

March 6, 1937

Dr. Warren Weaver
The Rockefeller Foundation
49 West 40th Street
New York, New York

Dear Dr. Weaver:

I haven't yet seen Dorothy Trinch's long paper in the Proceedings of the Royal Society, but I have read her shorter papers on the structure of proteins and on chromosome structure, as well as some of her early mathematical work, ten or fifteen years ago. I have the impression that she is a very clever person, and I am sympathetic to the type of speculative consideration which she is carrying on now. Without doubt there is a great deal of truth in her general picture. This picture is, however, still very far from definite - she suggests various alternatives and does not make any definite predictions. I have felt that the definite suggestion which she did make regarding protein structure, dealing with a type of polypeptide condensation involving hexagonal rings, is incorrect, since Mirsky and I came to the conclusion from the consideration of available experimental facts that the structure of native proteins is determined by hydrogen bond linkages; however, Dr. Trinch has said recently in a letter to Nature that she is willing to revise her picture by introducing hydrogen bonds.

Some fifteen years ago a number of people indulged in extensive speculations regarding the structure of crystals, using the self-consistency of their systems as criteria rather than test by experimental methods. Despite the nicely symmetric structures which they proposed, these speculations have turned out to be wrong. I feel that Dr. Trinch's work suffers a little bit from being similarly too speculative and from being based too largely on the assumption that nicely symmetrical structures are the right ones.

On the other hand, she seems to be conversant with what facts there are, and it is quite possible that her attempts to coordinate them with structural ideas will ultimately be of value in the solution of the great problem of protein structure.

I forgot to tell you that I am going to be at Cornell during the first semester of next year, giving the George Fisher Baker Lectures in Chemistry. Dr. Trinch has written saying that she would like to come to Pasadena for a visit next year, if it could be arranged, and I have answered that I would like to see her come here some time after February 15th, or, if that were not possible, come to Cornell during the fall semester. I would like very much to have a chance to talk over these problems with her, and I hope that her plan can be carried out.

With best regards, I am

Sincerely yours,

Linus Pauling

LP:mr1