

July 14, 1959

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Dr. Lederberg:

I received yesterday the reprints of your articles #33, 49, 60, 70. Many thanks for these. I took them home last night and tried to absorb as much as I could. This example proved only too well what I have been saying about the need to do research. As I read these papers and your markings of the review papers that you had cited I knew too well that a great deal of interesting research lies ahead. I have always believed that once the Citation Index is constructed it will open up vast unexplored areas of literature research. However, it will not be random research. But it will take the time of qualified scientists. Hence, a great need today for literature scientists (we call them information scientists.)

Of course, you must realize that the proposal you made in your letter of June 18th that we scan journals for citations to *Physid. Rev.* so as to make a critical comparison between what would be obtained by a routine search through BA--constitutes research--and would be out if a committee of experts decides to go ahead and build a citation index first. Such comparisons could then be made (after building CI) but it would not come first.

Incidentally, I think you have a style of writing which will drive the MT boys nuts. (Mechanical Translation). When I get a chance I intend to subject some of your sentences to a linguistic analysis necessary for computer translation and I think there will be some formidable problems in going to Russian or German without an editor--strictly with the computer.

There is also a distressing reminder in your papers how difficult it can be to trace the statements made in connection with a particular citation. E.G., you cite C. S. Cummins in your paper #70 but without the use of numbers to identify your citations it is quite a chore to locate the sentence involved. I found it on page 150, second column, 3rd paragraph. Can you tell me whether this paragraph would be of interest to someone who had just read pp. 25-50 of Cummins review (or is that the entire review). In other words citations ought to be a little more specific. I don't understand why citations frequently aren't more specific as to page number. Incidentally, I believe I can readily see the value now in locating this paragraph of yours, once having read the Cummins article. Your comment about the "preferential localization of DAP in the cell walls" is suggestive of an idea that would be very useful to a reader of the Cummins article. In addition it would then have lead him to the Davis paper of 1952.

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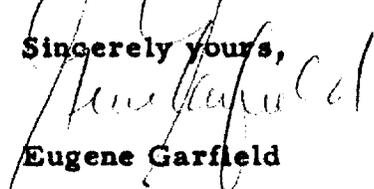
All of this ultimately suggests that research is badly needed on methods of presenting scientific information for maximum utility. Incidentally, Zellig Harris, Prof of Linguistics at Penn is very much interested in this problem and much of his research in structural linguistics has the ultimate objective of a suitable design for presenting scientific information. I have been taking some course work with him. I'm afraid that my correspondence, of late, on CI, has delay a paper I owe him on the relationship between linguistic analysis and scientific indexing.

So I will close on this point--your papers~~x~~ and the review papers you checked off do indicate to me some definite evidence, if more is needed, that the CI will tie together in biology, through use of ~~x~~ review papers, the definition of content, "topical definition of content of a paper"(JL) This I believe is a restatement of what I call "the use of review papers as a mechanical means of indexing earlier papers". One unfortunate part of this is that you cannot use it to index as soon as the paper appears. Here one must rely on the author's language and the orientation of the indexer.

I am enclosing a series of letters that we have sent out in the past for the purpose of stimulating interest in CC at particular schools. Perhaps you can find the one that suits Stanford best, make changes as necessary, and return to me. We can then run off a copy for each faculty member and send the letter together with a review copy of CC. If you would ~~xxxxx~~ prefer you can simply write out a suitable note on your own note paper, we would have it photographed, and run off as many copies as needed.

Please do not feel under any obligation to push this through. If you find, as has happened on occasion, that there would be an objection to your sending around such a letter, then forget about it. We can then send the regular promotional stuff to each man as we encounter his name. Sooner or later we can get a catalog and send our propaganda that way. Of course it is better when it comes from inside the school, but we have to take it as we find it. I've been taking so much of your time lately with the CI that I feel guilty to have brought up the promotion~~x~~ of CC. I know that you will decide what is best--and that will be okay with me.

Sincerely yours,

  
Eugene Garfield