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CORRESPONDENCE Aug. 1-11, 1954

N. WIENER MC 22

[ca. Aug., 1954]

South Tamworth  
New Hampshire

Mr. Weldon T. Ellis, Jr.  
Department of the Air Force  
Headquarters United States Air Force  
Washington 25, D. C.

Dear Mr. Ellis:

I am in fact in the midst of another book and what time I can get free from this I need for a summer's rest. If you can bring to me the problems which have been occupying you some time in the fall, I shall be glad to hear of them again.

Sincerely yours,

Norbert Wiener

NW:jc



Professor Norbert Wiener  
Massachusetts Institute of Technology  
Cambridge, Massachusetts

August 1, 1954

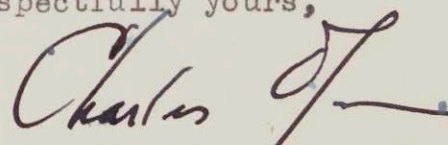
My dear Professor Wiener:

On behalf of the Faculty and Board of Fellows of Black Mt College, I have the deep pleasure to ask you if you will become a member of the new Advisory Council of the College.

The purpose of the Council is to demonstrate that leading scholars, artists and citizens know of the work of the College and believe in the principles of education on which it was founded and has thriven for twenty years. Nothing more; that is, membership on the Council asks nothing of the members other than their readiness, by their membership, to stand forth as recommenders of Black Mountain College in its work.

It is a great happiness to us that we understand you are willing to be a member of our Advisory Council and this invitation to you is wholehearted and unanimous from all of us. We are honored to carry your name as a member.

Respectfully yours,



Charles Olson, Rector

Black Mt College

[ans 8/11/54]

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

August 1 - 1954

Dear Dr. Wiener:-

Your book " The Human Use of Human Beings," contains the prediction, " We will have the completely automatic factory within twenty years if we do not have a war or within five years if we do have a war." A casual study of automobile journals ( Automotive Industries ) will convince the most skeptical of the accuracy of your prediction. Automation, the auto makers new word for automatic production, is not confined to the making of automobiles. It can be observed in all operations requiring extraneous energy.

Automation poses problems. This writer believes that wealth is the creation of goods of intrinsic value and that the wages of the workers who produce this wealth should be the sole basis of all taxation for maintenance of governments. If this be true, then the wages of salesmen, advertising men, etc. are parasitical and so are the taxes levied by the state on things purchased as well as the taxes levied by cities and others on things owned. However, it is not possible because of the constantly increasing costs of governments to take all taxes out of production wages. Therefore, Congress and all manner of tax levying bodies are taxing all things as much as possible without regard for the cost of goods to the ultimate consumer or for ethical origin. All of this proves that Automation is not the villain wrecking our economy, but is the multiplicity of taxes and the excessive gouging by all concerned in the production and distribution of goods and services. The constantly increasing cost of crime should also be added. Only those in on the take are satisfied to see a continuance of these conditions, even unto such vile conclusion pictured by George Orwell in his book " 1984 ".

As indicated in a letter to you in 1951, two thousand men and women including the writer quit the organization called Technocracy ( it seemed to have the answer ) because the leader was hell-bent on maintaining a one man fascistic organization. Since 1948 ( date of the breakup ) I have traveled many thousands of miles to confer with former leaders in the movement in the hopes of formulating a plan which would provide for the many thousands of our citizens who are unable to think for themselves a reasonable share in the wealth being produced automatically. Most of the people talked to were professional or semi-professional and had been aware of social conditions for a long time.



My reason for writing you is to ask that you check the possibility of using Constitutional Credit in place of present National Debt ( the distribution of Credit after costs of government are taken out ). Can it be sufficient to purchase all family requirements and can anyone prove it to be un-American. These are the three problems in the attached crude plan contained herewith, and are causing me much worry. Thus far this has been a oneman job and not having had a formal education it is quite difficult.

It is my intention to distribute this plan to the thousands of socially minded people now on my mailing list. Knowing of the tremendous efforts put forth by the Tedhnocrats in the west, I feel sure that this plan will have desirable results even as soon as the coming election in November-- that is, if I can get into final form and in the mail by September 15.

It is not my intention to impose on anyone or to bring anyone any undesired publicity and in replying you may desire to remain anonymous, in which case you may send me an unsigned letter or telephone me. You are one of America's foremost Citizens on whom we common folk must rely. As you say in you recent edition " The hour is very late, and the choice of good and evil knocks at our door." Will you please help ?

Sincerely,

*Harry L. Walters, Sr.*

Harry L. Walters, Sr.

R. D. 1 Box 414,  
Uniontown, Ohio.  
Oxford 9-2439

P. S. The writer is much releav<sup>ed</sup> by your statement on page 162 where you say " I have participated in two big meetings with representatives of business management, and I have been delighted to see that awareness on the part of a great many of those present of the social dangers of our new technology and the social obligations of those responsible for management to see that the new modalities are used for the benefit of man, . . . " Seems that some are not as cold blooded as we thought. Maybe my plan is not the complete answer but it may be a start.

HLW.

[ans 11/17/54]



Department of HEALTH, EDUCATION, AND WELFARE • Public Health Service

National Institutes of Health • Bethesda 14, Md.

NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES  
NATIONAL CANCER INSTITUTE  
NATIONAL INSTITUTE OF DENTAL RESEARCH  
NATIONAL HEART INSTITUTE  
NATIONAL INSTITUTE OF MENTAL HEALTH  
NATIONAL MICROBIOLOGICAL INSTITUTE  
NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS  
THE CLINICAL CENTER  
DIVISION OF RESEARCH GRANTS

August 2, 1954

In reply refer  
to: BF-5075

Dr. Archie R. Tunturi  
University of Oregon  
Medical School  
3181 SW Sam Jackson Park Road  
Portland 1, Oregon

Dear Dr. Tunturi:

It is with great pleasure that I inform you that the Surgeon General has approved your application for a Public Health Service Research Fellowship, the terms of which are set forth in the Statement of Award attached. You will also find certain additional information and instructions in the Award Letter Supplement.

We earnestly hope that you will find the tenure of this Fellowship both pleasant and profitable. If we can be of assistance at any time, please do not hesitate to call on us.

Sincerely yours,

Ernest M. Allen, Chief  
Division of Research Grants

CC: Dr. Wiener



DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
NATIONAL INSTITUTES OF HEALTH  
BETHESDA 14, MARYLAND

STATEMENT OF RESEARCH FELLOWSHIP AWARD

NAME OF RECIPIENT: **Dr. Archie R. Tunturi**

FELLOWSHIP IDENTIFICATION

**BF-5075**

TYPE OF AWARD: **Special**

INSTITUTE AWARDED: **National Institute of Neurological Diseases and Blindness**

EFFECTIVE DATE NO LATER THAN: **February 1, 1955**

SPONSOR: **Dr. Norbert Wiener**

DEPARTMENT: **Mathematics**

INSTITUTION: **Massachusetts Institute of Technology**

ADDRESS: **Cambridge, Massachusetts**

PERIOD OF THIS AWARD: **One year**

STIPEND: **\$6,250**

Provided the necessary funds are appropriated by the Congress, additional support will be given as follows: **None**

ALLOWANCES:

1 DEPENDENTS **---**

2. TRAVEL **---**

TOTAL **\$6,250**

The first stipend check will be for the first calendar month or part thereof of Fellowship duty and travel allowance, if any, as indicated above. The Supply Grant (see Award Supplement attached) must be requested in your behalf by your sponsor within 30 days after you enter on duty.

DATE June 18, 1954

*Ernest M. Allen*  
CHIEF, DIVISION OF RESEARCH GRANTS

DEADLINES FOR RECEIPT OF APPLICATIONS HAVE BEEN ABOLISHED

for

POSTDOCTORATE AND SPECIAL  
RESEARCH FELLOWSHIPS  
MEDICAL SCIENCES AND RELATED FIELDS

offered by

DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
THE NATIONAL INSTITUTES OF HEALTH  
BETHESDA 14, MARYLAND

*Please Post*

Applications will be received at any time of the year. Notification can be given three to four months after receipt of the application.

POSTDOCTORATE RESEARCH FELLOWSHIPS: These Fellowships are awarded to qualified persons holding Ph.D., M.D., D.D.S. or other equivalent degrees in the medical sciences. The stipend is \$3,400 a year plus a \$350 dependency allowance for spouse and each dependent child. Postdoctorate Fellows must show unusual interest in some specialized scientific fields related to health and show evidence that they expect to follow a career in medical or related research. Awards are given for one year, but commitment for a second year will be considered when requested by the Fellow and sponsor.

SPECIAL RESEARCH FELLOWSHIPS: These advanced Fellowships are awarded to qualified applicants who have a doctor's degree, or equivalent, in medicine or related fields and, in addition, have demonstrated unusual competence for research and require specialized training for a specific problem. Stipend is determined by the Surgeon General.

For further information and application blanks write to:

National Institutes of Health  
Division of Research Grants  
Research Fellowships Branch  
Bethesda 14, Maryland



DOUBLEDAY & COMPANY, INC., 575 MADISON AVENUE, NEW YORK 22



MURRAY HILL 8-5300

August 2, 1954

Dear Professor Wiener:

Thanks very much for sending me the first chapter, which I have just now begun to read. It starts out very well. I should have Chapter 2 ready to send to you soon.

Best wishes to you and Mrs. Wiener,

Jason Epstein

Professor Norbert Wiener  
Sandwich  
New Hampshire

JE:nr



HOUGHTON MIFFLIN COMPANY

2 PARK STREET BOSTON 7

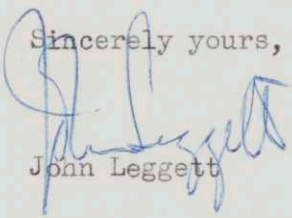
August 2, 1954

Dear Dr. Wiener:

Thank you for your very exhaustive reply to my questions. I am very grateful and hope we will be able to make good use of it.

I will certainly see that you get a copy of anything we send out in time for you to blue-pencil it.

Sincerely yours,



Joan Leggett

Dr. Norbert Wiener  
South Tamworth  
New Hampshire

JL:cdr



August 2 1954

Mr Norbert Wiener Ph.D  
Massachusetts Institute of Technology.  
Boston Mass.

Dear Sir,

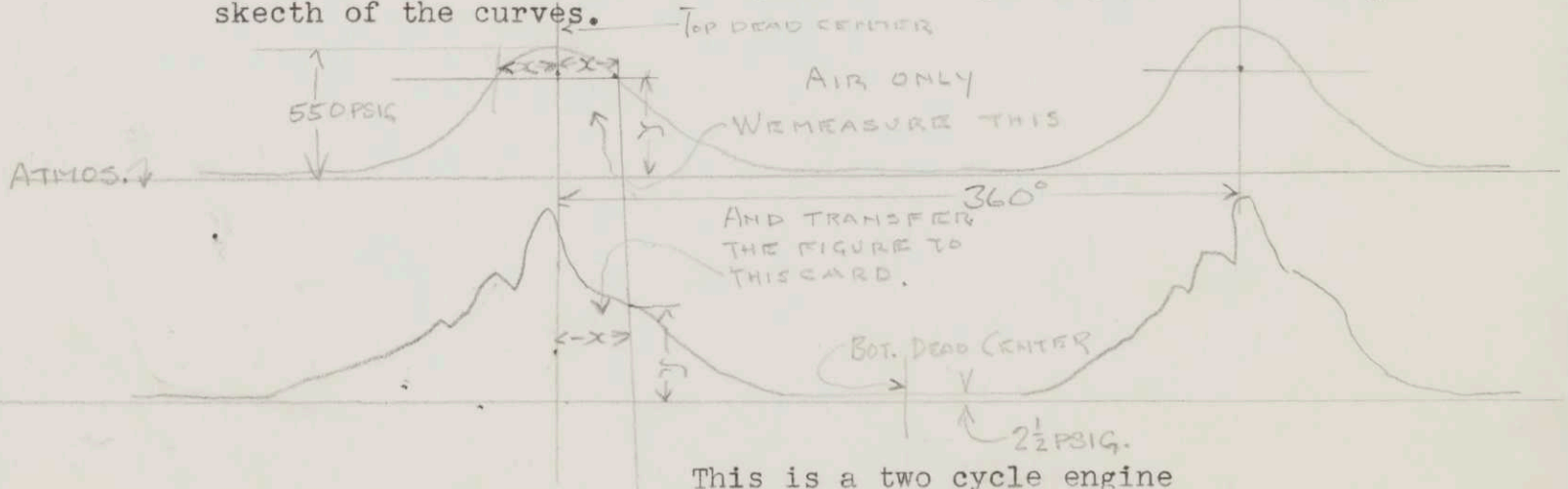
I am taking the liberty of requesting your assistance on the matter of an equation for the construction of a complex curve.

You are probably aware of the operation of a Bacharach Chronomatic Indicator; an instrument for determining the indicated horse power of diesel engines. A continuous curve is drawn on a strip of paper wound round a drum which revolves at a specified rate of speed.

The curve begins with the compression stroke and somewhere near the top dead center oil injection takes place with a rise in pressure, then the subsequent expansion curve.

If firing takes place before top dead center - and it usually does - the compression curve is not completed on this diagram and in order to obtain the top dead center it is necessary to cut out the fuel and thus obtain an air curve alone. This is sometimes not advisable if the engine is on full load however if the final compression pressure was known (from some previous reading or from manufacturers data) could the curve be constructed?

Taking a concrete example. The maximum compression is 550psig and the starting pressure  $2\frac{1}{2}$ psig (supercharged). It will not be an adiabatic curve as some heat will be lost to cooling water and radiation however the factor that introduces the confusion in the case is the variable speed of the piston. Here is a rough sketch of the curves.



Robert Greig Melrose P. O. Box 1254 Scotia, N. Y. Tel. 3-2457

As you are probably aware the mean effective pressure is found by subtracting the area of the compression side from the area of the power side and dividing by the distance from the top dead center to the bottom dead center and multiplying by the scale of the spring used.

It is not expected that extreme accuracy will be obtained as the instrument itself is allowed a latitude of 5% overall error and also there is the possibility that the compression pressure might have declined somewhat since last taken due to piston ring wear or liner wear. It is thought however that some slight adjustment could be made in this connection also as measurements on the maximum pressure curve compared with a measurement on the curve recently taken, at a point just before combustion starts, would provide a rough guide as to the ultimate loss in compression pressure.

I would be extremely grateful if you could develop this formula for me as it would simplify matters considerably.

If professor Luffborough is still with you will you give him my regards and ask him if he remembers out tour of Dublin, Ireland looking for hotel accomodations.

Yours sincerely,

*Robert G. Melrose*

[ans 8/6/59]



90 Paine Rd.  
N. Attleboro, Mass  
Aug 3, 1954.

Dear Sir:—

I would like to match my  
brains against those who make jet  
planes—!

I wonder if you would consider  
it a privilege to help me?

I have read your book and have  
been thru many similar incidences, only  
I happen to be of the female sex and believe  
me, — my road has been a hard one, yet I  
am glad. I have an inborn happiness few  
have found.

Please answer yes or no as soon as  
possible -- Mrs. Esther L. Santeavor.

10 Kilburn Road  
Belmont, Massachusetts  
August 3, 1954

Dear Norbert:

I have just obtained a result that, I believe, is a substantial advance toward the proof of your theorem. Oddly enough, it does not involve any but the simplest properties of the differential-space distribution.

Let the orthonormal set  $\varphi_k(x)$  be eigenfunctions of a quantum Hamiltonian, with eigenvalues  $H_k$ :

$$H \varphi_k(x) = H_k \varphi_k(x), \quad (1)$$

while the orthonormal set  $\chi_e(x)$  are eigenfunctions of some other Hermitian operator  $R$ , with eigenvalues  $R_e$ :

$$R \chi_e(x) = R_e \chi_e(x). \quad (2)$$

Corresponding to these two sets respectively, we have the Gaussianly distributed quantities

$$\xi_k^\circ(\alpha) = \int dX(\alpha, x) \overline{\varphi}_k(x) \quad \text{and} \quad \gamma_e^\circ(\alpha) = \int dX(\alpha, x) \overline{\chi}_e(x). \quad (3)$$

We are given a wave function  $\Psi(x, t)$ , which at  $t = 0$  has coefficients  $a_k^\circ$  and  $b_e^\circ$  when expanded in the  $\varphi_k(x)$  and  $\chi_e(x)$  respectively:

$$\Psi(x, 0) = \sum_k a_k^\circ \varphi_k(x) \quad (4a)$$

$$= \sum_e b_e^\circ \chi_e(x) \quad (4b)$$

As  $\Psi(x, t)$  develops in time, the  $a_k^\circ$  are represented by quantities  $a_k(t)$  which are simply

$$a_k(t) = e^{\frac{i}{\hbar} H_k t} a_k^\circ \quad (5)$$

since the  $\varphi_k(x)$  are  $H$  eigenfunctions. The coefficients  $b_e^\circ$  are similarly represented by functions of time  $b_e(t)$ , but we don't need the (more complicated) expansion of these for this proof. The same time development of  $\Psi(x)$  also implies a natural motion of the coefficients originally equal to  $\xi_k^\circ(\alpha)$  and  $\gamma_e^\circ(\alpha)$ , and we call these time-varying quantities



$\xi_k(\alpha, t)$  and  $\eta_e(\alpha, t)$  respectively; again, the present work does not require that we write down the matrix elements of the transformation.

Now let's talk plain "classical" quantum mechanics for a while. The expectation value of R when the wave function is  $\Psi(x, t)$  is, as a function of time,

$$\xi_t(R) = \int \bar{\Psi}(x, t) R \Psi(x, t) dx \quad (6)$$

$$= \sum_{i, i'} \bar{a}_i(t) a_{i'}(t) \int \bar{\varphi}_i(x) R \varphi_{i'}(x) dx \quad (7)$$

$$= \sum_{i, i'} \bar{a}_i(t) a_{i'}(t) \sum_{j, j'} \left[ \int \bar{\varphi}_i \chi_j dx \right] \left[ \int \bar{\chi}_j R \chi_{j'} dx \right] \left[ \int \bar{\chi}_{j'} \varphi_{i'} dx \right] \quad (8)$$

Let

$$U_{ij} = \int \bar{\varphi}_i \chi_j dx. \quad (9)$$

Then, putting in the exponential time-dependence of the  $a_k(t)$ 's from eq. (5), and noting that (in view of (2)),

$$\int \bar{\chi}_j R \chi_{j'} dx = R_j \delta_{jj'}, \quad (10)$$

we get

$$\xi_t(R) = \sum_{i, i'} \bar{a}_i^0 a_{i'}^0 e^{\frac{i}{\hbar}(H_i - H_{i'})t} \sum_j U_{ij} \bar{U}_{ij} R_j. \quad (11)$$

We now define the time average of a function  $f(t)$  over an interval  $0 < t < T$ :

$$av_T f(t) = \frac{1}{T} \int_0^T f(t) dt. \quad (12)$$

Then for sufficiently large T, assuming all  $H_i$  different, we get from (11),

$$av_T \xi_t(R) = \sum_j R_j \sum_i |a_i^0|^2 |U_{ij}|^2, \quad (13)$$

showing the usual disappearance of cross-terms.

Now we go over to differential-space theory. By a simple compounding of probabilities we obtain

$$\mathcal{E}_t(R) = \sum_{i,j} P_{ij}(t) R_j = \sum_j R_j \sum_i P_{ij}(t), \quad (14)$$

where  $P_{ij}(t)$  is the joint probability that, at time  $t$ ,  $H = H_i$  and  $R = R_j$  for an  $\alpha$  chosen at random, i.e.,

$$P_{ij}(t) = \text{measure} \left\{ \frac{|\xi_i(\alpha, t)|}{|a_i(\alpha, t)|} < \frac{|\xi_k(\alpha, t)|}{|a_k(\alpha, t)|} \text{ for all } k \neq i, \frac{|\eta_j(\alpha, t)|}{|b_j(\alpha, t)|} < \frac{|\eta_l(\alpha, t)|}{|b_l(\alpha, t)|} \text{ for all } l \neq j \right\} \quad (15)$$

We average the expression (14) exactly as we did (11), and obtain

$$\text{Av}_T \mathcal{E}_t(R) = \sum_j R_j \sum_i \text{Av}_T P_{ij}(t). \quad (16)$$

Equating the two expressions (13) and (16) for  $\text{Av}_T \mathcal{E}_t(R)$ , we obtain

$$\sum_j R_j \sum_i \{ |a_i^0|^2 |U_{ij}|^2 - \text{Av}_T P_{ij}(t) \} = 0. \quad (17)$$

Now, all quantities in the braces in eq. (17) depend only on the eigenfunctions of  $R$ , whereas the eigenvalues  $R_j$  are independent of the eigenfunctions, and may in fact be imagined as variable at will while keeping the coefficients of the  $R_j$  in the first sum of (17) fixed. We may then conclude from (17) that these coefficients individually must vanish, giving

$$\sum_i \{ |a_i^0|^2 |U_{ij}|^2 - \text{Av}_T P_{ij}(t) \} = 0, \quad (18)$$

for all  $j$ .

Thus far there seems to be nothing new in the discussion, but I believe that we never before bothered to write down eq. (18), perhaps because it seemed too obvious. Nonetheless a brief inspection of this equation yields a lemma that I think ~~yields~~ <sup>brings</sup> new insight into the problem.

Let us factor  $|a_i^0|^2$  out of the summand of eq. (18), to give

$$\sum_i |a_i^0|^2 \left\{ |U_{ij}|^2 - \frac{1}{|a_i^0|^2} \text{Av}_T P_{ij}(t) \right\} = 0. \quad (19)$$

Now, IF (and this admittedly big IF is the main thing here), the quantity in braces in this equation is independent of all the  $|a_k^0|^2$ , the fact that the  $|a_i^0|^2$  are essentially independently variable quantities (the wave function  $\psi(x, 0)$  being arbitrary within wide limits) will give us



the identical vanishing of the quantities in braces, or

$$A_{\tau} P_{ij}(t) = |a_i^0|^2 |U_{ij}|^2, \tag{20}$$

which is the result you have been looking for, or at least an important special case of it.

Now to discuss the "IF".  $|U_{ij}|^2$  is independent of all the  $|a_k^0|^2$  so all we would need is

$$\frac{1}{|a_i^0|^2} A_{\tau} P_{ij}(t) = \text{a quantity independent of all the } |a_k^0|^2 \tag{21}$$

i.e., we have by this argument reduced the proof of (20) to the proof of the apparently much easier (21). Note that thus in principle the proof of (21) need not require the evaluation of  $A_{\tau} P_{ij}(t)$  at all, whereas the latter is what we have till now been trying to do.

I realize that it may turn out that (21) is not in fact any easier than (20). But it looks easier, and I hope you agree that it does open an essentially new avenue toward the eventual proof. In particular, the work above gives me new faith that (21) is true, since (21) seems like such a "possible" result, if you think about it for a while.

I have been working very hard on the "general interpretation" paper, and it is now about three-quarters finished. I have also been pushing the joint probability calculation, i.e., the evaluation of the integral with the "when positive" integrand. I don't think it's impossible. In order to smooth the way, I started by evaluating it for a two-dimensional differential space (not a two-by-two matrix transformation of an n-dimensional differential space, which is harder), and have succeeded in doing this. The result is, for a transformation

$$U = 1 + i\varepsilon H \text{ where } \varepsilon \text{ is small,}$$

$$\text{Prob} \{1 \rightarrow 2\} = \frac{2}{\pi} |a_1| |a_2| \varepsilon |H_{12}| \left[ \cos \Delta' + \left( \frac{\pi}{2} + \Delta' \right) \sin \Delta' \right]$$

where

$$\begin{aligned} \Delta' &= \Delta && \text{if } \Delta \text{ in 1st quadrant} \\ &= \pi - \Delta && \text{" " " 2nd " } \\ &= \pi - \Delta && \text{" " " 3rd " } \\ &= \Delta - 2\pi && \text{" " " 4th " } \end{aligned},$$

$$\text{and } \Delta = \arg \bar{a}_1 a_2 H_{12}.$$

I am now working on the case of a three-dimensional differential-space, and have been so encouraged by the way the difficulties have been melting away that I think it can be done. If I am right in this, I think it would be fair to conclude that the n-dimensional result is obtainable.

On August fourteenth we hope to leave for a three-week vacation. We are buying a tent and hope to camp for two weeks on a lake in the Adirondacks--there are public campsites where every tent site faces directly on the lake. The only problem is the baby, but with a bit of added equipment for him, such as a portable crib and play-pen, which we already have, we are sure it can be done. We had no vacation last year, since Jeffrey's arrival prevented this, and we are both desperate for this escape.

I am pushing the "general interpretation" paper very hard in the hope of getting it off before we leave. If I succeed in finishing it in time, I shall telephone you in the hope that I can bring it up for your approval. So don't be surprised if you get a call from me late this or early next week.

I just received your letter and found it very interesting, but have not had enough time on it to offer any comments as yet. I shall transmit your message to Vallée. As for working with him, I shall be here for only tendays more and will be spending almost all my time on writing up the paper during this period. It's too bad that his visit is so brief and allows so little maneuvering space, because it would have been nice to work with him. As you know, I did spend some time bringing him up to date on our problems, but we did not get beyond this point. I would say, by the way, that he shows an excellent grasp of the ideas.

Please give our best regards to Margaret, and also to Barbara and Toby, and to Peggy, when they arrive.

As ever,

Armand

[ans 8/11/54]



South Tamworth  
New Hampshire  
August 3, 1954

Professor W. T. Martin  
Mathematics Department  
Massachusetts Institute of Technology  
Cambridge 39, Massachusetts

Dear Ted:

I am sending you copies of a correspondence concerning an invitation to Mexico this fall. It is very tempting, but I think that as the India business has a clear priority, it would be a mistake for me to go. I think you ought to know, however, for purposes of record.

The summer school with Lee came off even better than last year. I am working over my autobiography and I think it is coming very well. I sent off a big paper on matrix factorization to the Plancherel Festschrift. As to Siegel, I have got out of the dead end I found myself in in the quantum theory business, but the new and positive result with which I have replaced it looks better than ever. I now have the following outside engagements coming up sometime during the academic year.

(1) I am keynoting the city planners meeting in Philadelphia this September with the talk on long-time feedbacks in planning which I am cribbing from my as yet unpublished manuscript on invention.

(2) The Stavid Engineering Company is getting some consultation out of me concerning the instrumentation of airplanes. Here I am maintaining the thesis which is very welcome to them that the aviators' chief job is to determine policy but not to furnish excessively quick time reactions. From the point of view of mathematical logic he represents the medium for the execution of secular feedbacks which require judgment and are of higher logical type rather than instantaneous feedbacks where speed and accuracy are the main considerations and where he would act at best as an inferior sort of mechanical link. In other words, as man hasn't got

Professor W. T. Martin

2.

August 3, 1954

a bird's nervous system, it is better to make a rough simulacrum of a bird's nervous system than to adapt a man for that purpose.

(3) The University of California wants a return engagement from me during the Christmas vacation.

I think you will see that I am quite adequately busy. Let me know any Department news that is floating around and remember me to everybody. In particular I should like to hear how Norman's affair is going on and I hope very much the news is good.

Toby and Barbara have just been here on the way to visit Toby's family in Canada and my grandchildren are staying with us. They are in excellent shape and Lucy doesn't show a trace of her bout with poli-encephalitis last year.

Best regards from house to house.

Sincerely yours,

Norbert Wiener

NW:je

Enc. 2

[ans 8/10/54]



South Tamworth  
New Hampshire  
August 3, 1954

Mr. Trusten W. Russell, Executive Associate  
Committee on International Exchange of Persons  
2101 Constitution Avenue, N. W.  
Washington 25, D. C.

Dear Mr. Russell:

Your letter of July 30 concerning that invitation from the National University of Mexico finds me in a situation which I think I should recount to you in detail. In the first place, I have spent four or five visits in Mexico and regard the country and the University and the whole intellectual milieu with great affection in which my wife joins me. Other things being equal, nothing would delight me more than to be able to accept this invitation and to run down for another couple of months to a city in which I feel myself as much at home as in any city in the United States, with the exception of Boston. However, I do not consider myself to be free to accept the invitation at present and for the following reasons.

Several years ago I received an invitation from various Indian colleagues and the Indian government to give a series of scientific lectures in India, and last winter after many vicissitudes, the whole thing came off. I was guest at the Indian University at Haiderbad, and spent a total of seven weeks going from one end of India to the other and giving lectures. In fact, I gave some twenty lectures during this period. The trip was enormously successful from my point of view and sufficiently successful from the Indian point of view that I have received a return invitation for from six months to a year beginning a year from now. On the last visit I went alone, but on this one it is proposed that I go with my wife who, like me, is very eager for the trip. The offer is firm and I have already received in principle, permission from M. I. T. to go ahead with my plans.

Now, with a trip to India covering the period from the middle of December, 1953 to the middle of February, 1954 and with another trip in view, covering a large part, if not the whole, of the academic year

Mr. Trusten W. Russell 2.

August 3, 1954

1955-1956, I am not exactly in the position to ask M. I. T. for further leave. Moreover, while my health is in general good, I have reached the age when every new engagement is a bit of a strain for me and where I should seriously ration my effort. I have intended this next year as a period in which I am to make substantial progress in writing a treatise on cybernetics which is to represent the culmination of my scientific effort. All things taken together, I don't quite see how I can accept the Mexican invitation at the time at which it is offered to me.

On the other hand, Mexico and the University of Mexico mean a great deal to me and I should be most loath to take any action which would offend my friends or which would cut me out of similar invitations at a period at which my schedule is not quite so feverishly full. Is there any way in which I can notify all my Mexican friends and in particular my old student Manuel Sandoval Vallarta, Vice-Minister of Education, how much I appreciate their invitation and that I should like to take a rain check? Sandoval Vallarta will understand this and any other Americanism as well, as he is my old student at M. I. T. and was for many years professor with us.

I am sending a copy of this letter to Professor W. T. Martin, Head of the Mathematics Department at M. I. T. for purposes of record. I shall see that the letter gets to the attention of the highest M. I. T. authorities.

Sincerely yours,

Norbert Wiener

NW:jc

c. c. Professor W. T. Martin





August 4, 1954

Dear Professor Wiener:

I have now finished Chapter 1, and though there are a few spots where I think that your text is a little confusing, these are not many. For the most part Chapter 1 does exactly what it should do. The reader now knows who you are and what kind of mathematical work you are prepared to do. I don't think that it will be entirely helpful for me to outline Chapter 2 in advance, but I would like to make some suggestions for it.

You promise in Chapter 1 that you are about to spend the summer of 1920 in Strasburg, and this should of course be the first major thing that you discuss in Chapter 2, but preceding it, perhaps you should include some of the material that appears in the enclosed pages, covering the aesthetics of mathematics and its relation to other kinds of art. Then I think that you should go on, as you have in these pages, to discuss ~~the~~ postulationalism and your choice of the Brownian motion over ~~the~~ Banach space, being careful, of course, to describe Banach space. Then go on very simply to describe your trip to Strasburg, but be sure that you make it as interesting as your various descriptions in Chapter 1. Introduce as many people as you feel necessary, but be careful to give them substance and relevance and try to work the chapter out in such a way that you will always be involved in a coherent situation---a plot, so to speak---with a clearly stated goal and clearly stated obstacles against which to exercise your determination. Even your visits to Hadamard and Frechet should be introduced as if they were something for the reader to look forward to with anticipation and uncertainty.

If it is appropriate in this chapter to talk about the Borel, Lesbegue and Gibbs relationship, then by all means include it, but be careful to be as simple, as specific and as orderly as possible.

This should be an extremely exciting chapter, since here for the first time you feel confident that you yourself have done some important mathematical work and can speak if not as an equal at least as a fair competitor to the leaders in the field.

I believe that your sister Constance will come into this chapter quite a bit. If I am correct, then I suggest that you make her a character rather than simply a name. Let us know as much about her as possible, and let us know, too, as much as possible, the general effect that Europe, just after the war, had on you.

Best wishes to you and Mrs. Wiener,

  
Jason Epstein

Professor Norbert Wiener  
Sandwich  
New Hampshire

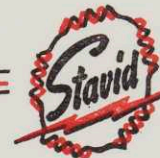
JE:nr  
Enclosures



# STAVID ENGINEERING, INC.

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August 4, 1954

312 PARK AVENUE  
PLAINFIELD, NEW JERSEY  
Plainfield 6-4806

Professor Norbert Wiener,  
South Tamworth,  
New Hampshire.

Dear Professor Wiener:

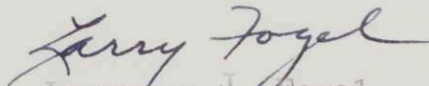
Thank you very much for your letter. By now you have spoken to Mr. Paul about our program and its implications. I am very sorry that it has taken us so long to formulate a schedule for your lecture, but we want to give the Aviation Psychology Laboratory of the University of Illinois sufficient time to establish their plans so as to mate with all concerned.

We should like to have you lecture and spend Monday the 20th of September with us. By that time we will have outlined a tentative long range future program to create maximum effectiveness and safety of aircraft through proper instrumentation and control and would then receive much more benefit from your insight.

Several of the color pictures I took of you have turned out extremely well. I am having some duplicates made and will give them to you in September.

By now I have assimilated much of your lectures and can better appreciate their worth. I am very much looking forward to seeing you again.

Sincerely,

  
Lawrence J. Fogel

LJF:rh



PLEASE ADDRESS REPLY TO  
"COMMANDING OFFICER  
AND DIRECTOR"  
AND REFER TO FILE NUMBER

U. S. NAVY ELECTRONICS LABORATORY  
SAN DIEGO 52. CALIFORNIA

( Private )

Aug. 4, 1954

Prof. Norbert Wiener  
South Tamworth, New Hampshire

Dear Professor Wiener:

I am very happy to have your letter of July 29 and feel that I should answer immediately.

I believe that the representation of the relativistic effect in hearing leads inevitably to a model implying digital information transfer. Autonomous system-time is compatible only with the digital model. Vice versa, current models of hearing from Helmholtz to Dr. Locklider and Dr. Huggins ( MIT ), describing hearing as passive transduction, imply silently universal absolute pitch possessed by everybody. Such representation of the hearing seems to me fundamentally wrong. Hearing is drifting.

The digital process brings forth in the cortex the power spectrum which has all the advantages described in your theorems. More specifically, a logarithmic compression of the running power spectrum is inevitable for the auditory mechanism, to cover a stimulus-continuum with the minimum number of circuit-elements.

In an open discussion after my paper, Prof. H. Davis raised the question of the site of the "clock". In a way similar to your explanation in your letter, I hypothesized that the brain-waves constitute only the fundamental clock which "winds up" the local clocks. Two clocks associated with the two ears will explain the constant fluctuation of the two standards. ( Diplacusis ) The clocks can be thought of in terms reference-oscillations in the eighth nerve. Prof. Davis' neurological studies at Harvard verified the existence of firings from the single fibers in quiet, i.e. in the absence of any stimulus. The ensemble of all these firings from a total of about 15000 fibers, will follow some sort of Poisson-distribution and could be interpreted as processing micro-time in the stochastic way. Drift of the spectrum-patterns must follow. However a slow drift in macro-time will not jeopardize identity of the patterns, i.e. information transfer. I am also aware that as you state, this relativistic effect has nothing to do with cosmic relativity.



A series of mathematical problems arise which could be solved with the methods of generalized harmonic analysis and which may lead to a supplementation of Dr. Shannon's theorems. (I had the opportunity to discuss with Dr. Shannon the issue of the relativistic effect.) One may ask, how much information is lost due to Relativity of Time and ~~and~~ eventually at a more general problem, i.e. information analysis of the Principle of Relativity. Furthermore, the very domain of the psycho-physical process will furnish problems, such as amount of information by summation and inhibition in binaural hearing, amount of information in short pulses and in temporally integrated short pulses etc. Information-analysis of simultaneous tones will encompass the 2500 years old problem of Consonances and Dissonances. Leibnitz, Euler and Helmholtz actually felt that some sort of "computation by the soul" is achieved. Ohm's acoustical law, erroneously, identified this computation with Fourier analysis which would rule out any difference between Consonances and Dissonances in the resolution-process. I now feel that the problem is ripe to be solved in the light of your auto-correlation function. The degree of Consonance and Dissonance is measurable in terms of the auto-correlation of the running audio-spectrum. Cross-correlations will identify the participation of the individual components in generating a Consonance.

I asked Dr. Licklider at the meeting of the Acoustical Society if it was possible to see you at MIT. Since you were already on your vacation, I have missed the invaluable opportunity of turning to you for your personal suggestion concerning the Power Spectrum Model of Hearing. I Hope that some time our Laboratory will authorize my trip to see you once again in Cambridge. In the mean time, I am in touch with Dr. George Miller who will decide about my forthcoming publication in the Journal of the Acoustical Society. I will take the liberty to turn to you once gain in connection with all the above problems.

I am Thanking you for your continued interest in my endeavors,

Most sincerely yours,

*Andrew G. Pickler*

( Andrew G. Pickler )  
Cbde 2920/f  
U. S. Navy Electronics Lab.  
San Diego 52, Calif.

[ans 8/11/54]

Cambridge, le 4 août.

Monsieur le Professeur,

J'ai reçu il y a quelques jours une lettre de Monsieur Le Lionnaï de l'UNESCO. Dans sa lettre il me fait part de son désir de vous associer à un ouvrage collectif (sur la méthode dans les sciences modernes) qu'il prépare actuellement et me signale vous avoir écrit à ce sujet.

L'entreprise de Monsieur Le Lionnaï me semble très sérieuse du point de vue scientifique si l'on en juge par le plan provisoire de l'ouvrage et par la qualité de ceux qui ont déjà accepté de collaborer [Louis de Broglie, Pierre Auger (UNESCO et Sorbonne), Albert Caquot (Académie des sciences), George Darmois (Sorbonne) etc]. Monsieur Le Lionnaï a, d'autre part, réalisé il y a une dizaine d'années un ouvrage collectif dans le même esprit, sur les grands courants de la pensée mathématique contemporaine, qui fut un grand succès.

Il est évident que votre participation à cette



œuvre serait extrêmement précieuse et serait très appréciée en France. Si vous pensez, 'étant donné vos travaux actuels, que la rédaction d'un article est une charge trop lourde je suis bien entendu à votre disposition pour vous apporter l'aide que vous désirez (sous la forme que propose Monsieur Le Lionnais ou sous toute autre forme).

Veuillez croire, Monsieur le Professeur, à l'assurance de mes sentiments respectueux et recevoir, ainsi que Madame Wiener, mes meilleurs souhaits de bonnes vacances

Robert Vallee

R. VALLEE  
MIT. FSSP  
Walker Memorial  
Cambridge 39  
Mass.

[ans 8/6/54]

South Tamworth  
New Hampshire  
August 4, 1954

Professor Ray L. Birdwhistell  
University of Louisville  
Louisville 8, Kentucky

Dear Professor Birdwhistell:

Many thanks for the invitation to the meeting of the University of Louisville Interdisciplinary Committee to be held on October 22 and 23. I am afraid that while I send the meeting my blessings, that I will not be able to be there in person. The fact is that as the years go on I find increasing demands on my time going hand in hand with greater fatigue and lesser ability to fulfill these demands. It would be the easiest thing in the world for me to fritter my time away as an external meeting visitor and I still feel that I have enough new scientific and literary work to do so that these primary constructive interests should have a first lien on my time.

Regretfully yours,

Norbert Wiener

NW:jc



South Tamworth  
New Hampshire  
August 4, 1954

Mr. Franklyn Elliott, Director  
Speech and Hearing Center  
Adelphi College  
Garden City, New York

Dear Mr. Elliott:

Just a word of thanks for your appreciation of THE HUMAN USE OF HUMAN BEINGS. I shall have more to say on similar themes in two books which are now under way. One is the second volume of my autobiography and the other concerns the philosophy of invention. Both manuscripts are in the hands of Doubleday and have been accepted for publication, and at least the latter will appear in the Anchor Series. In both of them I go into considerable more detail in my criticism of the position of the modern scientist.

Sincerely yours,

Norbert Wiener

NW:je

South Tamworth  
New Hampshire  
August 4, 1954

Mr. Lawrence J. Fogel  
Stavid Engineering, Inc.  
312 Park Avenue  
Plainfield, New Jersey

Dear Mr. Fogel:

I think I am in a position to say something more definite about the dates of my proposed consultation. I am speaking at Philadelphia before the American Society of Planning Officials on the twenty-seventh of September. I suggest that I arrive in Urbana (for that is the place where I believe you wish me to consult) on the twenty-fourth and stay the twenty-fifth. Sunday the twenty-sixth could be used if you desire for a report in Plainfield.

As this is a combined trip for two purposes, I am suggesting the following distribution of expenses: the planning officials had already agreed to pay my expenses to Philadelphia and back from Boston, and my stay in Philadelphia. Suppose that we add up my complete expenses from Boston to Boston by way of Urbana, Plainfield, and Philadelphia, and that you assume the responsibility for all that part of the expenses not covered by the plan I propose with the American Society of Planning Officials. I think in this way we can dovetail the expenses and make them less for you than they would be if I were to undertake the entire absence from home as two separate trips.

Sincerely yours,

Norbert Wiener

NW:jc

[ms 8/6/54]



South Tamworth  
New Hampshire  
August 4, 1954

Mr. Leopold Goetz,  
36, Khovevei Zion Str.,  
Tel-Aviv, Israel.

My dear Dr. Goetz:

Many thanks for your kind letter of July 25. I do read German and shall be glad to read the book you are sending me, but I imagine it is waiting for me when I return from my vacation. As to probability theory, I have always felt that von Mises missed the boat by not tying his work up with the Lebesgue theory of integration. An American mathematician, Mr. Churchill I believe, has taken von Mises' work and has shown how it is translatable step by step into that of Lebesgue. As to Gibbs, he died in New Haven, Connecticut in 1903. Lebesgue has already been dead for ten years. Borel was still alive the last I heard, and is in his eighties. He is a member of the French Academy of Sciences and if he can be reached, at all, he can be reached there. As to the references to their works, you can obtain them easily from your mathematical colleagues at the Hebrew University.

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth  
New Hampshire  
August 4, 1954

Miss Ruth Goodwin  
Department of Mathematics  
Massachusetts Institute of Technology  
Cambridge 39, Massachusetts

Dear Miss Goodwin:

I am going to talk before the American Society of Planning Officials in Philadelphia on the twenty-seventh of September. They want biographical dope on me. Mrs. Cole had prepared a form covering this which is somewhere among my papers. Will you dig out a copy and send it to:

Mr. Dennis O'Harrow, Executive Director  
American Society of Planning Officials  
1313 East Sixtieth Street  
Chicago 37, Illinois.

We are having a good time up here in the country and are so glad to be out of the heat of the city.

Sincerely yours,

*Norbert Wiener*

Norbert Wiener

NW:jc

*Sent  
8-10*



South Tamworth  
New Hampshire  
August 4, 1954

Miss Ruth Goodwin  
Department of Mathematics  
Massachusetts Institute of Technology  
Cambridge 39, Massachusetts

Dear Miss Goodwin:

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1313 East Sixtieth Street  
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We are having a good time up hwere in the country and are so glad to be out of the heat of the city.

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth  
New Hampshire  
August 4, 1954

Professor Henry A. Kissinger  
Harvard University International Seminar  
10 Weld Hall  
Cambridge 38, Massachusetts

Dear Professor Kissinger:

Many thanks for your letter of July 30. I did  
enjoy the International Seminar very much, and particularly  
yourself and your artist friend. I hope to see both  
of you when I come back this fall.

Sincerely yours,

Norbert Wiener

NW:jc



South Tamworth  
New Hampshire  
August 4, 1954

Mr. J. Howard McMillen  
Program Director for Physics  
National Science Foundation  
Washington 25, District of Columbia

Dear Mr. McMillen:

I shall follow your letter of July 29 and hold Yevich's proposal until I have a time to look it through more significantly. The pressure of my summer's work is slackening, and I think this time shall come in a very few days.

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth  
New Hampshire  
August 4, 1954

Mr. Dennis O'Harrow, Executive Director  
American Society of Planning Officials  
1313 East Sixtieth Street  
Chicago 37, Illinois

Dear Mr. O'Harrow:

This is to acknowledge receipt of your letter of July 30. Probably I shall come to Philadelphia at the end of a brief consulting trip which will take me to Urbana, Illinois. I shall let you know the details of the trip as soon as they are clearly formulated, so that we can come to a equitable decision of the expenses of the complete journey. In my opinion the fair division would be for your organization to pay hotel expenses in Philadelphia, together with the equivalent of airplane or Pullman Railway expenses from Boston to Philadelphia and back to Boston, leaving all other expenses for the trip to be paid for by the engineering firm consulting me.

Sincerely yours,

Norbert Wiener

NW:jc

[ms 8/6/54]

South Tamworth  
New Hampshire  
August 4, 1954

Professor Sidney L. Pressey  
The Ohio State University  
Columbus 10, Ohio

Dear Professor Pressey:

I find your letter of July 30 very interesting. I am inclined to agree with Terman's conclusions as related to me by you. I agree also that it is to the best advantage of the able youngster to put him in a position where he can have a thorough and accelerated training without the social isolation of being labelled as a prodigy.

Sincerely yours,

Norbert Wiener

NW:jc



# The Technology Press



MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
CAMBRIDGE 39, MASSACHUSETTS

August 5, 1954

Professor Norbert Wiener  
South Tamworth  
New Hampshire

Dear Norbert:

I sympathize with you in the loss which I know you have sustained in the death of M. Freymann. I have reviewed the letters and copies of contracts which you sent me and return them herewith. Your letter to M. Hermann seems to me to be entirely right.

I think also that if he enters into contracts for Spanish and Japanese translations of CYBERNETICS following contracts of which he sent you copies, his interests and yours are properly safeguarded. I think it is entirely all right to go ahead. I think this the more strongly because of the very hard-headed escape clause which appears as item 4 in the Japanese contract and item 7 in the Spanish contract.

I take it that your work on extending the quantum theoretical results of Siegel and yourself has been satisfying and that, therefore, you are enjoying the summer. More power to you.

With every good wish,

Very truly yours,

A handwritten signature in cursive script, appearing to read "Fried", written in dark ink.

F. G. Fassett, Jr.  
Director

FGF:k

[ms 8/9/54]

506 Eastwood Ave.  
Tallmadge, Ohio  
August 5, 1954

*Math Dept*

Office of the Summer Session  
Massachusetts Institute of Technology  
Cambridge 39, Mass.

Gentlemen:

As one of those who attended a 1954 Special Summer Program, I wish to compliment you on the excellent organization of the Programs. Our week of attendance in M 689 was a memorable one for Mr. Bushnell and myself.

There is, however, a small favor I would like to ask. Dr. Wiener gave those in attendance a set of mimeographed notes titled, "Mathematical Problems of Communication Theory" used in the 1953 Summer Session. He did not refer to these notes during the 1954 session, but on reading them I find much of value and interest. Since pages 66-70, inclusive, are missing from my copy of the notes, I would appreciate your forwarding to me either the missing pages or a second copy of the notes.

Thank you in advance for any assistance you can give me in this small matter.

Sincerely,

*R. J. Mead*

R.J. Mead  
Goodyear Aircraft Corp.

(P.S.- Kindly address correspondence to my home address above.)

THE UNIVERSITY OF TEXAS  
AUSTIN 12

DEPARTMENT OF ENGLISH

August 6, 1954

Dear Professor Wiener,

I have recently read with great interest your Human Use of Human Beings in the Doubleday reprint series. I was struck by the similarity of some of the premises of cybernetics--the tendency for entropy to increase; human activity as a local enclave of resistance, etc.--and the ideas in Robert Frost's poem, "West Running Brook," published in 1928, I believe. You are doubtless familiar with the poetry of your fellow New Englander, but I thought I might call your attention to what seems to me, at any rate, a striking parallel.

Sincerely yours,

*John C. Broderick*  
John C. Broderick

Professor Norbert Wiener  
Massachusetts Institute of Technology  
Cambridge, Massachusetts

[ms 8/13/54]



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August 6, 1954

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Metropolitan Area Regional  
Planning Commission

Mr. Norbert Wiener  
South Tamworth  
New Hampshire

## TREASURER

FERD KRAMER  
President, Chicago  
Metropolitan Housing  
and Planning Council

Dear Mr. Wiener:

In your letter of July 21 you were concerned about the job of editing your Keynote Address. The editing of the papers delivered at the Conference for publication, proofreading, etc., is all handled by our staff.

## CONSULTANT

WALTER H. BLUCHER

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DENNIS O'HARROW

The only question we have is whether you want us to use as your address the paper that you sent to us a few weeks ago or whether you wish to make any changes in this, any additions, etc. We would like to give your paper to the man who is handling the publicity for the Conference so that he can prepare a press release on it for the reporters who will be attending the Conference. We ordinarily get quite a bit of publicity on the Conference speakers. If you have no objection to this we will follow our usual practice of making available to the publicity chairman your address. We can either send him the manuscript that you sent to us or any revised manuscript that you may wish to prepare.

We will be very glad to clear with Mr. Epstein at Doubleday. Would it be correct to tell him that the paper we wish to publish is based on material you have prepared for inclusion in your forthcoming book, or that it is the text of one of the chapters in that book? I am enclosing a draft of a letter to Mr. Epstein for your approval.

Sincerely,

  
Executive Director

DOH:ds

1934

1954

National Planning Conference Philadelphia Sept. 26 - 30, 1954

THE BENJAMIN FRANKLIN HOTEL

[ans 8/10/54]

# PURDUE UNIVERSITY

STATISTICAL LABORATORY  
LAFAYETTE, INDIANA

August 6, 1954

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

Dear Professor Wiener,

The Indiana Chapter of the American Statistical Association annually holds its November meeting at Purdue University. Although most of our programs deal with applied statistics and related topics, we attempt to find a speaker for the Purdue meeting who can point out the horizons of statistical thinking from a more theoretical point of view. For example, last year we had Leonid Hurwicz from Minnesota to talk on decision making.

Our audience is quite heterogenous since it consists of applied statisticians at all levels as well as academicians. Nevertheless we feel that you would be able to please and stimulate the whole group with your philosophy and profound insight.

The Purdue meeting is schedule for Thursday, November 4. We have one hundred dollars available for the speakers expenses. If it is at all possible for you to favor us we shall be extremely gratified. If adjustments in either the date or expense allowance would be necessary, we should like to know of this, too.

We hope to hear from you soon so that we can proceed to plan for this meeting.

Sincerely yours,

*Paul Irick*

Paul Irick  
Ass't. Prof. of Mathematics

PI/dct

[ans 8/13/54]



F. LE LIONNAIS  
24, rue du Champ de Mars  
Paris, 7ème

Joué-les-Tours, le 6 août 1954

Monsieur Norbert WIENER  
South Tamworth  
New Hampshire  
(Etats-Unis)

Cher Monsieur Wiener,

Votre lettre du 29 juillet m'apporte non seulement une bonne nouvelle - celle de votre acceptation de collaborer à mon ouvrage sur "La Méthode dans les Sciences Modernes" - mais aussi tout un chargement d'entropie négative.

Vous avez trouvé le moyen de réunir dans une structure simple et évidente des points de vue que je connaissais tous très bien séparément depuis des années (Physique Gibbsienne, Mesure de Lebesgue, Théorie des Types de Russell, Théorème de Gödel) mais que je n'avais jamais pensé à rapprocher. De sorte qu'avant même d'être sûr que je suis d'accord avec vous, je trouve déjà un grand plaisir artistique dans ces associations.

Mais le fond de votre thèse est évidemment encore plus important que sa forme. Ses conclusions rejoignent ma position personnelle vis-à-vis de la Théorie des Types. L'originalité de vos arguments suscitera certainement des discussions approfondies. Quel est le domaine d'extension maximum du point de vue gibbsien ? Où passe sa frontière à l'intérieur de la Science ? La Physique des Champs relève-t-elle de sa juridiction ? J'aurais bien d'autres questions à soulever, mais il me faudrait un peu plus de temps pour la réflexion et je ne veux pas retarder cette lettre.

J'envoie une copie de notre correspondance à M. Vallée.

Nous nous réjouissons beaucoup, ma femme et moi, de vous revoir à l'occasion de votre prochain passage à Paris. J'espère que vous nous en ferez connaître les dates de manière à nous permettre de réserver notre temps.

Nous vous adressons, ainsi qu'à Madame Wiener, nos bien amicales pensées.

[ans 8/11/54]

F. Le Lionnais



WERNER NOBEL, M. D.

474 MAIN STREET

GREENFIELD, MASS.

TELEPHONE 9706

August 6, 1954

Professor Norbert Wiener  
South Tamworth,  
New Hampshire

Dear Dr. Wiener:

Thank you very much for your answer. I am hereby sending you a working model of my hip prosthesis. I hope I will be able to make myself clear in which way I would plan to use it. The prosthesis consists of three parts.

One is the socket part which would go into the acetabulum. Two is the prosthesis replacing the head of the femur fitting into the acetabular prosthesis. Three is the holding plate preventing the head of the femoral prosthesis to dislocate from its socket. The entire device is held with three screws in the acetabular rim and boney pelvis. To facilitate the insertion in the working model and perhaps also in the final model, the head of the prosthesis may be removed with an Allen wrench from the intramedullary nail and re-applied.

I believe my main problem will be to overcome friction in the joint and also try to have a working model tested for ability to take stress and strain without breaking. The inside of the acetabular prosthesis in this model is not polished and probably should be polished before testing it. If friction is a difficult problem to overcome between two metallic surfaces, I was thinking of making the socket out of nylon or giving this metal socket a nylon coat.

I realize that this is not quite in your line but I hope that you may come up with some helpful suggestion or refer me to the department at M. I. T. which could be helpful to me.

Please return the prosthesis when you are through with it.

Yours very truly,

*Werner Nobel*

Werner Nobel, M.D.

WN:JR

[ans 8/13/54]

South Tamworth  
New Hampshire  
August 6, 1954

Department of Foreign Studies  
Massachusetts Institute of Technology  
Cambridge 39, Massachusetts

Gentlemen:

I am enclosing a letter from Dr. Arguimbau, formerly of M. I. T. and the letter that he enclosed with it from Mr. Rajam, the founder of the Madras Institute of Technology. Rajam, who is blind, is a great Indian philanthropist. Perhaps somebody in your Indian Department can determine the best way to do the favor that Mr. Rajam asks. Probably there are those at M. I. T. who already know Mr. Rajam and can go even further than I can in backing him.

Sincerely yours,

Norbert Wiener

NW:jc

P. S. I wonder if some of our American Hindus might be able to help in the matter. I suggest two people who should be consulted. One is the Swami of the Vedanta Temple on Bay Street Road, and the other, Mr. Bose, who may be able to enlist the interest of his father in Philadelphia.

N. W.

NW:jc

South Tamworth  
New Hampshire  
August 6, 1954

Mr. Lawrence Arguimbau  
315 West 99th Street  
New York 25, New York

Dear Arguimbau:

I am glad you have got a job and I am always interested to hear from you. As to the Rajam matter, I am not prepared to take the responsibility myself, but I am passing the buck to the Department of Foreign Studies at M. I. T. They can at least give me advice as to what to do.

Sincerely yours,

Norbert Wiener

NW:jc



South Tamworth  
New Hampshire  
August 6, 1954

Mr. Lawrence J. Fogel  
Stavid Engineering, Inc.  
312 Park Avenue  
Plainfield, New Jersey

Dear Mr. Fogel:

Your plans for the twentieth of September are fine. I very much want to see the photographs you took, and I am very grateful for your appreciation of my lectures.

Sincerely yours,

Norbert Wiener

NW:jc

23

[ans 8/17/53]

South Tamworth  
New Hampshire  
August 6, 1954

Mr. Robert Greig Melrose  
P. O. Box 1254  
Scotia, New York

Dear Mr. Melrose:

I am not a mechanical engineer and do not see how my advice in connection with the Bacharach Chronomatic Indicator will have any value. I suggest that in a place as well supplied with engineers as Schenectady, you should not have any difficulty in finding adequate consultation on the spot.

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth  
New Hampshire  
August 6, 1954

Mr. Dennis O'Harrow, Executive Director  
American Society of Planning Officials  
1313 East Sixtieth Street  
Chicago 37, Illinois

Dear Mr. O'Harrow:

This is to acknowledge receipt of your letter  
of July 30. This indicates that I concur with  
your plans.

Sincerely yours,

Norbert Wiener

NW:jo



South Tamworth  
New Hampshire, U. S. A.  
August 6, 1954

Professor Albert Pfluger  
Buchnerstr. 7  
Zurich 6, Switzerland

Dear Professor Pfluger:

I think that an adequate dedication of my paper  
to Plancherel might read as follows:

"To Professor Plancherel, the founder of the  
precise theory of the Fourier integral and  
the inspiration of my work on harmonic  
analysis."

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth  
New Hampshire  
August 6, 1954

M. R. Vallee  
M. I. T. FSSP  
Walker Memorial  
Cambridge 39, Massachusetts

Dear M. Vallee:

Many thanks for your note of the fourth. I received a letter from M. Le Lionnais and I am going ahead with the business. It would be very pleasant to handle the matter by interview, but I am prepared to write a short article if that doesn't work. I shall be back in Cambridge about the first of September. I think I have made real headway with the work Siegel and I are doing together and I have written Siegel about it. It would be nice if you could talk it over with him.

Sincerely yours,

Norbert Wiener

NW:jc

[ans 8/14/54]

August 8<sup>th</sup> 1954

Professor Herbert Weeare,  
Massachusetts Inst. of Technology,  
Cambridge, Mass.

Dear Professor Weeare:

I long appreciate the pleasure  
of reading your intrinsically informative  
publication, *The Human Use of  
Human Drugs*.

Having been referred to you as  
the leading exponent in Science, I  
am firmly convinced you can contribute  
pertinent information.



Re: Rectifying Processes  
without Mechanical Means via  
Electro Magnetic Radiation thru  
Dielectric in Vacuum.

This view is supported by the  
opinions of Prof. Geo. Cochrane, Md Univ;  
Prof. Ferr Hapkin  
Nat. Bureau of Standards, Mr Sera  
W TOP Chief Electronics Mr Klink  
NBC Radio Elect. Mr John Rodgers

I have obtained a bit of data  
in which you will be considerably  
interested, Sir!

The courtesy of an interview in  
respect fully requested. Upon receipt  
of your reply, stipulating any date  
and hour, I shall consider this  
a privilege, consulting you, Prof.  
Robert Weirax, and arrange my schedule  
for your convenience.

With appreciation, I remain,

Very sincerely yours,

Betty Weirax (subsahler)  
[ans 8/13/54]

P.S. I shall be in New York through the  
16th of August,

1429 Webster St NW  
Washington, D.C.

c/o Mrs. D. H. Jones  
2610 Glenwood Rd  
Brooklyn, N.Y.

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

# WESTERN UNION

W. P. MARSHALL, PRESIDENT

FX-1201

SYMBOLS

DL=Day Letter

NL=Night Letter

LT=Int'l Letter Telegram

VLT=Int'l Victory Ltr.

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1954 AUG 9 PM 2 38

O.BLA111 DL PD=WUX BERKELEY CALIF. 9 1056AMP=

PROF NORBERT WIENER=

CENTER SANDWICH NHAMP=

MAY I HAVE YOUR DEFINITE CONSENT TO SPEAK AT THIRD BERKELEY SYMPOSIUM MONDAY DEC 27 ON YOUR TREATMENT OF STATISTICAL MECHANICS? PLEASE WIRE COLLECT GIVING

TITLE OF PAPER=

J NEYMAN UNIV CALIF=

*WPK*

TELEPHONE NO. *Mr Wiener*  
 TELEPHONED TO  
 TIME *2:38* *mail*  
 BY *WPK*

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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DELIVER | .....



THE UNIVERSITY OF CHICAGO PRESS  
5750 ELLIS AVENUE · CHICAGO 37 · ILLINOIS

August 9, 1954

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

Dear Dr. Wiener:

I have sent you an advance copy of  
THE HUMAN ANIMAL, with the compliments  
of the University of Chicago Press.

I hope that you will be interested in  
Weston La Barre's study of man - a  
synthesis of what is presently known  
about our species in the related  
sciences of man.

I have inclosed a return envelope,  
hoping that you will tell us what you  
think of THE HUMAN ANIMAL. Should the  
occasion arise, we would like to repeat  
your comments so that this book will  
find a larger audience.

Yours truly,

*Barbara Lovett*

Barbara Lovett  
Sales and Advertising

cw  
inc.

[ans 8/17/54]

South Tamworth  
New Hampshire  
August 9, 1954

Mr. Jason Epstein  
Doubleday & Company, Inc.  
575 Madison Avenue  
New York 22, New York

Dear Jason:

I am enclosing a new version of Chapter II of the autobiography on which I had been busy for some time before your letter. The material concerning aesthetics I think is better introduced where I now put it than at the beginning of the chapter, as I can thus bring it into closer relation with the things I have to say about postulationalism. You will see that in most matters I had conformed pretty closely to your criticisms even before I had received them, and I have gone to considerable pains to make Fréchet and Hadamard real people. I have ended the chapter with my first return from Europe after the war, and naturally I have nothing to say about Constance, as it was two years later that we went to Europe together. My feeling now is that I should make a chapter of the whole period from my return from Strasbourg to my trip to Germany in 1926.

Please let me know the rough places of which you speak in Chapter I and I shall get busy on them at once. I myself feel that there is a considerable improvement in the text over the original.

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth  
New Hampshire  
August 9, 1954

Mr. F. G. Fassett, Jr., Director  
The technology Press  
Massachusetts Institute of Technology  
Cambridge 39, Massachusetts

Dear Fassett:

Many thanks for your letter of the fifth. I  
am returning the contracts to Hermann with any necessary  
material filled out.

Sincerely yours,

Norbert Wiener

NW:jc



South Tamworth  
New Hampshire  
August 9, 1954

Hermann & Cie  
6, Rue de la Sorbonne  
Paris (5<sup>e</sup>), France

Dear Mr. Hermann:

I am returning the copies of the contracts which you have sent me as one of them is the wrong contract and concerns Schwartz's work. If my contract is like that, please go ahead with it as also with the Bompiani and the Spanish contract which you are making. I have had my friends here check them up and they are in complete accord with what you are doing.

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth  
New Hampshire  
August 9, 1954

Professor W. T. Martin  
Department of Mathematics  
Massachusetts Institute of Technology  
Cambridge 39, Massachusetts

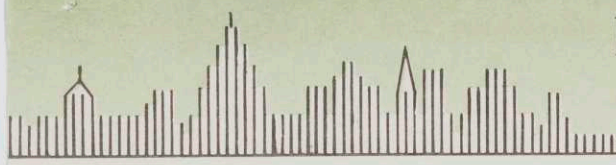
Dear Ted:

The material in question just came concerning Tunturi. As you know, I don't want to see hide nor hair of him. In particular I don't want him to force my hand by sheer obstinacy and insensitivity. As he had already received a note from you indicating that he would not be a welcomed guest with me, he should have cleared it up with the Department of Commerce.

Sincerely yours,

Norbert Wiener

NW:jc



PAUL VAN T. HEDDEN

planning, zoning, and municipal consultant

30 - 14th Street, N.E., Atlanta, Georgia

August 10, 1954

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

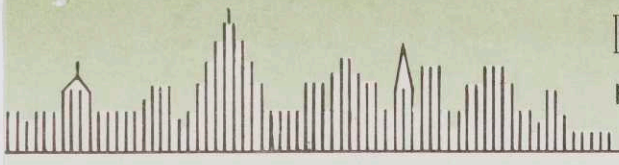
Dear Dr. Wiener:

Dennis O'Hara informs me that you are to be the keynote speaker at the ASPO Conference in Philadelphia next month. I was delighted to learn of this having read your two books on cybernetics.

I am concerned with the implications to be found in Chapter X of *The Human Use of Human Beings* on page 187. It is indicated that the development of the automatic machine will result from the loss of manpower on the battlefield in the next world war. It is common knowledge that we have many machines of potential destruction which are to a large extent either automatic or semi-automatic at the present time and undoubtedly many in preparation which the ordinary layman knows nothing about. As one interested in the future of our society in its genetic sense as well as the preservation of our civilization, if such be possible, through the next holocaust, I am concerned with the destruction of our manpower on the battlefield rather than the use of some robot, if you will, which might be able to replace a man at the point of danger and permit man to continue in his role as a factory or at least a productive worker.

I realize that much can be gained in relieving man, that is the production worker, from the repetitive tasks which now employ so many thousands. But in lieu of such occupation I fear that our economy would scarce stand what you refer to as the second industrial revolution without severe political consequences which might be even worse than the next war.





**PAUL VAN T. HEDDEN**  
planning, zoning, and municipal consultant

Ltr. Dr. Wiener - page 2

I am looking forward to meeting you in Philadelphia next month.

With best wishes, I am

Sincerely yours,

*Paul Hedden*

Paul van T. Hedden

PTH:sh

[ans 8/30/54]

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CAMBRIDGE 39, MASS.

DEPARTMENT OF MATHEMATICS

August 10, 1954

Professor Norbert Wiener  
South Tamworth  
New Hampshire

Dear Professor Wiener:

Thank you very much for your letter of August 3. I was interested in learning of your invitation to Mexico for this fall. I know that the invitation must have been very tempting to you but I certainly can see how you felt you could not go at this time. Your letter to Mr. Russell was a warm and friendly one and certainly should make your friends in Mexico understand your reluctance to go now and also make them aware of how much you have valued your other visits there.

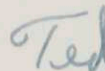
I am pleased at how well ~~you~~ your summer program with Lee went this year. I am very glad that you had the program. I know that it is valued by everyone at M.I.T. and also by the participants from outside.

There is very little in the way of Department news. C.C. Lin returned yesterday for a two or three day visit. The main purpose is so that his wife may receive her first papers. I think that she plans to get them today. I talked to Norman earlier this morning and everything seems to be going along well with his family. He seems much more relaxed about things now and I am sure that the worst is over.

One of our new C.L.E. Moore Instructors, Glen E. Baxter, is working at Cornell this summer on the applications of probability to Physics. Also, a Research Associate, Bayard Rankin, from California is now here and he seems interested in this direction. I feel that these two will gain a great deal from seeing you and Siegel this fall and I hope that they will have something to contribute themselves. It looks as though we will have an active year in the fall. I am very glad that your work on quantum theory is going so well. The invitations from the city planners in Philadelphia and University of California are very interesting and I am glad that you have been able to accept them. Your ideas on instrumentation of airplanes are certainly interesting and should prove very fruitful.

I had a pleasant stay in Colorado but I am glad to be back with my family. Lucy joins in sending you and Mrs. Wiener our best regards.

Very sincerely yours,



W.T. Martin

maf

From the News Service  
Mass. Institute of Technology  
Cambridge 39, Massachusetts

For Release in MORNING Papers  
of TUESDAY, August 10, 1954.

Dr. James H. Means, formerly Chief of Medical Service at the Massachusetts General Hospital and Jackson Professor of Medicine at Harvard Medical School, has been appointed Acting Medical Director at the Massachusetts Institute of Technology.

Dr. Means has been consulting physician on the medical staff of M.I.T. since his retirement from the Massachusetts General Hospital in 1951. He will be in charge of all medical services at the Institute until the appointment of a permanent director to succeed Dr. Dana L. Farnsworth, who has been appointed Henry K. Oliver Professor of Hygiene at Harvard University.

-30-

*We are all very sorry to see Dana leave, and I know you are. As someone remarked, Dr. Crompton cannot be replaced and I feel the same is true of Dana. Ted [ans 8/13/54]*



UNIVERSITY OF OREGON  
MEDICAL SCHOOL  
PORTLAND 1, OREGON

DEPARTMENT OF ANATOMY

August 10, 1954

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

Dear Professor Wiener:

( I regret to inform you that it will be impossible for me to take the fellowship which you so kindly offered to sponsor this fall. A prolonged siege of influenza has prevented me from getting our laboratory and home in order for the long leave of absence.

It is a big disappointment since I was looking forward to learning some of your ideas. However, it will give me an opportunity to get some of the elementary courses out of the way so that I will be in a better position to understand some of the problems.

It is hoped that you have not been inconvenienced in any way in this matter for I respect your good faith.

With kind regards and gratitude.

Sincerely yours,

*Archie R. Tunturi*

Archie R. Tunturi

ART:dmw

[sent 8/30/54]

August 10, 1954

Mr. Dennis O'Harrow  
Executive Director  
American Society of Planning Officials  
1313 East Sixtieth Street  
Chicago 37, Illinois

Dear Mr. O'Harrow:

Professor Wiener has written me from New Hampshire and asked me to send you his biographical information in connection with the talk he will give before the American Society of Planning Officials in Philadelphia on the 27th of September.

I am enclosing the carbon of a sheet which his secretary prepared last year and I hope it will meet your needs.

Very sincerely yours,

Ruth S. Goodwin  
Department Secretary

Enc.

Stewart G. Cole  
347 South Norton Avenue  
Los Angeles 5, California

August 11, 1954

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

My dear Dr. Wiener:

In view of the confusion in contemporary thinking about the validity of any dependable source of moral and spiritual values, I am undertaking an inquiry into the religious foundations of faith of representative men and women.

The purposes of this study are:

- a) to provide a challenge for re-thinking the foundations of human purpose and values in the mid-twentieth century;
- b) to assess the impacts of the Judaeo-Christian religions, the worldview of modern science, and the historic democratic value-structure, upon man in his search for a valid faith;
- c) to publish a vigorous statement representing a variety of viewpoints of recognized and dedicated men and women; the profit, if any, to go to a worthy program, such as the World's Tension Study sponsored by UNESCO.

The response I received to a paper in a symposium on "Foundations of World Organization" by the Conference on Science, Philosophy and Religion in Relation to the Democratic Way of Life, stimulated me to undertake this inquiry. Attached you will find a reprint of the article with editorial abbreviations. Using this paper as a springboard, would you be willing to contribute your personal testimony in terms of the five questions that are raised at the end of the article?

./.



The following persons are being invited to participate:

Gordon W. Allport	Archibald MacLeish
Lyman Bryson	Jacques Maritain
Pearl S. Buck	Richard P. McKeon
Ralph Bunche	Margaret Mead
Vannevar Bush	Lewis Mumford
Richard E. Byrd	Edward R. Murrow
Brock Chisholm	Reinhold Niebuhr
Arthur Compton	F.S.C. Northrop
James B. Conant	Harry A. Overstreet
Monroe E. Deutsch	Liston Pope
Paul H. Douglas	Nathan M. Pusey
Irwin Edman	Anna Eleanor Roosevelt
Harry Emerson Fosdick	Carl Sandburg
Lawrence K. Frank	Paul A. Schilpp
Simon Greenberg	Albert Schweitzer
Theodore M. Greene	Harlow Shapley
A. Eustace Haydon	Fulton John Sheen
Helen Hayes	Pitirim A. Sorokin
Paul G. Hoffman	Mark Starr
E. Stanley Jones	Ordway Tead
Mordecai M. Kaplan	Howard Thurman
Adolphe Keller	Paul J. Tillich
William H. Kilpatrick	Henry P. Van Dusen
Harold D. Lasswell	Henry N. Wieman
David E. Lilienthal	Norbert Wiener
Walter Lippmann	

Included in the list are individuals from the fields of the physical and social sciences, the arts, history, public affairs, psychology and philosophy, as well as spokesmen for the Protestant, Catholic and Jewish faiths. The broader the range of representative viewpoints, the richer the anthology will be.

It may interest you to know the reactions of three men with respect to this proposal. William H. Kilpatrick has written, "I am very glad that you are undertaking just such a study. The world needs a remaking of the religious outlook." Harry Emerson Fosdick says, "The matter with which you are dealing is central to the whole theological outlook . . . . (the study should be) not only valuable but exciting." And Paul Schilpp comments, "I shall be glad to cooperate in this exceedingly worthwhile enterprise."

- 3 -

I trust that you agree concerning the high importance of this undertaking, designed solely as a service, and that you will cooperate in the study.

I am planning to attend the Conference on Science, Philosophy and Religion, which convenes at Harvard University August 30 - 31 and September 1 - 2. I would be happy to meet you at your office any time during one of these four days to discuss this proposal, and should prefer that you delay making your personal reaction to the inquiry until we have had an opportunity to discuss the project together. Will you please indicate in the enclosed envelope the hour and the place where we can meet, and advise me as promptly as possible?

Sincerely yours,

*Stewart G. Cole*

Stewart G. Cole

Encl.  
SGC:as

[ms 8/30/54]

AN INQUIRY INTO THE RELIGIOUS FOUNDATIONS  
OF HUMAN PURPOSE AND VALUES

From Stewart G. Cole

1. I will cooperate in the conduct of this inquiry.

Yes \_\_\_\_\_ No \_\_\_\_\_.

2. I can forward my manuscript next December \_\_\_\_\_,

or by March, 1955 \_\_\_\_\_.

3. Remarks:

Signed \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
RESEARCH LABORATORY OF ELECTRONICS  
CAMBRIDGE 39, MASS.

August 11, 1954

Dr. Norbert Wiener  
South Tamworth  
New Hampshire

Dear Dr. Wiener:

I am sending you a copy of the announcement and the program of the 1954 Symposium on Information Theory which will be held at M.I.T. on September 15-17. This is the Symposium I told you about when we were running the summer session course. The Organizing Committee is extremely pleased with your acceptance of its invitation to be the after-dinner speaker at the banquet on Thursday, September 16. We would appreciate your informing us of the title of the speech a few days in advance.

Professor Fano, Chairman of the Symposium, wishes to welcome you to all of the sessions of the Symposium. Particularly, he hopes that you will participate in the discussion of those papers which interest you.

I have your letter concerning the request of Professor Vowels of Australia, and have attended to the matter. Apparently he does not know of our patents.

I am glad that you have recovered from the fatigue. Your part in the course was the most difficult to handle, and I know that the summer session group fully appreciated it.

Sincerely yours,



Y. W. Lee

YWL/rc

[ans 8/13/54]

ANNOUNCEMENT

1954 SYMPOSIUM ON INFORMATION THEORY

to be held at

MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
Cambridge 39, Massachusetts

September 15-17, 1954

The Program for the 1954 Symposium on Information Theory is attached herewith together with registration material. The Symposium has been organized by the Professional Group on Information Theory in cooperation with the Research Laboratory of Electronics at the Massachusetts Institute of Technology, and is also sponsored by the American Institute of Electrical Engineers, the International Scientific Radio Union (URSI), the Office of Naval Research, The Air Research and Development Command and the Signal Corps Engineering Laboratories.

Seventeen papers will be presented at this Symposium reporting new results and applications of information theory in the areas of: detection, prediction, organization, coding, and retrieval of information.

The Symposium will be of interest primarily to serious workers in the field. Authors have been instructed to minimize the review and tutorial content of their papers on the assumption that those attending the Symposium will be familiar with information theory. Only three papers are scheduled for each half-day session in order that ample time will be available for creative and thorough discussion; arrangements have been made for organizing informal evening sessions on profitable topics that might arise.

All program papers will be published in a special issue of the TRANSACTIONS of the Professional Group on Information Theory so as to provide everyone with the opportunity to read the papers before coming to the Symposium. Each speaker may thus devote most of his talk to presenting supplementary material and discussing points that have been suggested by the other papers or raised from the floor. These informal comments by the leading information theorists in this country should, in themselves, provide a most stimulating feature of this Symposium program.

The TRANSACTIONS, totaling more than 200 pages, will be mailed by September 1, 1954. PGIT members will receive this publication automatically as an issue of the regular PGIT TRANSACTIONS. Members of the IRE and other sponsoring organizations who plan to attend the Symposium should return the enclosed order blank by August 15, 1954 if they are to receive their copy of the TRANSACTIONS prior to the Symposium.

A Banquet will be held at the MIT Faculty Club on Thursday evening September 16, 1954. Those who plan to attend are requested to so indicate when returning the enclosed order blank. Attendance at the banquet is limited to 200 and reservations will be made in order of receipt.

Arrangements for hotel accommodations should be made by the individual. On the reverse side is a list of Boston Hotels and their rates.



BOSTON HOTELS AND THEIR RATES

1954 SYMPOSIUM ON INFORMATION THEORY  
to be held at  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
Cambridge 39, Massachusetts

September 15-17, 1954

	Single Rooms with Bath	Double Rooms with Bath
Bellevue - 21 Beacon St., Boston Mr. Stanley	\$6.25 - 8.00	\$9.25 - 10.00
Commander - 16 Garden St., Cambridge Reservation Manager	6.00 - 8.00	9.00 - 12.00
Continental - 29 Garden St., Cambridge Mr. Steele	7.00	9.00 - 11.00
Essex - 695 Atlantic Ave., Boston Mr. Hansey	4.00 - 6.50	6.50 - 11.00
Kenmore - 490 Commonwealth, Boston Miss Ludwig (Special Rates)	6.50 - 11.00 6.00	11.00 - 15.00 10.00)
Lenox - 61 Exeter St., Boston Mr. W. P. Sullivan	5.00 - 6.00	8.00 - 10.00
Lincolnshire - 20 Charles St., Boston	7.00 - 11.00	10.00 - 12.00
Ritz-Carlton - 15 Arlington St., Boston Miss E. O'Neil	12.00 - 14.00	16.00 - 18.00
Shelton - 91 Bay State Rd., Boston	6.00 - 10.00	11.50
Sheraton Plaza - Copley Sq., Boston Reservation Manager	6.85 - 8.85	10.00 - 17.00
Statler - Park Square, Boston Front Office Manager	6.00 - 10.50	10.00 - 16.50
Touraine - 62 Boylston St., Boston	6.00 - 8.00	8.00 - 11.00
Vendome - 160 Commonwealth Ave., Boston Mr. R. E. Palmer	4.50 - 6.00	8.00 - 11.00
Bradford - 275 Tremont St., Boston	6.40 - 7.45	9.50 - 13.00
Parker House - Tremont St., Boston	6.50 - 8.75	9.50 - 14.00



PROGRAM

1954 SYMPOSIUM ON INFORMATION THEORY

to be held at

MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
Cambridge 39, Massachusetts

September 15-17, 1954

Wednesday, September 15

9:00 A.M. REGISTRATION

In front of Room 10-250, M.I.T. (All meetings will be held in Room 10-250).

9:45 A.M. OPENING REMARKS - R. M. Fano, Research Laboratory of Electronics, M.I.T.

10:00 A.M. CODING I - Chairman, J. B. Wiesner, Research Laboratory of  
Electronics, M.I.T.

1. "Some New Basic Results in Information Theory", by A. Feinstein
2. "Binary Coding", by M. J. E. Golay
3. "Error-Free Coding", by P. Elias

2:00 P.M. CODING II - Chairman, W. G. Tuller, Malpar, Inc.

4. "A Class of Multiple-Error Correcting Codes and the Decoding Scheme",  
by I. S. Reed
5. "Coding for Fixed Data Rate Systems", by R. A. Silverman and M. Balser

Thursday, September 16

9:30 A.M. INFORMATION AND ORGANIZATION - Chairman, B. McMillan, Bell Telephone  
Laboratories

6. "Information, Organization and Systems", by J. Rothstein
7. "An Information-Theoretic Model of Organizations", by M. Kochen
8. "Simulation of Self-Organizing Systems by Digital Computer", by  
B. G. Farley and W. A. Clark

(Continued on reverse side)

2:00 P.M. ANALYSIS AND RETRIEVAL OF INFORMATION - Chairman, L. A. deRosa,  
Federal Telecommunications Labs.

9. "A Study of Ergodicity and Redundancy based on Intersymbol Correlation of Finite Range", by S. Watanabe
10. "Multivariate Information Transmission", by W. J. McGill
11. "Choice and Coding in Information Retrieval Systems", by C. N. Mooers

7:00 P.M. BANQUET - M.I.T. Faculty Club Dining Room,  
Dr. Norbert Wiener, After-dinner speaker

Friday, September 17

9:30 A.M. DETECTION AND PREDICTION, I - Chairman, E. Weber, Polytechnic Institute  
of Brooklyn

12. "Modern Statistical Approaches to Reception in Communication Theory",  
by D. Van Meter and D. Middleton
13. "A Nonlinear Prediction Theory", by R. F. Drenick
14. "The Detection of Signals Perturbed by Scatter and Noise", by R. Price

2:00 P.M. DETECTION AND PREDICTION, II - Chairman, L. G. Abraham, Bell Telephone  
Laboratories

15. "The Theory of Signal Detectability", by W. W. Peterson, T. G. Birdsall,  
and W. C. Fox
16. "The Human Use of Information, I - Signal Detection for the Case  
of the Signal Known Exactly", by W. P. Tanner, Jr., and W. A. Swets
17. "The Human Use of Information, II - The Problem of Simultaneous vs.  
Independent Observation When There is Uncertainty in One of the  
Signal Parameters", by W. P. Tanner, Jr., and R. Z. Norman



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TÉLÉPHONE : ODÉON 14-19

RÉP. DES PROD. 401 SEINE C. A. O.

N° D'ENT. 553-75105-0012

COMPTE CHÈQUES POST. 416-50

Paris, le 11 Août 1954

Monsieur Norbert WIENER

Massachusetts Institute of  
Technology

CAMBRIDGE 39  
( Massachusetts )  
U.S.A.

Cher Monsieur Wiener ,

Je suis d'accord avec vous pour soumettre dorénavant à la Technology Press qui vous représentera, tous les contrats relatifs aux traductions en langues étrangères de " Cybernetics " .

Pour ce qui concerne la traduction en langue Italienne, elle a bien paru en 1953, et la Maison " Valentino BOMPIANI & Cie " nous a versé, à la date du 18 Février 1953, la somme de Francs 70.000,-, représentant l'avance prévue au contrat, de 10 % sur 1.000 exemplaires . Le prix fort de l'édition italienne est de 900 Lires .

Quand vous êtes passé à Paris, en Décembre dernier, on vous a versé la moitié de cette somme, soit ... Frs. 35.000 et les droits d'auteur sur les exemplaires de l'édition française vendus en 1953, soit ..... - 29.440  
( 368 exemplaires à 80 Frs. ) , représentant au total: 64.440

qui vous ont été versés le 21 Décembre 1953 .

Veillez agréer, Cher Monsieur Wiener, l'assurance de mes sentiments distingués .

LIBRAIRIE SCIENTIFIQUE  
HERMANN & C<sup>IE</sup>  
Lib. G. B. S.



South Tamworth  
New Hampshire  
August 11, 1954

M. F. Le Lionnais  
24, rue du Champ de Mars  
Paris, 7<sup>ème</sup>  
France

Dear M. Le Lionnais:

Many thanks for your letter of August 6. I have just heard from Vallée and we shall work out the interview together. I am very much pleased with your interest in my ideas, and I myself think they are in the right direction for your work. Margaret and I are counting very much on seeing Mme. Le Lionnais next summer.

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth  
New Hampshire  
August 11, 1954

Dr. Charles Olson, Rector  
Black Mountain College  
Black Mountain, North Carolina

Dear Dr. Olson:

Many thanks for your letter of August 1. I hereby formally accept your invitation for me to become a member of the new Advisory Council of Black Mountain College. I consider it a high honor and shall do my best to be of service to you.

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth  
New Hampshire  
August 11, 1954

Mr. Andrew G. Pikler  
Code 2920/f  
U. S. Navy Electronics Laboratory  
San Diego 52, California

Dear Mr. Pikler:

As to your letter of August 4, I am not quite certain whether I have answered it or not. As to the question of digital processes in hearing, I am not convinced. By this I mean that a digital process might well be the explanation of a sense of pitch which is in absolute pitch, but I do not believe that there is any sufficiently sharp distinction between digital processes and analogy processes. to make this conclusion irrefutable. I shall be very glad to see you in Cambridge any time after the beginning of September.

Sincerely yours,

Norbert Wiener

NW:jc

[ms 8/18/59]



South Tamworth  
New Hampshire  
August 11, 1954

Dr. Janet Rioch  
Round Pond  
Maine

Dear Dr. Rioch:

Margaret and I are making a trip this summer to the Maritime Provinces. We expect to be passing near Round Pond about noon on the eighteenth of this month. Will you be there and can we look you up?

I am working hard and we have a mass of news to tell you and matters to discuss with you. I had a rather disturbing letter from Arturo the other day, and suspect the worst. Otherwise, everything is going as well as is possible in this vale of woe.

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth  
New Hampshire  
August 11, 1954

Mr. Armand Siegel  
10 Kilburn Road  
Belmont, Massachusetts

Dear Siegel:

The more I think of the letter I sent you, the more definitely it seems to me to be correct. In other words, it seems to me now that the picking out of an individual character function is a process which depends on all past picking outs and is a process which is in the small of a Poisson nature. I think that what you have been doing is very good, but I think the two parts of work will have to be bound together.

Sincerely yours,

Norbert Wiener

NW:jc