

Current Comments[®]

EUGENE GARFIELD

INSTITUTE FOR SCIENTIFIC INFORMATION[®]
3501 MARKET ST., PHILADELPHIA, PA 19104

Pageless Documentation; or, What a Difference a Page Makes

Number 17

April 29, 1985

The term pageless documentation will not be found in the dictionary and seems like a contradiction in itself. Yet, pageless documentation, or pageamnesia—the omission of a specific page reference in a cited reference—is a nearly universal practice in scientific journals, as the majority of *Current Contents*[®] (CC[®]) readers know. It may surprise some readers to learn that in other scholarly fields one is expected to religiously provide not only the full title of the article or book one is quoting, but also the precise page.

According to the editorial policies of most scientific journals, the first page or the first and last page of a journal article will be cited, but only rarely the specific page. And, of course, if the specific page cited is not the first page, problems in creating the *Citation Index* section of the *Science Citation Index*[®] (SCI[®]) may arise. It may not be possible to match this "false" or incomplete reference with correct or complete citations that appear in the *Source Index* section of the *SCI* or *Social Sciences Citation Index*[®] (SSCI[®]). We can correct many of these errors later on. But this requires an enormous human and computer effort. Since we store the full pagination of the articles we index, the computer can identify such errors. But that only happens after we have compiled our cumulated indexes, and we certainly cannot correct such errors if they occur in articles we have never processed before.

I had never heard the practice of omitting specific pagination in referencing called pageless documentation until I read a short article by Roy P. Fairfield

three years ago.¹ Fairfield is the editor of *The Federalist Papers*² and the author of many other historical books. I found his remarks on pageless documentation quite stimulating. I asked his permission to reproduce the article in CC. It is being reprinted with his permission and that of *The Chronicle of Higher Education*, where it was originally published in 1982.

Pageless documentation affects us in the compilation of our various citation indexes. We agonize over citations that are incomplete. Consider that in one year alone we process over 10 million cited references, of which about 2 million are books of various kinds. Over the years, we have painstakingly included in the *SCI* and *SSCI* the specific page numbers when they are cited. This is expensive in terms of space and energy, even though we have little direct evidence that users would greatly care or even notice if we omitted them.

The result of our "perfectionism" has been to create what must sometimes seem like strange redundancy in the citation indexes.

Consider the entries for a book like Linus Pauling's *The Nature of the Chemical Bond*, 3rd edition, published in 1960.³ In the 1983 *SCI* alone, there were several hundred citations to this book. Of these, the most frequently cited page is 260, on which Pauling discusses the van der Waals radii of certain nonmetallic elements. By the way, this work, in all its editions, has been cited more than 16,000 times since 1955, and was recently the subject of a *Citation Classic*[™] commentary.⁴ The question is:

Would the user of the *SCI* be less well served to find all citations to the book lumped together rather than spread out over several separate entries? After all, it is when you look at the title of the citing article in the *Source Index* that you decide whether you want to look at the paper regardless of the specific page cited. However, if a book has been cited hundreds of times, you may well be interested in locating those papers that had cited a specific chapter or page. In that case, the inclusion of the cited page number would save much time.

However, as Fairfield points out, this will be a function of the leisure time you have available. Page-specific or pageless documentation affects us or not, according to circumstances.

In order to prevent clutter in the list of references that follow each essay in *CC*, we often include the specific page number in parentheses in the text of the essay.

In certain cases, pageless documentation can be disastrous. To cite any lengthy reference work without specific pagination is tantamount to no documentation at all. To quote a book by Pauling without the specific page number is annoying, but less disastrous than omitting the title. The total omission of pagination in citing a journal article is catastrophic unless the author in question is so rarely cited as to make little difference in any case. If we knew in advance which books would be cited only a few times, we could save a lot of work in recording cited page numbers. While we do know which papers and authors have been well cited up to now, it is of course not possible to predict which new papers and authors will be highly cited in the first few years after publication, and in many cases long after publication.

Pageless documentation is a near relative of titleless documentation. Scientific journals are divided in their editorial policies on the value of including the titles of cited articles in footnotes or references. Chemists mainly leave them out; cellular biologists do not. Were you to prepare a paper for the *Journal of the American Chemical Society*, you would

have to omit the titles of cited articles. However, were you to submit the same article to *Molecular and Cellular Biology*, you would include the titles of cited articles.

Volumeless documentation exists not only in many popular magazines, but even in major journals such as some of those published by the Royal Society of Chemistry. It is no wonder that many authors confuse page numbers with the year when citing a 1969 article published on page 1968 or 1970.

Dateless documentation often occurs when people fail to cite the exact date of an issue of a weekly magazine or journal. Many journals, on the other hand, hide their publication dates by simply numbering, not dating, issues. Obviously, when you meet friends at a cocktail party you are supposed to ask: "Did you read Bloggs's article in issue number seven of the *Journal*?"

Information overload as we know it today will seem like bliss if new journals and books, electronic or otherwise, do not allow us to retrace our steps in our own personal scholarship. The collective memory of the scientific community may seem addle-minded indeed if pageless documentation makes it necessary for us to disentangle every reference to the past. Just as the national debt is a burden that, if not retired, will be passed along to posterity, so too might pageless documentation have onerous consequences for future generations of researchers. Scientific exegesis could become a nightmare. Whereas the term exegesis has special significance in the critical evaluation and explanation of biblical texts, it will take on added meaning as the study of the history of science increases. Growth in this field is already evident, so we can also forecast the emergence of science exegesis as a new specialty. Indeed, pageless documentation may be one of the stronger catalysts in promoting the occupation of science exegesis.

The foundations for such footnote and textual sleuthing have been long established in historiography by scholars such as Ranke, Mommsen, Braudel, and

countless others, but perhaps the classic tract on cryptomnesia that every CC reader should read is Robert K. Merton's *On the Shoulders of Giants (OTSOG)*.⁵ Merton defines cryptomnesia as an "unconscious plagiarism" in which creative ideas expressed as new are actually unrecalled memories of another's idea.⁶ (p. 402-8) Just issued in a new edition after 20 years, *OTSOG* traces in marvelous detail how Isaac Newton borrowed the aphorism usually ascribed to him over the centuries.

It is, of course, an ironic implication of Fairfield's essay that out of pageless documentation may come the kind of Mertonian musing for which we should all be grateful. Somehow I suspect we do not really need pageamnesia to foster scholarship in the future.

* * * * *

My thanks to David A. Pendlebury and Marianne B. Zajdel for their help in the preparation of this essay. ©1985 ISI

REFERENCES

1. Fairfield R P. The implications of pageless documentation (3: 1939-1979). *Chron. High. Educ.* 5 May 1982. p. 24.
2. Hamilton A, Madison J & Jay J. (Fairfield R P, ed.) *The Federalist papers*. Baltimore: Johns Hopkins University Press, 1981. 332 p.
3. Pauling L. *The nature of the chemical bond and the structure of molecules and crystals*. Ithaca, NY: Cornell University Press, 1960. 644 p.
4., Citation Classic. Commentary on *The nature of the chemical bond and the structure of molecules and crystals*. Ithaca, NY: Cornell University Press, 1939. 429 p. *Current Contents/Engineering, Technology & Applied Sciences* 16(4):16, 28 January 1985 and *Current Contents/Physical, Chemical & Earth Sciences* 25(4):16, 28 January 1985.
5. Merton R K. *On the shoulders of giants*. New York: Harcourt Brace Jovanovich, 1985. 300 p.
6., *The sociology of science*. Chicago: University of Chicago Press, 1973. 605 p.

THE IMPLICATIONS OF PAGELESS DOCUMENTATION (3: 1939-1979)

Roy P. Fairfield

The recent shift in documenting research, whereby a writer merely alludes to a particular document without indicating the numbers of the pages where the data may be found, has profound implications for the human race. For instance, if one quotes from Carl Rogers's *On Personal Power*, which was published in 1977, and the book is the sixth item in the bibliography, one need only note "(6: 1977)" after the citation, and the reader knows to which book the author is referring.

When I first encountered this "new" kind of documentation, I was incensed. After all, I frequently want to refer to a quotation or see it in context in the original source. Or a quote may whet my appetite for more of an author's insights. Then, too, working with graduate students over the past couple of decades, I have sometimes needed to check citations that sounded strange, phony, or even plagiarized. So I was unhappy at no longer being

able to find a reference—at least not with any degree of ease, efficiency, or accuracy.

But, upon second thought, I must admit how wrong I was. It seems that there are reasons "as plentiful as blackberries" (6: d. 1616) to applaud the practice. Perhaps the reasons can be stated succinctly:

First, of course, it makes for cleaner manuscripts and publications, and eliminates the need for long, cumbersome footnotes (8: 1981), which may or may not be read. In the long run, it should save incalculable secretarial time, research money, duplicating expenses, and acres of forests. Hence, it clearly has economic and environmental implications while humanizing work.

Equally important, it is an interesting application of Occam's Razor or the law of parsimony (4: d. 1349). In the long run, this may have profound implications for both scholars and learners. Dwight Eisenhower once de-

defined a philosopher as a person taking "more words than he needs to say less than he knows" (1: ?). Surely, it would be a step forward for humanity if researchers and professors were to say things more simply. Plato once remarked that they who lie become liars (5: II d. 348 B.C.). Perhaps those who apply the law of parsimony become linguistically parsimonious? In a society that is increasingly conscious of leisure, it is important to devise interesting ways for both scholars and the general public to spend their time. One day I ran across a reference of the kind that precipitated this discussion, wanted to check it, and spent half a day thumbing through a three-volume work trying to locate it. While my Anger Index increased (*cf.* next item), at one point that afternoon I finally concluded that there were only two ways to find the reference: Read all three volumes or write the author. So there is obviously value in the system of pageless documentation, especially for people who are looking for ways to spend their time.

Psychologists tell us that suppressed anger is like a boiling pot with no safety valve. Hence, it may be argued that the more occasions one has to vent one's anger, the more psychologically healthy one will be. And what better way for a scholar to contribute to human health than to get a better sense of his or her Anger Index? In fact, such people might very well work in cooperation with clinical psychologists to develop new projective tests to determine such indexes, tests that could conceivably be useful to insurance actuaries as well as to the medical and mortuary sciences.

While it might be argued that hunting for citations that can't be easily found is a lonely business, there is a contrary way of looking at it. Ample documentation exists on the lonely aspects of researching (3: 1939-1979). If, however, one had to resort to writing the author, as mentioned above, more communication might occur between researchers and authors, teachers and learners—both by

phone and by letter. Hence, pageless documentation would induce social interaction that otherwise would be impossible, or at least unlikely. And any author with a sense of responsibility and collegiality would be obligated to respond or be thought odd, uncommunicative, antisocial, or even unscholarly and unprofessional. Also, by responding, he or she might possibly reap an occasional fringe benefit in the form of a dinner or a cocktail party.

We know from experience that both "truth" and "falsehood" are frequently discovered to be myth. Theodore H. White says that his reports from the front in the Chinese-Japanese war in the early 1940's were really believed only when they became enshrined in print (7: 1978). My own research (2: 1961) indicates that one analytical error after another was repeated in edition after edition of *The Federalist* because the writers and researchers didn't return to the original materials to check the accuracy of quotations or the context for the interpretations. In fact, much revisionist history results from just such failure to check. But if the scaffolding by means of which one may conveniently check another's scholarship is eliminated entirely, it will almost inevitably lead to new and perhaps more inventive methodologies. For instance, research could become more intuitive, and future generations might have more respect for the educated hunch or the bolt from the blue. Of course, it could also produce generations of parrots (although I am certainly not anti-ornithological), and, somewhere down the road, a greater crop of cynics, when some future generation discovers that the emperor is truly unclothed (2: 1961).

On balance, then, one must conclude that pageless documentation seems to lead in generally hopeful directions. It also speaks to the inventiveness of a new generation of researchers. And it may relate to the quantity of advanced degrees now produced in the United States.

NOTES

1. Eisenhower, Dwight David. *New York Times*, date not known.
2. Fairfield, Roy P., ed., *The Federalist Papers*. Garden City, Doubleday, 1961, 1965.
3. -----, Archives, 1939-1979. (My files are full of such notations.)
4. Occam, William of (d. 1349). *Dialogus*. (See any encyclopedia.)
5. Plato (d. 348 B.C.). *The Complete Works*.
6. Shakespeare, William (d. 1616). *King Henry IV, Part I*.
7. White, Theodore H. *In Search of History*. New York, Harper & Row, 1978.
8. Zerby, Charles L. "Endangered Species Is Now Incarcerated At the End of the Book." *New York Times*, August 23, 1981.

Roy P. Fairfield lives in Biddeford, Me., and is an education consultant.