

(925) C.E. Shannon

BELL TELEPHONE LABORATORIES

INCORPORATED

463 WEST STREET NEW YORK

CHELSEA 3-1000

IN REPLY REFER TO

REPLYING TO

February 19, 1942

Miss Gwen Blake, Secretary
School of Mathematics
The Institute for Advanced Study
Princeton, New Jersey

Dear Miss Blake:

Dr. Claude E. Shannon has received no recent prize in electrical engineering. Two years ago, however, at the Annual Meeting of the American Institute of Electrical Engineers, he was awarded the Alfred Noble Prize for his paper entitled "A Symbolic Analysis of Relay and Switching Circuits."

This prize consists of the sum of five hundred dollars in cash and a Certificate signed by the President and Secretary of the American Society of Civil Engineers and bearing the names of this and the other Societies participating in the award; that is, the American Society of Civil Engineers; the American Institute of Mining and Metallurgical Engineers; the American Society of Mechanical Engineers; the American Institute of Electrical Engineers; and the Western Society of Engineers.

Is this the award to which you referred?

Yours very truly,

Dorothy Walsh

Secretary to Dr. Fry

Prof. Fry ✓
93-

(925) Shannon

February 12, 1942

Dear Miss Walsh:

We hear that Dr. Claude E. Shannon recently received some electrical engineering prize, and we should like to have the exact name etc. for our records. Professor Veblen suggests that Dr. Fry would certainly know. Might I ask you to be so kind as to get the information and send it to me? With our thanks in advance,

Sincerely yours,

Secretary, School of Mathematics

Miss Dorothy Walsh
Secretary to Dr. T.C. Fry
Bell Telephone Laboratories
463 West Street
New York City

COPY

(925) Shannon

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2101 CONSTITUTION AVENUE, WASHINGTON, D. C.

Established in 1916 by the National Academy of Sciences under its Congressional
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NATIONAL RESEARCH FELLOWSHIPS BOARD
IN THE NATURAL SCIENCES

February 10, 1941

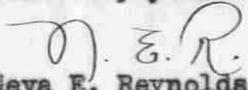
Dr. Claude E. Shannon
25 Palmer Square West
Princeton, New Jersey

Dear Doctor Shannon:

Your letter of December 5, 1940, returning the stipend check (\$166.67) which had been sent you for the month of December, was delivered in person by Doctor Eisenhart, and understanding that he in return informed you of the Fellowship Board's action in permitting you to interrupt your Fellowship work to accept a position under the National Defense Research Committee, I have intentionally delayed writing you formally concerning the matter until the rush of our extra Fellowship work subsided.

It is understood by the officials of the National Research Council and the Fellowship Board in the Natural Sciences that when approved by a Fellow's sponsor and by the Chairman of the Division of the Council in which the Fellowship is held, a request for the deferment of a Fellowship, induced by requirements for military training or other defense emergencies, will be granted by the Secretary of the Fellowship Board; and that the Fellow will, ordinarily, be given permission to resume and complete his Fellowship tenure upon the termination of his emergency service on or before the close of the fiscal year 1942-1943 (the final year of the current appropriation from the Rockefeller Foundation), or during any subsequent period that funds are available for administration of National Research Fellowships in the Natural Sciences. Therefore, in compliance with your request, approved by Dr. Hermann Weyl and Dr. Eisenhart, the deferment of the balance of your Fellowship beginning December 1, 1940, was approved by the Secretary of the Board.

Sincerely yours


Neva E. Reynolds
Assistant Secretary

cc. Dr. Hermann Weyl
Dr. L.P. Eisenhart

(923) Shannon

December 10, 1940

Dear Mrs. Reynolds:

Dr. Claude E. Shannon has been offered a job connected with our national defense program. He seems to be the right man for this appointment, and I therefore agree, and move to postpone his National Research Fellowship until he has completed the task assigned to him.

Yours sincerely,

Hermann Weyl

Mrs. Neva E. Reynolds
Assistant Secretary
National Research Fellowships
Board in the Natural Sciences
2101 Constitution Avenue
Washington, D.C.
HW:GB

(IAS) SHANNON

H.B.PHILLIPS TO M.MORSE OCT.21/40

"Mr. Shannon is one of the ablest graduates we have ever had and can do first class research in any field in which he becomes interested."

(995) Shannon

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NATIONAL RESEARCH FELLOWSHIPS BOARD
IN THE NATURAL SCIENCES

October 8, 1940

Prof. Herman Weyl
Institute for Advanced Study
Princeton, New Jersey

My dear Professor Weyl:

In reponse to our request for definite information concerning Dr. Claude E. Shannon's plans to begin his Fellowship work on November 1, 1940, he has just informed us that he began his Fellowship in September and that he would like to have his tenure date from September 15. Before such a change in our records can be authorized, it will be necessary for us to have definite information from you concerning the actual date Doctor Shannon began his work under your supervision. We shall be grateful, therefore, if you will complete and return the attached form at your early convenience.

Sincerely yours,

Neva E. Reynolds
Neva E. Reynolds
Assistant Secretary

*Returned
Oct. 21/40*

NER/md
Encl

(IAS) SHANNON

O. Veblen to T.C. Fry, Sep. 27, 1940

P.S. I have put Shannon in contact with Frink of Pennsylvania State College, who is here for a term and is an authority on linear graphs. So I think that the decision on Shannon's memorandum will very shortly be reached.

P.P.S. Frink thinks well of the paper and is going to help S. prepare it for publication.

BELL TELEPHONE LABORATORIES
INCORPORATED

463 WEST STREET NEW YORK

September 27, 1940

CHELSEA 3-1000

IN REPLY REFER TO

TCF - AA

REPLYING TO

PROFESSOR OSWALD VEBLER
The Institute for Advanced Study
Princeton, New Jersey

Dear Veblen:

Now that you are back in Princeton, I am wondering if we cannot reach a decision on Shannon's memorandum, "A Theorem on Color Coding".

The matter is not urgent, but I thought I would remind you of it, in case the paper might have become buried in the summer's correspondence.

Very sincerely yours,



BELL TELEPHONE LABORATORIES

INCORPORATED

463 WEST STREET NEW YORK

July 22, 1940

CHELSEA 3-1000

IN REPLY REFER TO

TCF - AA

REPLYING TO

PROFESSOR OSWALD VEBLEN
Brooklin
Hancock County, Maine

Dear Veblen:

Dr. Claude Shannon, whom I regard as a sort of joint protégé since he is with me this summer and expects to be at the Institute as a National Research Fellow in the fall, handed me the attached memorandum a few days ago. It seems to me worth putting in shape for publication, provided the result is not already known, which I wouldn't know. Will you look it over and tell me what you think of it?

Very sincerely yours,

A handwritten signature in cursive script, appearing to read 'Fry', with a long horizontal flourish extending to the right.

(703) Shannon

June 20, 1940

Dear Doctor Shannon:

In order to simplify matters in the fall I wonder whether you would be kind enough to fill out at your convenience and return to me the enclosed blank of information for the Institute records?

I have a considerable amount of information in my office about furnished rooms for rent in Princeton, which will be at your disposal when you come. Furnished housekeeping apartments, particularly for less than 12 months lease, are not so easy to find, and this year are apparently being rented unusually early; on the other hand, anything not rented by the latter part of the summer, might then be obtained for a lower rent than now.

Yours sincerely,

P.B.

Dr. Claude E. Shannon
19 Garden Street
Cambridge, Mass.

Secretary, School of Mathematics

(9AS) Shannon

May 20, 1940

Dear Professor Harrison:

I beg to inform you that I shall be glad to supervise Dr. Claude Elwood Shannon's work as a National Research Fellow in Natural Sciences at the Institute for Advanced Study. He will be welcome to commence his work, as he suggests, on or about November 1, 1940.

Yours sincerely,

Hermann Weyl

Professor Ross G. Harrison, Secretary
Fellowship Board in the Natural Sciences
National Research Council
2101 Constitution Avenue
Washington, D.C.
HW:GB

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NATIONAL RESEARCH FELLOWSHIPS BOARD
IN THE NATURAL SCIENCES

May 16, 1940

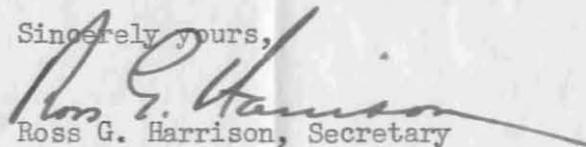
Prof. H. Weyl
Institute for Advanced Study
Princeton, New Jersey

Dear Professor Weyl:

The enclosed copy of a letter to Doctor Aydelotte is self-explanatory. We shall be grateful if you will kindly inform us at your convenience whether the arrangements as outlined therein are satisfactory to you, and also whether the date Mr. Shannon proposes to begin his Fellowship under your supervision is an expedient one.

Your cooperation in this respect will be greatly appreciated.

Sincerely yours,



Ross G. Harrison, Secretary
Fellowship Board in the Natural Sciences

md
Encl.

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IN THE NATURAL SCIENCES

May 16, 1940

Dr. Frank Aydelotte, Director
Institute for Advanced Study
Princeton, New Jersey

My dear Doctor Aydelotte:

I beg to inform you that of the men appointed to National Research Fellowships at the March meeting of the Fellowship Board in the Natural Sciences, the following named has indicated that he wishes to conduct his Fellowship activities at the Institute for Advanced Study:

SHANNON, CLAUDE ELWOOD (Ph.D. in Mathematics, Massachusetts Institute of Technology, 1940). For a 12-months' period beginning on or about November 1, 1940. Subject: A non-associative algebra applicable to dynamics of Mendelian populations.

It is our understanding that Mr. Shannon has consulted with Professor H. Weyl, under whose supervision he desired to work, as to the convenience and suitability of such a procedure.

The Fellowship Board will be very appreciative of any privileges and courtesies extended to Mr. Shannon.

We are sending a copy of this letter to Professor Weyl.

Sincerely yours,

Ross G. Harrison, Secretary
Fellowship Board in the Natural Sciences

md

(925) Shannon

Copy for Professor Weyl

April 11, 1940

Dear Dr. Shannon:

On the recommendation of the professors of the School of Mathematics of the Institute for Advanced Study it gives me great pleasure to invite you to become a member of the Institute for the academic year 1940-1941.

We all look forward with great pleasure to having you here next year and we will be glad to do anything we can to make your stay here pleasant and profitable.

Yours sincerely,

FRANK AYDELOTTE, Director

Dr. Claude E. Shannon
19 Garden Street
Cambridge, Massachusetts

FA/MCE

(725) Shannon

April 11, 1940

Dear Doctor Shannon:

I shall be glad indeed to have you work on your bio-mathematical problems at our Institute, and you may quote me as having agreed to act as supervisor of your work.

Though your problems greatly interest me, I am in fairness bound to say that I know little about genetics. But I hope I can give you some advice as to their algebraic side, and you will have a chance to discuss the matter also with von Neumann and other algebraists who happen to be with us next year.

Yours sincerely,

Hermann Weyl

Dr. Claude E. Shannon
19 Garden Street
Cambridge, Mass.
HW:GB

19 Garden Street
Cambridge, Mass.
April 7, 1940

Dr. H. Weyl
Institute for Advanced Study
Princeton, New Jersey

Dear Dr. Weyl:

I have been awarded a National Research Fellowship in mathematics for next year and I think I shall choose the Institute for Advanced Study for my work although I have not made a final decision on this matter. If I do, I should like to have you as a supervisor and wonder if this would be satisfactory to you. In my application, I gave as a subject for the research "A Non-associative Algebra Applicable to the Dynamics of Mendelian Populations". This would be a continuation of the doctorate thesis which I wrote at the Massachusetts Institute of Technology this year, in which the fundamental properties of this algebra are developed. Although it is of some interest from the pure mathematical point of view, being an algebra in which all the ordinary commutative, associative, and distributive laws of addition and multiplication hold except the associative law of multiplication, I am chiefly concerned with its application to theoretical genetics. The symbols in this algebra correspond genetically to groups of individuals or populations, addition corresponds to simple combination and the product of two populations corresponds to the expected offspring according to the laws of heredity when the populations are cross mated at random. I have a number of other projects in mind, however, and may work on one of them instead next year.

Would you let me know as soon as possible if I may use your name as supervisor?

Respectfully yours,

Claude E. Shannon

Claude E. Shannon