

CORRESPONDENCE May 1-15, 1950

Ica. May, 1950]

Mr. Herbert Feibert, Editor Commercial and Financial Chronicle 25 Park Place New York 8, New York

Dear Sir:

As I have recently been misrepresented in one of the newspapers by an inexperienced reporter, I write the following statements to give my opinion on the future of automatic machinery. More material is to appear in a book of mine entitled THE HUMAN USE OF HUMAN BEINGS printed early this fall by Houghton-Mifflin. The technique of automatic machinery to replace human judgment in the factory which originally started with isolated pieces of apparatus and with a series of unrelated inventions as become organized and **xxk** systematized with the use of the electronic computor as the decision center of the apparatus.

Second, This appratus with proper sense organs and effectors is capable of running assembly lines and a whole factory.

Third, The cost of such an apparatus is high at present, but is very rapidly becoming less as research models are beginning to take standard form, and to be subject to mass production.

Fourth, The Apparatus is quite capable of performing ing acts of accounting, aost account and statistical testing as it proceeds with its work of manufacture, and is therefore as much of a threat to the white collar worker as to overall labor. Fifth: The work is transforming the task for the industrial engineer to that of the man who puts on the machine the original instruction or taping. This is a highly skilled takk and must be well done, although probably one or two people can do it for a whole industry. Besides this man, and his small staff the only other people around a factory willbe the maintenance and trouble-chasing crew. Their The work will be greatly facilitated by known methods by which troubles may be made to show themselves before they have actually interfered seriously with the operation of the machine.

Sixth: The machine will havemore and more immediate use in the factory. It will have much less effect on small scale industries like auto-repair and on there agriculture, but **it** is absolutely no reason why the use of these machines may not spread considerably in the future and ultimately come down to an agricultural level. This is a difficult development job, rather than the introduction of any new principle.

Seventh: If the apparatus comes in gradually, it may be possible with the aid of a good deal of thinking to offset the social disorganization and the unemployment caused by a radical reorganization of human valuation in society. If it comes in suddenly, its impact may be catastrophic, and revolutionary.

Eighth: At In the presence of war with Russia, we shall have to face simultaneously a maximum demand for Army personnel for the purpose of occupation, and

and a maximum demand for productive output. These will immediately bring the automatic factory into into importance as one of the first needs for figting a war. The personnel to develop the automatic factory already exists among those trained in electronic engineering in the last war, and among those developed by that generation. It is a conservative prediction to say that the large automatization of industry will then take place in from two to five years. Social reforms are almost never made in war time. We shall thus find ourselves confronted by the know-how of the automatic machine and a large backlog of already constructed automatic machines. Our returning soldiers will face a situation of technological unemployment. This is the stuff of which revolutions are made.

I request that if you mention my name in connection with this material you print this statement above exactly as it stands, making it clear that further comment/on it are your own responsibility.

Very sincerely yours,

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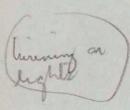
Mr. Clifton Webb--2

Once a human operation has been reduced to a succession of consecutive decisions, each made on the basis of those past, it may at least theoretically be performed by a machine. Machines capable of performing such sequences of consecutive decisions are already known as the mechanical brains which do so much of the modern work of computation. It was inevitable that these machines should take over the work of consecutive decision necessary for the whole factories or assembly lines. If you read last Sunday's New York times, there is an article in the business section which indicates the factory without employees, or substantially without employees as already being used by the Fords for manufacturing parts and subassemblies of the Ford car.

In this sort of factory without employees which is rapidly leading to a second industrial revolution, the work of Galbraith in analysing human operations, intotae sequence of consecutive unit operations is converted into the work of making punched cards or their equivalents by which the whole takk of the assembly line is regulated. In other words, the spirit of Galbraith's work is now developing to the point where the efficiency engineer of the Galbraith type is essentially the only important employee of the factory. The maintenance crew still exists, but its work is cut to a minimum by a process in which defective parts signal their existence by marks on the line, and before the period at which they actually have to be replaced. This modern automatic factory will do its own cost accounting, and its own statistical work, and has as little need for the white collar operator as it has for the man in overalls.

Thus the result of Galbraith's work which was intended to signal a new period of human efficiency has actually gone so far that it is destroying the possibility of human employment. The mechanized human being whom he worshiped, and whome he tried to imitate in his own family is giving way to the machine of glass and steel. It is a sardonic fact that the type of living to which he assigns such human values that he based his whole family existence upon it, is finding less and less place not only for human values, but for human beings. 'In this connection, a thing that was surprising to me, and which I suppose to be faithful in fact in the movie, is that a man whose work had so completely succeeded in upsetting the scale of human values on the one hand, and of such great commercial value to the industries on the other, should have lived a life not of a rich man, but of a cultured gentlemanof the average upper middle-

Was



Representative John H. Marsalis House of Representatives Congress of the United States Washington, D. C.

Dear Sir:

I am enclosing a copy of a letter which I have shet to Mr. Herbert Feibert, Editor of the Comercial and Financial Chronicele. This conveys the present status of my work, and priver, ideas on the second industrial revolution. There are certain points which I should like to bring to your attention. Since the new automatic factor, contain a very small working staff, that staff is likely to be mobile, and there is no particular need for the new type of factory to be established only in regions offering a large supply of skilled labor. They are thus almost as likely to appear in regions such as your own state which are relatively undeveloped industrially, as in the traditional industrial areas provided that there is an adequate supply of raw materials and an adequate transportation to markets.

Ica May, 1950]

They will not tend to bring to such a region any appreciable amount of new employment, but they may indirectly contribute taxable resources, and they will undoubtedly affect either favorably or unfavorably the standard of living. It is quite possible that it is exactly regions such as your state which may be sought out by industries of this sort, because the local labor market is relatively less important than elsewhere, and the unemployment which they are likely to produce will be felt more in the already existing centers of industry than locally. Thus they may easily furnish a real problem which you may have to face on your own ground.

You must realize, however that the problem they present will not only be local but national, and the desplacement of employment cannot but produce great repercussions even in the regions where locally but little employment is displaced. In the centers of industrial population, I foresee an eventual replacement of the majority of those doing repetitive takks in industry by the machine. These displaced people will have to find some new mode of living which will very probably be subsistance farming. It is thus likely to be at a future date, which I cannot name to be a considerable return to the land, and decentralization, which although it will not solve the entire new economic problem will be a factor tending to allevaite it. Under those conditions, the less industrialized and more agricultural or forest or mine regions will receive access to of displaced city people, which will represent a later and more acute form of the problem of the Oakie, and this again may become a matter of considerable interest in your state.

Sincerely yours,

Norbert Wiener

NW:z

2



Ica. May, 1950]

THE ATLANTIC MONTHLY 8 Arlington street boston 16

Dear Professor Wiener.

We take pleasure in sending you your galley proofs. Please return them to us with your corrections, with special attention to the queries we have raised on the margin. We hope it will be possible for you to confine corrections to a minimum as our schedule does not permit extensive revisions.

In order to fit your contribution within even pages, we have had to cut <u>20</u> lines. If these deletions are not acceptable, please feel free to restore them, but be sure to cut an equivalent number of lines.

To keep our time schedule, we ought to have these proofs back in our hands by <u>refurne</u> used otherwise we shall have to pass into page proofs on our own authority.

Thank you for your cooperation.

Faithfully yours,

(Un») Enily P. Flint Research Copy Editor

Robert Schatz Purdue University West Lafayette Indiana

Ica. May, 1950]

Prof. Norbert Wiener Dept, of Mathematics M.I.T.

Dear Sir,

Just recently a book of yours, "Cybernetics", has come to my attention. While reading it, I couldn't help but get the feeling that here was something that would perform invaluable service to the field of scientific endeavor as a whole by standing for the coordination and integration of diversified branches of investigation and to psychology in particular in that it would serve to reduce the subjective character of its approach. Because of the theoretical-mathematical approach which is used in the book, however, it is apparent that just psychological training would scarcely allow a person to pursue Cybernetics adaquately. Personally, I didn't find this fact unduely discouraging in as much as I am also getting a de ree in Electrical Engineering. But even so, while reading the book I felt that my theoretical knowledge was lacking in many respects.

It was mentioned in the book that a list had been compiled of the courses which must necessarily preceed any comprehensive study of Cybernetics. I would appreciate it, then, if you would either send that course of study to me or tell me where I might obtain the information. As of now, I am on the verge of entering Graduate school and so it is only natural that I begin to orient myself in terms of the goals which I am to pursue.

I hope this request doesn't inconvenience you in anyway.

Very sincerely yours Hallert a. Scher

A58 So. Cataluia St., hos Augeles 5, Calif. 1 Mary 1950

Dear Dr. Wisüss :

I gute usant it when I said that I didn't fiel justified in asking a refly to use fetter: and so I doubly appreciated your courtery in reflying. Your letter is a most clear and concise statement. The questions of ethics and behavior worre never of greater ineportances, I think - and so the effort to refate cybernetic analyses to judgment (however difficult) wurd continues to hold our attention. Please accept my thanks. Sincerely, William affrom

57 EAST 55th STREET, NEW YORK 22, N.Y., Eldorado 5-5850

editor • DAVID A. KATCHER

editorial advisers:

RICHARD H. BOLT SAMUEL A. GOUDSMIT PHILIP M. MORSE JOHN R. PIERCE MARK W. ZEMANSKY

May 1, 1950

Dear Professor Wiener:

PHYSICS *today*

We have received for review a copy of The Mathematical Theory of Communication by Claude E. Shannon and Warren Weaver and I wonder if you might be willing to review it for our book section? If so I hope that you will use your own judgement as to the most appropriate length, which I think should depend primarily upon your own evaluation of the work as an addition to the literature. The average length of our reviews is in the neighborhood of 800 words, although on occasions we have carried reviews about twice as long.

The only cautionary note that may be in order is that we are especially anxious to receive material that will be on as intelligible a level as possible for the largest number of people, or in other words that the vocabulary involved should be held to a reasonably nonspecialized region.

A return postcard is enclosed for your reply. If you are interested, a copy will be forwarded as soon as we hear from you. If you cannot see your way clear to taking this on, I should appreciate any suggestion you may have as to another possible reviewer for the book.

Yours sincerely,

R. R. Davis

R. R. Davis

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

RRD:lcr

published by AMERICAN INSTITUTE OF PHYSICS, Inc. member societies AMERICAN PHYSICAL SOCIETY · OPTICAL SOCIETY OF AMERICA · ACOUSTICAL SOCIETY OF AMERICA · SOCIETY OF RHEOLOGY · AMERICAN ASSOCIATION OF PHYSICS TEACHERS

192 Keer Ave. Newark 8, N. J. May 1st., 1950

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

Dear Professor Wiener:

Since I have already taken much of your valuable time, I write this with great hesitancy.

However, I must know whether the manuscript, "Assumptions and Attitudes of Scientist and Democrat,'' which I sent you over a year ago has been lost. If that is the case, I can proceed to make another copy, for there is a possibility of getting it published in a local Teachers Union periodical.

I would be grateful for word from you. Thank you very much for your efforts in my behalf.

Sincerely,

Benjamin De Fer

Benjamin De Leon

7/9/ Dowa ave Areano, California May 1, 1950 Massachusetts Institute of Jechnology, Boston, Massachusetts. Professor Weiner, Dear Professor. I am the mother of a seven year old impaired hearing boy and I am very interested in your method of teaching spuch to the severely impaired hearing aur doctor is very interested also. John is a very intelligent child and medically and educationally he is being given the progressive care up to date in both fields. John has a large speaking vocabulary but his works are not clear on understandable to many people , John his

auditory training I have come upon a plateau I can not get over! He heard loud noises and gross sounds even without amplification. With amplification he can hear my vouce but can not distinguish what I say to him. He can distinguish between one syllable words and two or more syllable words. For example, if I give him John and Jimmy he can tell what I said but if I give him John and boy he can not. He knows this words and says them well. He is an excellent speech reader but can not get it through the ear. He has had consistent. auditory training for a year and I feel I am not reaching him and first he may become

very discouraged if he doed not ful more success through his hard efforts to hear. I am very anxious to know more about your method of tacking Is it presible to purchase as mitten and information about the teaching methods concerned ? Thank you very kindly. Elie Eberwein

JACOB L. LORIE ATTORNEY AND COUNSELOR AT LAW - HOLTHDELITY BUILDING -KANSAS CITY, MO. 916 Walnut St.Bldg.

May 1,1950

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

Dear Professor Wiener:

I assume that you are the son of Professor Leo Wiener who tried to teach me Latin in the old Central High School in this city. My Latin was pretty anaemic and I can hear him now as I falteringly stammered through and ignominiously retired: "Mr.Lorie! Mr.Lorie!" Cover yourself with glory".

I lacked Botany to qualify for Ann Arbor and he coached me one Summer but the hours were delightfully spent with about fifteen to twenty minutes of Botany and the indefinite balance with listening to his English translation of some great Russian poet or just roaming the wide world through.

I then lived at 917 Penn Street, and next door north lived Henry Kahn (a clothing merchant) with his wife and family of several daughters. I think their names were Helen, Birdie, Emma and Etta. Your father I think married one of them. I forget which one - but you ought to know.

Have been reading about your Electronic Brain. My little candle is so dazzled by this blazing son (pun intended) that it can only worship from afar.

If you acknowledge this I would be much surprised and very proud.

Admiringly,

Jacobl Loiie

THE PENNSYLVANIA STATE COLLEGE STATE COLLEGE, PA.

OFFICE OF THE PRESIDENT

May 1, 1950

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

Dear Doctor Wiener:

In further reply to your letter of April 5 may I bring to your attention a statement of the Acting President of the College:

"Each year The Pennsylvania State College appoints a number of new teachers on a one year contract and at the end of this probationary period reappoints some and does not reappoint others. Because it does not wish to jeopardize the professional career of anyone, no announcement is ever made of the reasons for not reappointing.

"In a release to the press the Progressive Party of Pennsylvania, basing its statement on a report from Dr. Lee Lorch, condemned the College for not reappointing Dr. Lorch to the department of mathematics. The confusion which this statement has caused makes necessary an exception to our practice.

"Dr. Lorch was appointed for one year. After thorough consideration the Trustees decided not to reappoint him. The decision was not based on his action in inviting Negroes to live in his apartment in Stuyvesant Town, as the statement of the Progressive Party implied. The attitude of the College toward Negroes is well and favorably known. Nor was the decision based on his political views, as was also implied. The long record of Penn State in respecting the personal freedom of its faculty has been an important factor in the excellent relations between faculty and administration.

Dr. Norbert Wiener -2- May 1, 1950

"Dr. Lorch was not reappointed because in our judgment he does not have the personal qualifications which the College desires in those who are to become permanent members of its faculty."

Sincerely yours,

Lo. pers

A. O. MORSE Assistant to the President

Office of the Managing Editor



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May 1, 1950

Dr. Norbert Wiener Massachusetts Institute of Technology Cambridge 39, Mass.

Dear Dr. Wiener:

We note with interest your address on "The Atomic Era--Can it Produce Peace and Abundance?" given before the Nation Associates, April 29.

We believe that the subject might be of interest to our readers, and would like to read your address with a view toward reprinting it.

Will you be kind enough to send us a copy?

Yours very truly,

Charles Ruddock

Charles Raddock, MANAGING EDITOR

CR:pk

May 1, 1950

Dr. Hudson Hoagland The Worcester Foundation for Experimental Biology 222 Maple Avenue Shrewsbury, Massachusetts

Dear Dr. Hoagland:

Dr. Wiener has asked me to write to you and say that unfortunately we cannot change the date of the seminar as the room is engaged, and the date was announced at the last meeting, and most people have planned to come at that time.

This will be the last meeting this semester, but Dr. Rosenblueth will be here in the fall and the seminar will start again then.

Sincerely yours,

Norbert Wiener

NW:Z

May 1, 1950

Mr. S. H. Mathews, Jr. 283 North Lake Avenue Pasadena, California

Dear Mr. Mathews:

I am very much interested in the mechanism which you suggest for the Pavlovian conditioned reflex. A mechanism that will work is not too difficult to suggest. The important thing is to give an account of a mechanism which will work selectively for impulses that have accompanied impulses of a pleasant or unpleasant nature and not for others.

The particular difficulty is that we need some mechanism which is not so elaborate that it will take up too much slack at each synapse and can be triggered over the whole human system to act for synapses which have recently been carrying a message and synapses which have not. It seems to me that this can best be done by channel messages without specific destination, belonging to the emotional situation and which locally in combination with the set of synapses which have been recently discharged triggers some mechanism not unlike the one that you have mentioned.

I have a strong suspicion that these "to whom it may concern message" which do not need to act at high speed may well be chemical messages.

Sincerely yours,

Norbert Wiener

NW:Z

May 2, 1950

Mr. Max Pasternak 557KKosciusko St. Brocklyn 21, New York

Dear Mr. Pasternakz

I find your letter very interesting, and will be glad to look at your manuscript. In the position in which I find myself, however, I am compelled to make certain rules which I assume to be followed by anyone submitting a manuscript to me.

These are that anyone submitting a manuscript to me must posses another copy of it, and must not expect a return of the manuscript nor a promise of a comment on it. On some of these manuscripts I shall comment, but the problem of handling this sort of correspondence is getting to be so big for me, and involves so many possibilities of unpleasant contretemps with other people, that I must insist on my own rules and regulations. You will understand that these are not set down hostilgly, and that I may find time to comment on your work.

Sincerely yours,

Norbert Wiener

NW:z

May 1, 1950

Mr. Robert L. Stewart 1412 Park Central Building Los Angeles 14, California

Dear Mr. Stewart:

I find your letter of the 25th of April very revealing.

Sincerely yours,

Norbert Wiener

NW:z

May 1, 1950

Mr. F. H. Whitton Control Engineering Company 7631 Joseph Campau Avenue Detroit 11, Michigan

Dear Mr. Whitton:

I find your letter very interesting. As to the quotations you make from the article, it was based on a bad piece of reporting and is not fully adequate. My point is this. I would allow at a rough estimate ten to twenty-five years for the case of the domination of industry by the automatic machinery in case of no war. In case of war, the combination of our need for methods of high level of production and for the drafting of an enormous army of occupation would force the automatic machine to appear very high in its priority for the conduction of the war. Under those conditions, I would give a gues that two to five years should see the main principles well developed.

If I remember my own statement to my interviewer, I did not say "wipe out the assembly line" but "mechanize it". I see that you raise the point of the plant help for maintenance and for repair. May I point out that in the not dissimilar situation with chemical factories we have already seen the automatic factory reduce the maintenance crew to a level of perhaps one-tenth of the complete staff employed before. May I also point out that the technique of having automatic equipment monitor itself, and thereby signal approaching failures before they occur is one which is already developed and is subject to great further development. I conceive of the employees of the future automatic plant to be the following:

1. A very small group of employees at a very high level who design the succession of operation in the automatic process and fit the machine so that this succession will be carried out.

2. A very small trouble shooting gang whose work will be facilitated by the fact that most failures of the

Mr. F. H. W. -- 2

electrical and mechanical equipment will signal them and the place of their occurrence, and that the apparatus will be so made that they may be corrected without stopping the running of the machine. In this case, I consider that no definitive machine will believe anything that isn't said at least twice or three times and that a discord between the reports handed in for the same operation wil automatically throw the signal voice out of action and signal the repair man.

3. A heavy machinery assembly line like that of automobiles will require the transference of some parts to another part of the line. It follows that we will need a certain amount of heavy crew to do this handling. How much of a crew it will be I do not know; and that is largely a matter in the hands of the plant engineer.

I have very definite notions of what will happen to maintenance crews in the future and even on the type of man that will be used. I have also very definite ideas that the functions of the automatic factory will extend themselves to parts of the line other than the assembly lines itself. Before I go into these, however, I wish you to realize that you are writing under the letterhead of an engineering firm desiring special advice which it can turn to commercial advantage, it generally retains someone to give it that advice. You will understand that I am not in a position to share all my ideas freely with you unless and untill I shall be retained by you to that end. I may say that I doundthot be interested in giving advice at any rate of less than \$200 a day.

Sincerely yours,

Norbert Wiener

NW:Z

Johnson & Johnson

NEW BRUNSWICK, N. J.

May 2, 1950

Mr. Norbert Wiener Massachusetts Institute of Technology Cambridge 39, Mass.

Dear Mr. Wiener:

Certainly I realize the devastating fact of such developments as you picture. Having spent my life in factories I can say, from the past record, it would seem that we are on the way toward making better adjustments. The future may be more challenging.

Gordon Fromm is one of the Sloan students at the Massachusetts Institute of Technology, and I am sending our correspondence to him with the suggestion that he requests a meeting with you. I would like him to receive the benefit of your views, and I believe you will find him to be the modern type of executive. He will explain our policies, and I am most eager to see if they will stand up in your eyes.

You will do us a great favor if you will take the time to see Mr. Fromm.

Thank you for your letter.

Since yours. Robert W. Johnson

homas A. Dickinson MAIL ADDRESS: BOX 67, STATION "M" LOS ANGELES 32, CALIF.

Daus

CAPITOL 1-9082 May 2, 1950

Prof. Norbert Wiener, Massachusetts Institute of Technology, Cambridge 39, Mass.

Dear Prof. Wiener:

Thank you for your note of April 24.

I am often guilty of saying things I don't mean in my letters, since I am a professional writer and can't afford to devote much time to extracurricular correspondence. Anyhow, I want to assure you that I had no intention of accusing you of misanthropy after reading your book.

On the contrary, I only intended to imply that--while you seem to shy away from certain ideas, much the same as I tend to avoid mathematical concepts--we both managed to reach the same conclusions in many respects in contemplating the current industrial revolution.

This was interesting to me, since it seems to indicate that the accuracy of a conclusion is not necessarily dependent on a method of thinking; and that many thought-processes which are now regarded as unscientific might actually provide some of the most feasible solutions to our problems in the field of human relationships.

Cordially yours,

Thomas Q. Dukinson

TAD: sm

May 2, 1950

Mr. Arun Prasad Dormitories

Dear Mr. Frasad:

I have not as yet had the pleasure of meeting you, but I hear that you are the son of Mr. Rham Prasad, and that your Mother's name was Manik Kosambi. Your father was an old friend of my wife's and myself and of our family, as was your Mother who studied at Radcliffe at the same time as my wife, and young Baba is an old friend of our family as well. I have been several times in scientific contactom&thethim both by correspondence and when he was over here. Your grandfather I remember very well when he was a resident at Harvard. In view of all these things, I think we can consider ourselves family friends and I should like very much to see you and make arrangements that you should visit us some Sunday. Please turn up at my office sometime and we will make plans.

Sincerely yours,

Norbert Wiener

NW:z

M.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING CAMBRIDGE 39, MASSACHUSETTS

May 3rd 1950

Dear Professor Wiener,

- N former student and a great

adminer of your work, Suf. Litterer of

Columbia Muiversity, has charged me to

enpress to you hig kindest regardly.

Hease accept my own compliments, also.

Jours very sincerely Joseph Maximus Sertarius

(Room 4-234)

Barnard College Columbia University New Pork 27

OFFICE OF THE DEAN

May 3,1950

Dear Dr. Wiener,

I have heard glowing reports of the Eastern Colleges Science Conference which was held here last weekend, and I wish to send you a personal word of appreciation for your contribution to the success of the meetings.

We appreciate the time, effort, and thought you gave to this Conference, and we are very grateful to you for your participation.

Yours sincerely,

Millicent C. Mcintoh

Dr. Norbert Wiener Massachusetts Institute of Technology Cambridge 39, Massachusetts



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TECHNICAL SERVICES

Rm 318, 1800 'K' St. N.W.

4th May, 1950.

Massachusetts Institute of Technology, CAMBRIDGE, Mass.

Dear Sirs,

In accordance with the clearance granted me by the Office of Naval Operations, Office of Naval Intelligence, I propose visiting, along with Sir Charles Wright and Dr. W.R. Cook of the British Admiralty, your establishment on Tuesday, 9th May, to discuss with Dr. Wiener and Dr. Lee the project "Whirlwind", and autocorrelation techniques.

Yours sincerely,

J. W. Copports

S.W. Coppock Director of Technical Services (Research)

TRINITY COLLEGE HARTFORD 6, CONNECTICUT

DEPARTMENT OF MATHEMATICS

May 4, 1950.

Professor Norbert Wiener Massachusetts Institute of Technology Cambridge 39, Massachusetts

Dear Professor Wiener:

I very much enjoyed your talk at Trinity College last night. Unfortun**a**tely I had to leave before the conclusion of the motion picture and did not have the opportunity of speaking with you. I am certain that Professor Bissonnette greatly enjoyed meeting you again.

Your mention of the Ford article from the New York Times of several weeks ago made me wonder if you had seen the one last Sunday on the Buick Division of General Motors. Your predictions are being realized very rapidly!

Sincerely yours,

Harold I. Dorwart.

Harold L. Dorwart



An American Weekly Published in New York City by the New World Club, Inc.

MANFRED GEORGE, EDITOR

May 4, 1950.

Dr.Norbert Wiener c/o.Massachusetts Institute of Technology Boston,Mass.

Dear Dr. Wiener:

I was very interested to read in the "Herald Tribune" the statement you made regarding the industrial revolution in our country to be brought about by new machinery.

As the Editor of "Aufbau", the leading German language weekly in this country and the American correspondent of the "Nationalzeitung" (Basle), Switzerland, I would like to submit your ideas to the readers of these papers.

Therefore, I would appreciate it very much if you could grant me an interview. Would May 11 or 12th, 18th or 19th be convenient to you?

Looking forward to hearing from you, I am,

Very truly yours

Manfred George Editor.

Land. 5-6-

BOARD OF DIRECTORS ALFRED PRAGER CHAIRMAN MANFRED GEORGE WILFRED C. HULSE LUDWIG LOWENSTEIN FRITZ S. SCHLEGER HANS SCHLEGER ADVERTISING MANAGER MICHAEL SCHNAITTACHER LUDWIG WRONKOW CIRCULATION MANAGER

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an Wiener;

For your information. B.S. Lee

What for the Ballication Fort Monmouth, N. J.

SCCSCL-SXB Project No. 1954-1

> Editor Journal of the Acoustical Society of America ATTN: Dr. George A. Miller Psycho Acoustical Laboratory Harvard University Cambridge 39, Massachusetts

Dear Sir:

I wish to call to the attention of those who have not yet observed it an interesting experiment in the field of psycho-acoustics which may be duplicated by anyone having access to a magnetic tape recorder with separate recording and playback heads, as for example, the Presto PT-900.

By plugging a telephone headset into the playback jack a person's voice may be returned to his own ears but delayed by the length of time the tape requires to move from one magnet to the next. The effect of this delayed and dominating echo is startling - it will cause the person to stutter, slow down while raising his voice in pitch or volume, or stop completely.

The same effect, but to a feebler degree, has been noticed in connection with public address systems where the loud speaker is a to a sufficient distance from the microphone to delay the return by about 1/8 second. The effect on speech which I describe here is involuntary and induced with little or no regard to previous conditioning or the subject's will to oppose the influence of the delayed playback while the effect under the conditions of the public address system is only ennoying and can be overcome by effort on the part of the speaker. The earphones plus the recording machine add two additional factors to the earlier noted phenomenon, 1. They permit almost any desired volume of echo to be fed back, and 2. They stop, except through bone conduction, what is apparently our normal speech monitoring system.

I believe that this phenomenon invites the application of fundamental concepts presented by Norbert Wiener in his book "Cybernetics", SCOSCL-SXE Project No. 1954-1

Ltr to Journal of the Acoustical Society of America (Contd)

since the elements necessary for Wiener's analogy between an electronic circuit oscillating with feedback and the means by which wergovern many of our everyday physiological functions are strikingly manifest.

These elements are:

1. Oscillation and stutter are analogous.

2. The phenomenon is critical with regard to volume or magnitude of the feedback.

3. It is also critical with regard to time delay of the feedback. Of the three delays tried thus far, there is little or no effect at 1/15 second, a marked effect at 1/8 second, and a slightly different effect at 1/4 second delay.

4. As in other oscillating systems, the first chance speech disturbance will sot if off and this for most subjects occurs invariably within the first half dozen words spoken.

Of the subjects tested thus far, some develop a quavaring slow speech of the type associated with cerebral palsy; others may helt, repeat syllables, raise their voice in pitch or volume and reveal tession by reddening of the face. There seem to be different effects depending on whether the subject is reading, extemporizing, counting, reciting, speaking a foreign language, etc. Some have challenged the disturbance, but none have as yet defeated it. A prolonged session (more than two minutes) is physically tiring.

Hr. Bonald Elsier of Signal Corps Engineering Laboratories demonstrated to as the difficulty of adjusting an FM tuner (manually) while listening to a delayed playback from the tape recorder. A normally skillful operator, he observed that he made several ineffectual passes back and forth over the point of best results before he was able to achieve the desired setting. This seems to be analogous to Parkinsonianian and a more dramatic experiment might be set up by making the adjustment more difficult, say at arm's length, and the incentive urgent by introducing side-band noise of painful level. Another series of experiments might be conducted to examine our visual feedback system when welking an unfamiliar course, writing, or drawing a picture by monitoring our motor activity through a time delayed video system. SCCSCL-SXB Project No. 1954-1

Ltr to Journal of the Acoustical Society of America (Contd)

Recording engineers and others have no doubt observed this phenomenon since the advent of multihead magnetic recorders. The purpose of this letter is to point out its possible significance and to invite the attention of those who may investigate the phenomenon from a psychoacoustic, speech therapy, and theoretical physiology viewpoint.

Yours very truly,

BERNARD S. LPE Asst Chief, Photographic Branch Squier Signal Laboratory

THE PENNSYLVANIA STATE COLLEGE SCHOOL OF THE LIBERAL ARTS STATE COLLEGE, PENNSYLVANIA

MATHEMATICS

May 4, 1950

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

Dear Professor Wiener:

At the Washington meeting of the American Mathematical Society I was told that you had written a letter to the Pennsylvania State College administration protesting my dismissal. I want to thank you very much for your kindness in this matter and your efforts to protect academic freedom. It will interest you to know that quite a number of other scholars have also sent such letters. To my knowledge this includes people from University of Pennsylvania, Chicago, Syracuse, Illinois, Michigan, Princeton, Reed College, City College, Hunter College, Columbia, New York University, Brooklyn Polytech and perhaps a couple of others that may slip my mind at this moment. The fight is still going on, although the odds are not favorable for any sort of academic freedom victory these days. I believe it would help if those who have written would find ways of publicizing the support they have given in order to let the Administration know that it cannot live down this episode.

I have written to Chancellor Hutchins at Chicago soliciting his support and suggesting that one good way to support the principles of academic freedom would be to secure an appointment at a leading university for a current victim. I expressed the view that such an appointment, explicitly made for the protection of an academic freedom victim, and publicly announced as such would take the wind out of the sails of a good many now practicing or contemplating violations of academic freedom. It would also give encouragement to those who are determined to resist these violations. In view of the defense of academic freedom expressed by President Killian of M.I.T. when attacks were made last year on Professor Struik, I have since wondered whether M.I.T. might be willing to undertake just such an action as I suggested to Hutchins. I should be very happy to learn from you whether you think this might be possible, and to secure your advice as to how to proceed in this connection.

Sincerely yours, Lee Lorch

Duke University DURHAM NORTH CAROLINA

School of Medicine Department of Neuropsychiatry Reply to Undersigned

5 May 1950

Dr. Norbert Weiner Professor of Mathematics Massachusetts Institute of Technology

Dear Dr. Weiner:

I was talking to Dr. Warren McCulloch at the recent convention at Atlantic City of the Federation of American Biological Societies. About a year ago I sent him a copy of a paper that was first read in its essence before the Psychology Colloquium at Duke University. This paper propounds a theory of vision. I have made some efforts to get this paper published and have met with the objection that it is too complicated and comprehensive. On the other hand, it is not at all in proper form to be sent to Rashevesky's Bulletin of Mathematical Biophysics. Professor McCulloch suggested that I forward a copy to you for consideration in the hope that you could find a publisher for it somewhere, as the ideas contained in it are rapidly becoming current knowledge.

I must confess that this thesis was developed in opposition to Dr. Zener's presentation of Kohler's Field Theory and Theory of Figural After Effects. Accordingly, the first page or two is devoted to a repudiation of the Field Theory and truly were better omitted from any publication.

Any further comments, I leave to you.

Very truly yours,

A. A. Forta

A. A. Foster P.O. Box 3240

AAF/cmt Encl.



FIRST UNITARIAN SOCIETY Madison, Wisconsin Fred I Cairns, Minister

Mr. Norbert Wiener The Massachusetts Institute of Technology Boston, Mass.

Dear Mr. Wiener:

I have just read with excited interest those parts of your book, CYBERNETICS, which I am capable of understanding. By that I mean I have given specific attention to the introduction and first chapter, and the last two chapters. The material between these outer limits is more technical than my background allows me to digest with any comfort.

Perhaps it will not strike you as important that a clergyman praises your book with such enthusiasm. Yet I assure you that the field in which you have written has a relation to my own philosophy of religion - which is certainly a non-supernatural religion - that gives me courage and assurance that my own ideas, not always popular in my especial field, are not entirely misdirected.

I want to add my appreciation to that of the many others who must already have expressed genuine gratitude to you for your writing. Your last two chapters which relate your technical knowledge to the social development of the future are more than praiseworthy -- it is not only what you have said that thrills me, but what I detect as your motivation for saying it. I am in complete sympathy with your observations included in the final chapter on "Information, Language and Society."

Forgive me for this intrustion upon what I am sure is a very busy time for you. I simply mean to thank you for what you have written.

Very sincerely yours,

Fred I bains

May 5, 1950

4230 Mila Avenue Rockford, Illinois May 5, 1950

Dr. Norbert Wiener Dept. of Mathematics Mass. Inst. of Technology

Dear Sir:

A few months ago the author of the enclosed paper visited the University of Indiana in order to obtain the critical perspective in regards to his theoretical ideas. There, after being amusingly welcomed by highly refined, cloistered, and self-important specialist, he was indeed fortunate to meet and receive encouragement from a very renowned and capable mathematician, Dr. Halavaty, recently of Czechoslavakia. As a result of Dr. Halavaty's advice and encouragement, and also that of Dr. Newton P. Stallknecht, chairman of the University's Department of Philosophy, he is sending you this brief discussion with expectations of sympathetic criticism.

The discussion herein endeavors to unify and simplify various concepts and with its innovations, to unify and simplify the too conspicuous distinctions existing between various categories in science. Herein are the fundamental ideas without recourse to technical data in order to facilitate rapid review, as time may be expedient to you. The metaphysical aspect inherent, at first glance, is by no means an indication of extreme separation from the empirical---inspired research will ratify this assumption.

The author is twenty-four years of age. His immediate ambition is to unify "conscious effort" under one ideology, an ideology which is firmly rooted in scientific proof. There is no reason why he should not succeed, since great men such as you have gone ahead and cleared a path for him. Although lacking sufficient leisure and research facilities at the present, he looks forward to aid from those who inspired him.



May 5, 1950

Dr. Norbert Wiener

2-165

Dear Norbert:

In a moment of weakness I agreed, some time ago, to participate in an "America's Town Meeting of the Air" broadcast on May 30th, devoted to a discussion of possible developments in our society in the next 50 years. My assignment is to report on some of the important developments which our scientists might anticipate.

If you can do so without it being an undue burden, I would appreciate your taking out your crystal ball and giving me a few paragraphs on what **you** foresee as some of the most important impending developments and trends in the field of science, especially your own field. I am asking several of our colleagues here if they will be willing to make a forecast, thus providing me with an expert panel whose judgments I might reflect in what I contribute to the program.

Yours cordially,

J. R. Killian, President

THE Nation Associates

President FREDA KIRCHWEY

ADVISORY COUNCIL Chairman

DR. FRANK P. GRAHAM

Vice Chairmen Dr. Henry A. Atkinson Marc Connelly William Rosenblatt

JAY ALLEN THURMAN W. ARNOLD ROGER N. BALDWIN G. A. BORGESE ERSKINE CALDWELL EVANS CLARK HENRY COHEN ALBERT SPRAGUE COOLIDGE HELEN GAHAGAN DOUGLAS THOMAS H. ELIOT IRVING M. ENGEL LEWIS GANNETT J. W. GITT JOSEPH F. GUFFEY LILLIAN HELLMAN SIDNEY HOLLANDER SYLVAN L. JOSEPH J. M. KAPLAN JOHN FREDERICK LEWIS, JR. JOHN P. LEWIS WALTER C. LOWDERMILK THOMAS MANN FRANCIS J. MCCONNELL PHILIP MURRAY REINHOLD NIEBUHR EUGENE O'NEILL BORIS PREGEL T. EDWIN QUISENBERRY REVERDY C. RANSOM WAVERLEY ROOT JAMES N. ROSENBERG GAETANO SALVEMINI FREDERICK L. SCHUMAN PAUL H. TODD WALTER WHITE STEPHEN S. WISE SAMUEL ZEMUERAY

LILLIE SHULTS Director May 5, 1950

Dr. Norbert Wiener Massachusetts Institute of Technology Cambridge 39, Mass.

Dear Dr. Wiener:

Please accept my profoundest appreciation of your participation in our Conference last week end. I do not have to tell you that appreciation was shared by our representative audience, which gave concrete evidence of it directly to you.

I hope you feel as gratified as I do with the results. I think, all in all, it was extremely worthwhile. It helped to place the whole question of war and peace in a different context, and to make people see that there are a number of solutions which can be pressed for with success.

We mean to go forward. Our first step is to be a special 24-page supplement of The Nation, to be published May 16th. We are now in the midst of synthesizing the various proposals made, with a view of their formal presentation to the appropriate channels in the United Nations, as well as the United States Government.

Within the next days our plans will be more developed, and I shall be glad to inform you about them. In the meantime, my renewed thanks.

With kind regards.

Cordially, Freda Kirchwey

P.S. If you will be good enough to let us know what your expenses were, we shall be glad to send you a check covering them.

May 5, 1950

M. E. R. Freymann Hermann et Cie 6 Rue de la Sorbonne Paris, France

Cher M. Freymann:

11:12

J'ai dejamappris de Mlle. Brooks et de mes amis dans Wiley & Sons que ni la Technology Press ni Wiley retient aucune droit dans la traduction de mon livre <u>Cybernetics</u>. J'ai appris aussi qu'on vous a envoye plusieurs demandes des individus et des roupes pour le droit de traducion de mon livre. Je n'ai jamais recu aucune indicacion de vous en reponse de ce que nous devons faire . Je sais tres bien que vous ne croyez pas que la traduction allema ne ou italienne preuvent troire aucun profit economique. Mais il me semble que cette decision appartient a eux, et ni a moi, et ni a vous. Je serai tres sensible de l'honneur de recevoir une reponse de vous sur cette question.

Je serais en Francé de Janvier en Juillet de 1951. J'espere d'avoir l'ocasion de vous voir ét de causer sur plusieurs choses.

Veuillez agreer, mes sentiments le plus devoues et distingues.

Norbert Wiener

NW:z

May 5, 1950

Professor Erich von Holst Meeresbiologie 23 Wilhelmshaven Banter Seedeich, Germany

Liebe Kollege Holst:

Ich habe Ihren freundlichen Brief des zwolften April empfangen, so wie Ihre damit eingeschlossene Arbeite. Die Zusammenkunfit, woven sie sprechen ist gar nicht ausgeschlossen. Ich habe eine Einladung fur das nachste Jahr einige Verlesungen am College de France zu halten; und wenn die Fullbrightstiftung die Gute hat, mich dabei zu unterstutzen, so bin ich sicher nachstes Wahr in Europa mit meiner Frau, die Schlesierin ist. Wir machen eine Gemeinsame Reise nach Deutschland hin; sie, um Ihre Verwandten fur dan Ersteumaliseit dem Krieg zu sehen; und ich, um durch den Krieg gebrochene Wissenschaftlichen Beziehungen wieder aufzunehmen. Ich werde moglichst viele Arbeite mitbringen. Es wird un grosses Vergnugen sein, die ganze Aubernetik mit Ihnen zu besprachen.

Mit besten Wunchen fur die Zukunft Ihrer Erfolgreichen Arbeiten, ich unterzeichne mich, Ihr sehr Ergebener,

Norbert Wiener

NW :Z

MID-CENTURY CONFERENCE FOR PEACE

Executive Director: DR. WILLARD UPHAUS

COMMITTEE FOR PEACEFUL ALTERNATIVES

Honorary Chairmen: MISS EMILY GREENE BALCH, BISHOP W. J. WALLS 158 WEST 56th STREET, NEW YORK 19, N.Y. • JUdson 6-3882

> Room 608 30 North Dearborn Street Chicago,Illinois May 6,1950.

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

Dear Prof. Wiener:

Not long ago when I was in Boston my friend, Prof. L.Harold DeWolf of Boston University S chool of Theology told me about you, and said you would be an excellent speaker for our Mid-Century Conference for Peace to be held in Chicago, May 29-30.

The copy of the Call enclosed outlines the principles underlying the Conference and lists the distinguished Americans who are sponsoring it. We need prophetic voices who can tell us what we are up against as far as the H-bomb and atomic warfare are concerned, but who can also discuss the social implications of abundant power for the redemptive purposes of peace and world reconstruction. We shall be looking for peaceful alternatives throughout.

Can you be with us? We are a poor Committee, but should be able to manage the expenses. We realize how short the time is. We began planning rather late, but my travels have convinced me that we should have from 500 to 1000 present. The cry for peace is rising from the grass roots.

Here is a mere skeleton of an outline of the program. Much is to be filled in. I would be pleased to have you call me collect. Our number of ANDOVER 3-5903, Chicago.

Hoping to hear from you, I am

17

Sincerely yours,

bellond by haves

Willard Uphaus Executive Director

Initiating Sponsors: Dr. David Baker, Dr. Wade Crawford Barclay, Dr. Charlotte Hawkins Brown, Rabbi Jonah E. Caplan, Rev. Donald Cloward, Mrs. Howard G. Colwell, Dr. Abraham Cronbach, Dr. Mark Dawber, Prof. Kermit Eby, Rabbi Alvin S. Fine, Mrs. Welthy Fisher, Prof. E. Franklin Frazier, Rabbi Robert Gordis, Bishop S. L. Greene, Prof. Georgia Harkness, Prof. Robert J. Havighurst, Dr. Charles W. Iglehart, Rev. Dr. D. V. Jemison, Jameson Jones, Rev. Dr. Leo Jung, Rev. William E. Lampe, Prof. Halford E. Luccock, Dr. Benjamin E. Mays, Lester G. McAllister, Dr. Thomas Mann, Donald L. Mathews, Prof. F. O. Matthiessen, Dean Walter G. Muelder, Dr. John S. Nollen, Dr. Albert W. Palmer, Rt. Rev. Edward L. Parsons, Prof. Linus Pauling, Prof. George V. Schick, Rev. Franklin I. Sheeder, Hon. Odell Shepard, Dr. P. O. Sorokin, Dean John B. Thompson, Dr. Charles Turck, Prof. Oswald Veblen, Prof. Goodwin Watson, Bishop R. R. Wright, Jr.

May 6, 1950

Mr. Manfred George Aufbau Reconstruction 209 West 48th Street New York 19, New York

Dear Mr. George:

Thanks very much for your kind note of the fourth. I suggest that if you wish an interview from me, you come at ten o'clock on the morning of the 18th. I have a free day, and we can go over what you want to suit you.

If it were possible to hold up publication on your material until late August, when my new book comes out, the publicity I receive would be more valuable to me. However, I do not know whether this suggestion metts your proposition.

Sincerely yours,

Norbert Wiener

NW:z

T/PA Units LG 35 N.A.S. Norfolk, Va. May 7, 1950

Professor Norbert Weimer Mass. Institute of Technology Cambridge, Mass.

Dear Professor Weimer,

I realize that in answering this letter, you may be put at an inconvenience, for you are a man with many and varied duties and obligations. What I shall ask of you may seem a trifle, but it will place immense influence upon me.

After I graduated High School, I enlisted in the Navy. A year of electronics school and three years technical experience have given me a base and an avid interest in anything electronic or electrical.

Last year I became interested in analogue and computing mechanism. My range has been limited, since there are not many books and pamphlets published on the subject. Upon my seperation from the service, I intendentering a university to get the adequate background, so as to enter this field. I would like your opinion as to which professors and universitys would be the best to study under. I have been hoping to hear of a small college that would fulfill my personal requirements, for I feel that more can be accomplished there thanin a large inpersonal educational mill. My high school education was such an assembly line system, and I feel that I had been cheated somewhere along the line.

I would also appreciate your sending me a list of books and pamphlets which would help such a layman as myself, inpreparing myself. If not, could you advise me as to where to obtain such a list.

Respectfully yours,

Emil J. Steger 420 S. 11th St., Belleville Ill. May 7, 1950

Df. Norbert Wiener Mass. Institute of Technology Cambridge 39 Mass.

Dear Sir:

Your news release on a new Industrial Revolution through the use of completely automatic industrial processes, if I am correct, through the almost complete elimination of manpower, interested me very much.

As a workman I have thought along the same lines. I work in the Bottling Plant of a large local Brewery, where the latest machinery is in use, however through observation I even I can see where, with the use of more and more electronic controls. to replace the hands and eyes of humans, the entire productive process can be done without them.

If you were receptive and within week-end Airplane flight how I would like to talk about this fascinating subject with you. I think in what you forsee, opens for mankind the possibility theory quitting at almost all physical exertion, and the consequent release of new energies in better and higher level cultural pursuits.

Sincerely yours, Emil J. Steger Emil J. Steger

Eric Berne, M.D.

San Carlos at Ocean Avenue Carmel-by-the-Sea, California Telephone Carmel 1343 W P.O. Box 2111

May 8, 1950

Dr. Norbert Weiner Massachusetts Institute of Technology Cambridge, Massachusetts

Dear Dr. Weiner:

I am working on an article entitled "The Nature of Communication" which discusses psychoanalysis from a cybernetic point of view. I wonder if you would have the time and interest to read the manuscript before I send it for publication. I should certainly be interested to have your comments beforehand.

This article is a continuation of some previous work. You may have received a reprint I sent you entitled "The Nature of Intuition."

Sincerely yours,

Eric Berne, M.D.

EB:rp

Meridian, Idaho May 8, 1950

Dr. Norbert Weiner, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Dear Dr. Weiner:

I have been referred to you by the Central Institute for the Deaf, as having information regarding the glove development as featured in LIFE magazine around the first of the year.

The article was quite limited in scope, and while I am practically totally deaf (92 decibel loss), and realize I have almost nothing to work on, I don't want to miss following up any clues that might be of help to me.

My hearing loss is the result of Spinal Meningitis, which I contracted in Frankfurt, Germany the fall of 1946. I was a patient at the Aural Rehabilitation Center of WalterReed General Hospital for about 5 months following my return to the United States, at which time I was given a very intensive course in lip-reading, as well as work in auditory training - the latter of which was to no avail as I could never distinguish much of anything over a hearing aid.

I should appreciate any information you can give me regarding your recent development as an aid to hard of hearing persons.

Very truly yours,

Jace Williams

Grace Williams

Judith Chase Churchill, 24 Woodland Drive, Fair Haven, New Jersey

May 9, 1950

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

Dear Dr. Wiener:

I'm preparing a piece for the Woman's Home Companion on predictions of things to come in fields of especial interest to women.

I have been reading the UP dispatch (April 24th) of your interesting prediction that robots threaten jobs and could, within a decade, completely wipe out the factory assembly line. Won't you send me more of your speculations on this subject? I'd like so much to include these in my piece and to quote you --with your permission.

I'll be looking forward to hearing from you.

Judith Chase Church. 11

THE NEW YORK ACADEMY OF MEDICINE 2 EAST 103 STREET NEW YORK 29, N. Y. TELEPHONE ATWATER 9-4700

May 9, 1950

Dear Dr. Wiener:

I am planning to be in Boston the weekend of the 19th of May, and I wonder if it would be possible for us to meet either on the 19th or on the 20th.

I would like to have you dine with me. I would appreciate hearing from you on that score at your earliest convenience.

Sincerely yours, Iago Galdston, M.D.

Dr. Norbert Wiener Massachusetts Institute of Technology Cambridge 39, Mass.

/ek

GOODFYEAR

Goodyear Aircraft Corporation Akron 15, Ohio

May 9, 1950

Ref: AP-13592

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

Dear Dr. Wiener:

GA-13

I enjoyed very much our brief discussion of a few days ago in your office. I was gratified to find our method of attack in the determination of the dynamic characteristics of a human operator in general agreement with your own ideas. The emphasis on prediction was naturally suggested by your own work.

I was also interested in your suggestion that a computing machine may adjust a smoothing and a predicting network to minimize an error criterion of one sort or another between a predicted and an actual function. We had considered a similar possibility and we feel, indeed, that the human operator adjusts its networks in a similar manner.

Frankly, it had not occurred to us that you may be willing to act in a consulting capacity on this project, knowing your principles against war work. But we are certainly happy that such should be the case, or did I make it clear that the work would be financed by the Armed Forces, and should we be successful in securing the proposed contract we will be glad to discuss the matter further.

Sincerely yours,

GOODYEAR AIRCRAFT CORPORATION

(Jola Mayne.

Robert Mayne, Manager Aerophysics Departments

RM/emg

THE UNIVERSITY OF CHICAGO CHICAGO 37 · ILLINOIS

DEPARTMENT OF MATHEMATICS

May 9, 1950

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

Dear Professor Wiener

I hesitate to bother you about a relatively personal matter, but perhaps this wouldn't be much trouble for you. I am interested in doing some teaching in Mexico City during the Fall and Winter of 1950-51, during which period I am on leave from the University of Chicago, and would much appreciate it if you would mention this in case you should hear of an interest in Mexico in having a visiting American lecturer of my sort at that time. If a position materialized, I would study Spanish very hard, and would undertake to lecture in that language. Part-time work would be all right, but full-time work of short duration would be best. I think that in this way I could see some aspects of Mexican life not otherwise readily accessible, as well as benefit financially (tho only slightly, as my contract with the University of Chicago requires that I turn over to it any outside salaries not consumed by extraordinary expenses) and perhaps do a little for Mexican mathematics.

With best regards,

Sincerely Time Secol Irving E. Segal

P.S. Incidentally, I intend also to write Lefschetz with regard to this.

May 9, 1950

Mr. R. R. Davis Physics Today 57 East 55th Street New York 22, New York

Dear Mr. Davis:

I shall be delighted to review the Mathematical Theory of Communication by Shannon and Weaver, and I shall atempt not to violate your cannons of performance.

Sincerely yours,

Norbert Wiener

NW:Z

May 9, 1950

7-1

President James R. Killian, Jr. Room 3-208

Dear President Killian:

The enclosed comments on the future of science and technique are just jottings, and should not be taken too seriously. The first is that we have obviously opened up the nucleus of the atom, but we have come to no established theory of it. Our techniques are becoming more powerful, and each technique permits new techniques which use in their preliminary stages the high energy levels obtained in the previous ones. Whether this will stop short of the complete converion of matter of any sort whatever into energy, we do not know; but it is quite as unfactual to assume the final stopping place will be somewhere near where we are now, as it is to assume that it will be the complete conversion of all matter into energy. This is important in making judgments as to the destructive power of weapons which will be used in a war not immediately to come.

Second: We have as yet no completely united physics. We have an excellent trial balloon of Einstein's, but I am very far from being convinced that this is the ultimate synthesis between relativity, quantum theory, and electro-magnetic theory. I doubt if physics can go on for many decades without a better synthesis between these subjects, although I equally doubt whether this new synthesis will be able to stand up for many decades without developing its internal contradictions. Just where this will leave us from a technical or engineering point of view is anybody's guess.

Third: The further I go with Cybernetics, the more certain I am that we are on a right track. Combined with the electro-microscope study of the nervous system and the direct electrical study of the system, it should not be many years before we know our own internal communication system much better than we do now. I have a conviction rather of faith than of proof that in the study of this communication system

President James Killian--2

as it really functions as a whole, we shall find side by side with nervous conducted messages, hormone conducted messages playing an important part as long time regulators, and that these will be particularly interesting in the learning process. In the learning process, I also foresee the introduction of learning techniques into automatic machinery as an established policy. I foresee great social consequences, potentially both good and bad from the centralization of industry which is likely to come from the automatic computing machine, and the great use of atomic power, and from the displacement of human labor which is also likely to come from these fields.

I do not want to go into their complete nature here, nor could I adequately, but I do wish to state that unless the introduction of the automatic machine, and of atomic power are carried out with the greatest possible statesmanship, they are likely to cause us severe headaches (and a great deal worse), before we find a proper way of living together with them.

These as I have said, are sporadic ideas. I think I will stop now, unless you have further specific questions to put to me.

Respectfully yours,

Norbert Wiener

P. S. You can't imagine how relieved I am by the fact that you have weak moments too.

NW:Z

May 9, 1950

Mr. Charles Raddock Trade Union Courier 3 West 17th Street New York 11, New York

Dear Mr. Raddock:

The article in question is still in the hands of the Nation Associates, and may or may not appear in an extra number published by the Nation next week. If you wish to republish it, why not write directly to the Nation, and I shall certainly give you permission.

Very sincerely yours,

Norbert Wiener

NW:z



Professor Norbert Wiener Room 2-165

Dear Norbert:

Your letter is exactly what I wanted, and I appreciate your taking the time to make the suggestions.

If I later have questions, I will get in touch with you directly.

Yours obligingly,

J. R. Killian, Jr.

JRK:mh

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CAMBRIDGE 39, MASS.

DEPARTMENT OF MODERN LANGUAGES

May 10, 1950

Dear Dr. Wiener:

Copy is being prepared for the final program for the Speech Communication Conference for which you have kindly consented to give a paper. It must go to the printer on Nay 17.

Could you please, if it is possible, let me have a two or three-line abstract of your paper before that day for printing in the final program? I believe the title of your paper is one which you yourself suggested, but if you would prefer some other title, would you let me know before the same deadline date.

Sincerely yours,

wnl:rm

William N. Locke Program Chairman Locke

Enc.: Tentative Conference Program

Professor William Allis Room 20A-125

Dear Professor Allis:

I have working with me now a Mr. Bruce H. McCormick. He has been taking my course on Fourier Developments, and I consider him a very bright young man. He is very much interested in pushing through the theory of the Maxwell equations on a spectrum basis. Another young man who is interested in the same theory is Mr. Walter Pitts, an instructor in our Department. I think it would be a sphendid thing for Mr. McGormick to continue his work with Mr. Pitts.

I believe McCormick is the sort of student who needs some sort of financial support to make his continued stay at Tech possible. He is a very thoughtful young man, and is more interested in taking a course and learning the real significance of what he is doingk than in so arranging his work as to get maximum grades.

At present we are not getting too many promising young men for top theoretical posts. I think Mr. McCormick has very great promise in this direction.

Very sincerely yours,

Norbert Wiener

NW:Z

cc: Professor Muller

Mr. Benjamin De Leon 192 Keer Avenue Newark 8, New Jersey

Dear Mr. De Leon:

Z

I am sorry to have to write to you that at the present moment it looks as if your article on Assumptions and Attitudes of Scientist and Democrat has been misplaced. I have looked through the files here and I cannot find it. I am very sorry about this, and if it should turn up at some future some, I will most certainly forward it to you.

Very sincerely yours,

Mrs. Margot Semurray, secretary to Dr. Norbert Wiener

Miss Freda Kirchwey The Nation Associates 20 Versey Street New York 7, New York

My dear Miss Kirchwey:

Thank you for you letter of May 5. I certainly enjoyed my participation in the Conference, and hope something good may come of it.

As to my expenses, I think about \$5.00 will cover them, as I had to be in New York anyway for the Eastern Colleges Science Conference.

Very sincerely yours,

Norbert Wiener

NW:Z

2.1

Mr. Bernard S. Lee 136 Lovett Avenue Little Silver, New Jersey

Dear Mr. Lee:

Your note of the twenty-eighth of April has been received and I shall give your paper my attention as soon as my leisure is a little greater than it is at present.

.

Sincerely yours,

Norbert Wiener

NW:z

Mr. Willard Uphaus Mid-Century Conference for Peace 158 West 56th Street New York 19, New York

Dear Mr. Uphaus:

I have found that the only way to support principles, and for me at the same time to continue in the studies that are necessary so that my name may have some weight in supporting principles, is to confine my efforts as largely as possible to books and my own articles.

With all the sympathy in the world for your Conference, I must therefore decline to participate in it at a time when I am already excessively fatigued by the past years work.

Sincerely yours,

Norbert Wiener

NW:Z

Miss Joan M. Weiss c/o Miss Frances Fuchs Room 105, Barnard Hall Barnard College New York 27, New York

Dear Miss Weiss:

I wanted to let you know about my expenses for my trip to New York. As I understand it, you people paid for my hotel expenses, so I am submitting a bill for travel which is the equivalent of a rairoad fare to New York and back, and about \$2.65 for meals. That is I should say my expenses came to around \$25. I hope that this is all satisfactory for you.

I enjoyed my visit to Barnard very much indeed, and I want to thank you again for your kind invitation and the hospitality which you all showed me.

Very sincerely yours,

Norbert Wiener

NW:z



An American Weekly Published in New York City by the New World Club, Inc.

MANFRED GEORGE, EDITOR

May 11, 1950

Professor Norbert Wiener Massachusetts Institute of Technology Cambridge, Mass.

Dear Professor Wiener:

Thank you very much for letting me have an appointment for Thursday, May 18th, 1950.

I shall take the 7:30 A.M. plane to Boston which is due at 8:40 A.M. As I do not know how long it will take me to get from the airfield to the MIT, I might be a little late. In any event, I expect to be there by 10 A.M.

Yours very truly,

marp Manfred George

Editor

mg/p

Office: 209 West 48th Street, New York 19, N.Y. • Telephone Circle 7-4662 • Cable Address: "Aufbau" New York

Name	Dr.l	Norbert	Wiener	······	••••

Street & No. .. Mass.Inst.of Tech.....

City Cambridge State Mass.....

When Replying Sign Your Full Name and Address. Give Inmate's Full name and Number.

> Вох 51, Сомзтоск, N. Y.

Date May 11, 1950

H. H. AG

May 11,1950

Dear Sir:

I wonder if your could-in deference to my rather

severe handicap-take a moment of your leisure and pro-

vide me with the following information:

I have sought in vain for the titles of books which might acquaint me with the elements of what you have called cybernetics.Could you, if there are any such, give me the titles, dates of publication and such other information as should enable me to obtain them?I have, I suppose enough mathematics to manage that aspect of the

subject so that it is not necessarily a "popular" simplification

that I seek.

I thank you.

Roemer # 17741 omstock, New York

MASSACHUSETTS INSTITUTE OF TECHNOLOGY CAMBRIDGE, MASSACHUSETTS

SLOAN FELLOWSHIP PROGRAM FOR EXECUTIVE DEVELOPMENT

May 11, 1950

Professor Norbert Wiener 2-165, M.I.T.

Dear Professor Wiener:

May I express the sincere thanks of the Sloan Fellowship group for a very enjoyable session on Wednesday afternoon. The participation by yourself and others from the general Institute family has been a very important contribution to this Fellowship Program.

The men told me that they found the session with you particularly interesting and stimulating. I was sorry that a necessary trip out of town made it impossible for me to share in the experience.

Very sincerely yours,

SpTallmon

Gerald B. Tallman Director

n

OFFICE OF THE EDITOR



8 ARLINGTON STREET BOSTON 16, MASS.

The Atlantic Monthly

May 11, 1950

Dear Dr. Wiener:

Our session this morning sets a new friendly precedent and one which we shall resort to whenever necessary as your new manuscripts come our way. It was fun and it was satisfying to watch as those ideas shaped themselves into the sure imagery of your thinking.

I am sorry that we did not think of this twoway colloboration when your first manuscript was under discussion. Had we done so, we should not have missed the boat. Accept my apology and this dividend sent in appreciation of the extra pains you have taken.

Sincerely as ever,

Edward Weeks

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



THE ATLANTIC MONTHLY

8 ARLINGTON STREET BOSTON 16

May 11, 1950

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

Since the Atlantic is interested in first American and Canadian serial rights only, we shall be happy, on receipt of your request, to assign the copyright therein to you, at any time after publication date, reserving to ourselves the right to vend copies of the article during the term of the copyright as a part of The Atlantic Monthly.

We are advised that this formal procedure is necessary to protect your rights, as well as ours, under the very complicated conditions surrounding the copyright laws.

Very truly yours,

THE ATLANTIC MONTHLY COMPANY Splee Per

May 11, 1950

Dr. Eric Berne San Carlos At Ocean Avenue Carmel-by-the-Sea, California

Dear Dr. Berne:

I should be very glad to see your manuscript providing you retain a copy yourself, and that I take no responsibility concerning it, even to the point of returning it.

This does not mean that it is not my intention to do so, but I have a frightfully heavy schedule of correspondence and may easily omit sending your manuscript at a time when I ought to. Therefore, to protect you and myself, I am insisting on this requirement.

Sincerely yours,

Norbert Wiener

NW:Z

Mr. Fred Hoffman AT 2 T/PA Units LG 35 N. E. S. Nor Norfolk, Virginia

Dear Mr. Hoffman:

My own opinion is that the degree of personality and impersonality of a college is not covered solely by its size. I think that we have rather an intimate group here at MIT working on Electronics. The difficulty here would be much more in the matter of expense than in size.

If you will send me a more detailed account 66 what you have done, and what your interests are, I will try to get it in the hands of those of my colleagues who can give you better advice than I can as to where to go.

Sincerely yours,

Norbert Wiener

Mrs. Nina Holton Houghton Mifflin & Company 2 Park Street Boston 7, Massachusetts

Dear Mrs. Holton:

I suggest that your publicity people contant the following periodicals and see if you can ge . lists of their subscribers for circularizing

- 1 Bell System Technical Journal 195 Broadway New York, New York
- 2 BBulletin of Mathematical Biophysics University of Chicago Press 5750 Ellis Avenue Chicago, Illinois
- 3 American Statistical Association Bulletin 1603 K St. N. W. Washington 6, D. C.
- 4 American Journal of Economics and Sociology 50 East 69th Street New York 21, New York

I am enclosing with this letter the Bulletin of The American Mathematical Society which contains the lists of officers and members. You might also contact the Wistar Institute of Anatomy and Biology in Philadelphia to find out if they have any lists of physiologists you could use.

Very sincerely yours,

Margot Zemurray, secretary to Dr. Norbert Wiener

Mr. Robert W. Johnson Johnson & Johnson New Brunswick, New Jersey

My dear Mr. Johnson:

Thanks very much for your letter of the second. I appreciate its courtesy, and I hope that we may keep in touch.

As to Mr. Fromm, I met him at the meeting of the Sloan fellows. He is a very personalbe and intelligent young man, and I wish to congratulate you on having him as a Junior Associate. I got a very good reception from the Sloan boys, and I imagine Mr. Fromm has already told you about it.

Meanwhile, if you happen to come to Boston, let me know, and we can talk over various matters.

Sincerely yours,

Norbert Wiener

Mr. William N. Locke Department of Modern Languages Room 24-507

Dear Mr. Locket:

The particular thing that I wish to emphasize is that the understanding of language occurs by an act or acts of internal translation, and I wish to characterize these acts in comparison with similar acts of the machine.

Sincerely yours,

Norbert Wiener

ROBERT L. STEWART INDUSTRIAL ECONOMIST 1412 PARK CENTRAL BUILDING LOS ANGELES 14, CALIFORNIA ADAMS 3-2908

May 11, 1950

Prof. Norbert Wiener, Massachusetts Institute of Technology, Cambridge 39, Mass.

Dear Sir:

Your note of May 1 has been received and I should like to say that taking refuge in ambiguity is hardly considered scientific by technologists.

The phrase "very revealing" seems to indicate a condition of ignorance. To whom does it belong - please?

I am sure you were gratified to note how the CIO made use of your predictions at their convention yesterday in Atlantic City. If members of MIT faculty insist on aiding elements who would destroy the American System, they should make sure they have a majority, and if not then they should consider resigning and applying for membership in the organization that represents their views.

ours sincer ly.

RLS: cmp

Mr. Robert Mayne Goodyear Aircräft Corporation Akron 15, Ohio

Dear Mr. Mayne:

You are right. Q was not fully aware that the work you were doing was war work, and therefore, I am unwilling to be consulted in connection with it.

However, I have enjoyed meeting you in my office.

Sincerely yours,

Norbert Wiener

Mr. Emil J. Steger 420 South 11th Street Belleville, Illinois

Dear Mr. Steger:

I have already got in touch with Mr. Walter Reuther about the economic consequences of possible developments in automatic machinery, and I know that the labor people are giving it a great deal of thought. This does not mean that we have any practical solution of the problem which we can produce for all occasions, but at least the group that needs to be alerted is alerted.

I am trying to cut personal interviews to an absolute minimum. This certainly is not directed at you as an individual, but is a precaution which I have found my present fatigue, and the present state of my health to render necessary. I hope you will understand.

Very sincerely yours,

Norbert Wiener

COMMISSION FRANCO-AMERICAINE D'ECHANGES UNIVERSITAIRES 41, rue du Faubourg Saint-Honoré Paris (8°)

Paris, le 12 mai 1950

Monsieur Faral, Administrateur du Collège de France, 11, place Marcellin-Berthelot Paris, 5°.

Monsieur l'Administrateur,

COPIE

J'ai le plaisir de vous confirmer notre conversation téléphonique de ce jour au sujet de la venue en France du professeur Norbert WIENER du Massachussetts Institute of Technology, dans le cadre des échanges universitaires prévus par la loi Fulbright.

Mr. Wiener sera donc mis à votre disposition dès son arrivée en France, et vous pourrez alors organiser avec lui le programme de l'enseignement que vous voudrez bien lui confier.

Je vous rappelle que le traitement et les frais de séjour de Mr. Wiener sont entièrement pris en charge par notre Commission et que, par conséquent, sa collaboration n'entraînera aucun frais pour le Collège.

Je vous prie de croire, Monsieur l'Administrateur, à l'assurance de mes sentiments sincèrement dévoués.

Signé : Gaston BERGER.

May 12, 1950

Dr. Norbert Wiener

Dear Dr. Wiener:

The enclosed announcement, and later ones which I will mail to you, are just to keep you informed of the activities of "The Cybernetics Group". an informal organization which has been meeting, somewhat irregularly, for the past year or so in New York City. Claude Shannon and John R. Pierce have been with us frequently; also Harry Grundfest and Richard Brickner from the medical-biological field.

We would be most pleased to have you with us any time you can pay us a visit. We usually meet on Friday evenings, the particular dates being subject to the exigencies of programming. Location of the meeting also varies somewhat -- within the limits of Manhattan. Meetings usually consist of a fairly substantial "paper" taking 1 to one hour to present. followed by an hour or two of discussion. Attendance has averaged about 15, with a rather balanced representation from physical science, engineering, and the medical-biological interests.

Possibly you could be induced to speak to us some Friday evening on some such theme as Current Progress in Cybernetics. I suggest this type of survey or progress-report paper since one of our greatest needs is to keep up to date with the latest work which is going on and the newest horizons being exposed to view. If you can, at any time, see your way clear to getting acquainted with us in somewhat this way, just write to me at least twelve or fourteen days ahead of time and I'll be very happy to convoke the group on the Friday evening named by you.

We have covered a good bit of ground altogether. Last year the emphasis was on communication theory and applications of it to electrical communication. This year we have been looking into neurophysiological mechanisms a good bit. However, nothing in the way of a long-term program has shaped up yet. Eventually I hope to encourage the formation of a program committee which can help stimulate members to higher levels of organized creative effort along the lines of our common interest. We are especially fortunate in that at least a few of us can extend our interest in cybernetics into our regular professional work in a major way.

I should also mention John Pfeiffer, the science writer formerly with Scientific American, who is an actively interested member of our Group and through whose suggestion I am bringing the Group to your attention and also to the attention of Dr. Pitts. John has been most helpful in giving us what contact we do have with other groups interested in cybernetics.

With best wishes,

Ergene 7. Coleman



HOUGHTON MIFFLIN COMPANY 2 PARK STREET BOSTON 7

May 12, 1950

Professor Norbert Wiener Mass. Institute of Technology Cambridge, Mass.

Dear Professor Wiener:

Thank you very much for letting me copy your very interesting Prologue for RUR.

With my best regards,

Yours sincerely,

(Mrs.) Nina Holton Editorial Department

THE Nation Associates

President FREDA KIRCHWEY

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LILLIN SHULTZ Director May 12, 1950

Dr. Norbert Wiener Massachusetts Institute of Technology Cambridge 39, Massachusetts.

My dear Dr. Wiener:

Thank you very much for your letter. I am delighted to have your favorable reaction to our conference.

We are now in the midst of preparing to submit to the appropriate agencies of the United Nations and to our own government, the various proposals which were submitted, in the hope of action. The important thing is to spread these proposals far and wide, and to organize public pressures in their favor. This we will try to do.

I will, of course, send you a copy of the supplement as soon as it is off the press. I will take the liberty of keeping in touch with you.

Cordially,

Freda Kirchwey

P. S. My bookkeeping department will, of course, send you the small check which you have requested.

THE NATIONAL VETERANS EPILEPSY CENTER CUSHING VETERANS ADMINISTRATION HOSPITAL FRAMINGHAM, MASSACHUSETTS

May 12, 1950

Professor Norbert Wiener Massachusetts Institute of Technology Cambridge, Mass.

Dear Professor Wiener:

I should like to again express my gratitude for the opportunity to attend your last seminar. I found it most stimulating and provocative.

One of the most striking aspects to me was the use of a common language by workers in the physical sciences, the social sciences, the biological sciences, and the mathematicians. It was thrilling to hear a single language spoken and to see that it was possible by so doing to emphasize the community of interest and of knowledge shared by all scientists.

I hope I shall be privileged to attend more of your seminars next year.

We are all looking forward to another visit by you to Cushing to see the anesthesia feed-back mechanism in operation.

Very sincerely yours,

TK hisolic

J. K. MERLIS, M.D. Neurologist in Charge

JKM:rl

557 Kosciusko St. Brooklyn, May 12th 1950

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

My dear Dr. Wiener: cover

I am sending under seperateomy thesis, Capitalism Overhauled as you suggested You will recall my lenghty letter in which I build the premises why capitalism is to be overhauled and not discarded as others advocate. Here I shall dwell at greater lenght postulating the same reasons. This has to do with several fallacies in Marxism in addition that my Ms. contains: Every cultured person of today upon reading his newspaper may find various speeches or statements by public men who deplore the fact that in other lands people acquiesced and embraced the ideology of economic security without freedom. Even in this land of ours, there are small minorities who advocate a similar ideology. Not since the days of the mythological Damon and Pythias and their sworn enemy, Dionys, the tyrant has freedom been in jeopardy. All this may be attributed to that dilettante in political economy, Karl Marx and his adjutant, Lenin. Marx failed to learn from catholicism what it started out to be and what it developed subsequently. Jesus was a carpenter's son and he gathered around him the population of shepherds and fishermen, beggars and mendicants and all those who had hatred and contempt/for Jesus was their champion in those days. Their contention was that the old testament gave too much protection to the wealthy. The new moral instilled was to the effect that the underprivileged is to enjoy more freedom and not to be the footstool of the wealthy or the money changers. Subsequently the age of scholasticism set in and it was dangerous for a man of science to advocate that the course upon which the feligious spokesmen tread is an erroneous one until Giordano Bruno had to burn on the stake and Galileo Galilei had to end his life in disrepute .

Marx failed to deduce from this how dangerous it was to acquiesce by coining a phrase, the dictaorship of proletarians and how Lemin used it to make a revolution without proletarians in the preponderant majority. Instead from the bottom to start such a commotion, it suffices to send the word of the party line to the satellites and they are executed as the orders are from top. Yes, this dictatorship of the proletarians wrought havoc among the working people of the world who pretended to be the avanguard for public liberties. But Marx was not only a dilettante in political economy, he was xxix also one in economics . Economists of today know that there are two categories of industries, the durable goods industries and the consuming goods industries. The durable build up the capacity for the consumption of goods . The proposition is this that not before the durable goods industries reach top capacity is xthe a people to dispense with finance capital and do without investors or their capital. This is an axiom as envisaged by Capitalism Overhauled, but what Marx did is to announce a hatred and contempt for the wealth of the scatterde few in his days of industrial infancy. He transposed the same venom which existed in the days of Jesus and used it very diplomatically and " scientifically". He had success and no wonder the gullible worker had to blame someone for the state of affairs. In what land is there a record of voluntarily embracing the socialistice ideology ?Britain tries it and seems to be unable to do it for the truth of the matter is that we cannot achieve a state of complete. dispensing of capital not before the durable goods industries are built up to top capacity.

The other day, Mr. Lie, the Secretary of the U.N. stated that there are 1,660.000 000 individuals on the globe who have worries for consumption goods, let alone durable goods .It is indeed a mockery to talk of the discard of capital and its investors. The United States may boast in this as having reached the frontiers and presently is the chief worry. However, capitalism overhauled copes adequately with the situation. It opens up new frontiers and your cybernetics may assist in that. In view of the world-wide starvation which is on, we must not think of socialism or communism, a menace to freedom. We must think of building up consuming goods industries and subsequently durable goods and only then we may say to capital-skidoo. However, this might take centuries, Capitalism Overhauled takes the attitude that with a respite of 25 years without wars and the preparation for it that era may be reached. But you are a mathematician figure it out yourself. There is one thought that must be borne in every one's mind which is that the classical land of the proletarians needs capital for their consuming goods and durable industries and that is why they are angry at us because we decline to give the "xxxxxx"dough"to them. I hope that in this case you may deviate from your set out rules and give counsel and advice to M.I.Xxx T.to publish the paper as all the others from your faculty and that the faculty and the student body are to become the charter members of the League for Economic Coordination for if man is to work with robots and eat too , capitalism overhauled is the only alternative. Very sincerely yours,

Max Pasternal

May 12, 1950

Miss Judith Chase Churchill 24 Woodland Drive Fair Haven, New Jersey

My dear Miss Churchill:

If I were interested in giving my ideas on this material to the Woman's Home Companion which I am not, I would write an article myself and collect the payment.

Quite frankly, I do not regard the business of authors collecting live material from other authors as fully ethical.

Sincerely yours,

Norbert Wiener

May 12, 1950

The Editor The New Yorker Magazine 25 West 43d Street New York 18, New York

Dear Sir:

The following skit may or may not be acceptable to you. I am enclosing return postage on the most probably assumption. In either case let me know here at my MIT address.

In case it should be accepted, I would like to have it published pseudonomously, and I suggest that my psudonym be Norbertus Vindebonensis.

Sincerely yours,

Norbert Wiener

NW # Z

Massachusetts General Hospital Beston 14,

IN WAVERLY MCLEAN HOSPITAL W. FRANKLIN WOOD. M.D. DIRECTOR

IN BOSTON GENERAL HOSPITAL BAKER MEMORIAL PHILLIPS HOUSE

HALL MERCER HOSPITAL HUNTINGTON MEMORIAL HOSPITAL VINCENT MEMORIAL HOSPITAL

DEAN A. CLARK. M.D. GENERAL DIRECTOR

May 13, 1950

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

Dear Prof. Wiener:

This is to thank you very much for your genteel personal cooperation in the electroencephalographic studies that we are interested in, to determine the EEG's of those privileged brains and whether any special bicelectrical coorelation with mental activity could be found.

As you may remember you suggested that I write you to remind you of your very kind offer to make arrangements for the above mentioned studies to be done on Prof. Einstein and your personal friend Prof. Von Neumann. The test will consist of simple recordings during mental resting and mental work.

I am ready to go to those professors if it is requested. If this is the case it will be necessary to have an EEG machine of 8 channels there, which I am sure can be arranged but I would like first to have the consent of those professors.

Sincerely yours, and afectuosamente lo saluda,

afaulant. E S

Alejàndro P. Arellano, M. D. EEG Lab., Box 743

4th Annual EASTERN COLLEGES SCIENCE CONFERENCE BARNARD COLLEGE

Address correspondence to: FRANCES FUCHS B. C. S. C. Room 105, Barnard Hall Barnard College New York 27, N. Y. CHARLOTTE GRANTZ, Executive Chairman DOROTHEA BENNETT, Executive Secretary FRANCES RYDER, Executive Treasurer FRANCES FUCHS, Corresponding Secretary

May 13, 1950.

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

Dear Dr. Wiener,

I should like to thank you again, on behalf of the entire Barnard Committee, for your contribution to our Conference. Your lecture was both interesting and enlightening for out delegates, and I know that they enjoyed it very much.

Would you please send me an estimate of any expenses which you incurred by participating in the Conference so that it will be possilbe for us to return that amount to you. This is, of course, aside from the seventy-five dollar honorarium which you will receive.

Yours sincerely,

Frances Fuchs

Frances Fuchs Corresponding Secretary

Department of Philosophy Temple University Philadelphia, Pa. May 13, 1950

Professor Norbert Weiner Massachusetts Institute of Technology Cambridge, Mass.

Dear Professor Weiner,

I am enclosing a copy of an article called White to Play and Win which is a direct outcome of our interview which took place some weeks ago. It is a working out of the suggestions you made to me concerning the analogy between chess and a formal system. The ideas behind it were pretty well worked out within a few hours of my leaving you at M.I.T., and I tried to get in touch with you the same evening to tell you, but when your wife told me that you were leaving for New York early the following morning, I decided not to bother you with my ideas until I had got them down in a precise form.

I would like to make the following points, which were not perhaps quite evident from the paper, and which I hope to develop in a future one.

The axioms of a formal system do not correspond to the starting position in chess, but to the <u>final</u> (mating) position. This seems to suggest a new way of approaching metamathematics, from the standpoint of final causes, so to speak, rather than efficient causes. A formal system on this basis would be an instrument for proving such and such, rather than an instrument for deriving something from such and such.

The results of my paper can be extended to any game like chess even if it is played on an infinitely large board. The only requirements are that we should know a breach of the rules when see one, that we should know a checkmate when we see one, and that there should only be a finite number of legal successors to any position (e.g. chess on an infinite board would not fulfill the last requirement, though checkers on an infinite board would.)

I think I have solved in essentials the other

problem you proposed to me, (the construction of a system of logic in which the time parameter is explicit). But this is a technical business which I shall write up in another article and mail to you. The chief disadvantage of the system is this; that it is subject to the usual Godel problem in modified form; i.e. there are formulae of an altogether nonperadoxical appearance which don't "settle down". We expect this in the case of the Russell paradox, and our expectations are rewarded by a straightforward fluctuation between 1 and 0; but it is bothersome when it intrudes into diophantine equations. Nonetheless, I think Godel's argument shows that any other system would suffer from the same limitation. I'll send you the paper in a few days, and you can judge for yourself.

I wonder if you would consider that the enclosed paper, the time paper, and my previous record would justify you in recommending me for a research fellowship or other research position at M.I.T. I am writing to Professor Martin about this, and would be extremely grateful if I could feel that I had your support.

Very sincerely yours,

John Myhill



Monrovia, California May 13, 1950

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

Dear Prof. Wiener:

I know from your book "Cybernetics" that you attach fundamental importance to the entropy concept perhaps far beyond the fields of Thermodynamics itself. I feel you might welcome the interpretation of entropy along the lines of the mathematical theory of Utility (Ophelimity) in Econometrics.

I am enclosing a special print from the January issue of Econometrica about the Entropy-Ophelimity analogy. Although I know this is a very condensed summary of the key concepts I am sure you will appreciate that a working analogy on mathematical lines is possible in the various thermodynamical hypotheses.

I would appreciate very much to know if you are welcoming an Entropy-Ophelimity analogy and whether it could be used fruitfully in Cybernetics.

An outstanding Dutch economist-mathematician, Dr. H. J. C. Lisman, published last year a book entitled "Econometrics, Statistics and Thermodynamics". I wonder if you met this book and if not, I would be glad upon your request to forward to you a copy. Dr. Lisman devotes himself to the interpretation of Entropy in economics and his endeavorings, subsequent to mine, are very similar.

Hoping to hear from you, I am

Very sincerely yours,

andrew Piller

(Andrew Pikler) 110 May Ave. Monrovia, California

P.S. I would like to add that detailed explanations will shortly appear in different Enropean and American scientifical reviews about Entropy-Ophelimity.

May 13, 1950

Mr. Ted Weeks, Editor The Atlantic Monthly 8 Arlington Street Boston, Massachusetts

Dear Mud:Weeks:

I appreciate very much both your check and your letter of May 11. I agree with you that we have found a profitable method of working out the difficulties of my papers, and if you are willing to bear with me in the future for the time necessary to adjust matters personally, I think that you will find that that time will not be excessive.

I certainly intend to take advantage of your kindness more than once.

Sincerely yours,

Norbert Wiener

NW:z

PATHFINDER

1323 M STREET, N. W. -:- WASHINGTON 5, D. C.

EDITORIAL OFFICES

May 15, 1950

Professor Norbert Wiener Mass. Institute of Technology Cambridge, Mass.

Dear Professor Wiener:

We believe that you will be interested in reading the marked article on page 66 of the enclosed copy of Pathfinder.

Please feel free to make any comment or criticism on it that you may care to express.

Sincerely yours,

Benerley M Dowie

Beverley M. Bowie Science Editor

BMB/rs

COPY - Translation:z

Comlege de France

L'Administrateur

Dear Professor:

I have the honor to send you the attached copy of a letter which I have just received concerning your stay in France during the coming year.

The course at the College de France begins the first of December.

I will be grateful to you if you will get in touch with me during the coming October to arrange your teaching program.

Please be assured of my very best wishes to you.

TheAAdministrator of the College de France

Faral

Franco-American Commision for University Exchange 41, rue du Faubourg Saint-Honore Paris (8)

Copy-Translation:z

Paris, May 12, 1950

Monsieur Faral Administrator of the College de France 11, place Marcellin-Berthelot Paris, 5.

Monsieur L'Adminstrateur:

I have the pleasure of confirming with you our telephone conversation of today on the subject of the advent in France of Professor Norbert Wiener of the Massachusetts Institute of Technology under the plan for the exchange of university personnel provaded for by the Fulbright Act.

Mr. Wiener wil be at your disposal as soon as he arrives in France, and you can then organize with him the teaching program which wou wish to assign to him.

I want to remind you that the care and expenses of Mr. Wiener's trip will be completely taken care of by this Commission, and as a result his collaboration will not bring any financial burden on the College.

I want to assure you of my very best wishes.

Signed: Gaston Berger

HERMANN & CIE SOCIÉTE A RESPONSABILITÉ LIMITÉE

6, RUE DE LA SORBONNE - PARIS (5")



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io', central

See. See.

COMPTE CHÈQUES POSTAUX PARIS 416-50

PARIS , 1e 15 Mai 1950

Monsieur le Dr. NORBERT WIENER,

Massachusetts Institute of Technology Department of Mathematics U.S.A. Mass. CAMBRIDGE 39

Cher Docteur Wiener,

Le 14 Mars dernier, je vous ai envoyé une lettre "très comptable" pour vous prévenir que nous faisions des démarches auprès de l'OFFICE DES CHANGES pour pouvoir vous régler les droits d'auteur que je vous dois sur les exemplaires de CYBER-NETICS que j'avais vendu à la date du 31 Décembre dernier.

Entre le moment où nous demandons l'autorisation de faire le règlement des droits d'auteur qui résident à l'étranger et que nous ne pouvons pas rêgler en francs, parceque la loi nous en empèche, et le moment où le règlement est fait directement par l'Office des Changes, il se passe un certain temps, mais l'Office des Changes nous prévient de la date où le règlement va être fait, afin que nous puissions expliquer au destinataire la raison de ce virement.

Malheureusement, l'Office des Changes ne nous a pas notifié la date de votre règlement et je viens d'apprendre par notre ami commun SANTILLAMA que vous avez reçu vos droits sens aucune explication de notre part comme j'avais décidé de le faire si l'Office des Changes n'avait pas omis de me communiquer que l'envoi de vos droits était autorisé.

Comme je vous le disais dans ma lettre du 14 Mars, dont vous trouverez ci-joint une copie, nous avons vendu dès sa publication au 31 Décembre dernier 420 exemplaires à 800 frs. l'exemplaire, somme sur laquelle vous avez 10 %, soit 80 frs. donnant un total pour l'ensemble des exemplaires vendus de frs. 33.600.- qui ont été convertis en Dollars par l'Office des Changes, qui vous les a fait parvenir directement.

Au 31 Décembre dernier, il nous restait donc dans nos magasins ou en dépôt chez les libraires 1080 exemplaires et au 31 Décembre prochain, je pourrai vous indiquer combien nous avons vendus cette année et nous vous ferons un deuxième paiement de vos droits.

Nous avons reçu quelques demandes d'éditeurs

étrangers pour la publication de CYBERNETICS dans d'autres langues que l'anglais, et sauf deux qui avaient mal adressé leur lettres, que je n'ai pas reçu et qui se sont adressé directement à WILEY ou peut-être à vous-même, j'ai répondu à tous inclus les 2 dont je viens de vous parler, en leur envoyant pour examen comme ils le demandaient, un exemplaire de CYBERNE-TICS, afin qu'ils puissent décider de l'intérêt et de la possibilité de réaliser cette publication. Malheureusement, tous m'ont répondu en me disant qu'ils renoncaient à donner suite à la traduction en raison du public trop restreint à qui votre ouvrage s' adresse, et aussi parceque d'après les enquêtes qu'ils avaient faites, la plupart des spécialistes, possèdaient déjà l'édition originale, rendant l'entreprise difficile et pleine de risques.

Hier, la Maison VALENTINO BOMPIANI, Corso Porta Nuova Nº 18 MILANO, Italie, qui était une des premières à me demander les droits de traduction en langue italienne et à qui j'avais envoyé un exemplaire de OYBERNETICS et qui avait renoncé à donner suite à la publication, m'écrit de nouveau en me demandant si les droits de traduction en italien sont encore libres et si je peux lui confirmer les conditions que je lui avait faites dans le passé, soit 10 % sur le prix de vente du volume en italien, et une avance payable à la publication équivalente au montant des droits de mille exemplaires qui sont les conditions habituelles des éditeurs en Europe. Je lui ai répondu en lui disant que les droits étaient libres et en lui confirmant ma première proposition.

Les éditeurs qui m'ont demandé les droits de traduction de CYBERNETICS sont les suivants :

AB LJUS, Vasegatan 18 STOCKHOIM Suède VALENTINO BOMPIANI & C°, Corso Puorte Nuova 18 MILANO Italie LIERAIRIE GALLIMAND 5 Rue Sébastien-Bottin PARIS 7° Monsieur ADAM HELMS c/o FORUM Bokvötglaget STOCKHOIM Suède LOGANESI & C. Via Borghetto 5 MILANO Italie J. M. MEULENHOFF UITGEVER AMSTERDAM, Rokin 44 Hollande

Cher Docteur Wiener, si j'ai commisune faute en ne vous tenant pas au courant au fur et à mesure des demandes de traduction que j'ai reçu, je vous demande de bien vouloir m'excuser, si je ne l'ai pas fait, c'est parceque je ne voulais pas vous déranger inutilement en cas d'echec, je voulais vous notifier seulement la cession de traduction réalisée complètement et comme malheureusement aucune n'a réussi jusqu'ici, je ne vous avais rten dit.

Je ne crois pas inutile de vous signaler que les raisons de cet echec sont dûes au fait que votre ouvrage a été publié en anglais qui comme vous le savez est devenu la langue internationale de la Science et a occupé la place qui occupait le latin au Moyen-Age. En plus, votre ouvrage, réellement n'est accessible qu'à des spécialistes et qu'un spécialiste qui fait de la recherche sans savoir au moins lire l'anglais, ne peut-aller trop loin.

Si nous considérons le nombre d'exemplaires vendus en totalité, le succès de CYBERNETICS a été extraordinaire, vous pouvez être fièr et je suis persuadé que si vous faites une enquête auprès de WILLY ou de la TECHNICAL PRESS, vous constaterez que peu d'ouvrages de la qualité du vôtre se sont vendus à un nombre aussi

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considérable. Dernièrement, j'ai reçu la visite d'un des directeurs de la OXFORD UNIVIRSITY PRESS qui m'a posé des questions concernant CYBERNETICS et il a été étonné du résultat obtenu et il m'a affirmé qu'en dehors des livres d'étude intéressant les étudiants, il ne connaissait aucun ouvrage de la qualité du vôtre, s'étant vendu en Angleterre et à la OXFORD UNIVERSITY PRESS à un nombre aussi considérable que le vôtre.

Je ne sais pas comment vous expliquer, Cher Docteur Wiener, que mon intérêt personnel pour que votre ouvrage soit traduit dans un grand nombre de langues, est aussi grand que le vôtre, j'ai écrit à des éditeurs étrangers que je croyais susceptibles de s'intéresser à une traduction dans la plupart des pays importants, j'ai chargé deux de mes amis au Méxique pour proposer la traduction au FONDO DE CULTURA, Maison d'édition que vous devez connaître, et un autre de mes amis à BUENOS AIRES, et de partout, on m'a répondu que la possibilité de rendre rentable l'opération, était inexistante parceque les spécialistes le possédaient déjà en anglais.

> Pour vous prouver combien c'est sérieux, ce que je vous dis ici, je vous propose de faire une édition en français qui sera inclus dans les Actualités comme la première, si vous voulez bien mettre à jour le texte ancien, c'est-à-dire en introduisant du matériel nouveau, et les résultats que vos collaborateurs ont pu obtenir depuis le moment de la parution de l'ouvrage.

> Naturellement, je suis incapable de vous donner aucune indication, mais ce que je peux vous dire, c'est que votre livre est en train de reproduire le phénomène de la boule de neige. Votre livre a intéressé prodigieusement un petit nombre de savants, ceux-çi ont parké à des gens d'une certaine culture capable de s'y intéresser 'également, et ces derniers parlent à la grande masse en se donnant des airs d'avoir compris.

> Pour vous donner une idée de l'intérêt dont je vous parle, j'ai déjà entendu, et avec beaucoup de plaisir, soit au Café, soit au Restaurant, des voisins faisant une petite conférence sur CY-BERNETICS à des gens émerveillés et désireux visiblement de comprendre mais les conférencier (des Cafés et des Restaurants), pour se donner de l'importance, expliquant à leur auditoir, que votre livre n'était accessible qu'à des gens ayant une forte culture mathématique.

> Je suis persuadé que si vous vouliez bien en rédigant le texte d'une édition en français, songer un peu à ce public désireux de comprendre, le livre pourrait avoir un succès et ceci n'implique pas que je vous suggère un livre de vulgarisation, loin de là, il doit être, à mon point de vue, un livre scientifique dans lequel vous pourriez donner tout l'appareil mathématique qui est nécessaire et dont vous vous êtes servi dans l'édition anglaise. Naturellement aussi, je ne vous demande pas de le rédiger en français, je pourrai

290 le faire traduire tout en vous soumettant avant composition la traduction pour qu'elle vous donne satisfaction.

Cher Docteur Wiener, en vous disant ce que je viens de dire, je suis dans le même état d'esprit que j'étais le jour où à Paris, dans mon arrière-boutique, je vous ai demandé le texte de ce qui fut plus tard CYBERMETICS, première édition; à ce moment là, je n'avais aucune idée du succès que pourrait avoir votre ouvrage, et très probablement, vous ne le saviez pas non plus, et d'est dans ce même état d'esprit que je vous demande le nouveau texte pour la traduction française qu'aucun éditeur a voulu faire ici, craignant le risque, mais comme je suis habitué à ces risques, perceque tous les cuvrages que je publie, sont dangereux, je vous confirme que pour vous, je serai heureux de courir ce risque, et que je serai courageux pour supporter le succès s'il se présente à nouveau.

J'ai rencontré dernièrement un certain nombre de Méxicains qui vous connaissent et qui vous aiment bien, entre autres, le Docteur CHAVEZ, le Docteur BAZ, et hier, Monsieur NOVOA, Directeur de la Banque du Méxique qui vous connait et vous admire, et hier aussi, chez HENRI CARTAN, j'ai fait la connaissance de Monsieur le Professeur STONE de l' Université de Chicago, CARTAN avait invité à peu près tous les Mathématiciens français et tous ont parlé de vous et de vos travaix avec un grand enthousiasme. Presque tous m'ont dit qu'il serait intéressant de faire une traduction en français de CYBERMETICS, et comme je leur au dit que j'allais vous le proposer, tous m'ont encouragé vivement à le faire.

Par paquet poste recommandé, je vous fais parvenir deux des derniers volumes que j'ai publiés ces jours-ci et que j'espère pourront vous intéresser : le premier : le Nº 1091 THEORIE DES DISTRIBUTIONS, tome I par L. SCHWARTZ qui a un très grand succès, et le deuxième : le Nº 1102 : ELEMENTS DE MATHEMATIQUE par Monsieur BOURBAKI que vous connaissez bien, la première partie de : Les Structures fondamentales de l'Analyse, Livre II ALGEBRE, Chapitre IV Polynomes et Fractions rationnelles, Chapitre V Corps Commutatifs. Ce volume, c'est le volume XI de la série BOURBAKI et j'ai sous presse le volume XII qui sortira dans trois mois.

Vous voudrez m'excuser de cette lettre si longue, je sais que vous êtes trop occupé, mais je vous devais un certain nombre d'explications, explications que je viens de vous dinner, et je voulais aussi dissiper de votre esprit la mauvaise impression que mon silence aurait pu vous produire, et si vous aviez le temps de m'envoyer quelques lignes pour me dire que tout est de nouveau comme avant, cela me fera un grand plaisir.

Pour terminer, et en corfirmant ce que je vous ai dit dans ma dernière lettre, le projet d'établir une succursale au Méxique, est beaucoup plus compliqué que je le croyais, il y a toute une série de difficultés techniques et économiques qui m'ont obligés à renoncer à cette idée.

Myuymam

* *

Veuillez me croire comme toujours, votre très dévoué

Dr. Trygve Braatoy The Menninger Foundation Topeka, Kansas

Dear Dr. Braatoy:

I think it is important that in my concept of overloading, I refer to the amount of traffic rather than to any quantitative overloading of individual fibers. It is also not at all necessary that the excessive traffic be significant traffic, so that overloading does not necessarily pertain to an excessive use of one's mental facilities. As a matter of fact, probably random useless consideration of worryful alternatives are likely to produce a more serious consumption of neuronal pools than the ordinary regulated use of our mental facilities. However, a purely intellectual overloading remains a possibility, and the suddenness to which we have referred is equally relevant in both cases.

I find your article very interesting both as to the cases given and as to their explanation.

Sincerely yours,

Norbert Wiener

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Dr. Albert Einstein Institute for Advanced Study Princeton, New ersey

Dear Dr. Einstein:

Dr. Alexander P. Arellano of Beru is working at the Massachusetts General Hospital in electroencephelography. He is a sincere worker and has very definite scientific ends in view in attempting to collect encephelograms of men of active intellect. He has taken mine and would like an introduction to you (and Professor von Neumann) for the purpose of this work. I believe that he has a portable apparatus, and that he will be able to come to you people rather than put any burden on your coming to him.

I have no axe to grind in the matter, and Imam simply interested in making a contact between him and you which both sides can follow up if they wish it.

Sincerely yours,

Norbert Wiener

Dr. Lago Galdston The New York Academy of Medicine 2 East 103 Street New York 29, New York

Dear Dr. Galdston:

I would enjoy seeing you very much on Friday, May 19th in my office here at Technology at 4 p.m.

Sincerely yours,

Norbert Wiener

NW 2Z

Mr. R. T. Lipscombe Richmond, Virginia

Dear Mr. Lipscombe:

Your apparatus for exploiting solar energy looks interesting, but is well outside of my field. As you have already got in touch with Dr. Telkes and others you scarcely need the opinion of someone who is not an expert in the field.

Sincerely yours,

Norbert Wiener

NW:z

Dr. J. K. Merlis The National Veterals Epilepsy Center Cushing Veterans Administration Hospital Framingham, Massachusetts

Dear Dr. Merlis:

I am so glad that you could visit us in our seminar. What our plans for next year are will have to be thrashed out with Dr. Rosenblueth when he comes.

In the meantime, I am looking forward myself to seeing the anesthesia feedback mechanism.

Sincerely yours,

Norbert Wiener

Professor Raphael Salem 16 Rue Leonardo da Vinci Paris, France

Dear Salem:

I have had the first confirmation of my success in obtaining a Fulbright Fellowship to Europe for next year. It is to be at the College de France. I have just received a letter from Faral in which he indicates to me that the French term begins around the first of December. Tech would be very reluctant to let me go on the first of December, and will probably insist that I stay here until the end of January at the earliest.

Now this insistence is not absolute, but depends on just how serious the French expectation is of my coming in time and staying the full period possible. Would you then be good enough to talk over with Mandelbrojt, who already knows the requirements of my situation and with any other people in the College de France what really is expected of me and what I am to do.

Of course, if the MIT requirements and the College de France requirements are too incompatible and too rigid, it may still be necessary for me to decline the College de France invitation with thanks.

I am working on the multiple prediction problem and it seems to show a very interesting connection with quantum mechanics. I am proposing to give my talk to the International Congress on this subject, and to use it as the basis for a series of flectures in France. It is quite likely that I will so arrange things that these lectures can be published in book or pamphlet form. We wa

We all send our best regards to you and your family. I suppose next year our paths will cross so that you will be at MIT while I am in France like the little man and the little woman in the barometer.

Sincerely yours,

Professor Irving E. Segal Department of Mathematics The University of Chicago Chicago 37, Illinois

Dear Professor Segal:

I know your work and I value it, but I just don't think that your Mexican plans can be carried out. I can write a letter to my friends down there, but in general, letters by people who have not yet got their Spanish up are not particularly welcome to them. I think there is a much better chance of your doing something at the new Technical School at Monterey. A couple of years ago it would have been easy to place men there, but I am a little out of touch with developments now.

Sincerely yours,

Norbert Wiener

NW:z

Professor Gerald B. Tallman Room 14-N 221 B

Dear Professor Tallman:

Many thanks for your letter of the 11th. I enjoyed the Sloan Fellowship group very much, and have been surprised to find out how strong the liberal element among them is. You can count on my cooperation in the future.

Sincerely yours,

Norbert Wiener

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

Dear Professor von Neumann:

Dr. Alexander P. Apellaro of Peru is working at the Massachusetts General Hospital in electroencephelography. He is a sincere worker and has very definite scientific ends in view in attempting to collect encephelograms of men of active intellect. He has taken mine and would like an introduction to you (and Professor Einstein) for the purpose of this work. I believe that he has a portable apparatus, and that he will be able to come to you pe ple rather than put any burden on your coming to hig.

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