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## Bibliometrics and Research Evaluation: Uses and Abuses

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## **Book Review**

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## BOOK REVIEW

*Bibliometrics and Research Evaluation: Uses and Abuses*

by Yves Gingras

2016 | MIT Press | 136 pages, hardcover | ISBN-13: 978-0262035125 | U.S. \$20.00

Measuring the impact of research and publications (bibliometrics) has become increasingly common for libraries, academic institutions, and scholars. Libraries use bibliometric measures, such as citation analysis, when considering which journals to acquire and retain. Faculty use them to demonstrate the value of their research in the tenure process. Academic institutions are beginning to use bibliometrics to demonstrate institutional ranking and prestige (Pagell, 2014; Chen & Liao, 2012). In today's data-driven environment, these measures play an increasingly critical role. Like any type of metric, however, bibliometrics present their own set of challenges. *Bibliometrics and Research Evaluation: Uses and Abuses* aims to explore this topic in detail.

For this 2016 publication, author Yves Gingras has translated and updated his 2014 French title *Les Dérives de l'Évaluation de la Recherche: Du bon usage de la bibliométrie*, which is part of the History and Foundations of Information Science series from MIT Press. This series focuses on both historical and theoretical approaches to information science topics with an emphasis on practical uses and interactions of tools, applications, and information. Gingras notes in the introduction that the work is an opinionated essay, rather than a comprehensive analysis of bibliometrics. Several chapters provide information about basic concepts and methods of bibliometrics, but readers should anticipate an essay that provides succinct explanation with an in-depth analysis on the positive and negative uses of bibliometrics in academia. Gingras's viewpoint is critical of bibliometric indicators of quality, and thus the text focuses primarily on their negative aspects; however, the substantial research he cites throughout the text offers many other avenues for additional reading on the topic (see especially pp. 93–113).



While the first half of the book focuses on the origins of bibliometrics and the impact of bibliometrics on the dynamics of science, the second half explores the proliferation of research evaluation and the lack of evaluation for those research evaluation methods, which Gingras considers to be problematic. He explores the challenges and shortcomings of the h-index, the impact factor (IF), and university rankings, among other metrics. These metrics, the author argues, are often used in conflicting and problematic ways. Specifically, he challenges the use of the impact factor and its appropriateness for ranking the academic journal and the individual researcher. The author further argues that many bibliometrics do not evaluate validity and credibility, and thus are inappropriate measures of research quality. This has played a large role in the general misuse and misinterpretation of various bibliometrics.

The essay concludes with the author's proposal of three criteria that a well-constructed bibliometric indicator should have. These are adequacy (i.e., fitness for use as an indicator), sensitivity (i.e., resistance to change), and homogeneity (i.e., reliance on uniform indicators, like counting journal article citations). To illustrate the necessity for such criteria, Gingras explores several bibliometric measures that he believes best exemplify the growing problems associated with relying on bibliometrics as a measure of research quality. These problems include misuse and misinterpretation of the impact factor and bibliometric manipulations such as ranking boosting, dummy affiliations, and intellectual fraud. The most important takeaway from the second half of the text is for librarians and researchers to examine bibliometrics with a critical eye.

*Bibliometrics and Research Evaluation's* greatest strength is its critical analysis of current and emerging bibliometrics. Gingras states his position clearly and does an excellent job supporting it throughout the text with scholarly research. He cites 21 pages of various studies and research to support his arguments—a substantive amount, given that the text is 136 pages in total. However, since Gingras emphasizes that the essay is opinionated in nature, readers will find that his personal opinions on the topic are at the forefront of the narrative. Most of the research in the notes section directly support Gingras's viewpoint and arguments about the efficacy and appropriateness of bibliometrics. Readers will find the provided notes a good foundation for additional bibliometrics research, specifically for exploring the pros and cons.

While the text excels at supporting a specific, albeit somewhat negative, position on the efficacy and validity of bibliometrics, it is not an introductory text. Those who want a deep exploration of bibliometrics would be advised to look for other more comprehensive works. Librarians, in particular, may find titles such as *Meaningful Metrics: A 21st Century Librarian's Guide to Bibliometrics, Altmetrics, and Research Impact* (Roemer & Borchardt, 2015), to provide a more comprehensive and practical approach to bibliometrics and other

forms of alternative metrics. Overall, *Bibliometrics and Research Evaluation* supports what Gingras outlines as his thesis—that bibliometrics have a broad scope and should be utilized more effectively and beyond their use as research evaluation tools. Specifically, he notes that bibliometrics are “essential to go beyond local and anecdotal perceptions and to map comprehensively the state of research and identify trends at different levels” (90). Those who are familiar with bibliometrics and want a deeper analysis based on supporting evidence are the target audience and will find this text a useful and interesting commentary on the topic.

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## BIOGRAPHY

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