturelles Wort<br>Funk-Universität | E./Kz          | 20.1.58 |

#### Sehr geehrter Herr Professor Wiener!

Haben Sie besten Dank für Ihren <sup>B</sup>rief vom 2.d.M. sowie die Übersendung Ihres Referates zum Thema "Semantik und Kybernetik", das wir sofort zur Übersetzung weitergegeben haben und nun am Donnerstag, dem 20.Februar, senden werden. Wir freuen uns sehr, dass wir auf diese Weise in der Lage sind, den Ausfall vom Dezember noch innerhalb des Vortragsabschnittes, für den Ihr Referat gedacht war, wieder auszugleichen. Wir sind davon überzeugt, dass auch unsere Hörer, die Ihren Vortrag mit grosser Spannung erwartet haben, von dieser Lösung sehr angetan sein werden. Das Honorar für Ihre Bemühungen in Höhe von DM 200.werden wir unmittelbar nach der Sendung für Sie anweisen. Um die Auszahlung, für die wir aus bürotechnischen Gründen um etwas Geduld bitten, zu beschleunigen, wären wir Ihnen sehr verbunden, wenn Sie uns die beigefügten Honorarbedingungen recht bald unterzeichnet zurücksenden könnten.

Indem wir Ihnen für Ihre freundliche Mitarbeit noch einmal unseren verbindlichsten Dank aussprechen und in der Hoffnung, dass wir auch bei künftiger Gelegenheit mit Ihrer Mitwirkung rechnen dürfen, verbleiben wir mit den besten Empfehlungen

> und dem Ausdruck unserer vorzüglichen Hochachtung R I A S BERLIN

(L.P.Dalcher)

(Kundler

[aux 1/31/58]

Anlagen

Bitte Zuschriften nur an RIAS-Berlin zu richten (nicht an Einzelpersonen)

January 20, 1958

Dr. E. Luedicke 675 Coleraine Renfrew Ontario, Canada

Dear Dr. Luedicke:

Your letter of January 16th has been received. I will be happy to see you on January 31st at 3:30 in my office. For your convenience, my room is No. 2-276, and I am sure you will have no difficulty in finding it when you arrive.

Sincerely yours,

Norbert Wiener

NW:AD

January 20, 1958

Mrs. Aurel Wintner c/o Department of Mathematics Johns Hopkins University Baltimore, Maryland

Dear Mrs. Wintner:

It is with great regret and shock that I have learned of Aurel's sudden death. Of course in view of his state of health it cannot have come as a surprise either to you or to us, but this does not reduce the poignancy of our sense of loss. At least he went through no period of suffering, and as we all have to die soonor or later I can imagine of no better mode of death.

It is a personal tragedy to me to lose a valuable collaborator and a man for whom I felt deep friendship, particularly at a time when he should still have had many years of work ahead of him, and when his ideas were still at their most fruitful. I always have enjoyed contact with his keen mind and fine mathematical taste. I also felt in him a warm and lovable personality which had mellowed and matured with the years.

My wife joins me in our condolences. We are still going to be in the mountains in the summer. If you are to be there we hope to see much of you, and shall be very glad if you consider yourself free to be in and out of our house as you wish.

Sincerely yours,

Norbert Wiener

NW:AD

10-10 166th Street Whitestone, N. Y. January 21, 1958

Dr. Norbert Wiener Massachusetts Institute of Technology Boston, Massachusetts

Dear Dr. Wiener:

1

I have just read "The Human Use of Human Beings" in the Doubleday Anchor edition, and found particularly interesting the section in which you discussed the "hearing glove" for deaf mutes.

My eleven-year-old daughter, Elizabeth, is classified as "congenitally brain-damaged". She is extremely alert, energetic, highly observant, with an excellent memory, but so far has been totally unable to develop any number sense or any capacity to relate letters to sounds (so that she can read.)

Your discussion of the substitution of one sense for another in the case of defective human beings seems to me to bear very closely on the problem of teaching a child such as my daughter.

The scope of cybernetics seems so tremendous that I am sure work must be under way somewhere on this particular problem. Would you have the time to let me know if this is the case, and, if so, how I might gain access to such material?

Thank you for whatever suggestions you can offer me in this regard.

Sincerely yours,

[ans 1/31/58]

UNIVERSITÀ DI ROMA

ISTITUTO DI MATEMATICA FINANZIARIA E ATTUARIALE Piazza Borghese, 9

January 21, 1958.

Prof. Norbert Wiener Massachusetts Inst. of Technology CAMBRIDGE, Mass. - U.S.A.

Dear Prof. N. Wiener:

I do not know if you remember, I had the pleasure to meet you at the International Congress of Mathematicians of Cambridge, 1950. Now, at the "Istituto Nazionale di Alta Matematica " of Rome ( President: F. Severi ), it seems the due time of beginning some teaching in Cybernetics, and I was asked for advices concerning this program.

First of all, we would like to know if there is some possibility to begin with yourself. If you plan to visit Europe during this academic year, the "Istituto Naz. di Alta Mat. " would certainly be very pleased to invite you for some lectures or for a whole course, according to the circumstances, and to hear your advices as for the future programs.

In order to organise something for the present year, the time is hardly sufficient; however, I did not know anything about that till now, because I spent last quarter at the University of Chicago, as a Visiting Professor in the Department of Statistics. So it is very important for us to have your answer as soon as possible.

Sincerely yours

Bruno de Finetti Sm Atut

[ans.1-27-58]

## RCA VICTOR COMPANY, LTD.

RENFREW, ONTARIO CANADA



January 21, 58 PLEASE REFER REPLY TO.

Dr. Eduard Inedicke

675 Coleraine Renfrew / Onta rio Canada

Massachusetts Institute of Technology Department of Mathematics

Secretaryship of Prof. Dr. N. Wiener Att. Miss A .R. Dewsrop

Cambridge 39, Mass.

Dear Miss Dewsrop:

7 . w. A. en -

Some days ago was a disturbance in our mailing system. I am not sure that you have received my letter of January 16,58 and therefore a copy of this letter is attached.

Very truly yours,

Lucothe

Dr. E. Inedicke

## RCA VICTOR COMPANY, LTD

RENFREW, ONTARIO CANADA

January 16, 1958

Dr. Eduard Lusdicke 675 Coleraine Renfrew / Ontario Canada

Massachusetts Institut of Technology Department of Mathematics

Secretaryship of Prof. Dr. N. Wiener Att. Miss A.R. Dewsrop

Cambridge 39, Mass.

Dea r Miss Dewsrop:

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Thank you very much for your letter, Jan. 2,58. I expect to be at your Office on January 31,58 at 3 30 P.M. I am then for Prof. Wiener's disposal at any time after 3 30 P.M.

If driving conditions or other matters prevent my arrival at this time, I will informe you per wire or telephone prior January 31,58 1130 A.M.

Very truly yours,

Dr. E. Luedicke

[ ans 1/20/58]

Mr. Bayard Bankin Department of Mathematics Case Institute of Technology Cleveland, 6, Ohio

Dear Sir:

Professor Wiener has received your letter of January 16th and wishes me to advise you that he expects to be available the week beginning January 27th.

Very truly yours,

Secretary to Professor Norbert Wiener