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CORRESPONDENCE June 16-30, 1958

UNIVERSITY OF LOUISVILLE

LOUISVILLE 8, KENTUCKY

June 16, 1958

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

Dear Dr. Wiener:

I have taken the liberty of addressing you on an account I can hope will have interest. My responsibility at University College is for a series of liberal arts non-credit courses for adults; that is say, for endeavors which direct attention beyond the pale of career and the obvious immediate toward a consideration of the astonishing richness and ultimate mystery of life.

I read a brief review of a speech you delivered recently at Wabash College. Your attack on the modern mania for speciali-zation appealed to me as vivid and trenchant. Would it be possible to obtain a copy of that speech? I should have good use for it in my proseletyzing.

With best regards,

William Bowmer

William S. Bowmer,
Coordinator
Study-Discussion Program

WSB:es

[ans 6/26/58]

children's hospital, inc.

P. O. Box 12
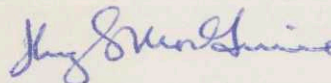Montgomery, Alabama

June 16, 1958

H. I. FLINN, JR.
Chairman

Professor Norbert Wiener
53 Cedar Road
Belmont, Massachusetts

Dear Professor Wiener:

In view of your work with Doctor Rosenblueth and others, I believe you will be interested in the enclosed booklet on Atomedics. As you can see, we borrowed from Cybernetics to try to indicate the usefulness of the Cybernetic concept to atomic age medicine.

As noted in the booklet, we are having a symposium here October 6th - 8th to have papers presented on various aspects of Children's Hospital research program. Mr. John Griffith of I.B.M., whom I believe you know, will be here to talk on the use of computers in medicine. If at all possible we would like for you to come and talk on mathematics and medicine. We are asking Margaret Mead to present her ideas on the part Social Science can play in a research unit such as Children's Hospital. We think we are going to have a stimulating program and do hope you can attend. If you do not wish to present a paper, we would still like for you to come. Unfortunately, we have no money for travel, but we can take care of your accomodations while here.

Very sincerely,

Hugh C. MacGuire, M. D.

HCM/t

[ans 6/26/58]

South Tamworth
New Hampshire
June 16, 1958

Professor Bryant
TECHNOLOGY PRESS
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Bryant:

We have been up her rather less than a week and I
have already begun working with Janet Corliss on my
novel. The climate has been clear but cold, and I think
you will find your stay here very refreshing.

Now as to business. I am enclosing a signed copy of
our contract. I shall be back Wednesday or Thursday and
prepared to put my signature on your copy. I have found
one or two things in the bibliography which need attention
and I am writing to Lee today to look them up.

Let me know if all the manuscript has come in. I
shall have about three or four days in Cambridge before
I fly and can attend to the preliminary work at that
time.

Best regards from our family to yours.

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth
New Hampshire
June 16, 1958

Professor Kakutani
Mathematics Department
Yale University
New Haven, Connecticut

Dear Kakutani:

I am doing a book for the Technology University
Press on random functions in non-linear problems.
I am making a considerable use of Friedrichs' Hermitian
functionals. I hear that you have a considerable amount
of material unpublished or in the course of publication
on this topic, besides, of course, your paper of 1950
with which I am familiar. Will you send whatever
references you have to Professor Y. W. Lee, Department
of Electrical Engineering, Massachusetts Institute of
Technology? Lee and I are going abroad for a month,
so we should like to have the matter settled before
we go.

We want to have as complete a bibliography as
possible and to see that the credit goes to the
proper places.

                              Sincerely yours,

                              Norbert Wiener

NW:jc

South Tamworth
New Hampshire
June 16, 1958

Prof. D. D. Kosambi
P. O. Deccan Gymkhana
Poona 4, Indiana

Dear Baba:

Some days ago I received your paper on the Riemann
hypothesis. I have given it a preliminary inspection
and the ideas it contains are very ingenious. However,
as you very well know, a mere casual inspection will
not do for a proof of the Riemann hypothesis. Too
many good men have been caught off base in that problem,
as for example Rademacher. Therefore I want to go
over the proof in detail, not merely as it stands,
but translating it into my own words and into my own
methods to be sure that I really understand where the
point is and that I am willing to back it implicitly.
You see my position, and I would expect the same thing
of you if you were looking over a paper of mine making
a similar claim.

I shall be busy at a meeting in Europe during part
of the summer, but I shall try to devote what time I
can find to looking over your paper, and I certainly
will be able to give a clean-cut opinion of it some
time in August.

Margaret joins me in sending our best regards.

Sincerely,

P. S. One point on which I am by no means clear concerns how you proceed from
formula 1 to the Riemann hypothesis. At first sight it seems that you have
only proved the convergence of the Dichrelat series between the real axes from
the point 1/2 to 1. This convergence need neither be absolute nor uniform.
It doesn't appear to me that you have much to go on to extend this to the
complex half plane.

N. W.

South Tamworth
New Hampshire
June 16, 1958

Dr. Y. W. Lee
Department of Electrical Engineering
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Lee:

I will be back Wednesday night or Thursday morning
to talk with you before we undertake our trip. Meanwhile
I have a copy of references which you or Amar should
place in the bibliography. The letter from Friedman
will explain three of them. In addition, I hear that
Kakutani at Yale has an unpublished or partly published
manuscript dealing with the Hermite functionals.
I am writing separately to Kakutani to see that he
informs you of the situation.

With best regards to Betty, yourself, and to
Amar,

Sincerely yours,

Norbert

NW:jc
Secretary's note: I'm signing this to get it in Monday
morning's mail.

J. C.

South Tamworth
New Hampshire
June 16, 1958

Mr. and Mrs. David Riesman:
5621 University Avenue
Chicago, Illinois

Dear Mr. and Mrs. Riesman:

Many thanks for your letter of May 30. It gives me
the encouragement to go ahead with the novel and I am now
busy with Miss Corliss, my secretary up country, on the
revision. I think it will go all right.

I am counting on talking things over again with you
when you are settled in Cambridge next fall.

With thanks and best regards,

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth
New Hampshire
June 16, 1958

Mr. Robert V. Sedwick
Organization Relations Division
c/o Mr. Thomas H. D. Mahoney, Director
Registry of Guests
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Mr. Sedwick:

I shall be back Wednesday evening and shall be
at school early Thursday morning. Thursday I have to
be on hand to receive a group of guests from Russia,
but I think I can find time for Mr. Kato and the hour
you mentioned is appropriate.

Will you attend to passing this message on to
Mr. Kato.

With best regards,

Sincerely yours,

Norbert Wiener

NW:jc

South Tamworth
New Hampshire
June 16, 1958

Herr Helmut Wielandt
Ob dem Viehweidle 21b
Tubingen, den, Germany

Dear Herr Wielandt:

    I am very much touched by your invitation
to contribute to the group of mathematical papers
published by the friends and pupils of Leon Lichtenstein
and devoted to his memory. At present I have placed
all my unpublished articles and I cannot, of course,
say exactly what the next months will bring. However,
if I find something suitable among my work, I shall
be glad to send it to you before the end of November.

    Sincerely yours,

    Norbert Wiener

NW:jc

c/o Psychology Department.
Canterbury University,
Christchurch,
New Zealand.
19th June, 1958.

Dear Sir,
    I am at present engaged in writing a thesis for a Masters in
Psychology which involves for me a general interest in temporal
integration in the human subject. In this respect your Fawley
Lecture to the University of Southampton seems by its title to
be particularly relevant to me, and I would be extremely grate-
full if I could obtain a copy of it. I would much appreciate
it if you could help me in any way, as there seems to be no
institutional way of obtaining the paper in New Zealand.

                  Yours Sincerely,

                  Peter F MacNeilage.

[ans 7/2/58]

June 19, 1958

Dr. Samuel P. Bessman
Associate Professor of Pediatrics
University of Maryland
Baltimore 1, Maryland

Dear Dr. Bessman:

After an absence of two weeks from my office,
I received your kind letter of June 6th on my return
today. It is very gratifying that you wish me to
repeat my appearance and it would give me pleasure to
do so if it were possible. However it has become
necessary for me to give up all lecture engagements
because they cut too heavily into the scientific work
which I consider to be my first duty.

Please believe that I deeply regret my inability
to comply with your request.   My best regards to your
son.

Yours sincerely,

Norbert Wiener

NW:AD

June 19, 1958

Professor Kurt O. Friedrichs
New York University
Institute of Mathematical Sciences
25 Waverly Place
New York 3, New York

Dear Professor Friedrichs:

I find that I have mislaid the form on which
I should make a report of my expenses incurred at the
conference on Shelter Island. Because I am pressed for
time, I must ask your indulgence in receiving them on
the attached sheet. Will you be good enough to pass this
on to the proper person.   Also enclosed is the expense
sheet I received from Raymond & Whitcomb Co.

It was a pleasure to attend the conference
and a very worth while experience for me in many respects.

Sincerely yours,

Norbert Wiener

NW:AD
Encs.

June 19, 1958

<u>Expenses incurred by Norbert Wiener
at the conference on Shelter Island</u>

Railroad ticket from New York to Boston $10.00

Taxi from Shelter Island to Railroad Station   5.00

Taxi from South Station, Boston to Belmont, Mass.   3.00

Railroad ticket from Long Island to New York   3.00

Meals on way 2.50

Tips 1.50

Tickets Boston to New York, per bill from
        Raymond & Whitcomb Co. attached   22.19

                                Total Expenses $47.19

June 19, 1958

Dr. R. W. Stacy
The Ohio State University
Columbus 10, Ohio

Dear Dr. Stacy:

    Thank you for your letter of June 13th with
a detailed opinion of my proposed paper for <u>Medical
Physics</u>. I shall give this matter some further
thought. However, I would very much like to have the
manuscript returned to me if you would be good enough
to do so.

               Sincerely yours,

               Norbert Wiener

NW:AD

BULLETIN OF THE ATOMIC SCIENTISTS

"*A Magazine of* SCIENCE AND PUBLIC AFFAIRS"

5734 UNIVERSITY AVENUE · CHICAGO 37 · ILLINOIS

MIDWAY 3-3056

EUGENE RABINOWITCH
Editor

June 20, 1958

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

Dear Professor Weiner:

The undersigned, an artist and a scientist, have accepted the responsibility of editing a special issue of the Bulletin of the Atomic Scientists to deal with art and science. The Bulletin, as you perhaps know, is a magazine of world-wide circulation which is concerned with the impact of science on human affairs in general.

Although it is planned to emphasize the visual arts and their relations with science, it is expected that discussion will inevitably widen somewhat to cover motivation and communication of imaginative work generally. It is our hope to balance the over-emphasis on the merely explicative and useful aspects of science, which have become dominant in the public mind, with a strong spot-lighting on the personal, creative aspect of the scientist's activities. Here lies the similarities between the scientist and the artist. We would like to reveal the artist's role in anticipating and reflecting the scientific impact of his environment.

Though art involves the transmission of non-verbalized ideas, and science must work with the most precise language possible, is there not an element to science beyond this, and does not the artist experience a similar joy of conception and satisfaction in partially overcoming the limitations of his medium?

The stimulation and restraint of imagination in the two fields could be compared; the essentially aesthetic enjoyment of a good scientific theory; the role of science in providing techniques, concepts, and patterns for the artist; the relative roles in creation of inspiration and construction; the relationships between the simple and the complex, the definable and the intuitively-sensed factors which appear in both fields; the structure of the human mind as revealed by the nature of scientific and artistic creation and its appreciation -- all these would be appropriate topics for the issue and others will surely come to your mind.
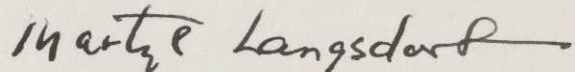
     We realize the twin dangers of being trite on
one hand or incomprehensible on the other. Nevertheless,
since there is such a general lack of understanding
among the artist, scientist, and layman, and a mutual
bewilderment and skepticism has separated them, we
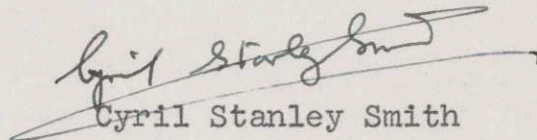think it is possible to say something of real value to
all three.

     If you could contribute an article of about
3000 words, it would enrich our issue immeasurably, and
we hope that you will be able to do it.

     Although usually the Bulletin is unable to pay
its contributors, a special fund for this issue enables
us to offer a small honorarium of $150. We regret
that it cannot be more. We must also reserve the right
to cut the article if the allotted length is exceeded.

                    Very sincerely yours,

                    Martyl Langsdorf

                    Martyl Langsdorf

                    Cyril Stanley Smith

ML:CSS:es

[ans 6/26/58]

June 21st. 1958

Dr. Norbert Wiener
M.I.T. - Cambridge
Massachusetts.

Dear Professor Wiener:-

       I was so happy when I received your
letter of March 13th last because you said my letter of
March 10th had "Come in at just the right time."

     "In a matter of a very few weeks", you went on to say, you
would let me know the results of an analysis with Dr. Morris Chafetz
of a group of electroencephalograph data, with medical and psycholog-
ical background concerning a number of alcoholics.

     What, sir, has happened?

     I write now because I imagine soon you will be away from
Cambridge until fall. In the meantime - for your amusement - I enclose
a case history (hereditary) of a failure in the feed-back system.

        Yours sincerely,

         Gelston Hardy

Enclosure:
    Cornelia Otis Skinner
    <u>in re</u> her Quaking Hands.

[ans 6/28/58]

June 22, 1958

Dear Professor Wiener:

The difficulty mentioned in my last letter is genuine. The distribution function F defined by

$$F(x) = 0, \text{ for } x < 0 \; ; \quad F(x) = \frac{1}{a} \int_0^x e^{-t^\mu (\cos \mu \pi)} dt, \quad x \geq 0$$

where $0 < \mu < 1/2$ and $a = \int_0^\infty e^{-t^\mu \cos(\mu \pi)} dt$, has moments of all orders. Moreover, the function f defined by

$$f(x) = 0, \quad x < 0 \; ; \quad f(x) = \sin(x^\mu \sin \mu \pi), \quad x \geq 0$$

is in $L_{2,F}$ and is non-zero, i.e. does not vanish a.e. with respect to F-measure. Yet for all $n \geq 0$

$$\int_{-\infty}^\infty x^n f(x) \, dF(x) = 0,$$

i.e. $f \perp$ all polynomials. Thus the polynomials are not everywhere dense in $L_{2,F}$. These results follow from the identity (given in Polya & Szegö's book)

$$\int_0^\infty e^{-x^\mu} \sin(x^\mu \sin \alpha) x^n \, dx = \frac{1}{\mu} \Gamma\left(\frac{n+1}{\mu}\right) \sin\left(\frac{n+1}{\mu} \alpha\right), \quad \begin{matrix} \mu > 0 \\ 0 < \alpha < \frac{\pi}{2} \end{matrix}.$$

The difficulty can be circumvented by assuming that our S.P. $f_n(\omega) = f(T^n \omega)$ is defined by a function $f \in L_\infty(\Omega)$ (and not just in $L_\omega(\Omega)$, as supposed so far). If F is flat outside a compact interval, then the polynomials are e.d. in $L_{2,F}$. I will make this assumption on f in ~~that~~ the paper I am writing, unless you have some alternative to suggest.

With kind regards,

Sincerely yours,

[ans 6/25/58] P. Masani

June 24, 1958
Hutchinson, Kansas

Dr. Norbert Wiener
MIT
Cambridge, Mass.

Dear Dr. Wiener:

I am preparing a magazine article dealing with the
constructive aspects of vengence--an emotion very much
in the news internationally these days. I want to bring
out the view that such a hostile feeling can best be
dispelled when channeled into wholesome, creative outlets.

I'd like to gather numerous anecdotes telling how
well-known people accomplish this. One university
professor of my acquaintance "gets even" by pulling weeds
or jumping into the dirtiest job he can find.

What is your personal way of dealing with this common
emotion--have you an anecdote in connection with this?
Do you believe people should just "grin and bear it"?
Why? Why not? If you wish to elaborate on any of the
questions, please don't hesitate. I want your views.

As a free-lance writer my work has appeared in Ford Times,
Travel, Hobbies, National Business Woman, Grit, and other
publications. I am a graduate of the University of Kansas
and have spent seven years as a practicing reporter and
editor. Thanking you for any help you may offer, I am

                           Most cordially yours

                           Beverly Baumer

                           Beverly Baumer
                           13 Carlton Road
                           Hutchinson, Kansas

Dear Norbert,

Your prompt reply is most encouraging.The caution is quite
proper,for I should be happy to have any real defect pointed out.

As for Dirichlet series,it seems to me that ~~the~~ convergence
on the real axis suffices for the whole ~~half~~ open half-plane,and
that uniform convergence and the regularity of the function fol-
low.For this,Titchmarsh,Theory of Functions~~x~~,chap.IX;in my edi-
tion,pp.289 ff.The results you want are on the first three pages
of the chapter.As a matter of fact,I had proved(using the methods
of my paper),convergence throughout the half-plane,and you will
see that the proof is obvious.But it seemed unnecessary to dupli-
cate the effort,when basic results suffice,and have reached the
textbooks.If you insist,I can put the proofs back,but I hope not.

Could you let me know whether a copy of the script should be
sent to anyone else ? Masani /also wrote about your mention of Rademacher
~~Also,~~I mean to make a few revisions and additions,mostly trifling
but useful for greater clarity;From the very first page,I ought
to distinguish more carefully between the interval d and its
length $\underline{d}$,though the distinction is ~~fairly~~ quite clear to a trained eye
like yours.Correspondingly,there ought to be another series ad-
ded to(2.4),just to take care of the difference $\underline{d} - [\underline{\underline{d}}]$,where the
square bracket indicates the number of integers contained in the
interval.I need not add that this series converges handily,and
makes no difference at all to the argument,or to the method.
                    (and considerable trouble)
It takes time /to get copies of the corrected script.So,do
let me have any additional remarks,whenever they occur to you.

If you like,a copy with these corrections could be mailed to you
at the end of
/the first week of July,but you must let me have the address,if
you are travelling. I sent him your address.

Ruth Goodwin

To Prof.Dr.Norbert Wiener, Inst.of Technology,
South Dartmouth
New Hampshire Cambridge Mass.
U.S.AMERICA

Sender's name and address :—

D.D.KOSAMBI
P.O.DECCAN GYMKHANA
POONA 4 ; INDIA

Please give my respectful salutations to Mrs.Wiener.As you know,

my elder sister Manik was struck down ♂ by heart trouble,and passed

away in May 1956,after a long illness.That is why we could not have a

real reunion when you came last time.If my present work succeeds,people

will - or so I hope - listen to my advice with more respect,and then I

hope to meet both of you again.Ti

Baba

(D.D.Kosambi)

P.S.You may have forgotten the incident,but my introduction to the
subject really began on that cold Xmas morning in 1948,when we paced the
floor of the garage where your car was being checked,and you explained
how the Erdös-Selberg results on an elementary proof of the prime-number
theorem could be reached by your methods.Vijayaraghavan used to talk a
great deal about the Riemann Hypothesis,but I do not recall that he had
any real ideas about it which had not been expressed by the Hardy-Little
wood school;still,I miss him,and wish he were alive today to see!

D.D.K.

June 25, 1958

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Dr. Wiener:

It was a real pleasure to see and hear you on the program "Machines That Think",
last Sunday. I should have liked to have heard much more of you.

You may not recall but I wrote you in 1949 a letter which was forwarded to you
in Mexico. At that time you made some most interesting remarks about the IBM
typewriter on which the letter was written. I have reread this letter many times
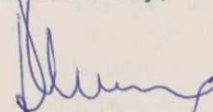with amusement.

To refresh your memory in my original letter of 1949 I told you that I had read
CYBERNETICS with great interest and had used it with my students. (I was then
doing some part time teaching at Northwestern University Department of Psychology)
Since then I have done some teaching at Illinois Institute of Technology and the
University of Chicago in Sociology. Your book remained with me as a text for my
students ever since. Although there is a great deal of it which is forbidding to
them - and to me, I have found so much that is seminal in it that I have continued
to use it.

Interestingly enough from it I have been able to develop some ideas that I have
been able to apply to business organizations. This is almost applied cybernetics.
Much of my professional work in the last two or three years have really been
problems in applied cybernetics.

I am enclosing a brochure describing a book which we have just published which
is a further extension of the principles of cybernetics. While there is nothing in
this report that would further your knowledge from any technical point of view
you might be interested in looking it over some time as a translation of a highly
technical area into the nontechnical language of management.

Thank you again for your intellectual stimulation over the years.

Sincerely,

David M. Cox

DMC:bb
Enc.

who will want to read	reason
Chairman of Board	Policy
President	Profitability
General Manager	Productivity
Controller	Conservation – Cost Reduction Procedure
Manufacturing Manager	60 Advantage Areas
Plant Engineer	Preventive Maintenance Procedure
Production Manager	Altered Manufacturing Methods
Research & Development Manager	Potential Design Breakthrough
Manager: Administration	19 Assignments
Data Processing	Compatibility
Forward Planning	Enlarged Horizons
Industrial Relations	14 Assignments
Training	3 Typical Courses
Industrial Engineering	Machine Replacement Analysis Procedure
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By H. Clifton Morse
and
David M. Cox

Management Consultants

∫

Walter R. Catey
Technical Editor

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which resulted in missiles and sat-
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manufacturing.

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    -- being tested
    -- under wraps, or
    -- ready to market.

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... Increase -- profits.

... Lower -- costs of labor, materials, inventories, overhead, administra-
tion, plant space, fringe benefits, recruitment, training,
labor negotiations, machines.

... Improve -- production, machining accuracy, production methods, safety
records, quality control, product design, machine perform-
ance standards.

... Reduce -- factory space, machining time, total equipment, setup time,
maintenance, lead time, inventories, inspection, capital
requirements, market risk, inventory losses due to engineer-
ing changes, personnel facilities, raw material storage,
machine space, finished inventories, amortization time.

... Eliminate -- blueprints, costly templates, process sheets, detailed draw-
ings.

... Change -- manufacturing and marketing strategy, vendor and subcon-
tractor relationships, market research, accounting, research
and development.

By 1963 -- only five years from
now -- at least half of all new machine
tools will be electronically controlled!

This means that unless you act
now -- today -- you may some morn-
ing read headlines which will tell
you that your competition

outproduces you 2 to 1 and,
at the same time,
cuts his costs 25 to 50%!

These are realities -- here --
now -- today.

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A conservation-cost reduction program through the interchange of money-saving ideas with other companies.

INDUSTRIAL ENGINEERING

NCMT changes Industrial Engineering responsibilities.

The five significant cost elements which must be considered in a NCMT replacement or retrofit analysis.

A Machine Replacement Analysis Program.

INDUSTRIAL RELATIONS

Why labor relations may be drastically altered under NCMT.

The psychological fears of so-called "automated" factories.

Reduction in costs of fringe benefits, recruitment, training, labor negotiations.

The need for more training courses and upgrading of maintenance personnel.

The need for labor training for the combined skills of electronic, electrical, hydraulic and mechanical knowledge.

A course of instruction for the machine operator, electrical maintenance personnel.

LONG RANGE PLANNING

Closer integration of over-all strategy in all areas -- manufacturing, market research, accounting, research and development.

Gives you a timetable to show you what to expect in the development of the Numerical Control art -- what is likely to happen between now and 1970.

Operations Research techniques for long-range planning.

MANUFACTURING ENGINEERING

Why NCMT effects Manufacturing Engineering more than any other department.

Reduction in each cost of manufacturing -- materials, men, machines and burden.

Costs can be reduced while productivity is being increased.

The substantial reduction in lead time from drawing to finished part.

Virtual elimination of blueprints, process sheets and drawings.

Higher machining accuracy results in less scrap and requires less materials.

Why machining no longer depends on a skilled operator.

The advantages in the building block concept.

PLANT ENGINEERING

The importance of Plant Engineering as NC replacement gets under way.

On-site machine parts repair is reduced by the use of spare assembly blocks.

A master check list of installation, operation and maintenance data requirements for NCMT.

A Preventive Maintenance Program with a detailed procedure based on new concepts.

PRODUCT ENGINEERING

Better Designed parts and products.

Opportunities for new products, new fields, new markets.

PRODUCTION PROGRAMMING & CONTROL

WHY IT IS NO LONGER NECESSARY TO HOLD BACK FOR ECONOMIC LOT SIZES.

Exact production standards and capability are known in advance, enabling exact scheduling.

Production, Programming and Control can reduce inventories and scheduled lead time.

The ability to produce as required lowers cost of spare parts and engineering change handling.

PURCHASING

New make-or-buy criteria are applied.

Better vendor and subcontractor relationships.

Tells you what machine tool builders can do to help users.

Gives you a canvass of what leading manufacturers and users have to say about NCMT.

QUALITY CONTROL

Quality Control assumes a new function; inspection is reduced or replaced.

Closer tolerances and better finishes of large, complex parts.

All-in-all "NUMERICALLY CONTROLLED MACHINE TOOLS" tells you all you need to know about management of NCMT -- their impact and implications for you ... your business ... your future.

The report predicts that net cost reduction from unit-by-unit NC probably will be 25% -- and as much as 50% from a matured program with a new manufacturing strategy.

It also predicts that productivity will increase 50% from unit-by-unit replacement and to more than 100% from a full-matured program.

It is the first -- and only -- significant report ever written on the management effects, the problems, the opportunities and challenges of quantity installation and use of NCMT.

"NUMERICALLY CONTROLLED MACHINE TOOLS" examines nontechnically NCMT manufacturing and gives you the information which you, as a progressive manager, need to

... understand its impact

... evaluate its advantages

... be in a position to cope with its management problems.

This new, up-to-the-minute, comprehensive report shows you how to recognize the problems and impact of NC manufacturing and what to do about them.

"NUMERICALLY CONTROLLED MACHINE TOOLS" was written by two outstanding management consulting engineers -- H. Clifton Morse and David M. Cox -- skilled in the fields of communications, management controls, organizational analysis and scientific management.

Walter R. Catey, Technical Editor, is well known as an expert and consultant in the machine tool and manufacturing fields.

"NUMERICALLY CONTROLLED MACHINE TOOLS" is guaranteed to save you months -- possibly years -- of trial-and-error in your long-range planning and manufacturing strategy. Its almost 200 pages can save you thousands of dollars.

"NUMERICALLY CONTROLLED MACHINE TOOLS" is a "how-to" report of nearly 200 pages. It shows you in detail how to plan for, study, investigate, cope with, organize for, evaluate and profit from Numerically Controlled Machine Tools.

"NUMERICALLY CONTROLLED MACHINE TOOLS" is filled with month-saving, dollar-saving plans, procedures, programs and assignments -- all written on a technical subject in nontechnical language.

If you were to hire a consulting firm to investigate the implications of NCMT on your busines, you could spend thousands of dollars and use months of time. All this has been done for you.

Step-by-step this significant management report outlines:

1. How to organize to meet the Challenge of NCMT.

   What you need to know -- how to investigate -- what you need to do -- how to plan and evaluate.

   The fantastic results in productivity available with NCMT. $ $ $ saved in direct costs of: Men - machines - materials and overhead!

2. How to cope with the Impact of NCMT.

   The impact on your own business.

   The effects of nine key departments.

3. How to project the Implications of NCMT.

   Sixty advantages compounded into greater profits.

   New manufacturing and over-all strategies.

In "NUMERICALLY CONTROLLED MACHINE TOOLS" actual, detailed, in-plant plans and programs are spelled out for your own use.

You are given tested procedures which you can immediately translate into action in your own plant. You are shown how to:

- organize and use most effectively a Numerical Control Coordination Committee -- with management actions, specific responsibilities, model forms, actual Committee agenda and meeting minutes, and 40 assignments .... all based on actual case histories.

June 25, 1958

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

Dear Dr. Wiener:

As a distinguished philosopher of science, you are, of course, aware of
the fact that research in any area must be carried out within a carefully
constructed framework of ideas and hypotheses in order to be fruitful.
Many researchers in the field of mental health have felt the lack of a
medium through which they might exchange such opinions and ideas on an
informal plane, since most professional journals currently in existence
publish, mainly, the results of completed research.

The Postgraduate Center for Psychotherapy has recently received a grant
to finance the publication of the International Research Newsletter in
Mental Health. Through this quarterly publication, it will be our aim
to facilitate discussion, controversy, speculation and the exchange of
information and criticism among researchers all over the world. Our
emphasis will be on research design and methodology rather than on con-
clusions. The first issue will contain material of general interest to
workers in this field, and a survey of current research techniques. In
subsequent issues we plan to feature articles in one major area of current
research. The first topic to be so treated will be investigation in the
field of juvenile delinquency.

We have already received editorial contributions from researchers in many
different countries, as well as hundreds of enthusiastic letters. For our
first issue we would very much appreciate having from you a statement of
what you, as an outstanding philosopher of science, think are some of the
philosophic and methodological requirements for an adequate investigation
of mental health, or any more narrow aspect of it. We are asking other
scientists, logicians and philosophers to express themselves in similar
fashion, and sincerely hope that you will be able to contribute to our
effort to evaluate current thinking in this area.

We have taken the liberty of placing your name on our subscription list
for our first four issues, and hope to hear from you in the near future.

Cordially yours,

Bernard F. Riess

Bernard F. Riess, Ph. D.
Director, Research Department

BFR:hh

[ans 8/6/58]

4th
INTERNATIONAL
automation
EXPOSITION

Address International Automation Exposition, c/o Richard Rimbach Associates, Management, 845 Ridge Ave., Pittsburgh 12, Pa., FAirfax 1-9831

June 25, 1958

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

My dear Dr. Weiner:

I am writing to you at the request of the Russian
visitors to MIT last week. They wish to apologize
for not fully taking care of your request for medical
publications.

As I understand from them they say they did not fully
understand your request for the name of a medical
publication.

Further they ask me to advise you that they will send
the information to you after they return home.

Very truly yours,

FOURTH INTERNATIONAL AUTOMATION EXPOSITION

Richard Rimbach
Exposition Manager

RR/ns

17620 Hannan Rd.
New Boston, Mich.
June 25, 1958

Professor Wiener
Elec. Engineering Dept.
Massachusetts Institute of
Technology
Cambridge, Mass.

Dear sir:

I was fascinated by the devices that I saw on the
telecast originating from MIT on Sunday, June 22. I
am a junior in attendance at the University of Michigan
and am taking courses that are prerequisite for a Bach-
elor of Science degree in Electrical Engineering.

I was particularly interested in the device that
responded to light. As I live on a truck farm, I con-
ceived of many applications to devices of this form.
I would like to know, if there are any forms of this
device which will respond to certain wavelengths of
light in the visible zone, for instance, red light with
a wavelength of 6200 angstroms.

I know that there are devices that can distinguish
metallic substances from each other; but, are there any
that can distinguish organic compounds or materials
containing these compounds from those which do not.

I am enclosing a self-addressed envelope and would
greatly appreciate your consideration in answering my
letter. In addition, I would appreciate any information
that you might be able to send me.

Respectfully yours,

Richard Szoke

[ans 7/1/58 and 8/30/58]

June 25, 1958

Professor P. Masani
The Institute for Advanced Study
Princeton, New Jersey

Dear Masoni:

You are quite right that the problem of the
uniqueness of the moment needs more discussion. As a matter
of fact, I think you will find a pretty thorough discussion
for the finite dimensional case in Shohat and Tamarkin "The
Problem of Moments". The particular issue discussed is that
of the Parseval Theorem. I believe that all the known results
are there in the form in which we can use them. There is
no great problem in transferring them to the infinitely di-
mensional case. I think this will enable us to put our
results together.

Margaret and I are on our way to Europe the
day after tomorrow, and will see you on the farm in August
when we get back. Meanwhile, our best wishes.

Sincerely yours,

Norbert Wiener

NW:EMB

June 26, 1958

Mr. William S. Bowmer
University of Louisville
Louisville 8, Kentucky

Dear Sir:

    I have received your letter of June 16th
and am enclosing herewith a copy of the speech I delivered
at Wabash College. This is a rough draft copy, but is
all that is available at this time.

        Sincerely yours,

        Norbert Wiener

NW:AD
Enc.

June 26, 1958

Mr. G. Deurinck
Chairman of Group X
XXXI Congres International De Chimie Industrielle Liege
32 rue Joseph II
Bruxelles IV
Belgique

Dear Sir:

I have your letter of June 5th and am pleased
that you wish my thoughts on the subject of cybernetics.
However, I regret that I will be unable to be in Bruxelles
at that time and must decline your kind invitation.

May I wish you every success with your plans
for this 31st International Congress on Industrial Chemistry.

Sincerely yours,

Norbert Wiener

NW:AD

June 26, 1958

Mr. Gelston Hardy
Indian Rock Farm
Ashley Falls, Mass.

Dear Mr. Hardy:

Your letter of June 21st finds me just about
to take off for a trip to a scientific meeting in Europe.
All the people in authority on the brain wave program will
be there, too. Therefore I shall have to leave the answer
to your query about electroencephalograph work in abeyance
until I come back in the fall.

Sincerely yours,

Norbert Wiener

NW:AD

[ans 12/6/58]

June 26, 1958

Mr. Martyl Langsdorf
Mr. Cyril S. Smith
Bulletin of the Atomic Scientists
5734 University Avenue
Chicago 37, Illinois

Gentlemen:

In order to obtain time for further research
and not to put what has become an unbearable pressure
upon me, I am not doing any more popular articles, or
indeed any articles whatever. I am confining my time
for the publication of scientific and other material in
book form. I trust you will understand my position.

Sincerely yours,

Norbert Wiener

NW:AD

June 26, 1958

Dr. Hugh C. MacGuire
Children's Hospital, Inc.
P. O. Box 12
Montgomery, Alabama

Dear Dr. MacGuire:

I have your letter of June 16th regarding
a symposium from October 6th to 8th and thank you for
your invitation to participate. However, in order to
find the time for my own research I am cutting out all
publication not in book form. I am also cutting out
travel in connection with meetings. Therefore I regret
very much that I shall be unable to take part in your
program. Let me wish you every success with your plans.

Sincerely yours,

Norbert Wiener

NW:AD

June 27, 1958

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

Dear Dr. Wiener:

This communication is to remind you of the manuscripts for Volume III of
MEDICAL PHYSICS.

According to my best estimate at the moment all manuscripts will not be
submitted until the end of August; therefore, the deadline date has been extended
to September 1. Of course, this extension is being made to accommodate some
of the contributors, but it is of utmost importance that every article be in my
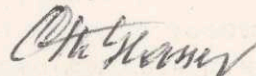hands by that time so that early publication can be assured.

As was mentioned in my initial letter to you, you will be compensated for
your material at the rate of $5.00 per printed page. Also, the publisher will
supply each contributor with 50 self-covered reprints of his contribution with-
out charge. There will not be an opportunity to secure more than this specified
number of reprints of each article. A complimentary copy of Volume III of
MEDICAL PHYSICS will be sent you upon publication.

There are 63 new collaborators, and so that you may be introduced to them
at this time a list of these colleagues is attached.

— I am holding this, RG.

Again we stress the importance of limiting your article to 2 to 3 pages in
length. Specifications concerning this matter were given in paragraph I of
our "Memorandum to Contributors to Medical Physics" which was sent you
initially.

Your fine cooperation is greatly appreciated. If I can be of service to you
at this time, please do not hesitate to notify me.

Sincerely,

Otto Glasser, Ph.D.
Head, Biophysics

OG:ps

[ans 8/6/58]

June 27, 1958

Dear Dr. Wiener:

By the time you get this, I will be trudging through
Europe in my foreign correspondent's trench coat. This is just
a note to say thanks and that I understand about the guest column.

Perhaps when you are in New York or I am in Boston,
you can make the time for a personal interview. I should very
much like to do that. Or when you do make a speech, I should like
to get a copy of it.

Cordially,

Victor Riesel

Victor Riesel

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

VR:msg

[ans 8/6/58]

NAMUR, le 30 juin 1958.

N° 88/1483 RD/AL.

Monsieur,

J'ai le plaisir de vous faire parvenir, sous pli séparé, deux exemplaires du Ier numéro de la revue "Cybernetica " à la rédaction de laquelle vous avez bien voulu collaborer.

Je ne manquerai pas de vous faire parvenir 25 tirés à part de votre article, dès qu'ils m'auront été remis par l'imprimeur.

Avec mes remerciements réitérés, je vous prie d'agréer, Monsieur, l'assurance de ma considération la plus distinguée.

L'Administrateur-délégué,

J. LEMAIRE.

Monsieur Norbert WIENER
Professor of Mathematics at the
Massachusetts Institute of Technology

C A M B R I D G E (Mass.)