Siena - Libreria del Duomo - Pinturicchio - Ene
Piccolomini riceve da Federigo III la corona d'allor
- Particolare.

Dear Chief - thanks
for your letter. Many people
are interested in your
work here - and the
resistance if any had
been due to Colonnetti.
Catholics as usual.
   See you soon, and keep
out of Tailspins
         Yours Giorgio

Giuntini Bentivoglio - Editore.
Proprietà riservata.   15

Professor Norbert Wiener
c.o. Professor Rosenblueth
Instituto Nacional
        de Cardiologia
Mexico D.F

Messico

January 2, 1946

Mrs. Thelma Hall
601 West Second St.
Winslow, Arizona

Dear Mrs. Hall:

Thank you for your note of the 14th. I
understand the good will with which your article
has been done. On the other hand it has been
my policy for many years to avoid all unnecess-
ary appearance before the public. I see no
reason to change that policy at present. I
would therefore request that any reference you
make to me be made anonymously. That is, with-
out bringing in my name and position.

                    Sincerely yours,

                    Norbert Wiener

NW:rg

January 2, 1946

Mr. S. Shu
541 West 113th Street
New York 25, N.Y.

Dear Mr. Shu:

I can scarcely consider myself an expert
in the field of your paper. I should suggest
that you submit it to Professor H.P. Robertson
at Princeton.

Sincerely yours,

Norbert Wiener

NW:rg

Box 279
M. I. T. Dormitories
Cambridge, Massachusetts
January 7, 1946

Dr. Norbert Wiener
Department of Mathematics
Massachusetts Institute of Technology

Dear Dr. Wiener:

Monday I attended the panel on atomic energy, and, of all the ideas that were expressed, I was particularly interested in something you seemed to me to intimate. You will remember that you said that in this coming era, each individual's actions will be of greater importance than ever before; that one person has more potential power than in times past.

Now it appears to me that whenever civilization is faced with any potential danger, it always purges itself of the threatening elements, sometimes over an extremely long stretch of time. If the free use of individual intellect, so to speak, has taken on such an increased emphasis in the modern day and provides a potentially constant menace, it would seem that society, over a long period, might take arms and eject the threat of unrestricted thought.

At any rate this grisly prospect and a few related points in your talk I thought of particular importance. I would be very happy to ask your opinions on these questions, but wrote you so that you could read this, or see me, at your own leisure.

Very truly yours,

Peter V. Ritner
Peter V. Ritner

CHARLES T. HICKS
342 MADISON AVENUE
NEW YORK, N.Y.

January 7, 1946

My dear Sir:

My esteemed friend and neighbor, Eric Hodgins,
assures me that you will not be annoyed in answering a math-
ematical question which has become a source of spirited
controversy among some of my friends. To me, at least, the
answer is so simple that I am somewhat ashamed to submit it
to you but there are some very stubborn people in this world
and it requires someone of your eminence in the field of
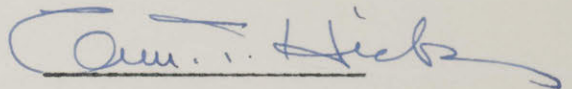mathematics to settle the question.

Here it is:-

What are the odds against throwing three
sixes with one roll of three dice?

A stamped envelope is enclosed for your convenience
in making areply.

Thank you very much for your courtesy and helpfulness.

Sincerely yours,

CTHicks:ew
enc.

Norbat Wiener, Esq.
Department of Mathematics
Massachussetts Institute of Teachnology
Cambridge, Mass.

COPY

January 7, 1946

Professors Harold A. Freeman
          Philip M. Morse
          Paul A. Samuelson
          Richard Taylor
          George P. Wadsworth
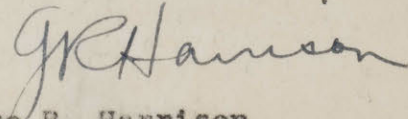   Norbert Wiener   THIS COPY FOR

Gentlemen:

          Investigation by telephone indicates
that the best early date for a meeting of the
committee to examine the possibilities of
establishing a Center of Statistics at the
Institute will be on Friday, January 11th, at
3:00 p.m.

          A meeting of the committee is therefore
called for that time in my office, Room 3-207.
The immediate business will be to determine the
answers to as many as possible of the questions
outlined in Mr. Killian's letter of January 4th.

                         Very sincerely yours,

                         George R. Harrison

GRH D

January 7, 1946

Mr. Leopold Infeld
University of Toronto
Toronto, Ontario
CANADA

Dear Infeld:

    I had a nibble at the novel in the following way.
A representative of McGraw-Hill came here the other day to
extort from me two books of a scientific nature. One of
them is to be on Time Series and the other on the Computing
Machine of the Nervous System. I mentioned to him our liter-
ary undertaking. He told me that Whittlesley House is a
sort of an illegitimate brother of McGraw-Hill which under-
takes material not strictly scientific. It is quite likely
he will want to submit the novel there later. if he does,
this will fall in with our plans for collaboration and we
should start with something more than a possibility of a
contract.

                        Sincerely yours,

                        Norbert Wiener

W/h

    P.S. Please give my regards to all Torontonians.

January 7, 1946

Professor E.J. McShane
University of Virginia
Charlottesville, Virginia

Dear Professor McShane:

I have been very neglectful in replying to what
should have been a rush answer to your letter concerning my
paper on Prediction Theory and Time Series. The reason is
that I wanted to have a manuscript in being before I took the
matter up with you. The manuscript now exists in about 112
pages and is being gone over by Whitmore and Pitts at M.I.T.
to insure readability and freedom from mistakes. I expect
this revision will be over from three to four weeks. That
probably is too late to catch the boat for your main number.
The manuscript is, however, in very clear form. As it is
too late we are quite able to take care of it here. If you
still think it would be of interest to you I shall send it
on.

There will probably be a fairly active demand for
reprints. I suggest that we have about 200 for circularizing
to people with direct claims to reprints and that we reserve
800 more for sale at a dollar a piece. I am basing this on
my experience with my Acta paper and my restricted war pam-
phlet. We are preparing to undertake this ourselves at M.I.T.
in the Journal of Mathematics and Physics.

I am sorry about the delay but as you will under-
stand anything of this sort is a long story and I did not
want to write to you until I could say something definite.

Very sincerely yours,

Norbert Wiener

W/h

January 10, 1946

Mr. Charles T. Hicks
342 Madison Avenue
New York, N.Y.

Dear Mr. Hicks:

The odds against throwing three sixes
with one roll of three dice are two hundred
and fifteen (215) to one (1) out of two
hundred and sixteen (216).

Sincerely yours,

Norbert Wiener
Professor of
Mathematics

NW:rg

January 10, 1946

Mrs. R. McCulloch
c/o W.S. McCulloch
Illinois Neuropsychiatric Institute
South Street
Chicago, Illinois

Dear Mrs. McCulloch:

We shall be delighted to have your daughter
stay with us while she is looking around Boston
and making plans for next year. My younger
daughter is very eager to meet her and my
younger one is away at school in Canada. I
shall also be delighted to be of any service I
can to her at the Institute or any other school
around Boston.

My trip to Chicago was extremely pleasant
and I want again to thank you and all the renewed
friends I have there.

Sincerely,

Norbert Wiener

NW:rg

January 11, 1946

Giorgio deSantillana
Press Attache
U.S. Embassy
Rome, Italy
A.P.O. 512

Dear Giorgio,

I am sending the first fruits of my published work on time series. My big paper is in the hands of Whitmore and Walter and will be published as soon as possible. As soon as we can get a copy we shall see that it is sent on to you. Is there anything else that you want in the way of a statement from me?

Many thanks for your efforts on my behalf although I am afraid that you are going to make me a political figure malgré moi.

Sincerely,

Norbert

NW:rg
Enc. Boletin de la Sociedad Matematica Mexicana
   Vol.11, No.3

January 14, 1946

Professor Hans Rademacher
University of Pennsylvania
Philadelphia, Pennsylvania

Dear Rademacher:

I am enclosing an article on prime number
theory that I just got from my old student
Ikehara in Japan. It looks like important
stuff. At present I am somewhat rusty on my
prime number theory and would appreciate it
greatly if you would give it the once over
and tell me whether it seems to be O.K. If
so we can publish it in any one of a number
of journals and I also would like your
suggestions as to which journal is most suit-
able.

I hope to see you at meetings before many
months are over.

Sincerely,

Norbert Wiener
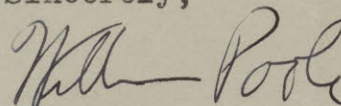
NW:rg

January 15
1 9 4 6

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

Dear Professor Wiener:

I have been talking with our College traveler, Mr. Dandison, who tells me that you have been working on a novel which you would like to show to a general publisher for his reaction.

We would, of course, like very much to see it and hope that you will be willing to let us examine it. If so, we will tell you our frank opinion of its availability from our standpoint.

Sincerely,

William Poole

WP:MK

OFFICE OF THE PRESIDENT

January 17, 1946

Professor Henry B. Phillips
        Ernst A. Guillemin
        Philip M. Morse
        C. Richard Soderberg
        Julius A. Stratton
      ✓ Norbert Wiener
        George R. Harrison
        Samuel H. Caldwell
        Henry Wallman
        Richard Taylor

Gentlemen:

        In 1941, I appointed an interdepartmental com-
mittee to promote and co-ordinate research and other
activities in applied mathematics and to formulate
and supervise a graduate program in the field. This
committee clearly demonstrated its effectiveness,
and I should like to suggest that the committee be
continued, with the above membership and under the
chairmanship of Professor Phillips and with the Dean
of Science ex officio.

        In addition to its original responsibilities,
the Committee on Applied Mathematics can serve to
co-ordinate the several programs at the Institute
in the field of machine computation.

        If the committee desires to add other members
of the staff to its membership, I should welcome
recommendations.

                        Yours truly,

                        Karl Compton
                        President

January 17, 1946

Professor L. Infeld
Department of Applied Mathematics
University of Toronto
Toronto 5, Canada

Dear Infeld:

Will you please forward the novel directly
to Whittlesey House, the McGraw Hill Building,
330 West 42nd St., New York 18, N.Y. I have
had a serious nibble from these quarters.

As to the Globe and Mail question I shall
have to soon get some article on this field of
my work. I have not received any telegram from
the man but in any case I must supply myself
with documents on the subject.

As to Mr. Schild I am forwarding your
letter to Slater and you will probably hear
directly from him.

I want to thank you for a grand time
during my stay in Toronto and hope to see
you either here or there before too much
time has slipped away. Regards to Mrs. Infeld.

Sincerely,

Norbert Wiener

NW:rg

January 17, 1946

Professor John C. Slater
Room 6-113

Dear Professor Slater:

I would like to have you read the following
portion of a letter from Professor L. Infeld
of the University of Toronto,

"I mention now another point. Mr. Schild,
my student, who is taking his Ph.D. here, is
the best and brightest student I ever had. A
long paper, by both of us, will appear in the
next issue of the Physical Review. He made
application for a Scholarship to the M.I.T.,
and Slater asks for more particulars. If you
would like to communicate to Slater that he, in
my opinion, has the makings of a fine theoretical
physicist, and that he is a very brilliant
lecturer, and also has a pleasant personality,
I shall be very grateful to you. Also, I would
appreciate a confidential report as to whether
there is much chance of his appointment."

Sincerely yours,

Norbert Wiener

NW:rg

January 17, 1946

Whittlesey House
McGraw-Hill Building
330 West 42nd Street
New York 18, N.Y.
Att: Mr. William Poole

Dear Mr. Poole:

I am very grateful to find that you show
an active interest in my novel. One copy is
now in Infeld's hands. I am writing to
Infeld to forward it to you at once. In
case there is any doubt as to what the manu-
script is through our forgetting to give the
proper description of it I have tried two
possible titles neither of which should be
the definitive one. One is "Professor's
Progress" and the other "Lifetime of Learning".

I have just today received a letter from
Infeld and he professes himself to be extremely
eager to work together if the novel shows promise
of being accepted in advance in some form.

Sincerely,

Norbert Wiener

NW:rg

19 January 1946

Dear Werner:

Ikehara's result surprised me greatly since it goes considerably farther than anything I had expected. My surprise, however, turned into suspicion, when I first glanced through the paper in order to find out what decisive new methods had made that result accessible. I saw that nothing is used beyond the traditional contour integration, something which could have been attempted at any time after Tchudakov's result.

The crucial point is formula (16). It is wrong as it stands, and I think it cannot be saved or replaced by anything which would do the same service. The mistake

~~Occurs~~ occurs through a careless manner of estimation. Let us have $s = \sigma + ti$, $\frac{1}{2} < \sigma \leq 2$, $t > 0$. The author in several places estimates

$$\left| (x+y)^s - x^s \right| \overset{?}{=} O\left((x+y)^\sigma - x^\sigma \right) = O\left(x^{\sigma-1} y \right),$$

$$\text{for } y = o(x).$$

We have, however,

$$\left| (x+y)^s - x^s \right| = \left| \int_x^{x+y} s\, u^{s-1}\, du \right| \leq |s| \int_x^{x+y} u^{\sigma-1}\, du$$

$$= \frac{|s|}{\sigma} \left((x+y)^\sigma - x^\sigma \right) = O\left(t\, x^{\sigma-1} y \right).$$

(The direct application of the binomial theorem to $(x+y)^s$ is not quite satisfactory.) In the proof of Lemma 3 there is so much to spare that the new factor t can be carried along. This factor, however, becomes critical in (16).

The paper shows some carelessness in other less essential points too. E.g. in the last two displayed lines p. 5 there is $\frac{1}{\varphi(k)} \sum_\chi \overline{\chi}(l)$ missing. Furthermore the queer and ambiguous combination

$$\left(\log \left(\log x \right)^{c_3} \right)^{-\gamma}$$

which runs through the paper occurs through a mistake after formula (9) and should actually read

[Hans Rademacher]

RADIATION LABORATORY

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CAMBRIDGE 39, MASSACHUSETTS

OPERATING UNDER THE SUPERVISION

OF THE

NATIONAL DEFENSE RESEARCH COMMITTEE

IN REPLY REFER TO:

31-FWL-012246

REPLYING TO YOUR REFERENCE:

January 22, 1946
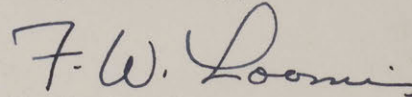
Mr. Walter H. Pitts
Dept. of Mathematics
M. I. T.

Dear Mr. Pitts:

It is my understanding that everything in connection with your termination has been taken care of with the exception of the return of several books from the M.I.T. library which are charged to you.

This is to confirm the agreement made with you by Miss Brennan at the time of your termination that a sum of thirty five dollars ($35.) will be deducted from the final salary payment due you from the Radiation Laboratory covering the first twenty seven days in November and that this amount will be held at the Main Library so that when you return a book you will receive immediate refund for each one turned in.

I hope you are making an earnest and successful search for these books which M.I.T. was kind enough to permit you to use and which are extremely valuable to them, much more so than the amount of money withheld by them would indicate I understand.

Very Sincerely,

F. W. Loomis

F. W. Loomis

January 22, 1946

Yang Yuen Hua, F.A.B. #1221
Luke Field
Phoenix, Arizona

Dear Mr. Hua:

        Unfortunately I have no connection
whatever with the Wiener you speak of and as
far as I know he is not a relative of mine.

        I was very interested to receive your
letters, nevertheless, since I have taught in
China and have a lively connection with Chinese
matters.

                        Sincerely,

                        Norbert Wiener

        W/h

January 22, 1946

Professor Marshall H. Stone
Department of Mathematics
Harvard University
Cambridge 38, Mass.

Dear Stone:

You can name any one of the dates you have
open for my lecture. I should be delighted to
talk to you and shall probably have it cover
some topic in Prediction Theory.

My manuscript is being gone over by some
of my colleagues to be sure it is in adequate
form before sending for publication.

Sincerely,

Norbert Wiener

W/h

INTERNATIONAL BUSINESS MACHINES CORPORATION

GENERAL OFFICES: 590 MADISON AVENUE
NEW YORK 22, N. Y.
TELEPHONE PLAZA 3-1900

January 23, 1946

Prof. Norbert Wiener
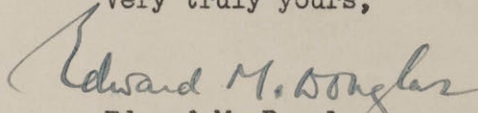Mass. Inst. of Technology, R. 2-165
Cambridge, Mass.

Dear Professor Wiener:

During the conference on Advanced Computation held on October 30-31, 1945 at Massachusetts Institute of Technology you will recall that one evening was spent in a demonstration of the IBM Automatic Sequence Controlled Calculator now installed in the Cruft Laboratory, Harvard University.

We have received a number of requests for further information about this machine and, because of this interest, we are taking the liberty of sending you a copy of the brochure which covers not only the story of the machine's development but a general description of the Calculator as well.

We trust you will find this interesting, and in the event you wish further copies you may obtain them through this office.

Very truly yours,

Edward M. Douglas
Executive Assistant

emd/c

1/ 24/ 1946

Dear Dr Wiener

I am now in New-York, invited by the
Institute of the Aeronautical Sciences for
his Annual Meeting ; I am planning to
go to Howard University and to stay at
Cambridge for a week; I shall arrive there
probably the 6 February.

I will be delighted to meet you and
to talk with you on your recent researches
on pure and discrete Chaos ....

Dean Albert Haertlein will give you
further informations on my trip.

January 24, 1946

Dr. Arturo Rosenbluth
Instituto Nacional de Cardiologia
Calzada de la Piedad Num. 300
Mexico, D.F., Mexico

Dear Arturo:

I am delighted to hear that you are coming so soon
and equally delighted to hear that Virginia will be
here. Margaret and I cordially invite you to stay with
us. Peggy is away at school in Canada and we have ample
room and besides the housing situation is tight in
Boston. We are counting on a very good time and a lot
of work together.

I have recently finished my long paper on Prediction
Theory. I have not yet decided where it will go. Pitts
and I are now working on nerve networks and multiple
prediction. Pitts will be here to work with you and
make plans for the future.

Since your visit is so soon there is no point in
going into any of the other many things we must discuss
together.

Best regards from house to house.
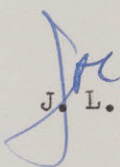
Sincerely,

NW:rg

January 31, 1946

Professor Norbert Wiener
Department of Mathematics
M. I.T.
Cambridge, Mass.

Dear Norbert:

    I recently heard from Albert relative to a manuscript by
you on "Time Series" as a possibility for Mathematical Surveys.
As you know, this series is not intended primarily as an out-
let for current research but is rather intended to publish sur-
veys of an entire field of current and permanent interest. The
other two members of the Surveys committee are Dunford and Tucker.
We should be delighted to hear from you relative to your manu-
script if that seems suitable for the series.

                Cordially yours,

                J. L. Walsh

February 5, 1946

President's Office
University of Pennsylvania
Philadelphia 4, Pennsylvania

Dear Sir:

I am very glad to accept the invitation
to the ceremonies dedicating The Electronic
Numerical Integrator and Computer at the
University of Pennsylvania on Friday, February
fifteenth.

Sincerely,

Norbert Wiener

W/h

February 5, 1946

Professor John von Neumann
Princeton Institute for Advanced Study
Princeton, New Jersey

Dear Johnny:

I received notice of the Macy meeting and I
understand you are to participate as well. Pitts
and Rosenbluth are in this among others. I think
this is our great opportunity to present our point
of view and that we ought to be in a position to
correlate our talks before we begin. I think that
we ought to get personally together sometime before
the meeting. I see that your Princeton machine has
its big celebration the fourteenth. Would it be
possible to see you in Princeton the day before or
the day after that meeting.

I have just finished my big paper and shall
bring it along. I am doing a good deal of random
place distributions both from the standpoint of
gas theory and nerve nets. I think that this is
an interesting field and we will have a lot of fun
with it.

Pitts thinks that he has a way to try out
Freudian psychology with some of our ideas. In
my opinion it is very promising.

Sincerely yours,

Norbert Wiener

W/h

Sapporo Hokkaido, Japan

February 6, 1946

Dear Prof. Wiener:

I am enclosing a bulletin published by Prof. Yosida, of the Imperial University of Hokkaido, located here in Sapporo where I am stationed at present.

Since my arrival in Sapporo some time ago I have had the good fortune to meet Prof. Yosida, who is with the mathematics department at the university. He seems to be a very likeable individual and speaks very good English. For this reason I have visited him a number of times. After our acquaintance became more personal he began to discuss his work at the university with me. The enclosed pamplet, written in French, is some of the research he did during the war. Since there isn't any possible way for him to mail the pamplet, he asked if I would mail it for him.

I have no knowledge of your acquaintance with him but I would appreciate it if you would answer in receipt of this letter.

In order to clear myself I have taken this pamplet to the Army Intelligence Office here in Sapporo and it has been approved for passage to the United States.

Sincerely,

T/Sgt William K. Thompson

T/Sgt. William K. Thompson

February 7, 1946

Professor Crane Brinton
98 Widener Library
Harvard University
Cambridge 38, Massachusetts

Dear Professor Brinton:

It has come to my attention that Mr. Walter Pitts is
under consideration for a junior fellowship at Harvard
University. As he has been my partner in a series of inves-
tigations extending over the last two years, I feel that I
can speak effectively of his qualifications. In these two
years we have begun the application of communication engin-
eering ideas to the nervous system. This has involved much
new mathematics and the interpretation of much that is old.
In both invention and interpretation Mr. Pitts has done very
much more than his share. His ideas are original and power-
ful and his criticism of all work including his own--accurate
and unsparing. His work has been brought to the point where
it has been thoroughly articulated with the program of experi-
ment already taking place under Dr. McCulloch of Chicago and
to take place in the future under Dr. Rosenbluth in Mexico.
The work has been important enough to play a large roll in
the discussions to take place a month from now at the Macy
Institute in New York.

In all my years of teaching I have not run against
any man of as great calliber intellectually as Mr. Pitts.
Personally he is loyal, enthusiastic, considerate, and
cooperative. It is a great pleasure for me to consider him
not only as a student and colleague but as a close personal
friend. I can think of no man more adapted for the purposes
and demands of a Harvard junior fellowship than Mr. Pitts.
I hope that he obtains the fellowship and I hope the provisions
of the fellowship permits our continued collaboration.

Very sincerely yours,

Norbert Wiener

W/h

February 7, 1946

Professor John von Neumann
Institute for Advanced Study
Princeton, New Jersey

Dear Johnny:

McCulloch tells me they are considering Walter Pitts for a junior fellowship at Harvard. You know, one of those otium cum dignitate. It will put him in the lap of luxury for three years and then there will be no trouble in finding him the academic job he wants. As a matter of fact we have our hooks into him here.

All this is an introduction to a request that you write to Professor Crane Brinton, 98 Widener Library, Harvard University, Cambridge 38, Mass. and say that you have heard that Walter is under consideration and want to say a thing or two in his behalf. As to the propriety of writing when not asked, Garrett Birkhoff has stuck a pin in me and asked me to stick one in you.

You must have my earlier letter by this time. Please let me know when we can get together to plan our missionary activities among the heathens.

Very sincerely yours,

Norbert Wiener

W/h

February 7, 1946

Mr. Daniel H. Simmons
2713 Rodio Road
Los Angeles
California

Dear Mr. Simmons:

Thank you very much for your friendly
letter of January 31st. My paper on fibrillation
and flutter in the heart has not yet been pub-
lished but expect that it will not be long now.
When I receive reprints of the paper I will cer-
tainly put you on my mailing list.

With best regards,

Very sincerely yours,

Norbert Wiener

W/h

February 8, 1946

Professor Norman Wiener
Department of Mathematics
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Professor Wiener:

We have carefully examined your biographical novel entitled LIFETIME OF LEARNING which you have written under the pseudonym of Oliver Bowditch, but I am sorry to say that our staff is not very enthusiastic about this book and I am, therefore, unable to make you a publishing offer for it.

It is quite possible, of course, that another publishing house may feel quite differently about it but we believe that the story is rather unpleasant and not likely to be of interest to a large audience.

We appreciate very much, however, the opportunity to see this venture of yours into the popular field and wish you the best of luck with it elsewhere. The manuscript is being returned to you today, separately.

Very sincerely yours,

William Poole

WP:bh

NAVY DEPARTMENT

BUREAU OF ORDNANCE

WASHINGTON 25, D. C.

Copy

13 February 1946

Dr. Zdenek Kopal
Department of Electrical Engineering
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Dr. Kopal:

Thank you for your letter of February 8. I am sorry to say that I am still unable to understand the reasons underlying your answers to questions 2,4,5,6,7,8. But rather than to carp on these, permit me to try another approach.

You speak of two conditions to be satisfied by the first correction $g(\eta)$, referring to them as to the correction necessary to "satisfy the fundamental equation" and the correction "at the surface". It is my guess that the first condition requires that $\Phi+g$ be a potential of the flow and, therefore, satisfy the equation (31), and that the second condition requires that $\Phi+g$ defines a flow for which the ogival profile is a streamline.

In the case my interpretation is wrong, permit me to ask:

Question 9. What is the physical meaning of the two conditions mentioned in your paper?

Question 10. What are the (mathematical) equations expressing these two conditions?

Question 11. Are the two equations answering question 10 compatible?

I do not believe that in your procedure, or in any other one, the shock-wave can be kept unchanged, i.e. the same as for the cone. For, if this were the case, the limiting flow would have the same conical shockwave, no matter what the ogival profile, and we know that flows past ogives do not have, in general, the same shockwave as the tangent cone. This argument holds regardless of the method used to derive the limiting flow from the approximations (i.e., whether any generalized limiting process is used).

Several mathematicians who examined your paper have been unable to understand your procedure. I wonder, therefore, whether this does not, in your opinion, indicate that a revision of your paper might be desirable.

With best regards for Dr. Jacchia and yourself,

Cordially yours,

Alexander Wundheiler

A. W. Wundheiler

CC: Professor Norbert Wiener

AWW/gmp

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ACTING EXECUTIVE SECRETARY

LILLIAN CHUTROO
ACTING RESEARCH ASSISTANT

Feb. 13, 1946

Dear Prof. Wiener,

I should like to obtain copy of your report on "Extrapolation, Interpolation, and Smoothing of Stationary Time Series with Engineering Applications", and any available reprints of your other work on time series, ergodic theory, and related subjects.

Sincerely yours,

Nathan Morrison

February 18, 1946

Memorandum to Professor Phillips

Dear Professor Phillips:

When I was in Princeton recently I talked to
von Neumann about Tukey and also had an opportunity to talk to
Tukey. I have the following information that may be of value.
von Neumann considers Tukey as preferable to Wilks for helping
to build up the statistics department and also puts him ahead
of Kac and Feller whom he considers about equal. Tukey is get-
ting now about $4,000 per year from Princeton University for the
time that he works there. He also is working for the Bell Co.
at the rate of $600 a month, but however on a basis of much less
than 12 months a year. Some effort will be made by Princeton to
keep him if we bid for him particularly under pressure from
Neumann. I do not think we could get him at $5,000 and I am
very doubtful even about $6,000. However, I think a $7,000 bid
would stand an excellent chance of being more than either of his
present employers could give him and might very easily form his
decision. I think any attempt of building up to it would only
have the effect of making the other side bid up the ante.

Sincerely,

N. Wiener

UNIVERSITY OF ILLINOIS
COLLEGE OF MEDICINE
912 SOUTH WOOD STREET
CHICAGO 12, ILLINOIS

DEPARTMENT OF PSYCHIATRY   ILLINOIS NEUROPSYCHIATRIC INSTITUTE

February 20, 1946

Professor Norbert Wiener
Massachusetts Institute of Technology
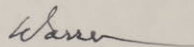Cambridge, Massachusetts

Dear Wiener:

Thanks for your prompt answer which I sent on to
Frank Fremont-Smith with the suggestion that if a vacancy
occurs, it might be possible to include Bigelow or Santillana.

Our original list was made up with two things in
mind; first, to cover the necessary variety of scientific
endeavors, and second, to include men from diverse institutions.
Both the engineering end and M.I.T. are already necessarily
heavily loaded and the total group is as large as we dare to
make it. I would not have suggested a second man from our
own place if I could have found another neuro-anatomist with
enough mathematics to follow the problem, nor two men from
U. of C. if I could have found the equal of either in a place
unrepresented. I would have loved to have had, in the group,
one man from St. Louis and Talbot from Baltimore, but we
could only have done so by omitting a key man or a crucial
discipline.

I would suggest that if a vacancy occurs, you
suggest Bigelow, whom I do not know, rather than Santillana,
whom I know and like and who would be a good discussant. But
that is merely my suggestion.

In any case, I hope we will, in the not too distant
future, gather a far larger group for a more formal present-
ation and I think we might, before this meeting breaks up,
start the ball rolling for that meeting.

Yours as ever,

Warren

Warren S. McCulloch, M.D.
Professor of Psychiatry
University of Illinois
College of Medicine

WSM:br

DEPARTMENT OF MATHEMATICS

February 20, 1946

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

Dear Norbert:

How would April 18th be as a date for your talk? I am reserving this date for you and if you agree we will schedule you for that time. You do not need to specify your subject at this time, but we need about ten days advance notice.

Sincerely yours,

Marshall

Marshall H. Stone

PAUL SCHRECKER

43 WEST 75TH STREET

NEW YORK 23, N. Y.

—

ENDICOTT 2-9390

February 24,1946

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge, Mass.

Dear Professor Wiener:

Reading this morning in the papers about the program of
expansion of the M.I.T.,I was particularly interested in the
report concerning the new library and the Division of Humanities,
and I wonder whether this would not facilitate your project of
a Leibniz Institute. As I told you when I had the pleasure of
seeing you in New York, my library,still in Paris,contains the
largest collection of books of and on Leibniz in the world,over
one thousand items,besides more than 3000 volumes of philosophy
and science,most of them very rare books. Considering the des-
truction of European libraries,it would be impossible to collect
to-day a bibliotheca Leibnitiana of similar completeness. I also
offered you then to place this collection at the disposal of the
proposed Leibniz Institute if I was granted an opportunity of
working at it and I may add that I could not think of any better
institution to bequeath it to than a research institute bearing
Leibniz's name.

I shall soon have to come to a decision concerning my
books which I cannot leave much longer in Paris. Therefore I
would be very obliged to you,if you would be kind enough to
let me know whether you expect your project to materialize within
a reasonable space of time.

You know,I trust,how much I would appreciate the possib-
ility of working under your sponsorship.

Yours very sincerely,

Paul Schrecker

28 February 1946.

Mr. R. E. Gillmor, Vice President
Sperry Corporation,
30 Rockefeller Plaza,
New York 20, N. Y.

Dear Reg:

Day before yesterday I had a talk with Professor
Norbert Wiener at MIT. Norbert is one of the country's
outstanding creative mathematicians.

He is engrossed in the problem of thought, and
the resultant biological interactions that are associated
with determination to do and the physical act of doing.
In his consideration of this complex subject he has been
able to visualize similarities between the human mechanism
and electronic feedback circuits. Moreover, he discerns a
relationship between nerve responses and, broadly, the mech-
anism of counting, which forms the basis of our most advanced
mathematical machine solution techniques. I told Norbert about
your reflections on the human system organization with its
mental processes, its glandular controls, and other divisions
and subdivisions, together with your thought that this model
structure has much to offer by way of a pattern and philo-
sophy to be applied to manmade organizations.

I believe that it would be very much worth your
while to make it a point to talk with Norbert Wiener one
of these days. It should be stimulating to you both.

Cordially, and with regards,

Edward L. Bowles

Feb. 26, 1946

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

Dear Norbert:

Dr. Brockway McMillan is being considered for a possible appointment at the California Institute of Technology. I was told that he was one of your pupils. Will you be kind enough to write to me concerning his mathematical work, teaching, and personal traits.

With best wishes, I remain

Cordially yours,

A. D. Michal.

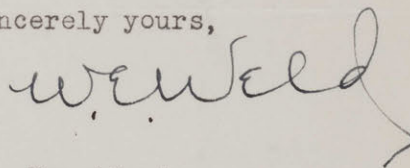Ἀπολλόδωρος

OFFICE OF THE PRESIDENT

February 26, 1946

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge, Massachusetts

My dear Professor Wiener:

Dr. Herbert Jehle has written to inquire about
a vacancy in the Department of Physics at Wells Col-
lege. He gives your name as a reference. I shall be
very grateful if you would be kind enough to give me
your opinion of Dr. Jehle as a person, a teacher and
a research scholar.

Thanking you, I am

Sincerely yours,
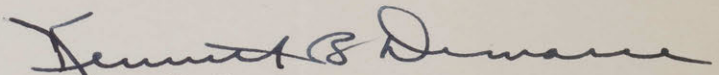
W. E. Weld

President

wew:s

February 26, 1946

Professor N. Wiener
Department of Mathematics
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Professor Wiener:

Mr. Dandison has told us of his very interesting conversation with you several weeks ago with regard to your writing program, and I want to confirm his expression of our sincere interest in your plans. We are especially interested in the projected volume of TIME SERIES and hope that we may be allowed to keep in close contact with you and have an opportunity to discuss the possibility of eventual publication under our imprint. Certainly, the plans you have outlined to Mr. Dandison would indicate a very thorough treatment and the development of a most acceptable volume.

Sincerely yours,

Kenneth B. Demaree
Editor

KBD:pac

NATIONAL ACADEMY OF SCIENCES

March 1, 1946

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

Dear Mr. Wiener:

The paper "A Generalization of the
Wiener-Hopf Integral Equation" of which you are
co-author with A. E. Heins, has been forwarded to
the Editor of the Proceedings of the National
Academy of Sciences.

Very truly yours,

George B. Darling

George B. Darling
Executive Secretary

GBD:df

March 2, 1946

Professor A.D. Michal
Department of Mathematics
California Institute of Technology
Pasadena, California

Dear Professor Michal:

        Dr. Brockway McMillan was one of my
very good students. He has worked with me on
problems of statistical mechanics and on random
distributions in space. He has done distinguished
work in applied mathematics during the war.

        Personally, he is very attractive and
agreeable and would be a very definite asset to
any department that takes him.

                        Sincerely yours,

                        Norbert Wiener

W/h

March 4, 1946

Professor Alfonso Napoles Gandara
  Department of Mathematics
and Professor Carlos Graef Fernandez
  Department of Physics

National University of Mexico
Calle Tacuba #5
Mexico, D.F., Mexico

Gentlemen:

        I am highly honored by your invitation to lecture at the
University the summer of 1946, and I hereby gratefully accept
it. I shall be able to remain in Mexico City from the latter
part of June until about the 20th of September. Could you
let me know as soon as possible the dates you find suitable,
as these dates of mine might be subject to change if it is
desirable.

        I have notified Mrs. Buechner of my invitation, that
she may try to secure the friendly consideration of our
State Department to my trip.

        I hope it will be possible for me to continue my work
in collaboration with Dr. Rosenblueth, who is here now, and
who is participating with me in the two days' discussion of
feed-back problems in the Macy Institute in New York this
week.

        I should like to put my whole program in your hands.
I am doing a considerable amount of work now on statistical
mechanics.

        With pleasant remembrances of our repeated contacts on
both sides of the border, and lively anticipations of a term
very enjoyable and profitable for me, I remain,

                              Very sincerely yours,

                              Norbert Wiener
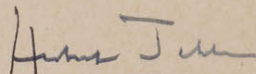
W/h

Jefferson Physical Laboratory
Harvard University

March 6,1946

Dear Professor Wiener,

    Permit me to approach you about a request about which
I am not sure whether it is O.K. to ask such a one.
If you think it would be not asking too much, I would be
very grateful if you could send a letter of recommendation
to our appointment office. I am somewhat hesitant in giving
out names of reference in my letters of application for
a job unless I feel pretty sure that I want the job. And that
often becomes clear only after some correspondence. Therefore
I usually refer people to the appointment office.

    Please do not feel hesitant to ignore or to return this
request. Many thanks for your troubles in this matter.

                    Very sincerely yours

                    Herbert Jehle

I do not intend to use a commercial agency

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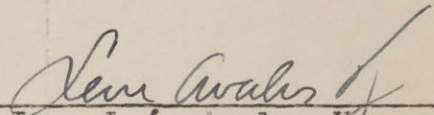
Marzo 28 de 1946.

Sr. Norbert Wiener.
Instituto Tecnológico
de Massachusetts.
Cambridge 39, Mass.

Muy señor mío:

    Contesto a su amable carta de fecha 13 de marzo, en la que me comunica usted la buena nueva de que - piensa venir a México y pasar unos días en Monterrey, durante los cuales nos ofrece usted dar alguna con - ferencia en este Instituto.

    Desde luego que tendremos mucho gusto en escu - char dicha conferencia, y le agradecemos en grado su- mo, su bondadoso ofrecimiento. Sírvase usted indicar- nos tan pronto como lo sepa, que días pasará usted -- por esta ciudad, con objeto de recibirlo y anunciar - sus conferencias, y al mismo tiempo hacerle las reser- vaciones en el hotel que nos indique.

    Sin más por el momento, y con saludos para mi buen amigo Manuel Cerrillo, le saluda afectuosamente su S.S. y amigo,

Ing. León Avalos Vez.

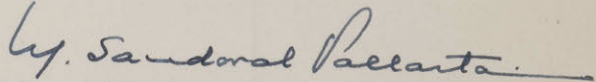LAV/GG.

Núm. 134.

México, D. F.,
marzo 6 de 1946.

Señor Profesor
NORBERT WIENER,
Massachusetts Institute of Technology,
Cambridge, Mass.-

A solicitud de los Institutos de Matemáticas y de Fí-
sica de la Universidad Nacional Autónoma de México, la Comisión -
Impulsora y Coordinadora de la Investigación Científica invita a-
usted a venir a México a desarrollar un curso de conferencias so-
bre materias de su especialidad, en la época en que usted mismo -
determine.

En caso de que pueda usted aceptar esta invitación, -
muy atentamente suplico a usted se sirva darme a conocer oportuna-
mente la fecha aproximada de su llegada, la duración de su visita
y el programa de sus conferencias.

Reitero a usted las seguridades de mi más atenta y dis-
tinguida consideración.

COMISION IMPULSORA Y COORDINADORA
DE LA INVESTIGACION CIENTIFICA.

DR. MANUEL SANDOVAL VALLARTA.

MSV/mb.

SILLIMAN COLLEGE · YALE UNIVERSITY
NEW HAVEN · CONNECTICUT

OFFICE OF THE MASTER   March 11
1946

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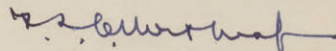Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Wiener:

As I told you in New York on Saturday, the AAAS and the
American Philosophical Association are officially inaugurating Section L
of the AAAS upon a new basis with the title The History and Philosophy of
Science at the forthcoming meeting in St. Louis. The philosophy of science
portion of the program occurs on Thursday, March 28. The morning session
at 9:30 is to be a symposium on theory and prediction in science, pre-
sided over by Professor Charles Morris of the University of Chicago.
The plan is not to have fixed papers. Instead the problem and issues will
be formulated at the outset very briefly by Professor Rudolf Carnap. Then
the meeting will be thrown open for discussion by the participants. The
following have already agreed to attend - A. C. Benjamin, Max Black,
Philip Frank, Carl Hempel, Henry Margenau, Ernest Nagel, Hans Reichenbach,
and we hope Alfred Tarski. In view of what you told me concerning your
recent manuscript on this topic, it is very important that you attend.
The plan of the program will not permit the reading of your paper, but
you can be assured of a portion of the time of the session for the pre-
sentation of the essential thesis of your paper.

The afternoon session at two o'clock will be a symposium on
the philosophy of biophysics over which I am presiding. There three
presentations will be made: one, the particle physics approach to
biology by Professor Raymond Zirkle of the Institute of Radio Biology
and Biophysics of the University of Chicago; two, the field physics
approach to biology by Professor H. S. Burr, Yale Medical School;
three, the problem from the standpoint of theoretical physics, including
the relevance of the Pauli exclusion principle, by Professor Henry
Margenau of the Department of Physics, Yale University. Your partici-
pation in the discussion of this symposium will be equally valuable.

Needless to say, I hope you will find it possible to attend.

Very truly yours,

F. S. C. Northrop.

Representative of APA on
Council of AAAS, in charge
of Phil. of Science Program of Sect. L.

March 13, 1946

Mrs. Carroll W. Dodge
703 Harvard Ave. (5)
University City, Missouri

Dear Bertha:

          I have received an invitation to participate
in a discussion of prediction theory at the meeting of
the AAAS the 28th of this month in St. Louis. Would it
be all right with you if I were to turn up the night of
the 26th or the morning of the 27th coming by air and put
up with you, returning to Boston the night of the 29th or
the morning of the 30th? Northrop of Yale who is organiz-
ing the philosophical section is inviting me. I shall be
busy the whole of the 28th but the 27th and the 29th will
be free for family gossip or whatever Carroll sees fit to
do with me around the school.

          Everything is going well with us. Barbara is
enjoying her work at Tech and Peggy tolerates her work
in Canada. This June we shall all leave for Mexico where
we shall spend the summer. I have an invitation from the
University of Mexico and have also a program of mathema-
tical physiological work to carry out with Pitts and
Rosenblueth in Rosenblueth's laboratory. We have the
flutter and fibrillation probalem just about where we want
it and we are going to use stroboscope techniques to check
it up against numerical data. We are driving down but I
imagine it will be too late to catch you in St. Louis and
as that is the case, we will probably go further south.
Before reaching Mexico City the crowd at Monterrey want me
to stop there, be their guests and give them a spiel.

          Love from house to house,

March 13, 1946

Mr. Leon Avalos Vez, Director
Technical Institute
Monterrey, N.L., Mexico

Dear Mr. Vez:

I have just received my invitation to the
University of Mexico for this summer and shall be de-
lighted to accept your invitation to stay a few days in
Monterrey during the month of June and speak on any
subject that may interest you people. I am driving
down with my wife and two daughters, ages 15 and 17.
I shall let you know later more precisely when I shall
come and shall also have in mind the question that
Cerrillo asked me concerning securing of american per-
sonnel in mathematics and related fields for your
institution.

Please remember me to all my Monterrey friends.

Very sincerely yours,

Norbert Wiener

W/h

March 13, 1946

President W.E. Weld
Wells College
Aurora-on-Cayuga, New York

Dear President Weld:

I have known Dr. Herbert Jehle for
some years. He is engaged in some very impor-
tant mechanical techniques of the problem of
star clusters using the most modern methods.
He has a gift of clear exposition and has an
active enthusiasm for schorlarship. Personally
he is friendly and attractive and a good person
to have around. I recommend him very strongly
for any vacancies that you may have.

Very sincerely yours,

Norbert Wiener, Professor
of Mathematics

W/h

March 13, 1946

Mr. George Taylor
Department of Cultural Relations
State Department
Washington, D.C.

Dear Mr. Taylor:

Dr. Hu Shih has referred me to you in con-
nection with a problem that has been disturbing me a
great deal. Dr. Yuk Wing Lee formerly of Tsing Wua
University of Peking and St. John's College in
Shanghai has recently received an appointment as
Assistant Professor in Electrical Engineering for one
year at M.I.T. He is one of my old students and is
a personal friend. He has had extraordinary bad luck.
He was caught in Shanghai in 1937 and has been unable
to participate in the trek westward since his wife is
a Canadian lady and did not wish to subject her to the
hardships of the Chinese backwoods.

He received his appointment here just at the
time of Pearl Harbor. He wrote to me last August and
has received another appointment. He has been unable
to get out of the country. He has contributed much to
Chinese mathematics and should have contact with his
western colleagues. I rank him extremely highly per-
sonally and scientifically. Will you please look into
the matter and see what can be done both here in the
United States and in China to find transportation for
him?

Very sincerely yours,

Norbert Wiener

W/h

March 13, 1946

Dr. Yuk Wing Lee
House 15
St. John's College
Shanghai, China

Dear Dr. Lee:

The invitation still holds. I do not know where
the hitch has come in the arrangements but Tech has worked
very hard. I have written to the State Department to see
what they can do. I talked to Dr. Hu Shih the other day.
When you get here, you can put up at our house. Don't
worry about housing problems. The invitation at Tech is
for one year but I have reason not to be worried about your
future although it is probable that the Tech invitation will
not be extended for two more years after your arrival. Do
not ask me to tell about my plans as it may not be advisable
to discuss them until you are here. We are terribly sorry
that we have been so ineffective. We trust that we can
remedy this in the near future.

Very sincerely yours,

Norbert Wiener

W/h

March 13, 1946

Appointment Office
Harvard University
Cambridge, Massachusetts

Gentlemen:

    Dr. Herbert Jehle wrote to me request-
ing me to send a letter of recommendation in
his behalf for future appointments. I am de-
lighted to have the chance to be of use to him.
I have known him for a couple of years and have
found him intelligent, of great enthusiasm, and
a thorough knowledge of the very important problem
of star clusters. Personally I have found him a
very brilliant person to know and with a marked
ability to impart his ideas to others. I shall
be glad to stand as a reference for him.

                  Very sincerely yours,

                  Norbert Wiener, Professor
                    of Mathematics

W/h

March 15, 1946

Senor Doctor
Manuel Sandoval Vallarta
Director de la Comision Impulsora y Coordinadora
de la Investigacion Cientifica
Puente de Alvarado 71
Mexico, D.F.

        Me da mucho placer acceptar la invitacion de
la Comision Impulsora y Coordinadora de la Investigacion
Cientifica a venir a Mexico a desarrollar un curso de
conferencias. Este termino continua hasta el 7 de junio,
y porque viajere en coche con me familia y tengo una
invitacion a tener unas conferencias en Monterrey, no
puedo llegar anter de el 23 de junio. Regresare para
llegar aqui en las ultimas dias de septiembre. Mis con-
ferencias son a su disposicion, pero creo que el tema de
los metodos nuevos de Mayer y otros en la teoria de la
mecanica estadistica contenga algo de interes a mis
alumnos. Tengo mucho material nuevo, y puedo tener tres
(o menos) conferencias cada semana. Crea que sea mejor
que usteder determinen el numero aproximado y la distri-
bicion aproximada de mis conferencias. Cuando sea deter-
minado enviare a ustedes un programa preciso.

        Es un privilegro muy grande regresar a un pais
donde tengo tantos amigos y tantos memorias de su amistad
a ellos. Que acepte usted las seguridades de mi mas atenta
y distinguida consideracion.

                        Norbert Wiener
                        Professor de Matematicas
                        en el Massachusetts Institute
                        of Technology

W/h

March 19, 1946

Dr. Alexander M. Wundheiler
Re3rd, Bureau of Ordnance
Navy Department
Washington 25, D. C.

Dear Dr. Wundheiler:

Please pardon so belated an answer to your letter of February 13th. I am sorry that my previous letter did not clarify your questions; but from your letter of Feb. 13 I am beginning to see just where your misunderstanding of our method lies. Where did you gather that $\Phi + g$ should be the potential of the flow? Actually g, as introduced in equation (37) is nothing but a difference between two successive approximations to the potential.

To explain the matter in more specific terms — suppose that we start from a conical air stream, characterized by a potential Φ_0, whose normal velocity-component vanishes along the line $\Theta = \Theta_s$. Let us now replace the cone by an ogive. The air stream around it should be characterized by a potential (say) Φ_1 which should make the normal velocity-component vanish along the ogive. Let us therefore put

$$\Phi_1 = \Phi_0 + g(\eta_0), \qquad (37)$$

(the reasons why g should be a function of η alone are discussed elsewhere in my paper) and determine g so as to let $d\Phi_1/d_n$ vanish along the solid. This g, or rather its derivative, turns out to be defined by equation (42). Note that this equation makes an explicit use of the net of characteristics; and these characteristics correspond of necessity to the original potential Θ_0. This is why the equation

$$\Phi_{n+1} = \Phi_n + g(\eta_n)$$

must be solved by approximations: with the aid of $g(y_s)$ we compute Φ_1; then a net of new characteristics corresponding to it and eventually $g(\eta_1)$ which, in turn, will lead to Φ_2 and so on; this process is to be continued until Φ_{n+1} differs

COPY

from Φ_n by amounts which we propose to ignore.

This constitutes our procedure, except for the fact that, between each such step, we must reintegrate the fundamental equation (31) with Φ_1, Φ_2, ... etc. and the corresponding set of characteristics to make sure that so modified a flow still satisfies the equations of motion.

I hope that the above remarks will make it clear that $g(\eta_n)$ is of the nature of an auxiliary function, indicating the direction in which the original (conical) potential is to be corrected to make the normal velocity-component vanish along a given ogive; and as soon as the nets of characteristics corresponding to two successive approximations come close to each other $g(\eta)$ goes to zero.

With regard to the other point raised in your letter, I share your opinion, that, in passing from the cone to the ogive, the form of the shock-wave will not remain the same. This is also explicitly stated in my script (p.21). The reasons why we did not find it necessary to investigate the actual form of the wave (though this can be done) in our drag computations is the fortunate circumstance that the pressure-distribution at the solid surface turns out to be insensitive to the position of the shock. It would be very difficult indeed to infer this solely from the general form of our equations; but it turns out to be so. In the cases which we treated so far, an arbitrary change in the position of the shock by as much as 1° or 2° did not affect the pressure on the surface by quantities of the order of one-tenth of a per cent.

Sincerely yours,

Zdenek Kopal

k:t

cc: Comdr. Bleick
     Prof. Wiener

March 22, 1946

Dr. Manuel Sandoval Vallarta
Director de la Comision Impulsora y Coordinadora
de la Investigacion Cientifica
Puente de Alvarado 71
Mexico D.F.

Dear Manuel:

This is the personal letter that goes with the formal one
which I have sent you in Spanish. I shall be delighted to come
to Mexico this summer and work at the University and spend some
time on some research that Arturo and I have planned together.
The whole field of work is coming along well and I think we can
do a final and definitive article on the heart. Before I can
make final plans for my trip however I should like to ask a few
questions.

While of course I can come alone I should like very much to
be able to give my wife and daughters the enjoyment of the very
pleasant experiences I had with you. I realize of course that
when a visiting scientist is asked the invitation does not include
his family but one way or another I shall have to take care of
them for the summer and the expenses will not be much greater
whether I take them or leave them. Now there are certain American
sources of funds that I can tap but I do not want to tap them
until I know how much to ask for and what I shall need. In other
words this letter is not a request for inordinate financial support
but merely a desire on my part to say where I stand in order to
make additional provisions at the right time.

We intend to come down in our car leaving Boston early in
June and arrive in Monterrey about the middle of June. We have
an invitation to stay over there for a few days before going on
to Mexico City. I am planning to leave Mexico City in the middle
of September in time to arrive in Boston by the end of September.
M.I.T. is paying me my full salary. I do not know how to estimate
precisely the expenses of the trip. As a rough estimate the round
trip in the car will cost for all of us together, including fuel,
repairs, room and board some $450. That leaves us eleven weeks in
Mexico. You will know far better than I how much an apartment,
service, and car storage for four people will cost. The fact is
that I should like to know how heavily we shall have to lean on
funds from this side of the border so that I can get busy as soon
as possible and secure them. Christine tells me that it is a little
late for government funds. I may be able to get something from the
Macy Foundation but would like to reserve that as far as possible
because they are favorably disposed towards the field of work that
Rosenbluth and I are taking up and we may be able to get something
really valuable in that field from them later if we have not bothered

them with too many flea bites. The real story is that we have to figure very carefully at present as the girls are going through college and it is probably the most expensive period in our lives until they graduate. We want to come to Mexico and we are counting heavily on it but we must be able to plan in such a way that we do not dip into the family savings. There will be no trouble if we know exactly what we are to expect from this end.

de Santillana of M.I.T. has just returned from Italy and has brought me back an invitation to lecture in Italy this summer which I have turned down. I think it can be made to hold over until next summer. I have also been invited at some not too definite future date to go back to China to teach.

We all of us are delighted to have the opportunity to see you and Maria Luisa again. You will be surprised to see what young ladies my girls have become.

With best greetings from house to house,

                                        Norbert

NW:rg

BROWN UNIVERSITY
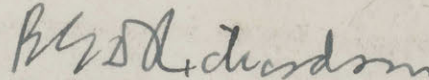## PROVIDENCE 12, RHODE ISLAND

March 29, 1946

Professor H. Whitney
Harvard University
Cambridge 38, Massachusetts

Dear Professor Whitney:

Thank you for your communication of March 26. I will heartily approve of your suggestion that we let the matter of a Society Visiting Lecturer rest for the time being. If someone stirs up the question later or if our Committee finds a suitable candidate, we can then resume our deliberations.

With kindest regards, I am

Sincerely yours,

R.G.D. Richardson,
Dean of the Graduate School

RGDR:T

Cordial greetings! RGDR

Prof Norbert Wiener
Dept of Mathematics
Mass Inst of Technology
Cambridge, Mass

Dear Dr Wiener:

With Walter safely in Mexico and well progressed toward full recovery
I am now free to begin work. Essentially the program I have planned is this:

    a.) Several years' study in the physical sciences, especially mathe-
matics. This is, of course, necessary in neurophysiology and psy-
chiatry in the light of the new work done by Mr Pitts, Dr McCulloch,
and you, and the program for future research as plotted in conversa-
tion and letter. My training so far has been this:
        1. Two years' work at Lewis Institute, a branch of Illinois
    Institute of Technology, where I had courses in mathematics
    up to differential equations, college physics, and nine
    courses in chemistry including physical chem.
        2. One year's work at University of Chicago, mainly in
    the biological sciences (frankly, a waste of time) preparatory
    to medical school.
        3. Four years' work at University of Illinois Medical
    School whence I graduated in March '43.
        4. Interneship on the Harvard Neurological Service in
    Boston City Hospital.
        5. Two and one half years in the army as Neuropsychiatrist,
    acting for one year as chief Neuropsychiatrist for the 237th
    General Hospital.
My unofficial training, however, is of rather more importance. I have
been connected with Dr McCulloch and his laboratory on and off for the
past five years and have been in constant communication with Mr Pitts
for the past six years. From these men I have learned in a general way
what the great problems are in neurophysiology, especially insofar
as treatment of nerve nets is concerned, and also have been following
their work in such problems. But to do any original research or to
be able to tie in with the work at its present stage I need a good
amount of sophistication in mathematics.

    b.) Concomitant with my studies in the physical sciences I am arranging
to work with the Veteran's Administration and with Boston City Hospital
so that my knowledge of the empirical end of neurology shall not lag
too far behind. It will be necessary, I am sure you'll agree, that
eventually clinical testing will have to be done to support one or
another of the theories being brought forth, and this would best be
done by someone who is not only acquainted with the theory but also
with the nervous systems the theory has to deal with. I wish to
work myself into such a position eventually.

    My original plans to attend MIT were tentatively scrapped when Mr Pitts
had his accident in California, for I knew not how long I would be tied up
staying with him. Fortunately his recuperative powers were good, his ten-
dency to invalid himself slight, and he was up and around within two and a half
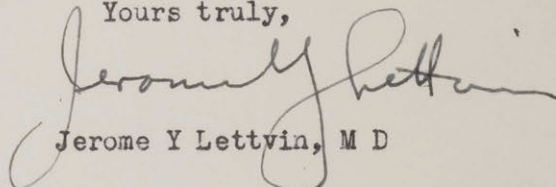months. While in California I was constrained to live at the house of an osteo-

path (there being no choice in the matter. One simply cannot get a room.) who, in the course of cleaning house one day three weeks ago, threw away all my transcripts of credits which I had waited for over a period of three months, the schools in Chicago, preseed by other business, having been unable to send these credits until the early part of September. This scrapping of my papers occurred two days after I got them, and I was in profound despair, for I knew I would have to wait another number of weeks before I could get them again. Walter, however, told me to write you anyway, telling you what had happened. Of course I have my diplomas, which might serve as well, but I suspect that I might be required to detail all the courses I've taken and the hours devoted thereto.

If it is possible to get me into the mathematics department this October I should be infinitely grateful. Frankly I am spoiling for work and am anxious to start at the same time as Dr Nelson. Furthermore the Vets are starting my contract in the middle of October so that I shall be around working for them a few hours each day. If your graduate department is not full up yet and you have room for another, drop me a note and I can be in Cambridge within a day's notice.

Incidentally, Walter and I have been talking over matters and have decided schizophrenia may a special form of a neurosis (i.e. a mislearning). I think you might be amused by the notion. I'll tell you about it when I see you.

Thank you very much for your interest in my plans and the work you've done in my behalf.

Yours truly,

Jerome Y Lettvin, M D

Dear Professor Wiener,

Enclosed is a letter to me from P. Erdös, which
reveals at last the fate of certain of our friends in Hungary.
As you may see, it is of the greatest importance that they re-
ceive funds so as to provide themselves with the barest nec-
essaries. I am taking the liberty of sending this to you
in the hope that you may be able to contribute a small amount
to a fund which is to be forwarded to these scientists. A
local bank has assured me that it is possible to send money
to Hungary. It is to be presumed that it will be disbursed
over there without delay or difficulties. Please send your
contributions to Mrs Gabor Szegö, ~~Stanford University, Stanford~~
~~University, California.~~ Box 612, Rt 2, Los Altos, Calif.

Sincerely,

E. R. Lorch

Dear Professor Lorch,

A few weeks ago I had news from Hungary. I got a letter from Turán and recently I saw a letter of M. Riesz. Fejér is in a very bad position. The nazis beat him, his apartment is ruined, he lives in his university office and eats in a public kitchen. He never gets enough food, has only one suit of clothes. F. Riesz, who probably interests you more is a little better off, but also needs help. M. Riesz is helping both of them, but the restrictions in Sweden prevent him from sending much help. We (Pólya Szegö, etc.) sent Fejér 36 dollars, but both he and Riesz would need regular help for a while, about 20 or 25 dollars a month. It would be very nice if you could send us a few dollars for this purpose (if you do not have too many other obligations). Please send the money to me or to Mrs. Szegö. Also please mention the matter to everybody in Columbia who is interested.

<div align="center">

Kind regards

P. Erdös

</div>

Kalmár and family are also alive.

April 3, 1946

Dear Professor Wiener:

·I have been asked to represent the Mathematics
Department on a committee to prepare exhibits for
the 1946 Alumni Day. It is expected that these
exhibits will show some of the recent developments
in the fields of science and engineering. Knowing
that you have participated in work of this nature
during the past few years, it is my hope that you
will give me some suggestions on certain phases of
your work that might properly be brought to the
attention of the visiting alumni at this time.

Very truly yours,

R. D. Douglass
R.D. Douglass

D/h

April 4th, 1946

Dr. Norbert Wiener,
Massachusetts Institute of Technology,
Cambridge, Mass.

Dear Dr. Wiener:

Please send me a reprint of your work with Wintner in Am. Journ. Math, 65, 279, 1943, also other reprints concerning chaos if you have any to spare, and on integration in function space.

I am forwarding reprints of "Reciprocal Relations" and of "Crystal Statistics. I". The former is related to theory of fluctuations, the latter to an eigenwert-problem in ∞ dimensions (set-function). In addition, I have recently played with ideal turbulence and find that the velocity field ought to violate every Lipschitz condition of order 1/3.

Yours sincerely

Lars Onsager

April 18, 1946

Professor Samuel Beatty
University of Toronto
Toronto, Ontario
CANADA

Dear Professor Beatty:

It is learned from Professor Tucker
that you have recently been exerting efforts to
secure for Professor Halperin a fair and unpre-
judiced trial.

A group in Cambridge of Halperin's
former colleagues would like you to know that we
have the highest regard for Professor Halperin's
integrity and honor. We should like to do every-
thing possible in his behalf.

From what we know of Professor Halperin's
character, the official charges made against him,
and the nature of the entire case, we feel sure
that violation of security regulations on
Professor Halperin's part, if any such occurred
at all, were of an entirely trivial nature, repeated
many-fold by everyone concerned with classified
material.

To magnify such matters into serious
charges is extremely unjust, and it is frightening
to think that Halperin is being caused to suffer
because of the ups and downs of national and inter-
national politics.

Very sincerely yours,

Norbert Wiener

W/h

April 24, 1946

Mr. James Keddie
The Speckled Band
Six Beacon Street
Boston 8, Mass.

Dear Mr. Keddie:

Please count me in on the Friday, April 26
dinner of the Speckled Band. While I have no written
paper to contribute I shall try to let you in on the
latest machinations of the brothers Moriarty.

Sincerely yours,

Norbert Wiener

W/h

April 25, 1946

Dr. Fremont F. Smith
Macy Foundation
565 Park Avenue
New York, New York

Dear Dr. Smith:

In confirmation of our telephone conversation of
today, I would like to state what I am proposing to do con-
cerning further joint work with Dr. Rosenbluth. I had
earlier in the year an invitation from the University of
Mexico and the C.I.C.I.C. to come to Mexico and lecture at
the University on subjects connected with feed-back. It was
supposed at that time that I could get funds amounting to
about $850 from the U.S. State Department together with some
probably amounting to about $400 U.S. guaranteed to me by the
C.I.C.I.C. and the University jointly. When Dr. Rosenbluth
heard of this, he was exceedingly eager that I should come
down and spend a large part of my time jointly with him
carrying out further investigations concerning flutter and
fibrillation of the heart. We have already carried a series
of investigations last summer and during the academic year I
have developed these more. As a matter of fact I have
developed them to such an extent that Dr. Rosenbluth and
myself consider a detailed quantitative experimental program
as possible and profitable. He is extremely eager that we
do not miss this opportunity of working together as both he
and I are counting on it as the subject of our communication
to the Macy Institute meeting in October on feed-back and
circular processes.

Let me explain that the study of flutter and
fibrillation is important for the purposes of our conference-

(a)   as an examination of a very significant kind
      of feed-back processes for its own sake

(b)   the heart with its anastomosing net of muscle
      fibers is a simple method of the brain net
      differing in the synapses and in the effect
      that an impulse coming to a place where two
      fibers join are above threshold strength.

It is, therefore, an excellent place to try out mathematical and experimental methods which we later intend to apply to the cortex of the brain and which are now being developed for the cortex of the brain by Mr. Pitts and Dr. McCulloch in Chicago. It is certain that no real program can be made in the study of the feed-backs of the brain and the nervous system unless we can separate from them their random background and determine what contribution this makes. It is, therefore, an essential step in the direct line of progress to carry out the proposed investigations. As I have said they will form the topic of our conference next Fall and without this possibility of cooperative work we will be hard put to it to justify our share in the next meeting.

The present situation is that as I have said no U.S. funds are forthcoming inasmuch as the money for the fiscal year ending the first of July has all been appropriated by the State Department for other purposes, while the money for the next year has not gone through Congress yet. I am, therefore, left with merely the $400 U.S. from Mexican sources of which $200 definitely promised and $200 bespoken but not so clearly promised. I think, however, I can count on these. In a letter from Dr. Vallarta he figured out that the expense per person per month living in a family would be between $100 and $125. That is, in three months it would amount to between $300 and $375. My fare down and back will certainly amount to a total of $250. My expenses living alone in Mexico will also certainly be greater than $100 to $125 a month. I do not think that a total of $850 is more than I need to insure myself against financial loss. I therefore respectfully request if your Foundation can see its way clear that you finance my trip to the exten of $450 U.S.

You will be interested to learn that M.I.T. is backing in its Electronics Laboratory the plan on the research which we have been laying out at our last meeting. I think the future for the entire subject looks extremely promising.

I am getting in touch with Dr. Rosenbluth in New York and I am asking him to get in touch with you. I, myself, shall be in New York next Thursday, the second of May at McCulloch's lecture and hope that we can be able to get together and discuss matters.

Very sincerely yours,

Norbert Wiener

W/h

April 27, 1946

Dr. Mark Kac
Cornell University
Ithaca, New York

Dear Dr. Kac:

Congratulations on the Guggenheim. I shall
be glad to have you work in contact with me and
to work in contact with you at any time that
seems fit. I shall be at M.I.T. until the
middle of June after which I think it highly
likely that I shall spend the rest of the
summer in Mexico. From the middle of Sept-
ember on I shall be back at M.I.T. It is
possible that I may not go to Mexico in which
case I shall let you know. With the exception
of that interval all my time will be at your
disposal.

                              Sincerely,

                              Norbert Wiener

NW:rg

Núm. 85/7.2

México, D.F., a 29 de abril de 1946.

Señor Dr. Norbert Wiener,
Department of Mathematics,
Institute of Technology,
Cambridge, Mass.
U.S.A.

Me es grato y honroso dirigirme a usted para comunicarle que la Sociedad Matemática Mexicana efectuará su IV Asamblea Regional en la ciudad de Monterrey, Nuevo León, del 13 al 18 del próximo mes de mayo.

Teniendo en cuenta su reconocido interés por el progreso científico de México y dada la importancia de este evento, la Sociedad Matemática Mexicana se vería honrada con la asistencia de usted a esta reunión.

Me es grato reiterar a usted las seguridades de mi distinguida consideración.

El Presidente,

DR. ALFONSO NAPOLES GANDARA.

ANG/js.

ALBERT B. DONWORTH
COUNSELLOR AT LAW

Houlton,Maine, April 30,1946.

Professor Norbert Wiener,
        Cambridge,Mass.,
    Dear Mr. Wiener,
            When in Cambridge I was glad to have an opportunity
to takk with you about my booklet "Graviation".

As you have occasion to look this over I would be pleased to hear
from you and would be asking if you find the propositions are
consistenet quantitatively with established facts and measurements.

Thanking you for any assistance you can give me about this ,

Most sincerely   yours,

Albert B. Donworth

I remarked in the J. Ac. S a paper from
Mr Pekeris M.I.T ; is he your collaborator
or pupil ? I would also like to meet him.

Sincerely yours.

J. Kampé de Fériet

NEW YORK UNIVERSITY
COLLEGE OF DENTISTRY
209 EAST TWENTY-THIRD STREET
NEW YORK

DEPARTMENT OF PHYSIOLOGY

February 27, 1946

Professor Norburt Wiener
Department of Mathematics
Mass. Institute of Technology
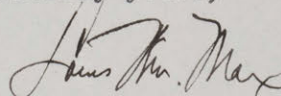Cambridge, Mass.

Dear Professor Wiener:

Mr. Julian H. Bigelow, who is a candidate for an electronic research position at New York University, has given us your name as a reference.

The vacancy calls for an electronic man with a thorough knowledge of filter-network theory and practice. His first assignment would be the design and construction of a set of band-pass filters, covering the unusually low frequency-range of $\frac{1}{2}$ to 20 c.p.s. in 2-cycle bands, i.e., $\frac{1}{2}$ – 2 c.p.s., 2-4 c.p.s., etc. This is admittedly no small task, and we are therefore anxious to avoid selecting the wrong man for the purpose.

Since part of this research has not yet been removed from the "classified" category, we described as much of the problem and its objectives as we reasonably and ethically could to Mr. Bigelow, and were rather taken aback by his peremptory demand to know all about its specific details before he would consent to have his name considered. While he has since receded from this position and is now willing to wait for this detailed information pending our receipt of word from the F.B.I. on his clearance, the fact that he has made such a demand has left some question in our minds as to how smoothly he will get on with other research-workers in the laboratory. We would therefore appreciate receiving your confidential comment on his personality as well as on his competence in the field of theoretical and practical electronic research.

If you have any other candidate whom you could recommend for the position, we would be very grateful for your assistance.

Sincerely yours,

Louis William Max
Associate Professor
of Physiology

April 8, 1946.

Dear Wiener,

Just had a letter from the Guggenheim people notifying me that a Fellowship was awarded to me.

I want to thank you again for your kind help. I am sure that your recommendation played a most important part.

My plans for the next year (the Fellowship starts July 1, 1946) are dependent very much on the housing situation. Cambridge I understand is almost hopeless and Ann Arbor not much better

For the present I am trying to find a place to live in Ann Arbor. If the situation in Cambridge doesn't improve I shall have to leave my family in Ann Arbor and pay you several lengthy and extended visits.

I am looking forward to working with you and I am sure we can get some worthwhile results.

I shall, of course, keep you informed about all my plans.

Best regards to you, Mrs. Wiener
and the children
Yours

April 11, 1946

Report
by
Freshman Schumpeter
on
his progress
submitted to
The August Tutor.

Then, on March 22, aforesaid Freshman,
laden with Professor Wiener's generous
gifts, returned to his domestic penates
and sat down to digest the Master's
teaching, he awoke to the fact, which
attempted perusal of the Master's papers
brought home to him still more forcibly,
viz. that, owing to his "pretty" training in Math,
which moreover had been oriented on practical

applications, he woefully lacked the conceptual
apparatus that seems to be necessary now. Therefore
he turned, during the recess week spent in
the country, to the general theory of Lebesgue
integration. On his return, he asked Mr
Fine, a former student of own., now of math.,
to help to clear from his path dense masses
of fog that still surrounded the Ergodic
Theorem for him. This is what he is now
engaged in doing, so far as his lectures and
similar undesirable and entirely futile activities
allow him to do so. When he sees land, he
will not fail to signal to the August
Master and pray him to vouchsafe another
audience in which to shed fresh light into the
abysses of his, the freshman's, darkness.

Respectfully submitted

J. A. S.

Dr.-Ing. Nai-Ta Ming   Berlin-Grunewald, den 15. 4. 46.
        China   Auguste-Viktoria Str. 70
z.Zt. Deutschland

Mr. Professor
N. Wiener
Massachusetts Institute of Technology
222 Charles River Road
Cambridge (Massachusett)
    U. S. A.

        Dear Professor!
        This paper is the introduction of my work, as I already told
you in another letter, dated with 21. 2. 46. I remain with best compli-
ments.

                Yours

                Nai-Ta Ming

Dr. Ing. Nai-Ta Ming
BERLIN-GRUNEWALD
Auguste-Viktoria-Straße 70

Verlusten aller Spulen und Kondensatoren realisieren kann. Die Verluste aller Spulen fuer sich genommen werden als gleich gross und ebenso die aller Kondensatoren fuer sich genommen als gleich gross vorausgesetzt. Eine wesentliche Vereinfachung ergibt sich in dem gesondert behandelten Spezialfall, dass die Verluste aller Schaltelemente als gleich gross angenommen werden. Wegen der Beziehung der im Abschn. "Zweipole" und "Vierpole" behandelten Fragen zueinander und zu anderen in der vorliegenden Arbeit nicht behandelten Fragestellungen vergleiche man die Uebersicht am Anfang des Abschnittes "Vierpole".

II. <u>Zusammenstellung bekannter Grundlagen aus der Theorie der Schaltungen.</u>

    1. Zweipole.

        Wir stellen im folgenden kurz einige Ergebnisse aus der Theorie der linearen Wechselstromschaltungen, die Zweipole und Vierpole ohne Verluste betreffen, zusammen. In Fussnoten [1] wird

[1] a) Zusammenfassende Darstellung:
    W. Cauer: "Theorie der linearen Wechselstromschaltungen".
       I. Band. Akademische Verlagsgesellschaft Becker
       & Erler Kom.-Ges., Leipzig 1941.

b) H. Piloty: Telegr. u. Fernspr.Techn. (T.F.T.) 28 (1939)
       S. 363 bis 375; 29 (1940) S. 249 bis 258, 279
       bis 290, 320 bis 325; 30 (1941) S. 217 bis 223.

c) S. Darlington: Journal of Math. and Phys. Mass. Inst. of
       Techn. (1939) S. 257 bis 353.

d) W. Bader: Arch. Elektrotechn. 34 (1940) S. 181 bis 209.

e) G. Cocci: Alta Frequenza 10 (1941) 470 bis 515.

f) E. A. Guillemin: "Communication Networks" Vol. II
       John Wiley & Son, Inc., New York (1935).
       Brune-Prozess und Betriebsparametertheorie
       der Reaktanzvierpole sind dort nicht enthalten.

Dr. Ing. Nai-Ta Ming
BERLIN-GRUNEWALD
Auguste-Viktoria-Straße 70

Einleitung.

I. Aufgabenstellung und Ergebnisse der Arbeit.

Die vorliegende Arbeit behandelt die Auffindung von linearen Wechselstromschaltungen (Netzwerken) vorgeschriebener Frequenzabhaengigkeit unter dem Gesichtspunkt, dass saemtliche Spulen einer realisierenden Schaltung einen Ohmschen Widerstand in Reihe und saemtliche Kondensatoren einen Ohmschen Widerstand parallel enthalten sollen ["Verlustschaltung", genaue Definition "Zweipole", I], so wie es den praktisch unvermeidlichen Verlusten entspricht. Der praktische Anwendungsbereich der gestellten allgemeinen Aufgabe umfasst saemtliche praktischen Anwendungen der Theorie der linearen Wechselstromschaltungen ueberhaupt.

Folgende Ergebnisse wurden gewonnen. Im Abschnitt "Zweipole" wird gezeigt, welche Type von Scheinwiderstandsfunktionen bei Verlustzweipolen ueberhaupt auftreten kann und dass sich jede Scheinwiderstandsfunktion dieser Type ["Verlustfunktion", Definition vgl. Abschn. "Zweipole" I] durch einen Verlustzweipol [genaue Definition "Zweipole", I] realisieren laesst. Der Existenzbeweis der Realisierungsmoeglichkeit einer Verlustfunktion durch einen Verlustzweipol wird ergaenzt durch eine an numerischen Beispielen erlaeuterte praktische Rechenmethode, die in den wichtigsten Faellen auf Schaltungen ohne ueberfluessig viele Schaltelemente fuehrt und weniger Rechenarbeit erfordert als die Entwicklung einer "positiven Funktion" in einen Zweipol nach Brune. In den benutzten Verlustschaltungen werden Gegeninduktivitaeten zugelassen. Im Abschnitt "Vierpole" wird ein praktisches Verfahren beschrieben, nach dem man einen als Funktion der Frequenz vorgeschriebenen Betriebsuebertragungsfaktor S [bzw. eine vorgegebene Betriebsdaempfung in |S|] durch einen Reaktanzvierpol ohne Gegeninduktivitaeten mit

Karoline Cauer   Berlin, den 9.12.45.

                      V o l l m a c h t.
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        Herr Dr.-Ing. Nai Ta Ming ist von mir gebeten und
beauftragt, alle nur irgend erreichbaren Manuskripte,Schrif-
ten und Buchunterlagen meines Mannes, Prof. Dr.-Ing.Wilhelm
Cauer, zuletzt Berlin-Marienfelde, Emilienstr.22, zu sammeln
und bei sich sicherzustellen. Herr Dr. Ming wird von den nur
einmal vorhandenen Exemplaren Kopien anfertigen lassen und m
mir diese Kopien zukommen lassen. Ich waere allen, an die
sich Herr Dr. Ming wendet, ausserordentlich dankbar, wenn
sie ihm bei dieser schwierigen Aufgabe behilflich waeren. Da
mein Mann vermisst ist und im Laufe der Berliner Ereignisse
seine saemtlichen Buecher und Schriften verloren gingen,
betrachten Herr Dr. Ming und ich es als eine Ehrenpflicht,
von dem Werk meines Mannes soviel als irgend moeglich zu
retten.
        Herr Dr. Ming uebernimmt in meinem Auftrage die
Herausgabe der zweiten Auflage des Buches "Teorie der
Wechselstromschaltungen" Als Mitarbeiter meines Mannes in
den letzten Jahren ist allein Herr Dr. Ming dazu im Stande.

                        Frau Karoline Cauer
                        geb. Cauer.

stofflich bedeutend zu erweitern.

Ausserdem bin ich selbst mit der Ausarbeitung einer neuen Arbeit beschäftigt, die bald fertiggestellt sein wird. Das Thema lautet: "Existenzbeweis zur Realisierung einer Verlustfunktion[1] durch Kettenschaltung von Verlustschaltelementen[2]".

Wegen der Schwierigen Verhältnisse in Deutschland kann ich noch nicht angeben, wann ich fertig sein werde und wann eine Veröffentlichung in Frage kommt. Wenn später eine Gelegenheit geboten sein wird, möchte ich gern meine Forschungsarbeiten in Amerika fortsetzen.

Ich habe auch englische Sprachekenntnisse, leider ist meine Bücherei durch Bombeneinwirkung zerstört worden, wodurch mir die Unterlagen zur genauen Uebersetzung Fachausdrucke fehlen. Daher wählte ich für den ganzen Brief einheitlich die deutsche Sprache.

Die Begriffe 1) und 2) möchte ich noch erklären:
1) Unter einer "Verlustfunktion" verstehen wir eine solche positive Funktion $W(\mu)$ der unabhängigen Veränderlichen μ, die aus einer positiven Funktion $\mathfrak{W}(\lambda)$ (Vgl. z.B. Arbeit von O. Brune) durch die Transformation $\lambda = \mu + \varepsilon$ gewonnen werden kann. Folgende Bedingungen sind notwendig und hinreichend für eine Verlustfunktion $W(\mu)$:
    a) $W(\mu)$ ist reell für reelle μ,
    b) W ist in der abgeschlossenen rechten μ-Halbebene regulär, mit Ausnahme gegebenfalls $\mu = \infty$, wo ein einfacher Pol erlaubt ist.
    c) Der Realteil $\mathcal{R} W(\mu)$ ist auf der imaginären μ-Achse überall grösser als Null mit Ausnahme des Falls, wo eine einfache Nullstelle im Unendlichen auftritt. In letzterem Fall muss $\mathcal{R} W^{-1}$ für $\mu \to \infty$ einen positiven Grenzwert besitzen.
2) Eine Verlustschaltung ist definitionsgemäss dadurch vor anderen passiven Schaltungen mit endlicher Zahl von diskreten Schaltelementen (Induktivitäten, Gegeninduktivitäten, Ohmschen Widerständen und Kapazitäten) ausgezeichnet, dass in Reihe mit jeder Spule und parallel mit jedem Kondensator ein Ohmscher Widerstand liegt.

Sehr geehrter Herr Professor, ich wäre Ihnen ausserordentlich dankbar, wenn Sie mir auf meinen Brief die gewüschten Antworten geben könnten. Ich danke Ihnen schon für Ihre Mühe jetzt und bin mit

vorzüglicher Hochachtung

Nai-Ta Ming

*) *I am very sorry to write the letter on the back of the copies because the mail is limited within twenty grams. Furthermore the contents and introduction of my work will be sent with another two letters.*

15.4.46.
Yours
Nai-Ta Ming

E. N. T.

ELEKTRISCHE NACHRICHTEN-TECHNIK

WISSENSCHAFTLICHE LEITUNG

Dr. F. Moench, Berlin - ~~Schöneberg, Hauptstr. 121~~ *Tempelhof*
~~Schöneberg~~ St. 33

Herrn

Nai-Ta Ming

Berlin-Grunewald

Augusta-Viktoria Str. 70 I

BETRIFFT: BERLIN, DEN 15. August 194

     Erst heute bin ich wegen der Kriegsereignisse in der Lage, Ihnen den Eingang Ihrer Arbeit:

    "Realisierung von linearen Wechselstromschaltungen vorgeschriebener Frequenzabhängigkeit unter Berücksichtigung der Verluste von Spulen und Kondensatoren" am 27. Januar 1945 zu bestätigen.

    Zugleich kann ich Ihnen aber die freudige Mitteilung machen, daß die tiefgreifenden Ereignisse der Zwischenzeit keinen schädlichen Einfluß ausgeübt haben, und daß Ihre Arbeit sich noch unversehrt in meinen Händen befindet. Ich werde bemüht sein, die Arbeit in Druck zu geben, so bald eine Möglichkeit vorhanden ist.

    Mit bestem Dank für die Übersendung Ihrer Arbeit un

        vorzügliche Hochachtung.

2. 1. 43. 5. C/1461

Dr.-Ing. Nai-Ta Ming
    China

z. Zt. Deutschland

Berlin-Grunewald, den 21.2.46
Auguste-Viktoria Str. 70

Herrn
Professor N. Wiener

Massachusetts Institute of Technology

222 Charles River Road

Cambridge (Massachusett)
    U.S.A.

        Sehr geehrter Herr Professor!

      Im Jahre 1936 studierte ich noch an der Tsing-Hua Universität
in Peking. während welcher Zeit ich des oefteren Vortrage von Ihnen
hörte , die Sie als Gastprofessor dort hielten. In Peking war ich Schüler
von Prof. Dr. Y.W. Lee.

      Nach dieser Zeit studierte ich in Deutschland und war Schüler
von Professor Dr.-Ing. Wilhelm Cauer.

      Durch die Kriegsverhältnisse war ich den in vergangenen Jahren
leider nur auf Deutschland angewiesen und konnte somit auch keine Fach-
literatur aus den anderen ländern beziehen, sehr zu meinem Bedeuern.

      1940 schickte ich meine Arbeit "Indexmethode zur Entwicklung
der Determinanten für höhere Ordnung und zur Berechnung der inversen
Matrix"mit grössten Schwierigkeiten an die Welt-Mathematiker-Konferenz,
ein Exemplar auch an Sie, Herr Professor. Danach erhielt ich eine Nach-
richt, dass die Konferenz verschoben sei, aber weiter nichts. Da mir
durch Bombeneinwirkung die Adresse des amerikanischen Absenders verloren

ging, konnte ich mich auch nie näher darüber erkundigen. Es wäre mir
daher eine grosse Freude, wenn ich jetzt, nach Beendigung des Krieges,
einiges über die Konferenz und evtl. über meine Arbeit erfahren könnte.

      1944 vollendete ich eine weitere Arbeit, deren Inhaltverzeich-
nis und Einleitung ich Ihnen zur Kenntnisnahme mitschicke.*) Sollten die
Schwierigkeiten des Druckens beseitigt und der Postverkehr günstiger
werden, könnte ich auch vollständige Arbeit übersenden. (Der erste Teil
des Aufsatzes behandelt nämlich rein mathematische Probleme.)

      Wie Sie aus dem beiliegenden Brief sehen, (Rückseite) ist die deutsche
Zeitschrift "Elektrische Nachrichten Technik" an der Veröffentlichung
meines Aufsatzes interessiert. Doch stehen dieser Tatsache heutzutage
leider verschiedene Schwierigkeiten im Weg, so dass ich gern versuchen
möchte, meine Arbeit so schnell als möglich vielleicht auch in einer
nicht deutschen Fachzeitschrift zu veröffentlichen, da sie fachlich in-
teressierten Kreisen bestimmt von Nutzen sein kann.

      Ausserdem wollte ich Ihnen mitteilen, dass Herr Professor Cauer
1941 ein Buch herausbrachte "Theorie der linearen Wechselstromschaltungen"
,das 614 Seiten umfasst und in der Akademischen Verlagsgesellschaft,
Becker und Erler, Kom. Ges., Leipzig, geschien. Vielleicht ist den
amerikanischen Fachkreisen dieses Buch auch schon irgendwie bekannt. Das
Buch war schnell vergriffen, und so entschloss sich Professor Cauer, eine
neubearbeitete 2. Auflage herauszugeben. Diese Arbeit, an der auch ich
beteiligt war, ist durch die Kriegsereignisse in Berlin leider stark be-
einträchtigt worden, da viele Unterlagen verloren gingen.

      Seit der Kapitulation ist Herr Professor Cauer leider vermisst.
Ich bin von seiner Frau mit der Fortsetzung seiner Arbeit betraut worden,
wie Ihnen auch der beiliegende Brief von Frau Cauer beweist(Rückseite von
zweiter Seite des Briefs). Mit der Bearbeitung der 2. Auflage habe ich
schon begonnen. Ich beabsichtige, neben kleinen Veränderungen, ein Kapitel

Dr. Ing. Nai-Ta Ming
BERLIN-GRUNEWALD
Auguste-Viktoria-Straße 70

Vierpole.

Dr.-Ing. Nai-Ta Ming   Berlin-Grunewald, den 15. 4. 46
        China   Auguste-Viktoria Str. 70
z. Zt. Deutschland

Herrn
Professor N. Wiener

Massachusetts Institute of Technology
222 Charles River Road
Cambridge (Massachusett)
        U. S. A.

        Dear Professor!
        This paper is the contents of my work, as I already told you
in another letter, dated with 21. 2. 46. I remain with best compliments.

                        Yours

                        Nai-Ta Ming

Dr. Ing. Nai-Ta Ming
BERLIN-GRUNEWALD
Auguste-Viktoria-Straße 70

Inhaltsverzeichnis

Realisierung von linearen Wechselstromschaltungen vorgeschriebener Frequenzabhängigkeit unter Berücksichtigung der Verluste von Spulen und Kondensatoren.

Einleitung.

Zweipole.