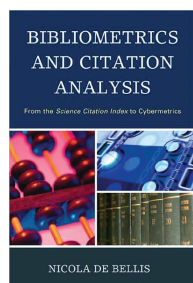


## BOOKS

**Bibliometrics and Citation Analysis: From the Science Citation Index to Cybermetrics.** Nicola De Bellis. Lanham, MD: Scarecrow Press, 2009, 415 pages, Kindle™ edition, \$39.



As stated in the preface, De Bellis intends to “make citation analysis a less unfriendly subject” and succeeds admirably, given its rather complex nature. The book provides a comprehensive introductory treatment of the history, theory, and application of citation analysis. Several chapters trace the historical foundations of bibliometrics, providing the reader with an informative overview of the origins and evolution of methods used for quantifying the immense body of knowledge in the sciences and related disciplines through citation analysis. Some historical examples include the impact factor being developed in the early 1960s by Garfield and Sher, a 1977 paper analyzing authors’ self-citation practices (which can be an “impact-reinforcing mechanism,” according to De Bellis), and Gregor Mendel’s experiments with pea plants in the mid-1800s. De Bellis uses Mendel as an example of how research that is ahead of its time can experience a delay in citation, not being cited by others in the first year or two of publication (as with most research) but rather many years later.

Chapter 6 deals with the evaluation of scientists based on citation analysis, particularly the impact factor. Potential limitations and useful applications of the impact factor are covered, as well as the peer-review process; ideally, the correlation between citation scores and independent appraisal by peers would be positive. Readers should remember that any journal’s impact factor must be used in context with other variables, never as a stand-alone measure of quality or importance to its field. In addition, a journal’s impact factor may be skewed if one of its articles is disproportionately cited compared to the rest; for example, the cancer statistics article published annually in *CA: A Cancer Journal for Clinicians* always is referenced heavily in many other articles.

De Bellis stresses the irreplaceable role of usage statistics kept by librarians—a journal’s usage will have greater bearing on the decision to purchase, renew, or cancel than its impact factor.

De Bellis does not cover Oncology Nursing Society (ONS) publications, but the book *Advancing Oncology Nursing Science* includes a table showing the most frequently cited articles authored by distinguished researchers from 1992–2008, based on an Institute for Scientific Information (ISI) citation report (Varricchio, 2009). A 1997 article for which 2006 Distinguished Researcher Lesley F. Degner was lead author was cited 372 times. In addition, the *Oncology Nursing Forum* (ONF) was accepted for inclusion in the ISI databases in 2004 and eventually had its first impact factor of 1.475 derived in 2007. In 2008, ONF’s impact factor increased to 2.207, ranking it third of 60 journals in the nursing category of the journal citation reports.

The final chapter covers cybermetrics, or the Web citation structure based on hyperlinks. De Bellis notes the inherent advantages of markup languages and the way they allow readers to move from a cited work to its full-text via electronic journals and databases. Google Scholar™ and Scopus™ are noted as examples of competitors to ISI products. Various ranking algorithms and systems are discussed for Web pages in general. A section on citations in e-journals and open archives draws attention to a fundamental problem; a selection criterion for sources used in the book was “free online availability,” but obviously any true examination of publishing metrics should not be restricted to sources that are available freely, considering the massive number of electronic publications only available to paid subscribers.

Another problem endemic to the Web is the “instability” or failure of cited URLs to remain retrievable over time. Many studies have confirmed—and continue to confirm—that a high percentage of Web citations eventually become unavailable. Some studies are specific to the accuracy of Web citations in the nursing literature (Oermann, Nordstrom, Ineson, & Wilmes, 2008).

Because De Bellis’s book does not cover the nursing discipline, briefly recounting some publications that address topics of interest to ONS members or the oncology nursing community within this review

seemed warranted. An encyclopedic entry by D’Auria (2006) provides a general overview of bibliometrics in the context of nursing literature. Several articles published in 2009 apply a bibliometric analysis to various nursing-, health-, and oncology-related subjects (Anderson, Keenan, & Jones, 2009; Bankson, 2009; Choi, Fuller, & Thomas, 2009). In addition, most articles in the June 2009 issue of *Journal of the American Society for Information Science and Technology* are devoted to citation analysis, including an exploration of the ISI Journal Citation Reports (Bensman & Leydesdorff, 2009) and an examination of participation in professional conferences or workshops as a committee or session chair or member, invited speaker, or award winner (Jeong, Lee, & Kim, 2009).

This text was reviewed using the Kindle™ (Amazon.com, Inc.). Simply figuring out the best way to hold it without accidentally pushing the Next Page or Previous Page buttons on both sides of the device proved surprisingly problematic, as did quickly jumping to a particular page via the index or the keyword searching function. However, having the ability to search for a particular term was appreciated. Overall, e-book readers have advantages, such as being able to store and transport many books at a time and download content immediately. That said, e-book readers remain inferior to print books purely from a reading standpoint—print pages are preferable to an electronic screen, as is holding an entire book rather than just a very small portion (i.e., only that which is viewable on the screen). In addition, print books can be loaned to others, but one may be more reluctant to loan an entire Kindle. Finally, the well-publicized incident of Amazon remotely deleting books from customers’ Kindles and other restrictive aspects of the Kindle license agreement and terms of use have been reported.

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## References

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