

STANFORD UNIVERSITY
MEDICAL CENTER
PALO ALTO, CALIFORNIA

DEPARTMENT OF GENETICS
School of Medicine

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Mr. Eugene Garfield
Institute for Scientific Information
1122 Spring Garden Street
Philadelphia 23, Pennsylvania

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Dear Gene:

This is in reply to your letter of February 13. I was glad to see how Index Chemicus is coming along. Actually, I have thought quite a bit how we might systematize biological statement. I am afraid we are a long way from any practical general developments. There have been some approaches at the development of axiomatic systems - for example, Woodger, Axiomatic Method in Biology - but these have not been very useful in developing a formal language for biological statement. The one place that may become an exception to this pessimism is in neurology and you might want to look at Ashby, Design for a Brain, for an example.

The main trouble is probably that there are so many variables and kinds of propositions in biology that it would be only within very narrow fields that it would pay to set up a formal nomenclature. However, it strikes me that a great deal could be done to improve the simplicity (sic) and precision of scientific statement if we were to substitute the format of the propositional calculus for conventional language. Statements in a scientific paper ought to be at least numbered for internal and further reference; and rather compact symbols could well take the place of the clumsy wordage that we now use in statements of uncertain inference. But I honestly don't think that such proposals are going to get very far insofar as biology is still the refuge of the poet in science.

You suggested rather tentatively that I might become a Director on the Board of ISI. Equally tentatively, I wonder if I could not be much more useful to your program in aid of scientific communication by remaining a proponent without formal status in your corporation. If I can be of help, I will be glad to be a consultant for you as in the past. This reticence is not due to any lack of interest on my part for what you are trying to do. But I anticipate that there would be times when I could be even more effective by speaking from the role of consumer rather than producer of your product. However, there are probably some counter arguments and I would want to know who else was likely to be sitting on the Board before we came to a conclusion about this. I am sorry that you have had so much trouble with ISF but am pleased to see that this is evaporating.

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With regard to your future plans, I don't think I would go along completely with the last paragraph of your letter. I don't think it would make very much difference in further dealings whether they were made with you personally or with a corporation in which you held a dominant interest. However, I could visualize all sorts of other reasons for making ISI a public stock corporation; these need not, however, detract from the advantages of also setting up the documentation center.

Yours sincerely,



Joshua Lederberg
Professor of Genetics