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Corres.

Dec. 1948

N. WIENER - MC 22



THIS SIDE OF CARD IS FOR ADDRESS

Prof. Norbert Wiener
Mass. Institute of Technology
Cambridge
Mass

411 West 114th St N.Y.C. 25

Dear Norbert: I've just seen a piece in today's Times which identifies you with a new discipline called "cybernetics." This intrigues me mightily. What is it all about? Have you offprints, references, etc for which I may thank you? And how are you and yours, anyhow? Keeping well, I trust, and keeping all the fun there is. The season's best.

Horace M. Kallen



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December 1, 1948

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

Dear Norbert:

I have had the pleasure of reading your new book on "Cybernetics," and having just written a note to Mr. Maddock, of John Wiley and Sons, I thought I would also take this occasion to tell you how much I enjoyed the book. Having been relatively closely associated with a number of the people involved in the birth of this new field, I feel a personal interest in your account of its early history.

Although, with my rusty and limited mathematics, I found it necessary to stumble and skip somewhat in the center portion of the book, on the whole, I think it is unusually provocative. In particular, I have been wondering whether it might not occur later that the technology of systems and components involved in servo-mechanisms, computers, and the like, would be influenced by increasing knowledge of the nervous and mental equipment of the animals--particularly the human animal. Surely, in point of efficiency and economy of power, space and weight, the instrumentalists have a goal to shoot at which would require many orders of magnitude of progress before being reached.

With kindest personal regards,

Sincerely,

W. L. Barrow

W. L. Barrow

WLB:mg

APPARATUS DEPARTMENT
GENERAL  ELECTRIC
COMPANY

MAIN OFFICE SCHENECTADY, N. Y.

1 River Road
Schenectady 5, N. Y.
December 2, 1948

Dr. Norbert Wiener
M.I.T.
Cambridge 39, Mass.

Dear Wiener:

Replying to your note of November 18, I expect to be at M.I.T. next week on Tuesday, December 7, and should like very much to talk with you then about your visiting Schenectady. I understand that Mr. W. K. Mulvey, of Science Forum, has already written you, inviting you to speak on the WGY Science Forum Program on Wednesday evening, January 12. If this is settled, we should then like you also to speak at an engineering colloquium we are having here on the general topic of computing machines on the afternoon of either January 11, 12, or 13, depending on other arrangements.

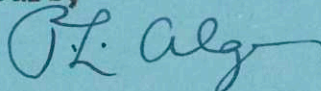
Further, we should like you to speak before the Laymen's League of the Unitarian Church, a quite small social group, on the evening of Tuesday, January 11, or ~~on~~ possibly on January 13, if that is more convenient.

Finally, we should like to make arrangements for you to meet a group at Union College and, of course, to talk individually with a number of our engineers and to see some of the G. E. activities.

All of this is very tentative, but I hope that we can settle on a definite program when I see you on the 7th. I am planning to make my headquarters with Professor E. W. Boehne most of the day--so he will know my plans.

Sincerely yours,

P. L. Alger



PLA:RS

E. W. Boehne

That is, I would like you to be here 2 days.

UNIVERSITY OF MICHIGAN

ENGINEERING RESEARCH INSTITUTE

TELEPHONE:
YPSILANTI 3287

AERONAUTICAL RESEARCH CENTER
WILLOW RUN AIRPORT
YPSILANTI, MICHIGAN

December 2, 1948

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

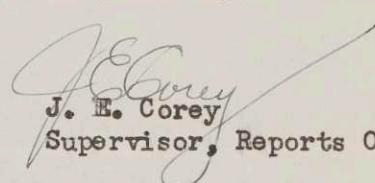
Subject: AAF Contract W33-038 ac-14222, Project MX-794

Dear Sir:

One of our engineers advises us that you have done considerable research in the field of prediction as applied to rocket trajectory.

Since this activity is particularly interested in this phase of rocket performance in line with the above referenced contract, we would greatly appreciate anything in the way of reports or papers developed by you on the subject of prediction of rocket trajectory characteristics.

Respectively,


J. E. Corey
Supervisor, Reports Office

JEC:sf

ENGINEERING RESEARCH INSTITUTE

December 2, 1948

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

Subject: AAF Contract W33-038 ac-14222, Project MX-794

Dear Sir:

One of our engineers advises us that you have done considerable research in the field of prediction as applied to rocket trajectory.

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Respectively,

J. E. Corey
Supervisor, Reports Office

JEC:sf

RANDOLPH-MACON COLLEGE

ASHLAND, VIRGINIA

December 2, 1949

My dear Dr. Wiener:

I am taking the liberty of writing you because of the intense interest aroused in me by the article, "Cybernetics", published in November, 1948 SCIENTIFIC AMERICAN magazine. I am not a scientist, but rather an artist-teacher I am among those who feel that the why of things is the cardinal scientific problem; that the meaning of any natural thing or event cannot be fully grasped or explained scientifically until we discover its relations to the other components of the flow of process that we call our cosmos. The science of cybernetics, as you propose it, is electrifying. So much is shared by all sciences that I am inclined to believe that all science is one science, etc. Process, as it flows thru Alfred North Whitehead, F. S. C. Northrop, you and hosts of others seems to integrate, etc. I feel that my own part in process is that of synthesizing, bringing together contributions such as you present into a vision of man on the face of the earth as he might live instead of as he does live burdened by misery warfare and the like. To this end I should like to invoke the idea that the motion picture audience is the greatest mass audience numerically that history has ever witnessed, spreads around the world, reaches many races and nations . . . In American language, have you thought of "getting your ideas across" thru this medium?

My "argument" is this: The army and navy war production people, in hurry and desperation, discovered how films could be used to teach workers new techniques and speed up production. They made films to give the psychological lead to the services and the public, to tell them where they were going or ought to go, and what the great push and sacrifice was all about. To paraphrase Comenius, the "school" of public relations in our technological society wastes time, relying on words, pamphlets, periodicals and lectures, often taking ten years instead of one to animate and dynamize the citizen audience that must be stirred to get on with the better ordering and understanding of problems. Pictures and the camera tool, fast workers, are at hand.

by

How to get the money, or the sponsorship ~~fixt~~ state, community, private enterprise, or patron to pay for the documentary or "educational" picture of processes and relationships, plain views and plain "facts" to show the vast audience? Or, indeed, how to construct the films!

Even if this letter strikes a responsive chord, but you are so engrossed in creative activity that it does not admit of consideration, please feel no obligations to even reply to this letter. It has pleased me to cry on your shoulder.

Cordially yours,

E. Ehrlich Smith
E. Ehrlich Smith
Professor of Education and Geography
Randolph-Macon College
Ashland, Virginia

✓ 1/2 December 2, 1948

Dr. Hans V. Briesen
1930 Wilshire Boulevard
Los Angeles 5, California

Dear Dr. Briesen:

Thank you for your compliments and good will on my book. As to the first criticism you make, I am using the terms "information", "matter", and "energy" in the full technical sense of physics. Information measures quantity of the nature of negative entropy and thus it is neither matter nor energy. In the pre-^{quantum} physics, information could be envisaged as an arbitrary low energy level. This is not true in the physics of the present day in which the light-^{quantum} could not be subdivided at its own energy level.

However, this energy which is inevitably associated with information is very small and in most kinds of apparatus nearly negligible with respect to the energy used incidentally for other purposes than those indispensable to the carrying of information

As to your second issue, the homeostasis of the body is surprisingly good and a thermostat as good as a normal temperature regulating mechanism would be a valuable tool in any chemical plant. On the other hand, as the presence of business cycles shows, the regulation of the uniformity of the conditions of the body politic is bad in the extreme. I do not need to abate the statements I have made concerning it in any degree.

Sincerely yours,

Norbert Wiener

NW:mz

December 3, 1948

Mr. P. L. Alger
General Electric Company
1 River Road
Schenectady 5, New York

Dear Alger:

You may be surprised to learn that I have written Mr. Mulvey refusing to come to Schenectady and give a talk. The reason is very definitely that I am opposed to giving the talk gratis. This is asking for a very considerable favor on my part, and while it is a favor I frequently perform for other universities and for student groups which are not in a financial position to pay for my talks, and which I feel I have a moral obligation to support, it is most definitely a favor which I do not intend to perform for a corporation whose primary purpose is the earning of money. I do not conceive you to be in the habit of asking for consultations with outside engineers except for the tender of a fee.

It happens that the work that I have been doing on amount of information is very definitely engineering work, and can be very useful to some of your own projects. It is inconceivable to me that I can be present for two days discussing scientific methods with your staff without performing a very definite amount of consultation work. Whether this is paid for by a lecture fee or a consultation fee is indifferent to me, but it is not in accord either with my position in science or my duty to other engineers that I allow myself to be pumped by what I suppose is the flattery of allowing me to associate with your leading scientists. In short, I know exactly what rejoinder I would get if I asked you to ship me an expensive piece of apparatus and mentioned in my letter that I would not be able to offer any money for it, but would pay the cost of shipment.

Mr. P. L. A.--2

I do not really think it is intelligent of your outfit to expect any different answer from me.

Sincerely yours,

Norbert Wiener

NW:mz

P. S. This is not written and is not to be taken in a personal sense, but when one of the greatest corporations in the world requests two days of a man's services without a tender of payment, I must only think either that somebody has been uncommonly stupid, or that the finances of the company are in a bad way.

December 3, 1948

Mr. J. S. Coles
Department of Chemistry
Brown University
Providence 12, Rhode Island

Dear Mr. Coles:

I shall be very pleased to speak before the
Brown Chapter of Sigma Xi on February 24th.
I will probably speak on some phase of Cybernetics.
Would you kindly let me know just what time I
am to be there.

Thank you very much for your invitation and for
your courtesy in this matter.

Sincerely yours,

Norbert Wiener

NW:mz

December 3, 1948

Mr. Leopold Infeld
60 Lowther Avenue
Toronto 5, Canada

Dear Infeld:

Pardon the long delay in answering your kind letter. It was dictated largely by the fact that I required some time to make up my mind about the Magazine Digest issue. I have looked over the Magazine Digest, and I am rather repelled by the sensational manner in which some of its material is handled. I have grave doubts whether the type of article that could be published in a magazine of this type would help me with the only public for whose opinions I have any particular regard. It is so easy for a new subject like this to fall into the science fiction class that we must lean over backward to avoid this sort of thing.

Perhaps I am wrong, and you may be able to convince me so. If you can, I shall be glad to reconsider. At any rate, I would have to be able to re-edit the article so as to be sure that it would not oversensationalize my opinions. I don't assume that this can be done, but if not, there is no possibility of an article of this sort; but, if my re-editing of the material is accepted, we may be able to work something out if they are still interested.

My review of your book has been sent out, I believe to Mr. Ginsberg of Scripto Mathematica. I have received no proof from the review as yet.

I hope you have already received a copy of my Cybernetics. If not, please let me know, and I will see that you get one at once.

My eyes have now fully recovered although it took some time. I hope that we will meet soon in the future.

Sincerely yours,

Norbert Wiener

December 3, 1948

Mr. James M. Putnam
1327 Laurier Avenue
Vancouver, British Columbia
Canada

Dear Mr. Putnam:

Thank you for your letter of November 16. I am
afraid I am not able to understand your terminology,
but my ipression is that my book has norgreat
relevance to the issues you discuss.

Sincerely yours,

Norbert Wiener

NW:mz

Frank Pierce Jones
180 Marlborough Street
Boston 16, Massachusetts

December 3, 1948

Prof. Norbert Wiener
53 Cedar Road
Belmont, Mass.

Dear Prof. Wiener:

I am writing you at the suggestion of John Dewey, with whom I have been discussing certain aspects of your recent article on Cybernetics.

For a number of years I have studied an educational technique whose aim, in part, is to extend and sharpen the kinaesthetic (proprioceptive) sense register. As the result of my studies I have obtained data which, I believe, has important bearing on some of the problems of cybernetics as you set them forth.

I should like very much to see you and talk with you about my work. On Wednesdays and Thursdays I am in New York, but I could call at your office or your home any other afternoon or evening.

Sincerely yours,

Frank P. Jones



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF WELFARE
WESTERN STATE PSYCHIATRIC INSTITUTE AND CLINIC
3811 O'HARA STREET
PITTSBURGH, PENNSYLVANIA

December 4, 1948

Dr. Norbert Weiner
c/o John Wiley & Sons, Inc.
New York City
New York

Dear Mr. Weiner:

I should greatly appreciate receiving a copy of your excellent monograph dealing with teleological mechanisms.

I believe that this was published in the Annals of the New York Academy of Sciences for 1948.

Sincerely,

A handwritten signature in cursive script, appearing to read "R. A. Patton".

R. A. Patton
Director of Research

RAP:rce

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BRISTOL CONNECTICUT

December 6, 1948

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge 39
Massachusetts

Dear Professor Wiener:

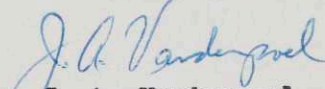
Your letter of November 30th is just the answer we have been waiting for and your estimate seems most reasonable. We are fully in accord as to terms and hope you will find the time to soon start on this project.

You are right in your appraisal of the integrals as elliptics. They are developed from the use of the Hertz Theory of solid elastic bodies in contact and the geometry of ball bearings.

I am going to try to get to Cambridge some time soon concerning another problem we have which is too complex and undeveloped to describe by mail.

Very truly yours,

NEW DEPARTURE


J. A. Vanderpoel
Research Engineer

JAV:um

[Handwritten scribble]

NOTHING ROLLS LIKE A BALL

MANUFACTURERS OF NEW DEPARTURE BALL BEARINGS & NEW DEPARTURE COASTER BRAKES

RESEARCH LABORATORY OF ELECTRONICS
CHALMERS INSTITUTE OF TECHNOLOGY
GOTHENBURG, SWEDEN
Cable-address: Chaltel, Gothenburg

Gothenburg, December 6, 1948.

Our ref.

Your ref.

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge 39, Mass

Dear Professor Wiener,

Do you have any copies you could send me of your article "^{Time,}~~Time,~~ Communication and the Nervous System"? I have shown this article to several people in Sweden and it has aroused great interest.

If you don't have any further copies, would you mind if I had the article copied to show to others here?

One of the men who would like to see this article is Dr. Velander, the chairman of Ingeniörsvetenskapsakademien in Stockholm.

I gather from some American newspaper that your "Cybernetics" has appeared. No copies are yet available in Sweden and I should therefore like to ask you to send me a copy, for which I shall be able to pay by American check. It would be especially good if you could inscribe something on the title page.

This Friday I am going to Stockholm to attend the Nobelfest, and I hope to meet many interesting people.

Sincerely yours,

Henry
Henry Wallman

285
29
3.14

December 6, 1948

Mr. S. B. Littauer
Department of Industrial Engineering
Columbia University
New York 27, New York

Dear Sebastian:

I will try and have the article for you some-
time toward the end of January. At present I am
very busy on my work with Dr. Rosenblueth, but
he is leaving next week.

I think I would be able to participate in the meet-
ing of the Philosophy of Science Association if you
will let me know soon when it is to be held.

Sincerely yours,

Norbert Wiener

NW:mz

December 6, 1948

Dr. N. Rashevsky
University of Chicago
Committee on Mathematical Biology
Chicago 37, Illinois

Dear Dr. Rashevsky:

Thank you very much for your interest in my book, Cybernetics, and I shall be most interested to see the review in the "Bulletin of Mathematical Biophysics."

Thank you also for the manuscript by Rupprecht Duell.

Sincerely yours,

Norbert Wiener

NW:mz

INTERNATIONAL CONGRESS OF MATHEMATICIANS

LOW MEMORIAL LIBRARY, 531 WEST 116th STREET

NEW YORK CITY 27, U. S. A.

December 7, 1948

To a Group of Mathematicians in the
Field of Analysis

Dear Colleagues:

On behalf of the Committee to Select Foreign Hour Speakers in Analysis for the International Congress, you are requested to vote on the enclosed list of foreign mathematicians who have been suggested for the Analysis program. As you know, the program in Analysis will consist of regular Sections of contributed papers and a Conference in Analysis on the following topics: the structural (abstract algebraic and group-theoretic), global (analysis and differential geometry in the large), and extremal (analytic function-theoretic) aspects of analysis, with a consideration of interrelations between analysis, algebra, and topology.

Will you please number the men on the enclosed list from 1 to 30 according to your estimate as to their desirability as Foreign Hour Speakers in Analysis omitting no name from the rating, and starting with a "1" opposite the name of the mathematician you consider most desirable.

Other names may be written alongside of the given list in a position indicating their relative rating. Any comments or objections to a candidate may be written in and will be carefully considered.

Please sign the rating; otherwise by direction of the Organizing Committee, the rating cannot be considered. These ratings will be submitted to the Organizing Committee together with recommendations from our Committee. Thanks for your assistance.

Very truly yours,

Marston Morse
For the Committee

Please reply to Marston Morse, Fuld Hall, Princeton, New Jersey, before December 18, 1948.

Committee to Select Foreign Hour Speakers in Analysis:

Marston Morse (Chairman), Salomon Bochner,
G. C. Evans, T. H. Hildebrandt.

UNIVERSITY OF ILLINOIS
DEPARTMENT OF ELECTRICAL ENGINEERING
URBANA

December 7, 1948

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

Dear Professor Wiener:

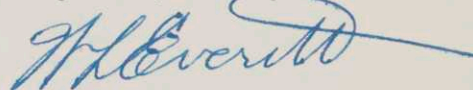
The Department of Electrical Engineering at the University of Illinois is making arrangements for a dedication ceremony for their new Electrical Engineering Building. This ceremony is to take place May 19, 20 and 21 of 1949. In addition to a program of a more or less conventional character, a Symposium entitled "Expanding Frontiers in Engineering" is being arranged to run over these 3 days.

We are trying to get a small group of men who are leaders in the fields corresponding to titles of the various sessions listed under this Symposium to participate in this program. I hope that you will see your way clear to attend this Symposium as one of the invited speakers. In particular, we should like you to present a 1/2 hour discussion on the subject "Statistical Problems in Electrical Engineering". This subject is on the May 20, afternoon session.

The University has agreed to allow an honorarium of \$150 in lieu of expenses for each of the speakers invited to present papers at the Symposium.

I would greatly appreciate receiving your reaction to this proposition.

Very truly yours,



W. L. Everitt
Head of Department
Electrical Engineering

WLE:LTD:mj
CC: W. S. McCulloch
J. L. Doob

*P.S. In particular we would like to discuss
the theory as it applies to Cybernetics.*

December 7, 1948

Mr. J. E. Corey
Engineering Research Institute
University of Michigan
Ypsilanti, Michigan

Dear Mr. Corey:

I am not accepting any work in connection with the services, neither have I any report or paper touching the question of rocket trajectory.

Sincerely yours,

Norbert Wiener

NW:mz

PRINCETON UNIVERSITY
PRINCETON NEW JERSEY

Department of Economics and Social Institutions

December 8, 1948

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

Dear Professor Wiener:

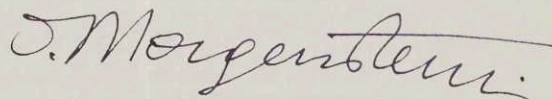
I have just finished reading with the greatest of interest your fascinating book "Cybernetics" and I have also seen your article in the "Scientific American." I hope that the programs for future work laid down there will bear rich fruit. My own thought often goes into similar directions and I have a number of things which I would like to put into more definite form if only I can find the time to do it.

May I, however, point out to you that in your kind references to my own person I should be referred to as professor at Princeton University and not as a member of the Institute for Advanced Study. I mention this only for the record.

I hope that I shall have the pleasure of seeing you soon either here or in Cambridge.

With kindest regards,

Yours sincerely,



Oskar Morgenstern

OM:mbf

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

DEPARTMENT OF PSYCHIATRY

December 9, 1948

ILLINOIS NEUROPSYCHIATRIC INSTITUTE

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

Sir:

Whether or not blank is of the form blank, I have as yet no chance to deduce from the rest of your text, for your Cybernetics is too popular. I have purchased two copies and both of them have already been stolen by my friends.

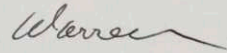
The day before yesterday I was at Urbana at the request of the group who are about to construct a computing machine, probably to be copied after von Neumann's, section by section. I found them all steamed up about your book, to which the chief objection was that you had not called it "Goobernetics." They are eager to have you come down to their meetings in May. I believe it is a three-day affair, May 19-21, 1949. They are particularly interested in the statistical aspects of communication engineering. I believe it is against the law, or against University regulations, for them to pay anyone's travelling expenses, but they seem to think they could cover this point by an honorarium larger than the expenses would be. I shall probably be there, for in this University we have real team-play instead of skid-grease. If, per chance, I am to say anything there, I would like to talk it over with you and von Neumann first so as to dovetail the physiology into the electrical engineering as neatly as possible.

I want to get up to Tufts to see their records of Kappa potentials, for if they be not artifacts, they may lead us into terra incognita of the frontal lobes. I will phone you from New York where I must present to the ARNMD a white beard, a blue suit and a gold watch chain. It would be most fun if I could work out some date between the 11th and Christmas to see you, Walter and Oliver and, above all, Arturo if he is still there. I would like to talk over with you some of von Neumann's notions of intermediate machines, varieties of memory and probabilistic logic.

For the moment I want simply to second the "proposition" of Dr. H. L. Everett, a copy of which he has sent to me.

The other day I met Doob for the first time and enjoyed his intellect.

Yours as ever,



Warren S. McCulloch, M.D.

WSM:be

cc: J. L. Doob
L. N. Ridenour

UNIVERSITY OF ILLINOIS
DEPARTMENT OF MATHEMATICS
URBANA, ILLINOIS

December 9, 1948.

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

Dear Norbert:

The head of our E.E. school passed on to me a copy of a letter he wrote you asking you to come help celebrate the opening of a new building. I hope that you will be able to come; among other things we could confer on our book while you are here. The E. E. school is very ambitious here, intending among other things to build a high speed calculator. Since it will be built on our own money it will be one of the few machines which can be used for pure research without Naval or other strings.

McCulloch was down here a few days ago and made a good impression talking about brains and such.

I am amazed to discover how many copies of Cybernetics are wandering around here. I do not know whether people understand it, but surprisingly many think that ownership is necessary.

The book is proceeding along at its usual snail's pace. I have been held up trying to do a good job on Markov processes, but think I'll have them licked by Christmas. A reasonable ms. should be ready by May.

Best wishes,

Joe Devot

December 9, 1948

Professor E. Ehrlich Smith
Department of Education and Geography
Randolph-Macon College
Ashland, Virginia

Dear Mr. Smith:

The motion picture audience is indeed the largest in the world, but in some way whether it is the audience or the intermediary channels through which one has to go to reach this audience, I find that there is a great increase in the entropy of any information that seeps through this appalling industry.

This, of course, does not necessarily apply to movies made for educational purposes. At the same time, these have one great inherent disadvantage, namely, they must be seen on the wing. A text book or heavy literary work may be read with pause and interruptions for thought, but the movie must be taken at its own pace. It is true that this difficulty belongs to the drama as well and that the drama as well as the very best of the movies has developed a technique for the pace of a great deal of thought through the limitations of a fixed time presentation. However, while this is thoroughly suitable to thoughtfulness concerning problems of individual human nature and even of human fate, at large, it is not a particularly good way of presenting the philosophy of science.

For this reason, I feel that until thought in this field of mine has become reduced to a sequence of consecutive cliches, there is a great deal to be said for the old-fashioned method of communication through paper and printer's ink, as opposed to the new-fashioned method involving silver emulsion.

Sincerely yours,

Norbert Wiener

NW:mz

December 9, 1948

Mr. W. L. Barrow
Sperry Gyroscope Company
Great Neck, Long Island, New York

Dear Mr. Barrow:

Thanks for your nice note of the first of December. I appreciate very much hearing from you and people in your company, because I realize to the full that in the periods in which servo-theory was nascent, your company was way a head of the field in its ideas.

I am entirely in agreement with you that work on the nervous system may throw a great deal of light on the problem of technical design of servo and other control and communication mechanisms. I think it would not be too much to say that this has already begun to happen. In particular, I have ideas of a learning mechanism which might not be too hard to translate into a workable piece of apparatus. You will find these in my discussion of "To whom it may concern" and "channeled messages". I suppose the best way of sending to whom it may concern messages would be chemical, but there might be other means such as those depending on heat which would make it possible.

However, since nothing has been written on this except that which exists in my newbook, I must refer you there again.

I must say again that living organisms are built of extremely complicated molecules largely of a colloid nature, and offer an extreme complication of structure and space as compared with metal structure, while their time course is rather long compared with what one finds in metal electric circuits. We must work with what we have and in my opinion, the present cue of the engineer is to exploit speed, rather than complexity to obtain the industry which the human body obtains by complexity rather than speed.

Sincerely yours,

Norbert Wiener

December 9, 1948

Mr. Frank P. Jones
180 Marlborough Street
Boston 16, Massachusetts

Dear Mr. Jones:

I should be very glad to talk things over with you on Cybernetics sometime in the future. Why not make it early in the Christmas vacation before Christmas, and why not call up my home address, Belmont 0021 for an appointment. At present my schedule is very full, and I am hesitant of making more appointments for fear of not living up to those already in existence.

Sincerely yours,

Norbert Wiener

NW:mz

Massachusetts Institute of Technology
Cambridge 38, Massachusetts

December 9, 1948

Mr. Henry Wallmann
Research Laboratory of Electronics
Chalmers Institute of Technology
Gothenburg, Sweden

Dear Henry:

Thanks awfully for your letter of December 6. I am having five copies of Cybernetics, the French edition, forwarded to you, that is I am sending the message to Hermann and Cie at Paris. You will probably have them at least as soon as you have my letter. I am taking care of the payment for them myself, and you are at liberty to distribute them in any way you think best. When you come back, I will do the signing for you.

I am also forwarding the article on Time, Communication and the Nervous System to you, and hope that you can place it where it will do the most good.

The letters from you and Norman are fascinating, but I wish they were more detailed. You certainly are doing a splendid job.

I see you are going to the Nobelfest. Damn the memory of Mittag-leffler for having quarreled with Nobel and made a mathematical prize impossible.

Sincerely yours,

N. Wiener

P. S. Best regards to Mrs. Wallman and the kids. Ditto to the Levinsons. If you get in touch with them soon you might find if Norm has a copy and if not give him one.

NW:mz

5, Old Mayor's Court
Calcutta 5. India
December 10, 1948

Dear Prof. Wiener,

I learn from a letter of Dr Francis Bitter written to Prof. S.N. Bose, which Prof. Bose kindly showed me, that you will kindly receive me in your laboratory, provided I do not get involved in any secret work. I also gather from that letter that you have already written to me stating the position. Unfortunately, I have not yet received this letter.

As regards my position, I wish to make it clear that I do not work in a Government Department, nor have I any connection or interest in any secret research work, related to Defence. The Government of India, which selected me as a candidate for the UNESCO Fellowship at the recommendation of the National Institute of Science, has not laid down any condition of my acceptance of the fellowship, nor has it suggested to me the subject-matter of my study abroad, in case I am awarded the fellowship. If I am given the opportunity, I shall try my best to learn the details about Modern Differential Analysers, in which I as well as my Professors here are interested.

Regarding my qualifications, I think it would not be inopportune if I say a few words. I have done some work on the Boundary Value problems of Laplace's Equation relating to two bodies, and have published some results, unfortunately most of it remains yet to be published. Also I have done some work on a problem of Diffusion in Chemistry, a gist of which has been published. Besides, I have picked up some knowledge about designing and constructing mechanical things, during my association with a technical project of construction of an Ultracentrifuge, the work of which was entrusted to me.

I shall consider it a great privilege on my part, if I get the benefit of your deep knowledge and wide experiences in the branches of Mathematics in which I am interested.

With kindest regards,

Yours sincerely,

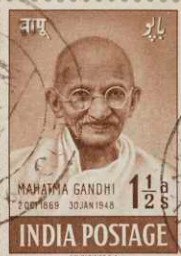
Samarendra Kumar Mitra

(Samarendra Kumar Mitra)

BY AIR MAIL

AIR LETTER

IF ANYTHING IS ENCLOSED
THIS LETTER WILL BE
BY ORDINARY MAIL



Professor Norbert Wiener, Ph.D.,
Head, Dept. of Mathematics,
Massachusetts Institute of Technology,
Cambridge, Massachusetts

U.S.A

Third fold here

Second fold here

Yours sincerely,

(Generalissimo Kumaar Mitra)

To open cut here

Dear Prof. Wiener,
I learn from a letter of Dr. Francis Bitter
written to Prof. S.H. Bose, which Prof. Bose kindly showed
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Batter from that letter that you have already written to me
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December 10, 1948

Calcutta, India

OFFICE OF THE
PUBLISHER



8 ARLINGTON STREET
BOSTON 16, MASS.

The Atlantic Monthly

CARBON COPY
For Your Information

December 10, 1948

Mr. Cleanth Brooks
1315 Yale Station
Yale University
New Haven, Conn.

Dear Mr. Brooks:

Our copyright in the four selections from the ATLANTIC: "Football is King" by Frank Sullivan, "A Scientist Rebels" by Norbert Wiener, "The Scientist Fights for Peace" by Louis Ridenour, and "Have Nations Any Morals" by W. T. Stace, is held as a trust for the individual author. It will be necessary for you to write direct to each author for the reprint permission you wish -- paying each direct any reprint fee which may be stipulated.

The ATLANTIC will be glad to concur in any permission given you by the various authors, provided you include the conventional copyright credit to The Atlantic Monthly.

Mr. Frank Sullivan
135 Lincoln Avenue, Saratoga Springs, New York

✓ Dr. Norbert Wiener
Massachusetts Institute of Technology, Cambridge 38, Mass.

Louis Ridenour
508 So. Ridgeway Street, Champaign, Illinois

Prof. W. T. Stace
131 Patton Avenue, Princeton, New Jersey

Very truly yours,

Donald B. Snyder

DBS:h

cc to each author

Tokyo Institute of Technology
Oh-okayama, Meguro-ku
Tokyo, Japan
December 11, 1943

Dear Prof. Wiener,

I am very happy to learn that Kakutani found you in good health and vigorously engaged in research. Kakutani wrote me that he listened to your lecture on a simplified proof of the prime number theorem in the form as given by Selberg and Erdős. My memories of M.I.T. are so stirred that I feel very, very sad to find myself tied up with the reorganization problems of our Institute and others in general. Since I am practically only one who has experienced American way of education, I am constantly in demand to answer and explain what do mean the new systems, which are yours.

Recently Dr. Compton sent me his President's Reports and catalogue, which I am studying with admiration and envy. From them I have learned what the present M.I.T. and your Department, in particular, are accomplishing. M.I.T. is a dream land which we can never reach. At this point I hasten to add my congratulation to you for the honorary degree from Tufts College. Through the NEWSWEEK your recent work is widely known here. Of course, I am very proud of myself to point out to every one I meet that Professor Wiener is my teacher. Now I must apologize for my failure in acknowledging your pre-publication paper, "Time, Communication and the nervous system".

In the catalogue I am happy to find Dr. Yuk Wing Lee teaching in the Electrical Department. His subject, Optimum linear system, sounds extremely interesting. I wish I could learn his programmes in details. Please convey my best wishes to Dr. Lee.

The Department of Mathematics of T.I.T. is still small with only two professors, namely, Tatsuo Kawata and myself, but from next year we shall start building up to a respectable place at least in Japan. From now on as never before we shall need your sympathetic guidance and help from you and your colleagues in making a good department here. For a long time to come we shall not be in a position to purchase anything from the States. Under such circumstances we shall be very much obliged to you all if you could spare reprints of your department. In a few days I shall send a similar request to Dr. Martin, also asking questions on educational problems.

In order to transplant American ideals and culture to Japan I have written two books. In one of them I wrote something about you ; Kakutani may read it to you. In his letter he did not mention about the books, so he may deliver them before long, I do hope.

About a year ago my family were reunited in Tokyo. Three sons, 10, 5 and I are making the home a noisy as well cheerfull place. Mother died last April after a short illness, but it was a little consolation to have her in my own house at the time of death. It is a matter of course for us to suffer after the war, but it is really annoying to have the electricity cut off several times a day. The "black out" spoils our supper every day. At the Institute we have ^{no} heating systems with its consequent misery during winter. Hard living becomes a good prey for communism here. Since I have experienced the American way of life, I cannot understand those who favor communistic life. They are longing for the life behind the iron curtain, which moreover no one has actually seen in details. Only sound education will help Japan from the claw of the Polar Bear. Your country is helping us in many ways, but greater emphasis on education will pave a long way towards a happier nation in the world.

I should have written you a long time ago, but daily routine has kept me too busy. As you believe in M.I.T., I am convinced that our Institute must bear great responsibility in establishing marching front of democracy in Japan. T.I.T. is the only one of its kind here at present. Therefore I am doing my best to make ours a little M.I.T. in the orient.

My family joins me in sending you, Mrs. Wiener, Barbara and Peggy a merry Christmas and a Happy New Year. And also I wish you to give my best wishes to your colleagues.

Sincerely yours,

Shikao Ikehara

1315 Yale Station
New Haven, Conn.
Dec. 13, 1948

Dr. Norbert Wiener
Massachusetts Institute of Technology
Cambridge 38
Mass.

Dear Dr. Wiener,

In collaboration with Mr. Robert Penn Warren, I am preparing freshman rhetoric, to be published by Harcourt, Brace and Company. The book will sell for approximately \$3.00. In this book we should like to reprint your essay, "A Scientist Rebels," which appeared in The Atlantic Monthly, Jan. 1947

The Atlantic Monthly has referred us to you for permission to reprint this essay. If we may do so, will you let us know how acknowledgment is to be made, and the fee, if any.

Sincerely yours,

Cleanth Brooks
Cleanth Brooks

December 13, 1948

P
Professor W. O. Everitt
Department of Electrical Engineering
University of Illinois
Urbana, Illinois

Dear Professor Everitt:

I should be very happy to be present for the
Symposium on May 19, 20, 21 for the dedication
of the new Electrical Engineering Building.

Thank you very much for your kind invitation.

Sincerely yours,

Norbert Wiener

N":mz

December 13, 1948

Mr. J. R. Kline
Department of Mathematics
University of Pennsylvania
Philadelphia, Pennsylvania

Dear Kline:

Until now, I have been retaining the idea of going to the Ohio State meeting as a "bon Bouche" to reward myself for the labors of the year. I now find that I am so utterly swamped with the various literary and scientific undertakings I have under way that I am going to try to get up to the country with Gretel and rest up.

If there is anything at the meeting that you think makes my coming really important, I shall be glad to come. This is not running out on anything, and don't interpret it as any lack of good-will.

Sincerely yours,

Norbert Wiener

NW:mz

December 13, 1948

Mr. Oskar Morgenstern
Department of Economics
Princeton University
Princeton, New Jersey

Dear Morgenstern:

Pardon the gaffe of putting you down as an
Institutor when you are really a Princetonian.
I appreciate very much the nice thing you have
to say about Cybernetics, and especially coming
from you. I need not tell you how much I value
the book on games which Johnny and you have done
jointly.

I certainly hope I shall have an opportunity to
see you soon.

Sincerely yours,

Norbert Wiener

NW:mz

APPARATUS DEPARTMENT

**GENERAL  ELECTRIC
COMPANY**

MAIN OFFICE SCHENECTADY, N. Y.

1 River Road
Schenectady 5, N. Y.
December 14, 1948

return

Dr. Norbert Wiener
M.I.T.
Cambridge 39, Mass.

Dear Wiener:

On further consideration of your letter of December 3 and our conversation in Cambridge on the 7th, it seems worth while to state my views about your proposed visit more fully.

The General Electric Company is organized to render service--to our customers, to our employees, and to the public generally, as well as to our stockholders. The money that we earn is simply a return for the services rendered, and its magnitude is a rough measure of the value of those services. We could no more be successful, if our primary purpose were the earning of money, than a person can be happy, if he makes being happy his primary purpose.

One of the important services we render is the free publication and wide distribution of the results of our engineering and research activities. Our engineers make a great many scientific addresses without compensation. Another service is the hospitality we extend to visiting scientists and engineers, who come to Schenectady in great numbers, to see our laboratories and to talk with our scientists. Since the gaining of knowledge is a two-way process, we generally find that the men from whom we gain the most inspiration are the very ones who, on leaving, feel that they have received much more than they have given. Certainly, we do everything in our power to make the exchange of ideas a two-way street, and to give as much as, or more than, we receive.

I have talked with Mr. Mulvey about the possibility of holding February 9 open for you to speak on SCIENCE FORUM, but he says he cannot now do this. Also, I have been unable to develop enough interest in any considerable group of engineers to warrant my arranging any formal lecture or organized meeting when you are here. On the other hand, I very sincerely would like to have you come to Schenectady, and get acquainted with some of our activities and people.

GENERAL  ELECTRIC

Norbert Wiener

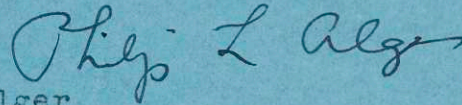
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2

I believe that, if this were done, the result might well be to develop a more formal arrangement, that would be profitable to you as well as to us in the future.

Therefore, I renew my invitation for you to come to Schenectady on either February 8 or 9, or both days, with no obligation for you to talk to any formal group, but with a cordial invitation for you to see what we are doing in unrestricted areas, and talk with any one you wish. We shall be glad to pay your expenses for such a trip, but not more.

Sincerely yours,



P. L. Alger

PLA:RS

Answered: December 17: Dear Sir: My patience and the present correspondence are at an end.

Yours very truly,

Norbert Wiener

December 14, 1948

Professor J. Doob
Department of Mathematics
Urbana, Illinois

Dear Doob:

Thank you for your letter. I have written to
Everitt saying that I will come in May. This
will be a fine opportunity to go over the book.

I was delighted to hear that Cybernetics is go-
ing so well around Urbana.

Sincerely yours,

Norbert Wiener

NW:mz

December 14, 1948

Dr. Warren S. McCulloch
University of Illinois
College of Medicine
912 South Wood Street
Chicago 12, Illinois

Dear Warren:

I have written to Professor Everitt to tell him that I will be delighted to come to the symposium in May. When you call me from New York, I will make arrangements to see you.

Sincerely yours,

Norbert Wiener

NW:mz

Topics for the Following Seminars

- I. Is mathematics a Science? (~~R. R. Hurewicz~~ ^{W.} ~~W. A.~~)
- II. Relations between "pure" and applied science.
(General, Wiener; Mathematics to Natural Sciences, Lin;
Physics to Engineering, (Allis); Physiology to medicine, (Simeone).
- III. Economic or autonomous interpretation of the history of science (Struik).
- ✓ IV. Non-logical aspects in scientific research. (Rosenblueth).

~~Topic~~ Social Factor in the 19-20-19

Topic -

Architecture (architect)

~~American History of~~ ~~Architecture~~ ~~19-20-19~~ - ~~19-20-19~~ - ~~19-20-19~~ -

R. S. McMullan - } Architecture Collaborations
Warren Fletcher - } Kin-7-6088 -

Luigi Tiesi (878)

Geoffrey H. Frank - Harvard -

Methods of Quality - 1. Harold Truman - Economic

December 15, 1948

Mr. Cleanth Brooks
1315 Yale Station
Yale University
New Haven, Connecticut.

Dear Mr. Brooks:

I will be very happy to have you reprint my article
"A Scientist Rebels" in your book with Mr. Warren.

Acknowledgment may be made by simply stating that
the article was written by Dr. Norbert Wiener,
Professor of Mathematics, Massachusetts Institute
of Technology and that permission to reprint has
been granted by him and the Atlantic Monthly.

The fee for the use of the article is \$10.

Sincerely yours,

Norbert Wiener

NW:mz

THOMAS S. SZASZ, M. D.
664 NORTH MICHIGAN AVENUE
CHICAGO 11, ILLINOIS

December 17, 1948

Dr. Norbert Wiener
M.I.T.
Cambridge, Mass.

Dear Dr, Wiener:

I read with interest your article on Cybernetics which appeared in the November 1948 issue of the Scientific American; I would appreciate receiving a reprint of this paper. Thank you for your favor.

Very truly yours,

Thomas Szasz.

Thomas Szasz, M.D.

*saved my own copies -
T - [signature]*

Massachusetts Institute of Technology
Department of Mathematics
Cambridge 38, Massachusetts

December 17, 1948

Mr. William D. Carter
United Nations Education, Scientific and Cultural Organization
19 Avenue Kleber
Paris 16, France

Dear Mr. Carter:

I have just been in touch with Mr. Mitra and have explained to him the terms under which I am willing to work with him.

Sincerely yours,

Norbert Wiener

NW:mz

December 17, 1948

Professor Samarendra Kumar Mitra
5 Old Mayor's Court
Calcutta 5, India

Dear Mr. Mitra:

Practically all the active work on computing machines at Massachusetts Institute of Technology is restricted or work under government supervision.

I shall be delighted to give you all the advice I can, but you will understand that what I have to give you falls far short of the laboratory work in the subject.

If you still care to work with me I shall be available between now and the summer.

Sincerely yours,

Norbert Wiener

NW:mz

Dec. 20, 1948

Dear Sir:

Having read your article in the Scientific American it becomes necessary for me to study it more. However, I still fail to see where there is any similitude of man to a machine, first because man does not rotate, but alternates, and second, no machine can operate unless energy is applied to it.

An electric generation will produce electron flow if power is applied to it; a motor will operate if these electrons are supplied to it by the generator, but there must be a closed circuit for both or they do not function.

The human body is a self-commencer, and though no matter what the activity there must be a circuit. Deficiencies of circuit or impediments to the flow of electrons gives a low power factor to the body. A confirmed gambler has one-circuit set up as far as any other activities are concerned; Leonardo daVinci had a multiple-circuit set up.

Life gave Mr. X 50 years to follow his vocation; he had no avocation. A year after retirement found him dead or dying: the vocation circuit had ceased to function and his failure to self-commence another circuit led to disintegration.

Have you other circuits you could cause to function, even dropping heavy use of mathematics entirely? Would your own present type of circuit try to add to a daVinci's circuits or try to induce him to follow only one and not take much interest in his avocation? Do you believe that a plan of closing circuits for the one-track person after the single circuit has been in use for some time could be developed as an aid to humanity? It may be simple or it may be complicated, but some way should be found for closing circuits for human beings who need them.

Sincerely yours,

C. H. Annis

Claude H. Annis
1702 South 52nd Street,
Tacoma 8, Washington

Impedances.

ROOM 5500
49 WEST 49TH STREET
NEW YORK 20

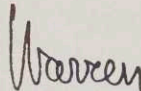
December 21, 1948

Dear Norbert:

I appreciate very much your having asked the publisher to send me a copy of your new book on "Cybernetics." I have read the first chapter three times, and think that I really understand it now; and I have at least read through all of the rest of the book. It is fascinating and important material, and you deserve enormous credit for having done all of this.

I am sure that you have been following the work which Claude Shannon has recently published in the Bell technical journal. It seems to me that this is also first-rate. He is so loyal an admirer of yours that I find it difficult to decide how much of this was really inspired by you, and how much he deserves individual credit for. That is probably a very bad question to put to you, but I would nevertheless be interested in your comments.

Cordially,



Warren Weaver.

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

WW:aeb



electronics

DESIGN • PRODUCTION • USE

ESTABLISHED 1930 BY MCGRAW-HILL PUBLISHING COMPANY, INC. • MCGRAW-HILL BUILDING • 330 WEST 42nd STREET, NEW YORK 18, N. Y.

December 22, 1948

Professor N. Wiener
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Professor Wiener:

Keith Henney has suggested that I send to you the attached page proofs of an article to be published shortly in ELECTRONICS. In view of your development in the field of cybernetics, we believe you might be interested in the capabilities of the machine described in this paper. It will appear that this device might prove to be a most important link between the human mechanism on the one hand and sources of waveform information on the other.

Your comments would be much appreciated.

Very sincerely,

Donald G. Fink
Editor

DGF:am

Trinity College,
Cambridge, England.

22nd December, 1948.

Dear Professor Wiener,

I hope you will pardon me taking the liberty of writing to you for some mathematical advice. I am very interested (as a not-very-good applied mathematician) in turbulent motion of a fluid, and as a consequence, in the harmonic analysis of random functions. I am acquainted with your own work on the spectrum of such functions (e.g. your paper in Acta Mathematica, 1930). The questions which I have in mind concern the difference in phases of any two of the Fourier components. As you probably know, the phase relations determine the mean value of the product of three turbulent velocity components (two at one point and one at another point in space) and are relevant to a discussion of the way in which the non-linear terms of the Navier-Stokes equations produce a transfer of energy between different frequencies of the spectrum. This non-linear dynamical effect is very complex, and I am not optimistic that we shall achieve a satisfactory analysis for some time to come. But in the meantime it would be a step forward to be clear about the purely kinematical analysis of the turbulent flow pattern into an energy spectrum on the one hand and a phase distribution on the other.

Now my query is this: is there some mathematical reason which prohibits a rigorous generalized harmonic analysis of stationary random functions so far as the phases are concerned? I have not got sufficient mathematical ability to be able to judge whether it can be done, although I am aware of the need for results corresponding to those already known for the spectrum. I do not think (although you may be able to correct me here) that anyone has even written down a precise definition of the difference in phase for any two Fourier components of a random function which continues to oscillate at infinity. It seems to me that since a Fourier component has just two elements, amplitude and phase, and since almost all the published work on generalized harmonic analysis concerns the amplitude, there must be some very good reason why people have left the phase alone. If so, I am unaware of the reason and would be grateful for your comment. If there is no intrinsic difficulty I think that I should like to attempt the task myself or else to persuade one of my mathematical colleagues to do it.

Yours sincerely,

G. K. Batchelor
G. K. BATCHELOR.

BY AIR MAIL

AIR LETTER

IF ANYTHING IS ENCLOSED
THIS LETTER WILL BE SENT
BY ORDINARY MAIL.



Professor M. Wiener,
Department of Mathematics,
Institute of Technology,
Cambridge 39
Massachusetts
U.S.A.

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To open cut here

Sender's name and address :-

Si. K. Bachelon
Trinity College
Cambridge

To open cut here

ROBERT MAYNE

671 DORIS AVENUE

AKRON, OHIO

December 22, 1948

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

Dear Dr. Wiener:

I am an engineer presently in charge of a rather large Research and Development Group and I can hardly say how thrilled I have been with your book "Cybernetics".

For some fifteen years I have been following a train of speculation which appears to have a remarkably similar pattern to that of your book. As you seem to have done, I too started with an interest in methodology. I have also attempted to bring dynamic concepts to the study of behavior, made free use of closed loop systems and in some cases even, used your language. In an unpublished talk, for instance, I said that a certain behavioral problem "lay in a no man's land between Physiology, Psychology and Physics".

There are naturally some differences of development. I am not a mathematician and have nothing to say about the mathematics of a theory of communication, even though communication itself has interested me a great deal. I have attempted to give scientific method a greater degree of generality which would allow it to handle problems of the mind. For instance, in the consideration of mathematical induction I am interested in the psychological problem of a Poincaré, being on the one hand convinced of the validity of mathematical induction carried to infinity and on the other hand attempting to demonstrate that the process involves a contradiction. The answer to this problem, as I see it, is only a shade different from the one you outline in your book but, I think, a rather significant shade.

Again I considered the problem of realism and idealism and tried to determine how the classes corresponding to the words real and unreal are arrived at by the mind. So science in the last analysis, in my system, is reduced to psychology. I have the outline of a book for which I have tentatively selected the ambitious title of "A System of Universal Science". In this system there is a distinction between "Behavioral" and "Physical" phenomena but it is not one between Bergsonian and Newtonian time. I completely agree with your criticism of Bergson concept of the difference between vitalism and mechanism, although I feel that Bergson had an intuition which cannot be entirely disregarded.

In your book you diagram the operation of the so-called "affective tone" mechanisms. One of my major efforts has been towards the formulation of theories of the various "affective-tone" mechanisms as you call them. I have tentative theories of aesthetic, the sense of humor, repugnance and irritation, the formation, stability and decay of objectives, etc., and have tried to account for the whole of behavior on the basis of the operation of these mechanisms. This operation involves closed loop systems approximately as you have indicated.

You may be interested in the attached patent covering an application of the theory of the mechanism of repugnance and of aesthetic to a therapy of motion sickness. The idea is only partially outlined in the specifications and is briefly as follows.

In the mechanism of stabilization, the inner ear is designed to give a rate of indication and, through integration, probably a position. This view is not shared by physiologists but the evidence that such is the case is overwhelming to a control engineer. As a matter of fact, it is hardly possible to devise an experiment which has not already been conducted and which, properly interpreted, does not fit the theory. The structure of the vestibular organs also is in complete agreement with the theory.

The mechanism of the inner ear gives three angular and three linear rates. The time constant of this mechanism, however, is such that the signals are linear only for the relatively high frequencies of normal body activity. For low frequencies it gives a completely erroneous indication of velocity or position. A conflict results when these indications are compared with those of joint position or force senses. Again the evidence to this fact is overwhelming when the countless previous experiments are properly interpreted.

A conflict may produce a number of "affective tone" reactions including surprise, humor, repression, activation. In the case of motion-sickness the reaction is one of repression, with the operation of what I have called the mechanism of repugnance and attending nausea.

Now repugnance was not invented for the purpose of explaining motion sickness. It fits in as one of the "affective tone" loops you have indicated. It is part of a secondary system of pain and pleasure. Freud saw the importance of repugnance in the control of behavior but was unable to formulate its theory. You may have run across a book of Jean Paul Sartres entitled "La Nausée". It is indeed impossible, as I see it, to begin to understand behavior in fields such as ethics, social conduct, etc. without a theory of repugnance.

The therapy outlined in the attached patent depends upon producing sensations which can be correlated satisfactorily with the kinaesthetic senses so that the conflict produces no reaction, all of this in accordance with a theory of aesthetic. My experimental work is very incomplete but the attached report will show that there is something to the idea.

I feel that the idea will relieve motion sickness but more important, it is a rock bottom experiment in psychotherapy. Motion sickness, like shock, is a circular process similar to those occurring in psychopathology. These processes, I believe, involve slow and fast phenomena, the slow phenomena being independent of the conditioning of reflexes. The proposed therapy would, I believe, give important leads to a new type of psychotherapy in breaking up those circular phenomena or, as the doctors call them with a degree of intuition in the matter, "vicious cycles".


You will perhaps have noted the very important implication of my theory of motion sickness to psychopathology. Somatic disturbances in symmetry with this theory would be produced not by a process of mental interferences as implied by medicine or one of symbolism as vaguely stated by psychoanalysis but by a purposeful, designed mechanism of controlling behavior.

Following this idea, I have what I believe to be a possible line of attack for psychosomatic troubles such as certain types of heart disease, and perhaps for mental disturbances as well. This line of attack is based upon a tentative theory of the mechanism of objective.

I have in preparation a paper which I intend to title "Motion Sickness - Its place in psychology" and which will give a few of my general ideas. I will be very much interested to know your reactions to the ideas crudely outlined here and whether you feel as I do that they fit in the general pattern of "Cybernetics".

With the best Season's Greetings

Sincerely yours



Robert Mayne

RM/emg

P.S. You may wonder why I went to the Patent Office instead of to a publication with this idea of motion sickness. In the first place, I could find no psychologists who understood the broader significance of the idea and the Patent Office was a natural place to go for an engineer with an invention. In the second place, I felt that a new philosophical system would be easier to sell if one of its practical applications could be demonstrated. Then it appeared to be a way of solving a financial problem of supporting myself while attempting to develop this system. Finally, I rather liked, at the time, the idea of going from Descartes, Locke, Hume and Berkeley to the Patent Office and commercial application, bypassing the modern stuffy interpretations of philosophy.

2 Gracie Square
New York, 28, New York

December 23, 1948

Prof. Norbert Wiener
Massachusetts Institute of
Technology
Cambridge, Massachusetts

Dear Sir:

I take the liberty of writing you because I wish to call to your attention a book published in 1942 in France (Ed. Albin Michel) by Mr. Pierre Vendryès entitled "Vie et Probabilité". Prof. Louis de Broglie has written a preface to this book, but I do not know if this book has had a wide circulation.

One of Mr. Vendryès' main points is the living body's ability to maintain in his "milieu intérieur" constant conditions (e.g. temperature, glycogen content in blood, etc.), by means of "tampons anti-chance" which are similar to your feed-back devices.

I do not know if there is an English translation of this book, but you will certainly like to read at least its mathematical chapters. The need for a science of the type of your cybernetics is clearly indicated in Mr. Vendryès' book and I feel sure that you will enjoy reading it.

Respectfully yours,

Edwin Hermann
Edwin Hermann

EH:ABB

Columbia University
in the City of New York

[NEW YORK 27, N. Y.]

DEPARTMENT OF INDUSTRIAL ENGINEERING

December 23, 1948

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Norbert:

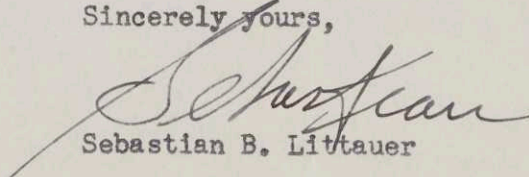
I am very happy that you are willing to participate in a meeting of the Philosophy of Science Association. I have just now been able to fix a tentative date, namely, Saturday, March 12th. If you cannot make that particular Saturday, would you suggest another one near to it?

We are planning to have two sessions, the morning session on your work and an afternoon session of shorter contributed papers. We were wondering if it would be agreeable to you to have two speakers and possibly two discussants. We thought that it would be nice if you were willing to present the article that you are now writing on your Philosophy of Communication. If it is agreeable to you, we would ask Dr. Frank, the psychologist, to be the second speaker on the program. Then we would get discussants who are competent to deal with the subject. The time allotted for each of the two principle papers might be 45 minutes each, while two discussants might have fifteen minutes each. Hence the morning session could be run off very nicely in $2\frac{1}{2}$ hours so that the afternoon session could go on at 2 o'clock.

I hope that these arrangements will be agreeable to you, and that you will find it worth your while to lend this meeting your prestige. I want you to know that I have talked to a number of my associates in the Philosophy of Science Association, and find them most enthusiastic about your work, and very anxious for you to deliver your paper at this meeting. I look forward with considerable personal interest to your participation in this session.

I have been recommending your "Cybernetics" to everyone whom I meet, and even some who cannot recognize an integral sign have purchased the book and are reading those portions which are not mathematically expressed. I am sure that it is exercising a profound influence on modern scientific thought.

Sincerely yours,


Sebastian B. Littauer

SBL/gc

JOHN H. ROUSE
PATENT ATTORNEY
704 SOUTH SPRING STREET
LOS ANGELES 14, CALIF.
VANDIKE 2922

Dec. 23, 1948

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge Mass.

Dear Sir:

After reading the review of "Cybernetics" in the current issue of Time magazine, I thought you might be interested in what is possibly the first description of the electric thermostat and hygrometer.

British patent No. 2,448 of 1853 (filed April 24, 1854) entitled "Kraut's Impts. in Apparatus for Regulating Temperature of Stoves, &c." was issued to Henry Kraut of Zürich, Switzerland.

The specification and drawing of this patent disclose several forms of thermostats, including one composed of "two pieces of metal of unequal expansion, soldered or otherwise joined together".

A statement in the patent reads: "I call such apparatus 'thermostator'".

At the end of the patent one finds the following:

"But what I claim is,--

"Firstly, the regulating and maintaining the temperature of water, air, or other fluids, by effecting the opening and closing of dampers, slides, valves, cocks, &c., by means of the electric current.

"Secondly, the indicating and regulating the degree of strength of spirituous liquors or chemical mixtures, by means of the hydrometer in combination with the electric current.

"Thirdly, the indicating and regulating and maintaining the hygrometric state of the air in buildings, rooms, &c., by means of the hygrometer in combination with the electric current."

Very truly yours,

John H. Rouse

JHR:1

C O P Y

1059 Cragmont Ave
Berkeley 8 Calif
December 26 1948

Professor Norbert Wiener
53 Cedar Road
Belmont Mass

Dear Wiener:

December brings back pleasant memories of Mexico City, of which I enclose photograph taken at the Instituto. I wonder whether you are in Cambridge or in Mexico.

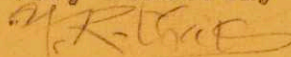
Enclosed are also some sheets, which are not self-explanatory. They were some of the things I talked about last spring in a series of lectures on Types of Symbolic Systems, being a series of public lectures given at the University of California.

I am happy to learn from last week's Sunday Times that your Cybernetics has at last come out. If you have any complimentary copies to spare, I should appreciate having one. If not, I shall get one myself.

Philip Frank visited here last month and I had some nice chats with him.

My wife joins me in sending you and Mrs Wiener our best wishes of the season.

Very sincerely yours,



Y R Chao

1059 Cragmont Ave
Berkeley 8 Calif
December 26 1948

Professor Norbert Wiener
53 Cedar Road
Belmont Mass

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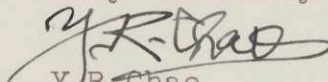
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My wife joins me in sending you and Mrs Wiener our best wishes of the season.

Very sincerely yours,


Y R Chao

12.26.48

Erik Fennel
P. O. Box 101
Waiialua, Oahu
Hawaii

TIME Magazine
TIME and LIFE Bldg.
Rockefeller Center
New York 20
N.Y.

Gentlemen:

A plague upon Professor Norbert Wiener for his treatise on Cybernetics, and a king's-size murrain upon you for publicising it!

I make my living writing science-fiction -- (Do you smoke opium or just get stinko to dream up that wild, fantastic, impossible stuff?" my friends ask) -- and characters like Wiener are lousing up the racket.

Nuclear fission used to be a subject upon which a writer could simply crank up and let loose, but no longer. A shoulder weapon hitting like a battleship gun was once sufficiently fantastic, but now several million people know all about bazookas. Supersonic aircraft have become the property of the slipstick pushers. Space flight is still good for a yarn, but already one university offers a course in theoretical astrogation and soon it will be a matter for factual reporting rather than fictionizing. Strange chemical elements not found on a standard periodic table? Just ask AEC -- and see if you can get an answer through the censorship.

Yes, the pincers of technology squeeze inexorably upon the poor science-fiction writer.

Two of my pet themes have been machines (or robots) replacing humans with a civilization of their own, and machines

that go crazy and raise assorted hell for/with their creators.

But from now on the fans will bat my ears down with letters starting, "You're nuts. Wiener says, page x, line xx, that --"

The era of carefree flirting with the psychiatry of mechanisms has departed.

I wish a psychotic robot afflicted with the electronic variant of hydrophobia would bite Dr. Wiener. Hard.

Sincerely,



Erik Fennel

P.S. :- And, damn it, I haven't yet been able to get a copy. The bookstores out here seem to specialize on Faith Baldwin + the transportation service stinks.





Mexico City, Mex., December 27, 1948.

Dr. N. Wiener,
Massachusetts Institute
of Technology,
Department of Mathematics,
Cambridge 39, Mass.

Dear Norbert:

We have already been here a few days but you can imagine the amount of mail and work that was waiting for me. The trip was quite pleasant. I had the opportunity of seeing Bob Morison and Juan in New York and George Acheson in Cincinnati; everything seems to be going along well with them. Bob was pleased to learn about the work ~~we~~ *did*.

I want to tell you again how much Virginia and I enjoyed our stay in Cambridge and how much we ~~are~~ *re* looking forward to your visit here next fall.

With our best wishes for a Merry Christmas and a happy new year to all your family and to you, I remain as ever

Cordially,

Arturo

Dr. A. Rosenblueth.

P. S. Please give Walter and Oliver my best wishes.

(54)

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COMPTE CHÈQUES POSTAUX PARIS 416-50

Paris le 29, Décembre 1948

Monsieur Norbert WIENER

Department of Mathematics
Massachusetts Institute of
Technology

CAMBRIDGE 39. Mass. U.S.A.

Cher Docteur Wiener,

J'ai bien reçu votre cablogramme, me donnant des instructions pour envoyer cinq exemplaires de "Cybernetics" à Mr. Henry Wallman, Chalmers Institute Gottenburg. Sweden qui ont été expédiés le 13, courant.

Vous trouverez ci-joint un article du journal "Le Monde" un des plus importants périodiques français, contenant un article sur la parution de "Cybernétics". Et je me permets d'attirer votre attention qu'un article de l'importance de celui-ci, dans un périodique comme "Le Monde" est un fait tout à fait exceptionnel et tout le monde est étonné, dans leur ignorance de l'ouvrage que nous avons eu l'honneur de publier.

Je saisi cette occasion, Cher Docteur Wiener, pour vous présenter mes meilleurs voeux pour la nouvelle année, dans laquelle j'espère avoir le plaisir de vous rencontrer.

Veillez me croire, votre très dévoué.

W. Feynman

THEODORE H. LASSAGNE
JAMES M. NAYLOR
ATTORNEYS AT LAW
PATENT ATTORNEYS

FRANK A. NEAL
PATENT AGENT

LAW OFFICES

NAYLOR AND LASSAGNE

2607 RUSS BUILDING
SAN FRANCISCO 4, CALIFORNIA
DOUGLAS 2-7543

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PATENT OFFICE PRACTICE

December 29th
1948

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Professor Wiener:

I have just finished reading, with deep interest, your work entitled "Cybernetics" and, upon reading the postlude speculating upon the feasibility of constructing an automatic chess-player, one of my lengthier neuron chains was stimulated.

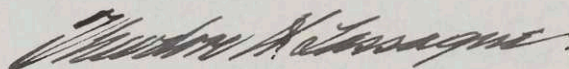
This resulted in my recalling that in the French scientific periodical "La Nature" for 7 August 1920 (No. 2418) at pages 89 to 93, inclusive, one H. Vigneron, in describing a novel automatic calculator exhibited by M. Torres y Quevedo at a then recent exhibition sponsored by La Societe d'Encouragement pour l'Industrie Nationale, adverted to other creations of the same inventor, including an automatic chess-player. The text, which I find in my files, indicates that M. Torres y Quevedo was something of a pioneer cyberneticist: I will quote enough to enable you to determine whether you would be interested in looking up the detailed description of the chess-player which, unfortunately, I do not have.

"Ce savant ingénieur que l'Académie des Sciences vient d'appeler à siéger dans son sein, est bien connu des lecteurs de La Nature; nous avons décrit ici même son télékine qui permet de conduire à distance des navires, des avions, des machines quelconques, exécutant non seulement les ordres transmis, mais encore semblant doué d'un véritable sens de raisonnement qui permet de coordonner leurs mouvements. Cette sorte d'intelligence, dont M. Torrès arrive à doter ses mécanismes est encore plus évidente dans un curieux automate que nous avons décrit aussi en détail, le joueur d'échec. Cet appareil joue, contre un adversaire pensant, une fin de partie, réagissant de lui-même, ripostant aux attaques de son partenaire et cela en respectant les règles assez complexes du jeu, jusqu'au moment où l'un des deux joueurs sera échec et mat, ce que l'appareil, aussi bon juge que bon joueur, signalera immédiatement."

Professor Norbert Wiener
December 29th, 1948
Page 2

My interest in your book arises from the fact that for something more than twenty years a large part of my time has been spent in patent work on various types of computing devices and also on automatic control devices of various kinds. The analysis of these devices essential to the verbal definition of their respective novelties, particularly where the novelty is found in mode of operation rather than in specific structure, is so similar to your own analyses of such mechanisms that I am directing the attention of several of my clients to your work with the expectation that it will orient and stimulate their thinking.

Very sincerely,



THL
RR

5, Old Mayor's Court
Calcutta 5, India.

December 30, 1948

Dear Dr Wiener,

I have received your letter of December 17, and I thank you for your kind offer to work with you. But as I can gather, it is upto the UNESCO authorities, who have have offered me the Fellowship for studying computing machines, to make arrangements for my study. In my application I stated that I desire to study under you in the M.I.T. But I have not received any communication from them yet. You will understand that if I accept the UNESCO Fellowship, I will have to abide by the conditions they make for awarding the Fellowship. In this connection, I wish to have your permission to transmit to them the purport of your letter.

But, I will always value your advice and your guidance, and if circumstances here allow, I desire to proceed to your place and work under you in some near future.

Sincerely yours,

Samarendra Kumar Mitra

Samarendra Kumar Mitra

Prof. Norbert Wiener, Ph.D.,
Head, Dept. of Mathematics,
Massachusetts Institute of
Technology,
Cambridge. Mass.
U.S.A.

90-6
PO [unclear]

U.S.A.
Sampalgar, Nag.
Technological
Research Institute of
New Dept. of Mathematics,
Prof. Norbert Wiener, Ph.D.,

Technological Institute

Dear Sir,

I am pleased to hear from you in your
last letter and in your letter of the 15th
of June. I am glad to hear that you
are still working on the problem of
the stability of the motion of a
system of particles.

First fold here

BY AIR MAIL

AIR LETTER

IF ANYTHING IS ENCLOSED
THIS LETTER WILL BE SENT
BY ORDINARY MAIL.

Professor Norbert Wiener, Ph. D.
Head, Dept. of Mathematics
The Massachusetts Institute of
Technology,
CAMBRIDGE, Massachusetts.
U. S. A.



Dear Dr. Wiener,

Second fold here

To open cut here

TORONTO HYDRO-ELECTRIC SYSTEM



PERSONNEL DEPARTMENT

TELEPHONE:
AD. 2261

JOSEPH GIBBONS BUILDING
14 CARLTON STREET
TORONTO 2
CANADA

December 30, 1948.

Dr. Norbert Weiner,
53 Cedar Road,
Belmont, Mass.,
U.S.A.

Dear Norbert:

I have intended writing you at some length concerning a number of things, especially the Book which I am now reading. This letter, however, is just a hasty note, to ask you if you would be good enough to send to me post-haste a photograph of yourself, preferably a glossy print, to illustrate a review of Cybernetics in our Toronto newspaper "The Globe and Mail". I wrote a review for Bill Deacon, the Editor, and mailed it to him last night. To-day he called me up and asked me, in the most urgent way, to write you for a photo.

Please address it to my home address, 171 Dawlish Avenue.

With the best of the Season's Greetings to yourself and family.

Cordially yours,

Frank Sutherland

Vineyard Haven, Mass.,

Dec. 31, 1948,

Prof. Norbert Wiener
Cambridge, Mass.

Dear Sir:

I wish very much to complete my collection of autographs of our National Academy Sciences.

I think scientists are much more important to our civilization than any other profession, and I am much interested in their wonders.

I am always ready to buy autographs that I can afford, but it is difficult to buy those of people of importance today, as the autograph dealers do not have them, hence we collectors have to make the personal appeal, which, I will admit, must be a nuisance.

Hoping you will be good enough to favor me with a few words.

Yours faithfully,

Howes Norris, Jr.

Howes Norris, Jr.

age 81