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M. Pierre Donzelot

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Friday Morning
[ca April, 1953]

Professor Weiner -

I have just finished your book. I bought it yesterday from the coop & have been up all nite reading. I must say I found it absorbing. The style was a revelation; I had expected something stuffy & pompous but this is quick, lively, and delightfully expressive (i.e, your use of "drunk as a coot" or "reads like a Sears-Roebuck catalog"). I cannot write any criticism or evaluation with the material this fresh in my mind; I actually think it will take another reading or two before I am quite certain just what the significance of the book is - & if you've really accomplished the purpose of tracing the formative factors in your early life. (Which, I suppose, are now responsible for many of your present attitudes) At this point, I can only say I thoroughly enjoyed the book -

Sincerely yours,

James J. Baker

[Ca April, 1953]

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Ecrire à : R. VALLÉE, 2, rue Mabillon - PARIS (6°)

[ca. April, 1953]

THE UNIVERSITY OF CHICAGO
CHICAGO 37 · ILLINOIS
DEPARTMENT OF MATHEMATICS

Dear Norbert,

I'm sorry you can't come, but I can understand.

Best wishes,

Saunders

Surrey – Nues. Fera

Prof. Bonnell [illegible]

[illegible]

PAUL G. KLAWANS
7212 CONSTANCE AVENUE
CHICAGO 49, ILL.

6 in

Dear Sir;

Please autograph the FRONT of the enclosed envelope. In my collection of over 7000 similar envelopes I have the autographs of many leading educators and authors.

Thanks from,

Paul G. Klawans

Dr Weir [illegible] [illegible] of [illegible] [illegible] [illegible] [ca. April, 1953]

~~Dear Sir~~

~~In the~~ examination of primitive language. writing we may be reading backwards. In Hebrew + other early written languages we start from Right to Left as Da Vinci found this a method to convey his findings. Also 1 in 10 children are supposed to have a natural manner of reading the words backwards until corrected. This may be a [illegible] of phenomena [illegible] those in [illegible] of [illegible] to our own. The north hemisphere being left to right or ~~counter~~ clockwise ~~those~~ of southern influence counter-clockwise. An electrical phenomena or law which must be considered if we wish to know how we think + speak.

In Greek + early Hebrew of the letters or words are looked at upside down they seem more familiar to modern readers. This may be a condition of modern or transposed thinking + habits made by those who have "romanticized" our older methods of learning thinking + writing. The eye shows image upside down + backwards. This would be the formation way of thinking, writing + speaking the modern way may be superior or inferior the earlier way would be the easier to find a method.

When one goes to a racetrack to pick a winner One uses his eyes to look at the horse, his record + the opinion of experts. The last two can be studied the nite before + recorded. On looking at the horse we may have a changed opinion. Returning to bet one may change both + use a "hunch" or intuition

If the glandular condition of the horseplayer is known as in palmistry (mounts ect.) His reason for selection may be determined by the various chemical elements in his blood as greed, sports, selection for beauty of horse, the ×"brain" would be determined by the success of a longer period imagination by betting on a long shot. ect. Many people will bet on popular opinion as rumor spread for the purpose (ie propaganda). The general instinct of large crowds to bet on a favorite may be an electrical impulse

The proper way to bet is known as recorded by the larger + more successful bookmakers (Carroll). The public ignore this method. They follow a pattern most of them losing but return to try again even when they know their method are bad. They still follow them.

This shows habits of involuntary thinking + acting which could be know before hand if the subject is studied. The chemical content of the blood determining the action + thinking. To find the similar excitement of the words + letters would be a means of identifying same as in pronunciation.

Also betting on head or tails can be determined by chance. Why? This is a mechanical process. thought to be chance by the inexpert. The thinking of men + women can be shown to be simulated in many matters by experts as in electrons selection of clothes ect. in summer + winter as well as styles as gown designers in Paris.

× The "brain" would be as in a action of an intelligent "computer" that would consider all factors as Mr Carroll.

If I 6 electronic eyes were ~~to scan~~ the various words each eye to activate an electronic or sound producing unit similar to the sound of the letter by ~~speeding + retarding~~ the sounds a ~~recognizable~~ word should be pronounced

A study of how some birds + parrots repeat words + sounds as the minor bird might be useful. Then must use a kind of echo process as song birds will sing when hearing a radio.

The lowest form in animals must be that of a chicken or hen cackling. Mosquitoes respond to a electronic sound wave as do bats

The attraction of a mirror to higher + some of the lower animals as in pools as well as the absence in others may be of some note in the making a apparatus to read aloud.

The invention given to the head of A.B. M. Co. (Sat Times N.Y. 9th) which perforates numbers from checks etc by recognition electronically would seem useful as perforating a drum (revolving) which by an instrument as a player piano would translate the perforations into the sound of the words to be read automatically

The attraction of the eye seem the most strong in looking at mirrors (unknowingly). This must be the magnet or center of attraction. The property of the eye are known. The recognition factor must be considered beforehand or is unnoticed. A man will look in a mirror + go without his glasses although they are necessary. A man will go by a restaurant + not eat until his chemical makeup tells him. Then an electric impulse tells him to go in + dine. So a drunk wishing has a strong affinity. He cannot take his eyes off the bottle or glass. Women + gold have an electrical influence on some men. Candy changes the chemical make up of children when they have enough it becomes negative. The attraction of words to pronunciation as repetition must be an electrical phenomenon — possible to understand + duplicate. J F H

[ca. April, 1953]

Dear Professor Weiner; — I

In work is an article which you will find interesting.

The importance of it will ~~be~~ possibly impress you as it does me. The teacher who introduced me to your book called Cybernetics, has consented to type and edit my article. He is at Temple Univ.

This letter is merely to confirm the reception of future correspondence.

By way of introduction, I'm a businessman. Radio and Television Servicing. And might add that honesty is my by word along with good work.

I hold your book and opinion in very high regard. It is along these lines that my motives are directed.

There is no business involved. 2-

Upon receipt of a card or letter from you, I will then entrust the article to your hands.

It will be notarized. Should you desire to retain it, for reference, you may do so.

But specifically wish you to render an honest opinion.

The article will also be submitted to Earnest Hilgard of Stanford Univ. He wrote a book on "Methods of Learning."

Should it (the article) enter public print, your opinion will be duly credited and financial reward what you deem just. If you want no mention of your name, this will be rigidly eliminated.

Quoting Hilgard on page 356 "This brilliant theorist will be immeasurably aided if the rest of us have provided raw materials in the form of system-

atic inter relationships carefully worked out around identifiable ~~data."~~ bodies of data."

Business demands are very trying. Time is short. Please acknowledge receipt of this letter and I will send along the article.

Respectfully and Sincerely yours

Peter Campione
2026 Fairmount Ave.
Phila 30 Pa.

P.S. I don't know whether you're in the States or not right now

[ca. April, 1953]

Thursday

Dear Doctor:

I cant say when I enjoyed a broadcast more, as I did today when you appeared on Mary Margaret McBrides program. There is no douht that a child prodigy creats quite a problem, that is, of readjusting himself to the world. I think you did wonderfully.

Curiously I was a prodigy without knowing it. I drew almost immediately, and at a very early age I learned French and Italian through some self study books, a cartload of facts through a world almanac, Dantes Paradise Lost, and the History of the World during the Nineteenth Century. This was learnt for a simple reason, they were the only books on the shelf. But I came from a home in which there was much guilt, and much of this guilt was laid to the door of the learned, the upper classes, and there was an attempt, and a successful attempt to reduce the home to poverty and ignorance. One contributing factor was inherited directly through the Puritan sense of sin, and that knowledge was of the devils making, another that my father, whom my mother hated with a fury was an intelligent man. So I kept all my learning secret, and even concealed in school work, until, when I was sixteen, in California, I was about to be thrown out of school for being an idiot. However they thought that it would be a good idea to give me an IQ, just to see how low a score they could get, and I turned in the highest in the school, 144 I believe. This drew the attention of Terman, who was making tests in California, but before I could be tested again my mother remarried, and my new father removed me immediately from school on the basis that his father did so when he was fifteen and that, indeed was the and of my formal education. However I have been studying ever since, and still study, attending night classes whenever I can. And I am happy that there is still a chance, in those who will come after me. My daughter married, and is helping put through Columbia a wonderful guy, whose sole intention is to get degrees to teach. Another son Malcolm, is a wonder at math, and is teaching himself for the most part, because he is ahead of his teachers.

It is this lad I write to you about. He is attending now, Goddard College a small college in Plainfield Vt. on a scholarship. He is in his second year. This kid had a terrible time of it, having acquired for some reason, the complete hatred and rejection of his mother, and his adjustment has been a very difficult thing. In fact he has been taken from home, by psychiatrists, because his regression is dangerous when near his mother. During his work period which they have at Goddard he spent some time in Boston, and wrote of the joy and thrill of putting his hands on books in Harvard, or perhaps MIT, books like Principia Mathematica, and Keppler. He is indeed reverant, and should be educated.

However there is a danger that his scholarship will not be continued, and when I heard you speak I thought I would have the nerve to write you, asking you this. Are there scholarship students at MIT. How do they get a scholarship? To whom do they apply? I do hope you will help me. There has been such a severe setback in the family that I find, in spite of muliple talents, to make a decent living.

I have scores of books on languages, including Hausa and Zuni, which I study just from going mad, although my Spanish, which I spoke fluently at the age of eleven is so rusty that when I spoke it recently they thought I came from Cuba, my accent was so bad.

If you wish any of these books on outlandish languages I would be glad to sent them to you. Or records. I am sure you would enjoy Chinese records. I have several sets, Linguaphone, the GI course, but the best one is Hua Wen Chu Chieh.* I taught myself pretty much, then I turned up at NYU, Doctor Britten had a class, and I wanted some fifth year work, Confucius. I told him I lived in China six years, and he thought I had gotten quit a grasp of the language in so short a time. When I told him the truth that I had taught myself he never believed me. Swell man, do you know him?

Cordially, and thank you,

Walter Stewart

*華文初階

WALTER STEWART
280 Grove Ave
Metuchen, NJ

[ans. 9/7/53]

[ca. April, 1953]

Nine Terrace
Naugatuck, Conn.

Dear Dr Wiener -

I have just finished reading "The Freedom to Explore" in the current SR. And - Master of Cybernetics - Though I can be classified as "one with no intellectual pretensions" in your field, I have a unique claim - Guess what? I played hide and seek with you in your (and my) youthful days !! Remember the gay

Peabody School days? Summer Street and Avon Hill? Or have they, with you, fallen into the limbo of forgotten trivia!

The euphony of your name has remained with me (I am the Dept. of English Chairman at Naugatuck High School) across the years. I shall avidly await the publishing of "A Prodigy" for the subtitle brought back to me vividly my growing up in Cambridge, too! Very sincerely

Louise GRAINGER.

[ans 6-1-53]

[ca. April, 1953]

ASP

NATIONAL COUNCIL OF THE ARTS, SCIENCES AND PROFESSIONS inc.

35 West 64th Street, New York 23, N. Y. Telephone: SUsquehanna 7-4677

IRVING ADLER
National Director

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

Dear Prof. Wiener,

Because we believe that you share with us and other liberal intellectuals a deep concern for the cultural welfare of our nation, civil rights and peace, the National Council of the Arts, Sciences and Professions has nominated you to its National Board of Directors. It is my privilege to extend to you this invitation to join with us.

Stemming from the Independent Committee of the Arts, Sciences and Professions, which arose during the 1944 campaign for the re-election of Franklin Delano Roosevelt, we have during all these years consistently worked for the principles and goals which President Roosevelt still symbolizes. We strive for the peaceful cooperation of nations through the United Nations, the cultural and material welfare of the American people, and for the defense and extension of the civil rights of our citizens.

As a cultural organization, we seek to encourage the development of our nation's democratic culture and to deal with the economic and professional problems which affect the people in these fields. As an independent, non-partisan organization, we support legislation consonant with this program.

The purposes of our organization are indicated in the enclosed first draft of a policy and program, prepared for consideration by the National Convention that meets April 25, 1953. If, after reading it, you have any questions, I hope you will address them to me.

We look forward to your acceptance of the nomination and to your participation with your fellow intellectuals, through the semi-annual Board Meetings, in determining those policies by which the ASP hopes to contribute to assuring world peace and advancing American culture.

Sincerely,

H Fairchild

Henry Pratt Fairchild
National Secretary

THE NATIONAL COUNCIL OF THE ARTS, SCIENCES AND PROFESSIONS

PROPOSED POLICY AND PROGRAM

The National Council of the Arts, Sciences and Professions is dedicated to the defense and further development of a free, democratic culture. In the pursuit of this goal it seeks to accomplish two distinct, but related results: first, it encourages the members of the groups it represents to take the distinctive part in the affairs of the community for which their particular capacities qualify them; to use their professional skills in advancing popular welfare, through an improved standard of living, better health and cultural enrichment. Second, it seeks to protect and advance the special interests of these groups and to provide a free field for the exercise of their talents. At the present time the second of these objectives has been forced into a predominant position. The current practice of singling out individuals and groups in the arts, sciences and professions for special investigation, attack, restriction and humiliation, has compelled the National Council to assume the defensive in a considerable part of its activities. But for the achievement of our positive goals, as well as for the defense of traditional rights, we believe that the atmosphere of freedom guaranteed by our Constitution and its Bill of Rights is indispensable and the determination to preserve and protect it permeates and inspires every activity the Council engages in. We therefore pledge our best efforts to the following:

I. We challenge all forms of "thought control" and official and unofficial censorship of political, intellectual, scientific and artistic work or conduct. We regard the current "loyalty" oaths, "investigations" of opinion and belief, blacklists, trials and imprisonment for teaching and advocacy, as a direct violation of the First Amendment to the Constitution - and the antithesis of a free society. Enforced conformity dries up the springs of creative effort, destroys the free exchange of ideas, which is the lifeblood of scientific progress, and undermines integrity.

II. We call for freedom of communication and publication, unrestricted travel and the unhampered international interchange of knowledge, ideas and artistic achievements.

The banning - and even the burning - of books, the denial of passports, the interference with scientific and cultural conferences, the elimination of recognized classics from our libraries abroad, are all manifestations of the same growing hysteria - which is an unmistakable forerunner of fascism.

III. We demand full and equal opportunities for the practice of the arts, sciences and professions. The latent talents of the people are a priceless national resource and must not be restricted, squandered or diverted to non-constructive ends. To permit the fullest cultivation of these talents equality of educational opportunity must be provided. This should include opportunity for professional training and employment, with financial assistance to overcome economic handicaps, and without discrimination on grounds of race, religion or national origin.

IV. We condemn and reject the assumption of superiority on the part of any group of people which leads to the oppression or subjection of other groups. In the United States this takes the characteristic forms of anti-Semitism and discrimination against Negroes and the foreign-born. Every such act is a direct denial of democracy, undermines the very foundations of the country and unfits it for leadership in a world striving for national and racial equality. In particular, because this is one of our great national responsibilities, we demand the full extension of political, social and economic rights and equalities to our Negro population. This is essential, not only as a matter of simple justice, but also in order that the nation may have the benefit of the vast reservoirs of talent and ability which are inherent in the Negro people.

The immense contribution already made by the Negro people to the cultural life of our country is indicative of the further contribution that might be made if existent handicaps were removed.

V. We propose resumption of the advance in social and economic well-being which has been interrupted and threatened by the development of the cold war. Much still remains to be done before we can reach the goal of adequate health services, decent housing at reasonable cost and a higher standard of living.

VI. We place particular emphasis on the encouragement of cultural activities of all kinds. We shall do our utmost to widen opportunities for artistic and scientic expression. We shall make our own special contribution through our forums, publications, theatrical productions, films, concerts and art exhibitions.

VII. Finally, and most importantly, as the central and indispensable basis of all that the National Council stands for, we demand PEACE. None of the foregoing objectives is capable of attainment in an atmosphere of war or the preparation for war - cold or hot -- actual or contemplated. We categorically reject all doctrines that hold that war is desirable or inevitable, or that it produces any values that cannot better be achieved by peaceful negotiation. We are convinced that all the difficulties, differences and tensions that afflict mankind at present can be resolved through the medium of peaceful negotiation. And we believe that only in an atmosphere of peace and tranquillity can the members of the Arts, Sciences and Professions achieve that fruition of their special talents which is essential to the realization of their own personalities and the rendering of their greatest contribution to society.

To achieve these goals, we shall cooperate with other organizations of the people -- economic, cultural, religious and civic -- to the extent that their programs and activities are consistent with ours. Artists, scientists and professionals are traditionally independent in politics, judging legislative proposals and candidates for office on their merits. We aim to give organized expression to this traditional attitude, on matters on which there is a clear consensus of our members. The freedoms we demand are, in a more profound sense obligations. The inalienable right of the artist, scientist and professional is the right to serve. We shall serve our country and its people, with the full measure of our devotion and professional skill.

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COPY

New York trip, Thursday, April 9, 1953:

12:30 a.m., lv. Boston via The Owl. R'ette 8, car 30.

8:00 a.m., arr. New York.

9:30 a.m., Mr. Simon will be in his office.

4:30 p.m., Dr. Marks Neidle will pick you up at the Hotel Chatham to take you to CCNY.
Reception and dinner before lecture to Chemistry Alumni Asso.

8:00 p.m., Lecture: "From The Computing Machine to the Automatic Factory."

11:15 p.m., Lv. N.Y. via American Airlines Flight No. 346.
12:18 a.m., Arr. Boston.

A room is reserved for your use all day at the Hotel Chatham, and will be ready as soon as you get off the train.

A Professor Magid of the Philosophy Dept. will speak to you after the lecture about the possibility of your giving a series of lectures next spring at City College.

[ca April, 1953]

Mr. P. Irani
19 Arlington St.
Cambridge, Mass.

Dear Mr. Irani:

Your name has reached me through Mr. Kannapann, who has told me that you are thoroughly familiar with Indian income tax regulations. Hence I write to you to seek an answer to income tax questions which have arisen in connection with an invitation which has been extended to me to visit India next year.

I have been invited to attend the meeting next January of the Indian Science Congress and to remain in India to consult with Indian scientists, lecture, and visit universities until about mid-September. My compensation will be the payment of my transportation expenses, probably my wife's, all of my living and travel expenses during my residence in India, and an additional $600.00.

A question has been raised about Indian income tax law, which I understand to be complex. I have been informed that any income earned in India (in excess of $600, which is tax-exempt) will be subject to Indian income tax, and that Indian income tax is levied on both income earned in India and income earned elsewhere in the world.

I shall receive further information on this subject about a month hence. But in the meantime I should appreciate it if you would be kind enough to answer two questions for me in the light of your knowledge of Indian income tax law. First, is my understanding of this law substantially correct? And second, in the arrangements for compensation I have outlined

above, ~~do you~~ is there any feature which will raise the possibility that I may be subject to taxation so long as any compensation in addition to my living and travel expenses is restricted to $600.00?

If it would be easier for you to come to see me at M.I.T. than to write a letter, ~~I~~ my time is available to you if you will make an appointment with my secretary. (KIrkland 7-6900, Ex. 198) I shall be most grateful to you for any help you can give me with this problem.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

....19........

Memo to.. **Room**..................

(Pheroz) Irani
19 Arlington St, Camb.
UN 4-3178.
Law Sch - EL 4-8246.

Tocata [illegible]
Albert K. [illegible]
[illegible]

from.. **Room**..................

7-52-250M MURAN B33478

PRINCETON UNIVERSITY
PRINCETON, NEW JERSEY

CENTER FOR RESEARCH ON WORLD POLITICAL INSTITUTIONS

April 1, 1953

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

Dear Norbert:

Thank you for the copy of Ex-Prodigy. It is beautifully produced and reads, if anything, still better than the manuscript which I enjoyed so much. Have you expanded the section on Cambridge, England, at all? Or am I only now discovering how many ideas they contain?

You have written what to me seems to be a really important book, with implications for psychology, literature, education and American history, as well as for the history, philosophy and sociology of science. It is a book that will make a permanent place for itself in our tradition. Doubtlessly, the reviewers are beginning to tell you so, even though some of them at first may see less of the forest of your ideas for the trees of their own specialties.

When are you coming again to New Jersey? Ruth and I should be delighted to have you and Margaret visit with us here.

Professor Richard Meier of Chicago University has asked me for some piece on communications and social science for the Bulletin of Atomic Scientists. Should we give them the text of our old article on "Cities that Survive," from which the abstract in Life was made?

I enclose a copy of a note on a problem with which I have been playing recently. Could you glance at it and let me know what you think?

Once again, congratulations on an outstanding book!.

Yours as ever,

Karl

Karl W. Deutsch
(Visiting Professor,
Research)

P.S. I was pleased with the Saturday Review of Literature's reaction to your book. They should lead many readers to discover for themselves how much your book has to give them.
K.

jl

[ans 4/7/53]

Karl W. Deutsch March 30, 1953 (Not for publication)

Notes on a Possible Measurement of Social Integration

Let $C.O.i = \frac{p\ x}{d}$

i.e. The crude opportunities for interaction is assumed to be proportional to the ratio of the ensemble of population of possible partners, p; inversely to the cost or resources required for each contact; this cost factor may be roughly proportional to distance, d,* the whole multiplied by a coefficient X which indicates the probable extent to which a given universe of C.O.i's will actually be exploited for cultural, economic, or other reasons. Comparisons of C.O.iIs at different periods with actual interaction volumes can then be used to compute X, the cultural or institutional probability of interaction for a given set of opportunities. This probability X is then a crude measure of social integration.

---

* Actually, one should separate "distance cost" from "interference cost", as in desert or ocean travel in contrast to urban traffic jams; d is therefore only a rough approximation.

THE UNIVERSITY OF CHICAGO
CHICAGO 37 · ILLINOIS
DEPARTMENT OF MATHEMATICS

April 1, 1953

Professor Norbert Wiener
Department of Mathematics
Massachusetts Institute of Technology
Cambridge 38, Massachusetts

Dear Norbert:

This letter is to invite you to give the address at the Spring initiation meeting of the Chicago Chapter of the Society of Sigma Xi.

We would wish you to give an hour address on a suitable research topic of general scientific interest; we would, of course, leave the choice of a topic to you. The initiation meeting is normally scheduled for a Thursday evening, probably Thursday June 4th, but possibly Thursday, May 28th.

My colleagues on the executive committee of Sigma Xi and I very much hope that you will be able to accept this invitation; since time is short, we would appreciate hearing from you soon.

Cordially yours,

Saunders Mac Lane

Saunders Mac Lane
President, Chicago Chapter
Sigma Xi

SM:mre

[ans 4/7/53

8209 Roanoke Avenue,
Takoma Park, Md.,
April 1, 1953.

Dear Norbert,

The sketch of your unmistakable posture on a recent cover of the Saturday Review of Literature was a delightful surprise. I enjoyed the review of Ex-Prodigy and in time will read the book. From the review, however, I gather that you omitted much of the entertaining material which you recounted to me at odd times. My particular favorite is the picture of you at the age of six translating Cicero at sight while your father worked on a Tolstoi translation. Or is this story apocryphal ? At any rate I am delighted that you are sharing your remarkable experience and Weltanschauung with the general public. For a fellow who used to say frequently 15 years ago that you were all washed up you are remarkably active.

Since I saw you briefly in Cambridge two years ago I have been assigned to the Austrian desk of the State Department. As yet I have not been ground to pieces in Senator McCarthy's jaws but sooner or later I shall probably be called to book. Personally I prefer service abroad rather than in the Department, although I am thankful for the glimpses I have had of that mystical function known glibly as "policy making." To me Austria illustrates in miniature a large number of current world problems and as such is very interesting. With a little luck I may escape abroad this summer. I hope for something in the Middle East such as Damascus or Baghdad but one can never tell about thesethings.

We are now awaiting the belated arrival of child No. 3. The first one is named Jeremy Bentham; the second, Stephen Douglas; and for third, if a boy and Nancy permits, I have selected Matthew Maury whose reputation as an oceanographer and metereologist you know better than I.

Incidentally do you know if Sam Saslaw is still around the Naval Academy ? If so , I shall try to look him up. I have lost touch with most of the old crowd in building 2. Paul Eaton flourishes as a Dean at Cal Tech. Freddie Fasset may still be with the Carnegie Foundation. Ted Smith has found his proper niche representing the Motion Picture Export Association. Please give my best regards to Ted and Lucy Martin.

Enough for now. If you attend meetings of learned societies in these parts, please try to call me up. The Department of State operator won't recognize my name as belonging to an important personage but she can locate me. As a middle-aged person I trust that you no longer exhibit your prowess as a wrestler by living people up in the air. Do you remember brandishing me aloft !

Sincerely yours,

Peter Rutter

[ans 4/1/53]

DEPARTMENT OF RESEARCH

BARNWOOD HOUSE,
GLOUCESTER

Glos. 66207.

Your ref.:
Our ref.:

Date 2nd April, 1953.

Dear Dr. Wiener,

I hope the conference in August will be possible as I am looking forward to it keenly. Discussion of the various problems with yourself and the other participants should be most helpful.

There are two subjects that I am particularly anxious to discuss with you.

I have started writing an "Introduction to Cybernetics" - non-mathematical and intended for those who approach the subject with the background of the biologist rather than that of the physicist. It will be purely technical and will contain many exercises: it is for those who want to get into cybernetics, not for those who want just to read something about it. The arguments, proofs etc., will be handled mostly in the "discrete" form, as in the first part of Shannon's book, for this method seems to make possible a firm quantitative grasp of the principles without leading into the full complexities of the continous case.

I hope to show, what has been sometimes doubted, that cybernetics is a single subject, richly cross-connected. Its basic principle is the accurate counting of the possible behaviours of a system, coupled with the assumption that no determinate system can produce more modes of behaviour than are given to it by its input or environment.

I shall take "regulation" as the basic aim of living things. Regulation can be achieved only by the organism playing off disturbance against information so that, finally, no disturbance arrives at the essential variables. Thus, to the biologist, the reduction of disturbance to zero is fundamental - the collection of information is undertaken as a means to this end. "Regulation" can thus be discussed as, essentially, the nullification of information (or disturbance, or variation).

The necessity for the collection of information leads into Shannon's theory of entropy, etc. I shall make no attempt to go into his theory - I shall aim simply at bringing the reader to a point at which he is ready to start on Shannon's theory with a perfectly clear idea about how it is related to the wider issues.

The book will then discuss the self-building regulator - the homeostat and the brain. Discussion then leads into that of statistically large mechanisms and the evolution-like processes that can go on in them. This part is nothing like so well developed as the rest, and I have no doubt that it will cause me some trouble in the writing. It is this subject that I particularly want to discuss with you if I can get over in August. I have made a good deal of progress in it since we last met, and I hope to be able to show that there is a real science of such "statistical mechanics of open systems". I am sure that the theory of information is basic in it. (In fact, I am convinced that the concept of information will prove to be as fundamental in the theory of open, orderly systems like the brain as the concept of energy is in the theory of closed systems; but that is for the future).

At the moment I must get on with writing the Introduction. I am sure such a book must be written, for most of my biologist friends have shown only too plainly that they find the whole theory and method of cybernetics quite foreign to their way of thinking. I know something of the biologist's difficulties and feel that I am in a better position to write the book than most.

Cybernetics in England seems to be stuck at the moment, at least so far as the physiologists and psychologists are concerned. They respect it and are looking forward to its development, but nothing is happening. Can you suggest how I can break this up? Perhaps a book such as the Introduction may help to get more people participating actively.

How I wish we were closer! Writing is to me a great labour and puts a barrier between us. I must make the best possible use of the time in August.

Yours sincerely,

W. Ross Ashby

(W. Ross Ashby).

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

[ans 4/6/53]

1716 Humboldt Street
Manhattan, Kansas
April 2, 1953

Mr. Norbert Wiener
Belmont, Mass.

Dear Mr. Wiener:

After reading your book on "Cybernetics" I am certain that you will understand the mechanics of OPEN BOOK. The other manuscript is enclosed to avoid having to write too long a letter.

We need a CRUSADE FOR SANITY. M. D's are no more to be TRUSTED with "minds" than a lot of blacksmiths. By hundreds they are returning to the Jewish rite of circumcission; so that must mean they are preparing for another "absolute monarchy".

The R. C.'s have the "rosary" which goes back to the "original FIXATION mentally" on image or image force as regards "specific gravity" MENTALLY. It means a visible image, the beads in hand; invisible image--praying to Jesus or to Mary--invisible images; the person praying to Jesus or Mary "radiates" his thought to them--radiating image, and the radiating thought is supposed to travel by the vibrations of the air. There you have the "original system" taught by the astrologers" who were the HENCHMEN of the first TYRANT--Nimrod of Babylon!

Before 1900 astrologers were not allowed to advertise in our Press and Jews, Catholics, Protestants and Atheists, who were EDUCATED met in the reading of Sir Isaac Newton's "SCHOLIUM" but since that time when LABOR or Labor's children go to college --the FOUNDATION of education has been put on the shelf. The ONLY PLACE where Jews, Catholics, and Protestants MEET now is in the LABOR MARKET--so if we ever have another "absolute king" it will be a LABOR LEADER. People belong to churches but most of them DO NOT BELIEVE what they are taught--and why should they??????????????????????????????

The number of people finding themselves confronted with a "nervous breakdown" is terrific. The special business of churches should be PREVENTING nervous breakdowns--NOT CAUSING them. But that is the WAY IT IS.

ALL civilized religions were originally FOUNDED upon ABSOLUTE GRAVITY--and that is the ONLY PROTECTION from hypnotism, but the "joiners" come along later and put in the "image, or "idea" worship" later and that is the religion of HIDING SCIENCE.

Since January of 1948 I've been in classes in colleges where the SPECIAL PURPOSE of the class was to convince the student that there was NO Absolute!!!!!!! That means just one thing "MONOPOLY" for college professions and NO TALENT UNFOLDMENT for students.

The ECONOMIC FOUNDATION for a nation is the unfoldment of TALENT for its young people. We are still supposed to have 2½ million illiterates in this country--but what would we have if it had not been for ANDREW CARNEGIE and the Libraries??

I suppose you've seen the Movie, "KING SOLOMON'S MINES". Siriaque by that serpent symbol PROVES that his ancestry goes right back to the FIRST KING of Babylon. Think of it--SIX THOUSAND YEARS his ancestors lived with a rag or a skin for their whole ward-robe, a grass hut for a shelter, but they did know enough not to KILL OFF animals--except as they were needed for food. Mentally, their religion that of FIXING ATTENTION on "specific gravity" means they have been in a MENTAL BLIND ALLEY!!!!!!! But they can LEARN what people will teach them.

Even after they see the "theory" of Absolute Gravity most people do not know how to tune to contact the ONE TRUTH. The layman's synonym for Absolute is SOLID. I AM THAT I AM is SOLID LIGHT. Solid Light is COMMON to all image and all space. No image has any power to cause a break, a breach, a flaw, or a schism in the FIXED LIGHT of Truth.

That "ALL is Mind and Mind's idea" is the OLDEST STATEMENT known to education, but it is TRAGIC to fix attention on "idea". There are MORE people sending others to insane asylums than there are GETTING THEM OUT. Something needs to be DONE ABOUT IT!!!!!!!!!!!!

At this time "TRUTH" is kept for "secret societies" and things are in a really bad way--we are headed for a country like INDIA--unless it stops!!!! AN AMPLIFIER that could record thought could put an END TO RELIGIOUS HYPOCRACY--can you figure that one out??????? I'm HOPING SO!!!!!!!!!!

Yours most sincerely,

P. Z. Copenhafer

P. Z. Copenhafer,

[and 5/28/53]

2 April 1953

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

Dear Dr. Wiener:

Thank you very much for your letter and for your continued interest. Sihce I know how very busy you must be, I particularly appreciated your thoughtfulness in letting me know that you have already taken the first step and plan to look further into this matter upon your return. I continue to hope that it will be possible to make some arrangement which would enable me to join your group.

With kindest personal regards,

Yours most sincerely

George Devereux
Winter Hospital
Topeka, Kansas.

Box 263, Chapel Hill
North Carolina
April 2, 1953

Dear Norbert Wiener:

By that name I knew you many years ago, when I lived on Walker Street andwent to the Peabody Grammar School. You looked about as you do in the picture of "Age Nine" in your book, which I have just finished reading, and greatly enjoyed, not only for its story of your early days--and difficulties--but also for the allusions to people and places that I knew.

I specially remember seeing you when I was playing with the Smyths. Their yard backed up on the Rockwoods (only I thought it was "Rockwell"?), and we used to play "Beckon" and "Sardines in a Box" out there. Of course I knew Herman Howard--and his fabulous train and track in his third-story playroom--and the Osgoods, Kittredges, Bôchers and Kings. Just this past fall I had a delightful visit with Margaret King, who is Mrs James C. Manry, and spent most of her life withher missionary husband in Pakistan. This winter he is teaching at Duke University, twelve miles from here. I am going to tell her about your book, and allusions to her brothers.

Wasn't your third-grade teacher at Peabody Miss Helen Hazard, and Miss Tufts the fourth-grader? And a Miss MacCarthy ran the playground next door.

Professor Huntington gave a course that I took at Radcliffe, and I even preceded you to ~~to~~ Albany, attending the New York State Library School, in the Education Building, in 1915-17. I had two very happy and busy years there, and went to shows at Harmanus Bleecker Hall, as you did.

But I did not intend to make this letter a reminiscence; it is just a word of thanks for the great pleasure that Ex-Prodigy gave me.

Sincerely yours,

Cornelia S. Love

[ans 6/1/53]

R C. SEINE 239.575 B

UNITED STATES LINES

10, RUE AUBER, PARIS 9e

ORIOLE LINE
AMERICA FRANCE LINE

TEL. OPÉRA 05-87 (3 LINES)
OPÉRA 89-80

AMERICAN PIONEER LINE
AMERICAN HAMPTON ROADS LINE

TEL. ADDRESS: SEAPOSTES

April 2, 1953.

Dear Sir,

We hope that you duly received our letter of February 12, in which we were thanking you for the honor you were doing us in contributing to our review.

We are now gathering all the articles and we would appreciate if yours coul d reach us at your earliest convenience. Also, as your article will be the object of a special presentation, we wonder if you could forward us a photograph of yourself, and eventually photographic elements or sketches that you might like to see used for its illustration.

With our anticipated thanks, we beg to remain,

Yours very respectfully,

Georges A. Mathieu.

To Norbert Wiener Esq.
Professor at the Institute of Technology
Massachusetts.

[ans 4/7/53]

UNIVERSITY OF CALIFORNIA

COLLEGE OF ENGINEERING
DIVISION OF ELECTRICAL ENGINEERING
BERKELEY 4, CALIFORNIA

April 2, 1953

AIR MAIL

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

Dear Dr. Wiener:

Thank you for your letter of March 25. I plan to present a paper in Washington, D. C. on Monday, April 27, in Commission VI of the International Scientific Radio Union meeting. I also plan to attend the symposium on non-linear circuit analysis at the Polytechnic Institute of Brooklyn on Friday and Saturday, April 24 and 25. If you are going to be at either of these meetings I would appreciate an opportunity to get together with you for a short time to discuss the problem of the general specifications of non-linear optimum circuits.

Sincerely yours,

Otto J. M. Smith

Otto J. M. Smith
Associate Professor

OJMS:ah

[ans 4/9/53]

COPY

April 2, 1953

Mr. Bruce B. Barrow
Waalsdorperweg 261
Den Haag
Nederland

Dear Mr. Barrow:

I intended to add a note to Professor Wiener's letter of last week, but I didn't get to it. So I hasten to follow that letter with a further word about Henry Singleton's reference to a "seminar in nonlinear networks in February 1949."

I have been in touch with the RLE several times this winter about this reference, and no one has been able to find a printed record or notes of any sort about it. The best I can do is urge you to write to Singleton at the Hughes Aircraft Corporation, Culver City, California, if you want some further information. Even this is little help, for RLE is quite sure he no longer works for Hughes!

This letter can scarcely assist you much, but perhaps it will short-cut your effort to reach Singleton. I hope so.

Sincerely yours,

Mrs. George Baldwin
Secretary to Prof. Wiener

h

COPY

April 2, 1953

Dr. Morris Chafetz
Psychiatric Division
Massachusetts General Hosptital
Boston, Mass.

Dear Dr. Chafetz:

I am returning to you the address lists which you loaned Professor Wiener. The Summer School Office was kind but firm in its refusal to pay any attention to these lists: apparently, a mailing is in preparation which will go to over a thousand persons and institutions, and the problem of making some selections from these lists was too great. It was good of you to locate the lists and to get them over to me, and Professor Wiener wants me to thank you for your effort.

You mentioned a News Letter which goes each month to the American Psychiatric Association in which an announcement of Professor Wiener's seminar might be included. The verdict on this is that it is a good idea, but Professor Wiener warns that any announcement must include the note that the seminar would be of value only to those of unusually thorough mathematical training. I have asked the Summer Session Office to send you an announcement of the seminar from which an announcement for the News Letter could be drawn up--Professor Wiener has passed the buck to you!

Thanks very much for your help, and I'm sorry that it appears to have borne little fruit.

Sincerely yours,

Mrs. George Baldwin
Secretary to Prof. Wiener

h

COPY

April 2, 1953

Mr. Morris L. Ernst
285 Madison Avenue
New York 17, New York

Dear Mr. Ernst:

I enjoyed very much your speech and my talk with you the other evening, and I write concerning the Sidis case. I gather from your comments that although your firm handled it, you did not take up the matter personally. I have no doubt that the law was on the side of the New Yorker, but I also have no doubt that, as you yourself hinted in your talk on the radio, the American laws of libel do not always coincide with the policies of human decency. Quite frankly, Sidis received a raw deal, one that I believe in the end had ruinous effect. No public good was served by the case.

In this connection, the New Yorker has given my book a favorable although minor review. It has not mentioned the Sidis affair, and I can well see from their point of view why they shouldn't. My own policy is to be the following: I shall let sleeping dogs lie and show no active ill will to the New Yorker. But in case they should ever wish to do a profile on me or request my cooperation, I shall deny that cooperation to them until and unless I see some sign that they have done public atonement for their action in the Sidis case. I believe this to be entirely within my rights.

Thank you for your pleasant letter. I hope we may meet again soon. Meanwhile, I remain,

Sincerely yours,

Norbert Wiener

hb

COPY

April 2, 1953

Mr. F.B. Fisher
The Chatham
Vanderbilt Avenue at 48th Street
New York 17, New York

Dear Mr. Fisher:

Professor Wiener's plans have changed slightly for his trip to New York on April 9th, and I write to inquire whether you can accommodate him. He will arrive in New York in the early morning of the 9th, and will return to Boston on a midnight plane that evening. Is it possible for you to reserve a room for his use during the day? He would like to come to the Chatham directly from the train, and again toward the mid-afternoon to freshen up before his evening lecture.

I look forward to hearing from you soon.

Sincerely yours,

Mrs. George Baldwin
Secretary to Prof. Wiener

h

[ans 4/3/53]

COPY

April 2, 1953

Dr. Vincent A. Flynn
Society for Advancement of Management
411 Fifth Avenue
New York 16, New York

Dear Mr. Flynn:

Professor Wiener has asked me to tell you that Monday, April 6, is a convenient day for him to see you. He is free in the afternoon, and will expect you at 2 p.m. I hope this arrangement will be satisfactory from your point of view.

Sincerely,

Mrs. George Baldwin
Secretary to Prof. Wiener

h

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CAMBRIDGE 39, MASS.

DEPARTMENT OF MATHEMATICS

April 2, 1953

Dr. Frank Fremont-Smith
Josiah Macy, Jr. Foundation
16 West 46th Street
New York 36, New York

Dear Dr. Fremont-Smith:

It appears that Dr. McCulloch in his Chairman's Address to the final Macy Conference makes certain statements concerning the direction of my work and my intentions which are in fact injurious to me. This is to notify you that Dr. McCulloch and you will be held to full legal responsibility for these statements and their consequences. The fact that these statements are made in a tone of pretended friendship does not remove the damage they are capable of doing, nor to exonerate either of you in any way.

Very truly yours,

Norbert Wiener

Norbert Wiener

hb

COPY

April 2, 1953

Dr. Frank Fremont-Smith
Josiah Macy, Jr. Foundation
16 West 46th Street
New York 36, New York

Dear Dr. Fremont-Smith:

It appears that Dr. McCulloch in his Chairman's Address to the final Macy Conference makes certain statements concerning the direction of my work and my intentions which are in fact injurious to me. This is to notify you that Dr. McCulloch and you will be held to full legal responsibility for these statements and their consequences. The fact that these statements are made in a tone of pretended friendship does not remove the damage they are capable of doing, nor to exonerate either of you in any way.

Very truly yours,

Norbert Wiener

hb

April 2, 1953

Professor Henry M. Magid
Department of Philosophy
The City College
Convent Avenue and 139th Street
New York 31, New York

Dear Professor Magid:

My plans for the spring of 1954 are, at the moment, a bit indefinite because of the possibility of a trip to India at that time. This uncertainty, plus the fact of my very great fatigue, may make it unwise for you to consider a series of lectures at City College.

However, I shall be glad to talk the matter over with you when I am in New York on April 9th, and shall look forward to meeting you after my lecture.

Sincerely yours,

Norbert Wiener

hb

COPY

April 2, 1953

Professor Carroll L.V. Meeks
Department of Architecture
Yale University
New Haven, Connecticut

Dear Professor Meeks:

I am deeply appreciative of your invitation to speak to the students in your Department in May, and I should like to be able to come to New Haven for such an occasion. Unfortunately, however, my lecture schedule for the spring has been filled as full as my energies permit, and I must say no. Perhaps at some later date I shall be able to speak to your group.

With many thanks, I am,

Sincerely yours,

Norbert Wiener

hb

April 2, 1953

Dr. Alex Rathe
Edgebrook Estates
White Plains, New York

Dear Dr. Rathe:

I am chagrined at my error in connection with the letter from Mr. Ovshinsky. My recollection is that I discovered that I had not sent the letter with Mr. Ashe's letter and the letter to you, and that I then mailed it (together with a note on pink paper!) to you by a later post. At any rate, I failed to make a note of this transaction, and only hope that my recollection is correct and that you have not received Mr. Ovshinsky's letter.

Sincerely yours,

Mrs. George Baldwin
Secretary to Prof. Wiener

h

p.s. Professor Wiener asks me to thank you for him for your attention to these letters.

COPY

April 2, 1953

Mr. Henry Simon
Simon and Schuster, Inc.
630 Fifth Avenue
New York 20, New York

Dear Mr. Simon:

I am delighted that the gook is going so well, and I appreciate very much your approval of my cooperation. On my part, I have told you already and repeat that there is nothing in the book that could have been handled better than it has been handled by you people. I heard from my friend Matheson of John Wiley that there are rumors in the publishing trade that the book is to go into a second printing. Is this true, and if so, how big? The book seems to be selling out in the nearby book stores, and is attracting favorable attention.

Did you see the New Yorker review? It is adequate and favorable, but I notice that they don't stick their necks out about the criticism of the Sidis affair. My attitude to them is to be passively friendly, but not to lend myself to an active cooperation with any profile they may intend to do on me. And I think that my book has acted as profilaxis.

I shall be in New York on the 9th, arriving early by train. In the afternoon and evening I shall speak at CCNY. About 9 a.m. I shall come into your office just in case you have some unfinished business to dispose of.

With the book off my hands, I am going into my research with renewed activity, and I believe I am getting somewhere. Please remember me to Mrs. Simon.

Sincerely yours,

Norbert Wiener

hb

April 2, 1953

Dr. M.S. Sundaram
Embassy of India
2107 Massachusetts Ave., NW
Washington, D.C.

Dear Dr. Sundaram:

You will recall that we corresponded last fall with reference to an invitation extended to me by the Indian Government to attend the Indian Science Congress which I was unable to accept.

I write to you now because a new invitation was extended to me verbally six weeks ago. Dr. P.C. Mahalanobis of the Indian Statistical Institute, while visiting Cambridge, invited me to attend the meeting of the Indian Science Congress in January, 1954, and to remain in India for eight months afterwards. I enclose a copy of a memorandum on our conversation. I have expected to receive some verification of this invitation from Dr. Mahalanobis, but none has come. The plans of other individuals for the coming year depend on my plans, and I feel that I cannot hesitate any longer to make a firm decision about a trip to India.

I should therefore be most appreciative of any information you may have about the invitation I received from Dr. Mahalanobis. I should like further to know whether this invitation has the backing of the Indian Government.

Sincerely yours,

Norbert Wiener

hb
Enc.

[ans 4/9/53]

Edith M. Brickman
119 Wyman Street
Medford, Massachusetts

April 3, 1953

Prof. Norbert Wiener
Belmont, Mass.

Dear Professor Wiener,

After reading a review of your recent book, and putting in my order for the book, it is with a sense of awe that I am grateful that the Lord put on earth a few persons like you, with a capacity for invention to do good, in a very cruel, real world.

Since you are considered an "idea" man, I take this opportunity to call to your attention one of the great mysteries of our society which needs brains like your to unravel; I refer to the case of the schizophrenac.

In a recent talk stemming from the Medfield State Hospital, it was said authoritatively that only 1% of money spent on mental patients in this state is used for research. This amount is probably greater than that spent in many other states.

In every hospital in the country(mental), in the back wards, where they cannot easily be seen,

Edith M. Brickman
119 Wyman Street
Medford, Massachusetts

are the greatest majority of mental cases and they are almost all schizophrenacs.

They are truly forgotten men, and it would be a curse lifted from the world if the cause and cure could be found. Practically, it would eliminate a good part of the tax dollar.

Myself, I am about to embark on an ambitious program. I am about to organize men for the purpose of collecting moneys to be applied to research for this project. Since this idea is only in its infancy, it occured to me that writing to men like you might give me some information as to what is being done in this field, and perhaps act as a stimulant to people like yourself who believe in upholding the dignity of men everywhere, even in mental institutions.

I am the wife of a newspaper publisher in Medford, Massachusetts, and considered respectable. I welcome any investigations. All I hope from you is a response as to whether you are concerned with this problem, and if so, what has been done, and where money could be applied for research in this field.

Sincerely yours,
Edith M. Brickman
(Mrs. David)

[ans 6/11/53]

7-23

COPY

April 2, 1953

Dr. Grey Walter
Burden Neurological Institute
Stoke Lane
Stapleton, Bristol
England

Dear Dr. Walter:

I should think that you were too old a hand to have much confidence in anything that McCulloch says simply on the basis of his saying it. He has manipulated himself into a position at M.I.T. in order to give some color to his tendency to speak in my name about Cybernetics. Neither McCulloch nor any person in his laboratory has any access to me, and any statement they make is pure heresay. The fact is that I am now working on the physical side of Cybernetics which promises to pay off very well in quantum theory, but that when I have made a decent amount of progress in this I shall return to the larger job that I intended to do of a treatise on Cybernetics. Dr. McCulloch can speak for himself and the Macy meetings which are in his pocket, and for nothing else.

Of course I shall be glad to see you in Boston when you are here, and please try to spread the fact that I am still working in Cybernetics--and that I have no connection with any other firm which uses my name.

If you can manage to stay with us while you are in Boston, we shall be delighted. Peggy often speaks of you.

Sincerely,

Norbert Wiener

h

WP

April 3 1953.

Dear Professor :-

Enclosed is a copy of a letter written to your publishers at their request. At least, they enclosed a card with your book asking the reader to state if the book came up to his expectations. They left only six square inches for reply.

I could now sympathize with G.K.Chesterton. He said that when asked a question, he frequently felt like writing a book in reply. My reply may be more than the publishers asked for, but for me it is the limit of compression. To your publishers it should indicate that this work has an appeal to, and value for, a class of readers far outside the circle of your erudite colleagues.

Phoutrides at Plattsburg was my squad-mate. We were closely associated in barracks and on marches. Together we had more Attic Nights than Aulus Gellius. He is chiefly responsible for my pleasant memories of the camp.

As you know, Phoutrides was a friendly soul. Toward the end of camp he suggested that after the war we retire to his native island, Icaria. He said we could raise grapes for a living. We would have ample leisure, he to write poetry, I to explore the ancient ruins with which the island abounded.

I was entranced at the prospect and asked him if $25,000. would give us a fair start. Said he, "For that you buy the whole island." His untimely death ended the dream.

Best wishes,

Briggs.

April 3 1953.

Simon and Schuster, Inc.

Gentlemen :-

As requested, I offer a few reflections on Prof. Wiener's Ex-Prodigy. To me the book is eminently satisfactory. The author remembers and records his early years with such clarity that I felt I shared his experiences.

Many famous autobiographies are amply introspective. I know of none which has so nearly approximated objectivity in the field where it is most difficult.

To me, the miracle of Wiener's career is not his precocity but the achievement of well-balanced maturity. This is evidenced in his evaluation of his father.

The elder Wiener seems an example of the dictum, "Power corrupts". Where he is powerless, his judgement is excellent - as in his opinions on international affairs and the case of the Harvard "numerus clausus".

But in the treatment of his son, the father is the childish one. His attempt to reduce the boy to the level of his own Exhibit A. approximates the level of Baal worship.

I am tempted to write a thesis on "Progressive Abdication - The prime problem for parents." I mention this only to indicate that this book is thought-provoking.

At Plattsburg, in the autumn of 1917, I was introduced to Wiener by our mutual friend, the poet Phoutrides. We three had a genial discussion of world affairs for several hours. I knew nothing of Wiener's background. When he left us, I told Phoutrides that he seemed to have the best-balanced mind I knew. He must be somebody. Said Phoutrides, "Oh, Wiener is one of Harvard's boy- wonders - he is the sane one."

I have not seen Prof. Wiener since the Plattsburg episode

Respectfully, Robert E. Briggs

The Chatham
VANDERBILT AVENUE AT 48TH STREET
NEW YORK CITY 17
ELDORADO 5-5400

F. BURTON FISHER
VICE PRESIDENT AND
MANAGING DIRECTOR

April 3, 1953

Mrs. George Baldwin
Secretary to Prof. Wiener
Massachusetts Institute of Technology
Cambridge 29, Mass.

Dear Mrs. Baldwin:

We received your nice letter of April 2nd, and as you requested, it will be perfectly alright for Prof. Wiener to use a room at The Chatham for day use only on April 9th.

Please assure Prof. Wiener that his accommodations at The Chatham are in order, and we shall do everything possible to make him comfortable during his brief visit, we are

Sincerely yours,

THE CHATHAM

F. Burton Fisher

F. Burton Fisher
Vice President & Managing Director

FBF:ac

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CLIFTON AVENUE · CINCINNATI 20, OHIO

April 3, 1953.

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

Dear Dr. Wiener:

Many thanks for your kind letter of March 25.

We have ordered a copy of your forthcoming autobiography and I am looking forward to reading it.

I will gladly get in touch with you again if I come across any material in your book which would prove of interest to us.

Very sincerely yours,

Jacob R. Marcus

JRM:bl

SIMON AND SCHUSTER, INC.
publishers

ROCKEFELLER CENTER, *630 Fifth Avenue, New York 20* · CABLE ADDRESS *Essandess* · TELEPHONE *Circle 5-6400*

April 3, 1953

Dear Dr. Wiener:

Yes, I did see the New Yorker review and was very much pleased with it. In a review of this length, it would have been very bad taste even to touch upon the Sidis affair, whatever they thought of it.

I am glad, however, that that passage did not prevent them from giving the book a favorable notice. I must admit I did not think them big enough.

I am afraid there is nothing in the rumor that we are going into a second printing. Such things get started through seeing a lot of advertising and publicity. As you know, we have done exceptionally well in these fields with EX-PRODIGY. Still, the public has not flocked to the bookstores in the numbers that might have been expected. This week has been the best so far: we have sold about 400 copies as of today; but total sales, as of now, come only to 2,622. Maybe the current spurt will turn out to be more than a sprint. I certainly hope so: the reviews have confirmed my idea that the book deserves a much better sale than it has had so far.

As you know from experience, I get to the office fairly late - seldom before 9:30. On Thursday, the 9th, however, I shall make an effort to get here a little sooner so that I may greet you.

Very cordially,

Henry Simon

Dr. Norbert Wiener
Dept. of Math.
MIT
Cambridge, Mass.

hws:lf

P.S. I thought you might be interested in the enclosed sample of readers' cards that have been returned. When you are through with them, we would like to have them back.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
PROJECT LINCOLN
P. O. Box 390
CAMBRIDGE 39, MASSACHUSETTS

April 3, 1953

Prof. Norbert Wiener
2-155

The enclosed correspondence I believe is self-explanatory. I have been meaning to show it to you for some time, but whenever I saw you either in the corridors or at the Faculty Club I did not have these papers with me and vice versa.

Louis Smullin

L. D. Smullin

LDS:pb

Fordham University
New York,N.Y.

March 19,1953

Dr.R.Fischer
Chairman,Dept. of Physic
Northwestern University
Evanston,Illinois

Dear Dr.Fisher:

Dr and Mrs.J.M.Barnothy (Barat College) sent me an outline of a research program in the cosmic ray field which they would like to begin if financial support can be secured.

The investigation of the part of cosmic radiation which comes in horizontally, at the earth's surface, has never been investigated.Barnothy would use a quadrupole coincidence counter telescope especially designed for obsrevations at large zentith angles mounted on a turn-table. Addition of anti-coincidence tubes would eliminate disturbances by side showers and guarantee very good collimation and prevent the influence of local radiations.

This program looks very promising.It will perhaps enable us to understand better the production of secondaries by neutral rays of high energy. The apparatus will also allow a study of the East-West and North-South asymmetries at large zenith angles and of the positive temperature effect which was discovered by the Barnothys years ago.

I can recommend this program wholeheartedly and hope that you can find a sponsor for it.

Very sincerely yours

VICTOR F. HESS

VFH:V

California Institute of Technology
Pasadena

March 25,1953

M.Forro-Barnothy
Barat College of the Sacred Heart
Lake Forest,Illinois

Dear Madame -

According to my memory of the Echo Lake Symposium in 1949 on Cosmic Rays, you were there with your husband and presented together some interesting and new Cosmic Ray results.

The record which you have enclosed to me with your letter dated March 19, shows that you are active and well trained workers in the field of Cosmic Rays and although I have only met you on two occasions, I am very glad to testify to your competence as Cosmic Ray investigators.

Very sincerely

Robert A,Millikan

RAM;h

CURRICULUM VITAE

I was born October 28, 1904 in Kassa, Hungary; studied physics and mathematics at the Royal Hungarian University of Budapest. My first scientific paper was published in 1931 about the directional distribution of cosmic radiation. I got my Ph.D. in Physics with the grade "summa cum laude" in the year 1935. I was appointed to the Physics Department of the Royal Hungarian University of Budapest in 1934 as instructor--from 1940 on as associate professor--and from 1946 to 1948 as professor of physics. In 1939 I was habilitated as docent of "cosmic radiation".

Since 1930 my wife and I have been working together on cosmic ray investigations. My wife, Dr. Madeleine Forro, was associate professor of Physics at the Royal Hungarian University of Budapest until 1948 and is now professor of Mathematics at Barat College, Lake Forest, Illinois.

In 1948 my wife and I were invited to join the faculty of Barat College, Lake Forest, Illinois and we left Hungary with the help of the American Legation. Since then we have been permanent residents of the United States of America. I am professor of Physics and Head of the Physics Department at Barat College, Lake Forest, Illinois. Neither my wife nor I have any relatives living at present behind the Iron Curtain,

Until 1948 the field of my scientific activity was mainly devoted to cosmic radiation researches. Since 1948 I have engaged in researches in the field of nuclear physics. These investigations were sponsored by Frederick Gardner Cottrell grants of Research Corporation. Enclosed you will find a list of my scientific publications. I have presented papers at various international conventions of physicists in Germany, France, Poland and at several meetings of the American Physical Society.

LIST OF PUBLICATIONS

OF

J. Barnothy and M. Forro

I. Publications in English

E.1. Diurnal Variation of Cosmic Ray Intensity and Nove Herculis Nature 136, 680, 1935

E.2. Cosmic Rays from Nova Herculis? Nature 135, 618, 1935

E.3. Measurement of Cosmic Ray in a Deep Mine. Nature 138,325,1936

E.4. Absence of Cosmic Rays from Nova Lacertae.Nature 138,544,1936

E.5. Diurnal Variation of Cosmic Ray Shower. Nature 139,633,1937

E.6. Sidereal Time Periodicity of Cosmic Rays and its Phase Shift. Nature 139,1064,1937

E.7. On the Penetrating Component of Cosmic Rays. Phys.Rev. 53, 848, 1938

E.8. Difference between the Effects of Meteorologic Factors upon Shower and Vertical Intensity. Phys. Rev. 55, 868, 1939

E.9. Cosmic Ray Particles at Great Depth. Phys.Rev.55,870, 1939

E.10. Directional Distribution of the Soft and Hard Component of Cosmic Radiation. Nature 144, 116, 1939.

E.11. Absorption of Cosmic Rays in Lead at a Depth of 1000 m.w.e. Phys. Rev. 58, 844, 1940

E.12. Proper Life Time of Mesotrons. Phys. Rev, 60, July 15,1941

E.13. Quantization of our Solar System. Nature 157,808,1946

E.14. Quantization of the Solar System and its Consequences Nature 158, 309, 1946

E.15. The Problem of Elementary Particles. Papers of Terr. Magn. Hungary No. 2. 1947. See also review in Nature 160, 847, 1947

E.16. Temperature Effect of Cosmic Radiation at 1000 m Depth. Phys. Rev. 72, 868, 1947

E.17. Neutral Decay Products of Mesons at Great Depth. Report of the Krakow-meeting of the Union Internationale de Physique Pure et Appliquee, Comission des Rayons Cosmiques. 1947

E.18. On the Intrinsic Moment of the Electron. Phys. Rev. 74, 113, 1948

E.19. Comments on the Theories Interpretating the Magnetism of Celestial Bodies. Phys. Rev. 74, 218, 1948

E.20. The Specific Charge of the Positron. Phys. Rev. 74, 344, 1948

E.21. Neutral decay Products of Mesons at Great Depth. Phys. Rev. 74, 1300, 1948

E.22. Lethal Effect of Cosmic Ray Showers upon the Progeny of Animals. Experientia Vol. 4, 76, 303, 1948

E.23. The Earthpotential. Publ. of the Echo Lake Synys. 1949

E.24. The Origin of Cosmic Radiation. Publ. of the Echo Lake Synys. 1949

E.25. Cross-section of Nuclear Interaction. Publ. of the Echo Lake Synys. 1949

E.26. Neutral Decay Products of Mesons. Publ. of the Echo Lake Synys. 1949

E.27. Coincidence Methods of Measuring Disintegration Rates of Radioactive sources. Rev. Sci. Instr. 22.415,1951

II. Publications in German

G.1. Temperaturverlauf der Dielektrizitatskonstanten einiger Gase bei verschiedenen Drucken. Z.F.Phys.47, 430, 1928

G.2. Uber die Dispersion von Luft und CO_2 in dem Wellenlangen-intervall von 600 bis 60 m. Z.f.Phys. 51, 374, 1928

G.3. Experimentelle Untersuchungen uber Barkhausen-Kurz-sche Schwingungen in magnetischen Feldern. Ann.d.Phys. 1.513, 1929

G.4. Uber NaCl-Phosphore mit Cu^1 Zusatz. Z.f.Phys.56,235,1929

G.5. Uber die Absorptions-Spektrea von sechs weiteren Alkali-halogenid Phosphore mit Tl Zusatz.Z.f.Phys.58,613,1929

G.6. Uber die Absorptions-Spektra einiger Alkalihalogenid Phosphore bei hohen Temperaturen.Z.f.Phys.56,534,1929.

G.7. Messungen von Kontaktpotentialen einiger Metalle. Z.f.Phys.63,444,1930

G.8. Eine elektrolytische Darstellungsmethode von Alkali Metallen in Entaldungsrohren. Z.f.Techn.Phys.12,256,1931

G.9. Das Wesen der Ultrastrahlung.Z.f.Phys. 71,778,1931

G.10. Koinzidenzregistriermethode mit 10^{-6}sec Auflosungvermogen. Naturwiss. 21,835,1933

G.11. Uber die sonnenzeitliche Periode der Ultrastrahlung.Z.f. Phys.89,457,1934

G.12. Bemerkungen zur Atomzertrummerung durch Ultrastrahlung. Z.f.Phys.85,201,1933

G.13. Regenanzeiger fur minimale Niederschlagsmengen. Z.f.Instr. Kunde. 1935

G.14. Bemerkungen zu der Arbeit von W.Kohlhorster:Hohenstrahlung und Nova Herculis. Z.f.Phys.94,273,1935

G.15. Uber die solare Komponente der Ultrastrahlung.Z.f.techn. Phys.16,395,1935

G.16. Meteoroligisch magnetische Einflusse auf die Ultrastrah-lungsintensitat I. Z.f.Phys.100,242,1936

G.17. Impulszahler fur rasch aufeinander folgende Impulse. Phys.Zeitschr. 37,208,1936

G.18. Messungen der Ultrastrahlung im Bergwerk.Z.f.Phys.104,744,1937

G.19. Meteorologisch magnetische Einflusse auf die Ultrastrah-lungsintensitat II.Tagesgang.Z.f.Phys.104,534,1937

G.20. Bemerkungen zu den Arbeiten von A.Ehmert"Zur Richtungseffekt usw." Z.f.Phys.105,642,1937

G.21. Zeitliche Anderung der Schauerintensitat und Mesonenzerfall. Z.f.Phys.112,206,1939

G.22. Die durchdringende Strahlung hinter mehr als 300 m.W.A.Z. f.Phys. 115,140,1940

G.23. Die Absorptionskurve der Ultrastrahlung in Blei unter 1000 m Wasserequivalent.Z.f.techn.Phys.21,290,1940

G.24. Zerfallszeit der Mesonen. Naturwiss.29,404,1941

G.25. Zur Frage des zweiten Maximums der Rossi-Kurve.Naturwiss. 31.1943

G.26. Wertebereich der Physikalischen Mengen.Z.f.Phys.120,148,1943.

G.27. Zeitliche Anderung der Physikalischen Mengen und Ihre Folgen. Csill. Lapok. 7,65,1944

III. Publications in French

F.1. Variation periodique des rayons cosmique avec le temps sideral. Hermann et Co.Paris, 1947

F.2. La nature des rayons ultrapenetrantes. Journ. de. Phys. et le Radium (3) 197, 1940

IV. Publications in Hungarian.

H.1. Dielectric Properties of several Gases. 1927

H.2. Questions concerning dielectric constants. Mat.Fiz.Lapok 1928

H.3. A simple Construction of Geiger-counters.Fiz.es.Kem. Didaktikai Lapok 1,1930

H.4. Contaktpotentials. Mat. Fiz. Lapok 38,61,1931

H.5. Faraday-centenary in London.Fiz.Kem.Didaktikai Lapok.2,1931

H.6. Cosmic Radiation. Stella, 1932

H.7. Recorder for small amounts of Rain. Idojaras 38,194,1934

H.8. General Properties of Cosmic Rays. Mat.Fiz.Lapok. 1935

H.9. Solar Component of Cosmic Radiation.Mat.Fiz.Lapok 47,79,1935

H.10. Influence of Meteorologic Factors upon the Intensity of Cosmic Radiation. Mat.Term.Tud.Ertesito 55,525,1937

H.11. Influence of meteorologic Factors upon the Intensity of Cosmic Radiation II. Diurnal Variation. Mat.Term.Tud. Ertesito 56,207,1937

H.12. Measurement of Cosmic Rays in a Deep Mine. Mat.Term.Tud. Ertesito 56,184,1937

H.13. Diurnal Variation of Cosmic Ray Shower.Mat.Fiz.Lapok 44,54,1937

H.14. Cosmic Radiation and its Periodicities.Mat.Term.Tud. Ertesito 56,410,1937

H.15. F.N.Hess the discoverer of Cosmic Rays. Term.Tud.Kozlony.1937

H.16. Cosmic Rays reveal New Particles. Term.Tud.Kozlony. 1937

H.17. Influence of Meterologic Factors upon Shower Intensity. Mat. Term. Tud. Ertesito 58, 329, 1939

H.18. Intensity of Hard and Soft Component of Cosmic Radiation at Various Zentith Angles. Mat.Term.Tud.Ertesito.58,698,1939

H.19. Wandering in the Realm of Cosmic Radiation. Magyar Noi Szemle. 1939

H.20. Nature of Cosmic Radiation. Csill Lapok.4,1938

H.21. Cosmic Radiation. Magyar Szemle. January, 1939

H.22. The role of Mesons in Cosmic Radiation. Csill.Lapok.1,1939

H.23. E.O.Lawrence Nobel-prize winner of Physics.Term.Tud.Kozl.1939

H.24. Diurnal Variation of Cosmic Radiation Csill.Lapok.1939

H.25. Cosmic Radiation.Rewarded with a medal of the Hungarian Academy of Science, 1939

H.26. Extensive air-showers. Term.Tud.Kozlony.Potfuzet. 1942

H.27. Cosmic Radiation. Egeszseg 1943

H.28. Cosmic Radiation. Firsch.a.d.G biet.der Rontgenstrahlen. 66,246,1942

H.29. Biologic Effects of Cosmic Radiation. Termeszettudomany,1947

H.30. Biologic Effect of Cosmic Ray Showers. Csillagok Vilage.1948

Title of proposed research: Nature of the Horizontally Incident Cosmic Radiation.

Short summary of previous investigations performed from 1930 to 1948 in team-work with M. Forro.

1) First coincidence telescope for directional distribution measurements (1930)
2) First coincidence telescope determination of the diurnal variation (1934)
3) First coincidence telescope determination of the temperature-effect of the hard and soft component. (1936)
4) Discovery of the seasonal effect in the diurnal variation. (1937)
5) Determination of the variation of hard and soft component with zenith angle and its explanation by means of the absorption and decay of mesons.(1939)
6) Measurements of the influence of meteorologic factors upon shower intensity and first explanation of the positive temperature-effect, the anomalous barometer-effect.(1939)
7) Measurement of the life-time of mu-mesons with the method of the inclined telescope.(1941)
8) First determination of the absorption curve in lead at 3000 ft. depth. (1937-1948)
9) Discovery of the positive temperature-effect at great depth and its explanation through meson-decay.(1947)
10) Discovery of the anomalous absorption of the horizontal intensity.(1939)

Description of the proposed research: To investigate the absorption curve in lead and other materials of cosmic radiation with horizontal incidence at sea-level and later at greater heights.

The proposed investigation is based on the following theoretical considerations and experimental facts:

It is established that 75 o/o of cosmic radiation at sea-level consists of mu-mesons. The measurements in high altitudes, the negative temperature-effect at sea-level, furthermore the life-time measurements of mu-mesons with the inclined telescope method have lead to the conclusion now generally accepted that the mu-mesons are predominantly created in heights of about 16 km, or 80-100 mb below the top of the atmosphere. The life-time of the mu-meson is $2{,}1.10^{-6}$ sec. Cloud-chamber measurements of Anderson and others revealed that mu-mesons decay into an electron and two neutral particles, which most probably are neutrini.

Preliminary measurements made at the Royal Hungarian University of Budapest with a horizontally directed telescope of narrow aperture revealed the surprising fact that the absorption curve obtained by increasing the lead absorber between the counters showed not the usual monotonic decrease of the intensity, but after a minimum at about 4 cm, the intensity increased again. The same behavior can be traced in directional distribution measurements of other authors at large zenith angles. The results are listed in the table below. (Data taken from J.Barnothy, Zeitschr.f.Phys.115,140,1940.)

	Zenith angle	cm Pb	Rel. Int.o/o	cm Pb.	Rel. Int. o/o
Barnothy	89°	4	32	30	54
Bernardini	85°	3	57	30	83
Bernardini	75°	3	67	30	73
Bernardini	60°	3	59	30	60

This phenomenon can be explained in the following manner: If the main creation of the mu-mesons occurs at 80-100 mb below the top of the atmosphere, then the distance of this layer is about 600 km in horizontal direction from an observer at sea-level. 600 km is equivalent with the average path of a 100 bev mu-meson travelled during its life-time. On account of the known energy spectrum of cosmic radiation we can say that practically none of the mesons can reach sea-level from the horizontal direction without decay. Since mu-mesons decay creates two neutral particles we ought to expect from the horizontal direction a neutral radiation of high energy (up to 100 bev) with an intensity equaling the vertical intensity of the cosmic radiation at sea-level (0.01 particle per cm^2,sec, ster.rad.). If this high energy neutral radiation can interact with nuclei and liberate ionising secondaries of about 25 cm Fb range in lead, the anomalous absorption can be explained. Namely in the quoted experiments the following events could have occurred:

a) without lead the coincidences are mainly due to scattered electrons of air-showers created in the vicinity of the equipment and through ionising secondaries of the neutral radiation of horizontal incidence created in collisions with O and N nuclei.

b) Neither the electrons, nor the secondaries of the neutral radiation have ranges exceeding 4 cm Pb, therefore after inserting 4 cm Pb between the counters of the telescope they will be absorbed and can no more give rise to coincidences.

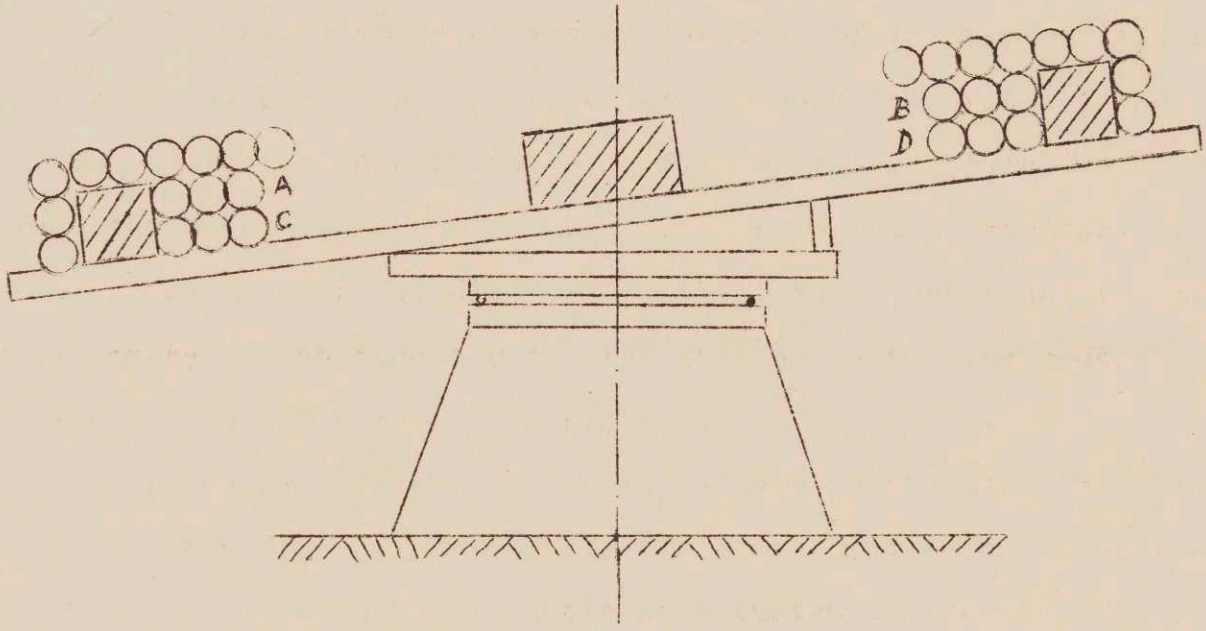
c) With increasing thickness of the interposed absorber the probability of the creation of a secondary through collision of the neutral radiation with a Pb nucleus will increase. Therefore a coincidence can be obtained now by means of the ionising secondary created by the neutral ray in air discharging the first counter and the ionising secondary of the same neutral ray created in the interposed lead and discharging the second counter.

If nuclear forces alone play a role in the transfer of the energy from the neutral particle to the nucleus, then this interaction will only take place with the nucleons situated in the vicinity of the path of the neutral particle through the nucleus. In a first approximation the number of nucleons in the vicinity of the path will be proportional to the square root of the atomic weight. Therefore, the energy transferred to a lead nucleus exceeds by a factor of 4 the energy transferred to a nitrogen nucleus. Assuming that the created secondary particle gets an energy proportional to the full energy transferred, this explains the greater range of the ionising secondaries in lead.

From the fact that the intensity increases observably by increasing the lead absorbers from 4 cm to 30 cm we can infer that the cross-section for the creation of an ionising secondary in lead is of the order of $10^{24} cm^2$, agreeing with the cross-section of a lead nucleus.

From Anderson's results it seems most probably that the neutral particles are neutrini. So far no experimental evidence was found for the interaction of low energy neutrini (up to 5 mev) with matter. However, no experiments with high energy neutrini (10^3 to 10^5 mev) were up to now performed. Therefore, it seems to us worthwhile to undertake this experiment.

Description of the planned equipment



The coincidence telescope (see Fig.1.) consists of four counter trays each formed by three G.M.counter of 2" diameter and 40" length. The trays A and B and again C and D are forming two parallel horizontal counter telescopes, whereas the trays A and D and B and C respectively form two crossed telescopes. To the left and right side from the telescope different materials will be placed to define geometrically the location where the creation of the secondaries occurs. To prevent a creation through ionising primaries from whatever direction these materials are covered by anti-counters. The anti-counters extend even over the counters of the telescope, preventing thus a

discharge of the telescope due to air showers with many ionising particles. Between the counter trays absorbers from different materials and thicknesses will be placed, to observe partly the absorption of the secondaries created in the materials left and right from the telescope, and partly to observe the creation of new secondaries in the interposed materials. The remaining small background of the telescope coincidences due to the incomplete shielding against air showers can be determined by interchanging the connections of one counter from tray A with one in tray C and similarly in the trays B and D.

The full arrangement will be placed on a turn-table with precisely adjusted vertical axis and will be provided with a mechanism to tilt the telescope from the horizontal up to 20°.

In addition to the outlined purpose the same equipment will be used for the investigation of the following questions:

1)Barometer and temperature effects in directions close to the horizontal. From the temperature effect important inferences can be reached regarding the mechanismus of pi-meson decays in the highest air layers.

2) East-West and North-South asymmetry of cosmic radiation at large zenith angles. From this conclusions can be derived regarding the nature of the primary radiation. This experiment will be performed by using the turn-table.

3) Barometer and temperature effects and the diurnal and seasonal variation of air-showers. This will be performed by using a coincidence selection combination without the anti-counters.

4) Constant recording of cosmic ray intensity with special interest to sudden changes during magnetic storms and sun spot activities. For this purpose the trays A and C and B and D respectively will form with some of the anti-counters two independent vertical three-fold telescopes. The coincidences will be recorded hourly by printing recording devices.

J. M. Barnóthy

Title of proposed research: The Anomalous Beta-Decay of S^{35}

From considerations based on a theory of the structure of elementary particles I came to the conclusion that by certain beta-emitters in addition to the normal beta-decay, two further energy levels should belong, both with higher energies than that of the normal decay. The theory itsself is not to be considered as part of this project; therefore, I shall confine myself only to the experimental observations made so far.

Since it was obvious that the predicted components will possess extremely small intensities compared to the intensities of the normal beta-decay, the first investigations were performed on such isotope, which has a much softer beta-radiation than the two predicted components, and furthermore has no gamma-radiation. The use of such isotope made an easy discrimination between normal and "abnormal" beta-emission possible, moreover excluded disturbing effects due to conversion processes, inner Bremsstrahlung etc. Furthermore, since the weak intensities necessitated long measuring periods, such isotope had to be chosen which had a comparatively long half-life. Accordingly the first investigations were made with S^{35} isotope as source.

The theoretical considerations yield for the end-point energies of the two predicted components in case of S^{35} isotope: 0.68 mev and 2.45 mev respectively, whereas the maximum energy of the normal S^{35} beta spectrum is 0.169 mev.

Description and results of the experiments:

1) Measurements with double and triple coincidence equipments using flow-cpunters with thin windows revealed the presence of a penetrating, ionising radiation with a range in aluminum in excess of 800 mg/cm^2. The used S^{35} samples were obtained at different occasions from Oak Ridge National Laboratory. All sources were

immediately after receipt sealed between 50 mg/cm^2 plastic tape layers to absorbe the normal beta-radiation of 38 mg/cm^2 range. The basic tape layer was never removed. The P^{32} and P^{33} impurity of the source was checked on hand of their decay-curves, and the sources were only used after sufficiently long time to insure against these contaminations.

2) Measurements were made with a diffusions cloud chamber of 10" diameter in a magnetic field of 400 gauss with photographic recording of the tracks. The curvature of 1250 tracks were measured. The strength of the magnetic field was not sufficient to determine the curvature of the particles with the highest energies. The energy distribution showed that two components are present, called in the following the softer and the harder component. Both components haved negative charge. In addition to the negative tracks a small number of positive tracks were also observed. The end-point of the softer component was found from its Kurie-plot to be at 0.8 mev (after substraction of the harder component, assuming a straight line for its Kurie-plot). The end-point of the harder component was found from its Kurie-plot at 1.8 mev. The difference compared with the more reliable value found in the absorption measurements can be explained by the circumstance that in this survey only such tracks were used for which we could determine the curvature.

3) Life-time measurements carried out with different sources over one and a half year and recent measurements using Sr^{90}-Y^{90} source as standard, revealed that the life-time of both components is more than 100 years. This limit in the life-time determination has to be maintained even if the statistical errors are considered in the most unfavorable manner.

4) The absorption of the radiation was determined in aluminum and gold absorbers, using coincidence equipments. In order to diminish the possible error in the evaluation of the maximum range

the same absorption curves were measured with Sr^{90}-Y^{90} in secular equilibrium as source, The coincidence equipment had thin-walled flow-counters with 6,5 mg/cm^2 windows, $0.3.10^{-6}$sec resolving time and the coincidence recording was provided with electronic scalers to eliminate errors due to counting-losses at different intensities. The S^{35} source aswell as the Sr^{90}-Y^{90} source were covered by 40mg/cm^2 plastic tape and equally mounted. For the extrapolated maximum range Of 1.16 g/cm^2 in aluminum we get with Flammersfeld's formula 2.44±0.10 mev for the maximum energy of the harder component. The Y^{90} absorbtion curve treated in the same manner yields 2.17 mev for the end-point energy, in accordance with the spectroscopic results.

5) The end-energy of the harder component was determined with the Forro-method (See Bulletin of the Washington meeting of the American Physical Society April 1953.) The method is based on the observation that the absorption curve in gold measured with double coincidence equipments is for beta-emitters a fairly straight line on a semi-logarithmic plotting and the slope of the line and the end-energy of the beta spectrum are connected by the equation:

$$E = 95\left(\frac{x_2 - x_1}{\ln J_1/J_2}\right)^{2/3} - 0.03$$

where E denotes the energy in mev, x_1 and x_2 the thickness of the gold absorbers in g/cm^2 and J_1 and J_2 the measured intensities at the two absorber thicknesses. The formula gives the energy with an error of about 30 kev in the energy interval from 0.17 mev to 2.25 mev. If comparision measurements are performed with a comparision source of knwon end-energy and the unknown source is alternatevely measured with the comparision source, only the statistical errors remain and sensitivity changes in the equipment etc are eliminated. (A differenc in the shape of the spectrum can cause a difference). Taking the ened-energy of the Y^{90} beta-spectrum to 2.23 mev, we get with this

method 2.42±0.04 mev for the harder component.

6) Scintillation spectrometer measurements were performed using anthracene phosphores of different size and thicknesses and NaJ phosphores with thin aluminum windows. The pulse spectrum was displayed on cathode-ray oscilloscope screens (DuMond type 322 and Tektronix type 524) and photographic recorde were taken on a moving film. The illuminated graticule had 40 channels and the spot diameter was on the DuMond scope 1/3 -d, On the Tektronix scope 1/6-th of the channel width. Through changing the amplification and shifting the base line it is possible to display different parts of the spectrum on the 40 channels of the screen. These measurements, now in progress, so far revealed the following properties of the spectrum: the total intensity of the two components is closely equal, the end-energy of the harder component is with about 200 kev higher than the end-energy of the Y^{90} spectrum.

We are fully aware that on account of the difficulties encountered in measurements of such extremely small intensities (1 to 10 dps for the different samples) the possibility of a mis-interpretation of the experimental results can not yet entirely excluded although all precautions were taken to avoid them.

Probability of a radioactive impurity of the source.

The case of the harder component. The arguments in favor of the harder component being an Y^{90} impurity of the source are: the existence of two components with similar energies as those of Sr^{90} and Y^{90}; and the long life-time.

Arguments againsts this interpretation are:

a) the Y^{90} is produced in an entirely different manner than S^{35}, namely the mother substance Sr^{90} is a fission product; whereas S^{35} is processed from Cl^{35} by a (n,p) reaction, or from S^{34} through a (n,γ) reaction. These different production methods render a direct

contamination through unclead handling of the source in Oak Ridge most unlikely.

b) The contamination of the S^{35} sources with Sr^{90} in our laboratory is excluded, because we observed the radiation a year earlier before we ordered the Sr^{90} source.

c) It might be assumed that in the material from which S^{35} isotope is processed such a chemical impurity was present which can be transformed by neutron bombardement into Sr^{90}. This is not possible, because for an (n,γ) reaction the starting material should be Sr^{89}; for an (n,p) reaction Y^{90} and both are short-living isotopes which can not occur in sufficient amount in the target material. No other method with the exception of fission is so far known to produce Sr^{90}.

d) The end-energy of the harder component was found with all three methods: absorption curve, Forro-method and the scintillation spectrometer at least with 200 kev higher than the end-energy of Y^{90} used as a comparision source in the same measurements. It should be mentioned that a 10 p.c. difference in the thickness of the 40 mg/cm^2 tape covering the S^{35} and Y^{90} source would involve only a difference of 8 kev. All other additional absorbers were the same with both materials and were used in the same position and sequence.

e) The life-time measurements gave as lower limit a four-times longer life-time than that of Sr^{90}.

f) A radioactive impurity due to an other isotope can be excluded on hand of the evidence that no other substance is known which has an end-point energy between 2 - 3 mev and a life-time longer than 60 days (Sb^{124}) or a mother substance with a life-time longer than 1 year (Rh^{106})

The case of the soft component. The arguments favoring the view that the soft component is a Cl^{36} impurity of the source are: both S^{35} and Cl^{36} can be produced from the same target Cl^{35} by neutron

bombardment; the specific activity of Cl^{36} is much higher than that of S^{35}, therefore the chemical purification is not a sufficient safeguard. The end-point energy of Cl^{36} is 0.71 mev, which value is not in contradiction neither with the cloud chamber, nor with the scintillation spectrometer results at the exactitude reached so far. The life-time of Cl^{36} is 4.10^5 year and so not in contradiction with the found life-time exceeding 100 years.

Arguments against the contamination with Cl^{36} can on hand of the present data conclusively not be raised and should be the subject of further researches. However a Cl^{36} contamination can not explain the presence of the harder component, moreover why the two components have nearly equal intensities.

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J. M. Bannothy