

Send to Everett

THE JOHNS HOPKINS UNIVERSITY

DEPARTMENT OF PHYSICS
HOMEWOOD CAMPUS
BALTIMORE 18, MARYLAND

October 23, 1957

Professor John A. Wheeler
Physics Department
Princeton University
Princeton, New Jersey

Dear Professor Wheeler:

I read with considerable interest a discussion by Mr. Everett in the latest Reviews of Modern Physics. From your comments later, I believe that this is a student of yours. I would like to request a reprint of his paper and of your remarks, if any are available.

Some time ago, one of my students and I expressed ideas which I believe are rather similar, even though we arrived at them in a quite different fashion. We attempted to formulate quantum field theory from the very start as a distribution theory in the sense of Schwartz. This allows a much more satisfactory mathematical treatment of the ~~wave~~ ^{singular} functions which normally occur in field theory. However, as you may recall, a distribution is always defined relative to a set of test functions which are very regular functions. In previous applications of distributions to field theory no physical interpretation of these test functions was attempted. One always hoped to eliminate them out of the theory again later. It was our contention, however, that especially in field theory these test functions form an integral part of the theory. In fact, our proposal was that these test functions are nothing but the non-relativistic wave functions of the measuring instrument. So in field theory certain aspects of the measuring instrument are according to us, inextricably bound up in the physical description. In ordinary quantum theory one can, so to say, factor out again the measuring instrument, but in field theory one can not. This idea is worked out in detail in one of my students' thesis. A preliminary report was published in the Proceedings of the Iowa Conference on Theoretical Physics in 1956. It seems to me that the formulation of Mr. Everett contains many similar elements.

If you think it might be useful, I would like to get together with you some time and perhaps discuss some of these matters. In the meantime, I hope you will be able to send me whatever information you have on this subject. With best personal regards,

Sincerely,

Max Dresden
Max Dresden

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W. Hugh Wheeler

30 October 1957

Professor Max Dresden
Department of Physics
Homewood Campus
The Johns Hopkins University
Baltimore 18, Maryland

Dear Professor Dresden:

Thank you for your letter of October 23rd about Everett's "relative state" formulation of quantum mechanics. I am very much interested that one of your students worked out similar ideas in his thesis and published a preliminary report in the 1956 Proceedings of the Iowa Conference on Theoretical Physics. By carbon of this letter I am asking Professor Joseph Jauch to send copies to Everett and me.

I would like the opportunity to talk to you more about these questions if you happen to be in Princeton sometime. You are even closer to Washington where Everett is now working and I am sure he would like an opportunity to talk with you.

By carbon to him of this letter I am also reminding him that Niels Bohr has been in this country for two weeks and will be spending the month of November lecturing on recent advances in complementarity at M. I. T. Professor Bohr can be reached in care of the Office of the President, Dr. Killian. I look forward with great interest to the outcome of further discussions between Everett and Bohr on these questions.

As you request, I am asking that reprints of Everett's and my articles in the July Reviews of Modern Physics be sent to you when available.

I send all good wishes.

Sincerely,

John A. Wheeler

JAW:mbp
cc: Professor Jauch
Dr. Hugh Everett
22 Glenn Drive
Alexandria, Va.

Dear Hugh: I am very eager to see you and talk with you and learn the latest information. I saw General James McCormack at the Bohr Atoms for Peace Award ceremony in Washington Oct. 24 and asked him how you were getting along. He said you were worth your weight in Pu₂₃₉ and that you were one of the very top people in the whole

organization in his view. However, I hope that Bob Sachs will succeed in luring you into quieter and more reflective areas at Wisconsin because I think you really have a lot of original things to give to the world which you can't do through the present set-up. If you are hell bent on staying in Washington at any price why don't you let me see if George Washington University couldn't make a really attractive position for you? For the love of Mike please wire

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or phone Bohr long distance and make a series of dates to chew on what you now have formally in print -- and what I hope you will soon further augment in print.

30 October 1924

Regards,

John W

Homewood Gables
Desert Inn Hotel
University Station
Mystic Beach

Dear Professor Deegan:

Dear Son for your Father to Cooperate. SBD about Newell's a "little" better. I am very much interested and one
of your father's old friends who keep the similitur intact in his place has supplied
a photograph of him to the 1928 Proceedings of the Iowa Geologists no. 196.

I now live in a small town at the foot of the mountains, where I can hunt for deer and wild game. The people here are very friendly, and I have made many friends. I still go hunting every day, but now I also spend time reading books and writing stories. I am happy to be back home again.

dissemination between faculty and poor no longer assessions.
Kittifan. I fear it will not be long before I am forced to do the same. I have had a few letters from people who need us in this country for our benefit will be more than we can give at present. I hope you will be able to help us.

As you remember, I am sending every telephone to Newell's office.

medieval book like this I

Myelocystis

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Dear Harry: I am very eager to see you and talk with you and learn the latest information. I saw General James McCormick at the Bombs Away for the peace treaty ceremony in Washington Oct. 24.

make a restful reflective position for you. For the love of Mike please write
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