


INTERVIEW with Eugene Garfield


Svetla Baykoucheva, editor of the *Chemical Information Bulletin*, took this interview from Dr. Garfield by email on July 25, 2006. The interview was originally published in the *Chemical Information Bulletin* (Vol. 58, No.2, pp. 7-9).

Dr. Garfield, I am very pleased and honored that you have accepted our invitation to give this interview for the *Chemical Information Bulletin*. This is the year that marked your 80th anniversary. So much has been written about you, so many interviews have been taken. What a life! I will start with a story about you that I heard many years ago. This happened in Paris—you were to meet with a friend and you brought to this meeting a young woman, introducing her as “a friend of a friend.” The minute you went somewhere, she turned to your friend and asked him: “Who is Eugene Garfield?” You don’t need to be introduced to the readers of this publication—your name is a legend among people involved in chemical information.

Most of the questions that people would ask you are about the *Science Citation Index* and the impact factor. Since these are based entirely on the citation practices of authors, I would like to ask you some questions that I did not see being asked in your other interviews. These questions have been kind of a taboo to discuss in the scientific community. I have often pondered on them, though, and I am curious what you think about these issues.





 How have the citation practices of authors changed in the past 50 years?


 I wonder if you asked about 50 years instead of 100 years deliberately or whether you feel the practices of earlier years are not really relevant. But since *SCI* was started about 1963 I can give you my impressions. Generally speaking I think there is greater citation consciousness. On the other hand I am often depressed to see authors who neglect the earlier literature. Scholars who work in many fields like management, computer science, economics, etc. demonstrate a complete ignorance of past work in information science. Their egocentrism is amazing. On the other hand I can say that I don’t think these problems have been systematically studied. It is impressionistic. Chemists of course are trained to search the literature and anyone who is conscious of the requirements for obtaining patents should be literature conscious. There are a lot of anecdotal claims about what authors do or do not do but few substantiated studies.





The Institute for Scientific Information at 3501 Market Street, Philadelphia


 Some journals put pressure on authors to cite papers published in their journals as an incentive to accept their papers. Some editors have even openly defended such methods. What do you think of these practices? How does this affect the objectivity (if there is such a thing) of the whole system of citations?

 I regret that I cannot find the place where I said that there are many times when an author is seeking an example of a paper to cite. Such a general citation to the same journal could be justified when there is more than one choice. But to simply cite the same journal just to add another citation to its impact count is absurd. I do know there are a few editors who invented a new kind of annual review in which they cited every paper in the journal for that year, thereby increasing the citation count significantly. But sooner or later they will be found out.

 Do such factors as the pressure to get cited influence an author’s decisions which papers to cite? For example, are there incidents when friends cite each other’s papers, even if there are more relevant papers to cite? Or former graduate students and post-docs continue to cite their former mentors indefinitely?

 There are a lot of anecdotal claims on these issues, but little systematic evidence. If you stay in the same field it is inevitable and justifiable that you will cite certain mentors “indefinitely”. The relevance of Robert K Merton’s work in my writings didn’t change over the 40 years I knew him; so I continued to cite his work and that of many others whenever it was appropriate. When people write brief introductory historical statements for new papers they will cite one or more of the same people who started the field. That may be why co-citation clustering works.

 What tricks do authors use to avoid citing competitors or researchers that they don’t like?

 There is no “trick” in just leaving out relevant work. It is either deliberate or unwitting. However, it may be counterproductive. I have always advised people to cite their competitors because their work will be found, through citation links, when others



The converted chicken coop in Thorofare, NJ, where ISI® began.

look up their competitors' papers.



Q *Is there a nationality bias in citing—for example, authors from a particular nationality tend to cite more often colleagues of the same nationality?*

A In certain subjects it is inevitable that national journals will be cited instead of international ones. There used to be significant language barriers, but now that most people write in English I don't think this is a significant factor. I can access articles in English whether they are published in an American or a German journal equally well. Of course, we don't cite Chinese language journals much because we may only know the title of the article in English.

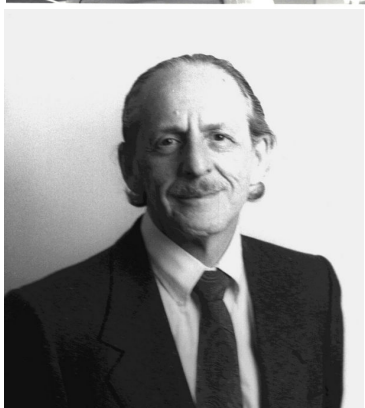
Q *How do authors filter information and choose the papers to cite?*

A There are lots of anecdotal statements, but little systematic data. However, in the past certain medical literature studies claimed that American physicians did not cite their British or European counterparts. I doubt however that you find any serious US chemist ignoring the chemical literature of France or Germany when it is relevant.



Q *Do you think many authors would cite a paper without actually having read it—just on the basis of an abstract or even a title that they have seen? Or would copy the citation from another paper? I have noticed errors in some citations that perpetuate from paper to paper—obviously a result from copying a wrongly cited reference.*

A This is a very complex matter. Suppose I read a paper long ago, but have misplaced it and want to cite it again. I remember the main point but I need the reference for a new paper I want to publish. It is easy enough to see it cited in a recent review. But suppose that source has gotten cited page or volume wrong. That is one of the many ways errors get perpetuated. It would be nicer and more ethical if people would look up the original reference in CAS or SCI but that doesn't always happen. JAMA and other journals like NEJM, I believe, have an in house staff that goes to the original for almost every reference that is cited, but few other journals can afford that procedure. It should be demanded of authors, but so far no one has taken up my challenge that they make authors sign a statement that they have checked out the accuracy of their citations, as is supposed to be done in patents. But even there, the reference practices can be abominable.



Q *We recently advertised a position for a Life Sciences Librarian and we posted the announcement on several listserves. On one of these listserves a person posted an email raising the question of why we did not require an MLS for this position, but asked for "an MLS and/or an advanced science degree." This started a whole discussion whether an MLS should be required or not. You have served on university boards and have observed the changes in the science information community. What are the qualifications that should be required from a person to be a good science reference librarian?*

A That is a very complex issue. The more education a person has the better the chances they will succeed. Intense curiosity is the hallmark of a good reference person and a desire to serve. I have the greatest admiration for the people who answer reference questions on the cheminfo listserv. It is hard to imagine a chemistry librarian who hasn't studied chemistry, but then some of the best people I have employed had classical backgrounds and became the best science writers. My friend Robert Hayne was the prototype. He knew more science than most scientists I've met but was trained in the classics.

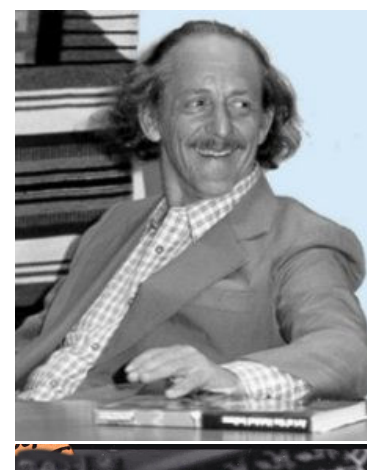
He learned a lot from being a medical indexer at NLM.

Q *Many chemistry libraries are now becoming part of big science libraries. How do you see the future of chemistry libraries?*


A I guess it is inevitable that many of these libraries will merge. The overlap between chemistry and other fields is so pervasive. And with electronic access why would you need immediate access to all the old classical tools in print? Libraries are a great place to study but not necessarily for the old reasons. When I worked for Prof. Louis Hammett at Columbia he had his own set of CA in his office but the library was just down the hall. Today some of the chemistry faculty never show up at the library.


Q *Compared to the field of Molecular Biology, chemical information has been lagging behind in terms of openness and free access. What is the reason for that?*

A I imagine that this is due to the conservative type of management at ACS and other societies and



publishers. They fear the loss of the cash machine and maybe for good reasons. But I suspect all of them will eventually find a good compromise in sustaining their operations.

 I used to be an ardent reader of your essays published in the Current Contents (CC). Your essays are the main reason I switched from the lab bench to information science. How did you get ideas for so many different topics?

 I believe I answered that question in one of my essays, but there never was a shortage of topics to cover in CC. We had meetings every week and put out ideas on topics to cover and then we would assign them to one of my many assistants. As the years went by the scope became larger and larger. One series of essays we did took over two years to complete, since we had to generate a database for each part. Some of the more personal topics just came up in the course of everyday events. Eventually I realized that our readers were happy to have a distraction from the scientific topics and found personal subjects more interesting. Topics like jazz and family appealed to a lot of people. The CC essays were very popular in East Europe because CC was not censored. I wrote in such a way that it gave those scientists a window on the west, but did not offend their bosses. I knew from my travels that they did not need me to tell them the shortcomings of totalitarian regimes.

Dr. Garfield's essays and other interviews with him are available on his web page: www.eugenegarfield.org

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