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# **Comparing the Impact of Open Access (OA) vs. Non-OA Articles in the Same Journals**

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*(This Opinion piece presents the opinions of the author. It does not necessarily reflect the views of D-Lib Magazine, its publisher, the Corporation for National Research Initiatives, or its sponsor.)*

The way to test the impact advantage of Open Access (OA) is not to compare the citation impact factor of OA and non-OA journals but to compare the citation counts of individual OA and non-OA articles appearing in the same (non-OA) journals. Such ongoing comparisons are revealing dramatic citation advantages

A recent [Institute for Scientific Information](#) (ISI) study has reported that traditional journals and Open (OA) journals have similar citation impact factors ([Pringle 2004](#)). The [ISI's press release](#) announced:

*"Of the 8,700 selected journals currently covered in Web of Science, 191 are OA journals... [A study on] whether OA journals perform differently from other journals in their respective fields [found] no discernible difference in terms of citation impact or frequency with which the journal is cited" <<http://www.isinet.com/oaj>>.*

It is certainly welcome news that there are no impact differences between the 191 OA journals and the non-OA journals indexed by ISI, equating for comparable journals as closely as possible: <http://www.isinet.com/oaj>. This proves that the skeptics who thought OA journals would be of low quality or impact and would not be indexed by ISI were wrong (at least for those 191 OA journals): OA journals *are* indexed by ISI, and they *do* have comparable citation impacts. But obviously this method has a certain element of circularity!

To get a realistic estimate of the effect of OA on impact, it is not enough to compare only the 2% of ISI journals that are OA journals with the 98% that are not, to find that they are equal in impact (for this to be comparing apples with oranges, even if you equate for subject matter).

What further needs to be compared is:

(1) the citation impact of the much higher percentage (perhaps as high as 20-40% according to [Swan & Brown's](#) (2004) sample) of *articles* from the 98% non-OA journals that have been *made* OA by their authors (by [self-archiving](#) them)

with

(2) the citation impact of articles from those very same journals and issues that have *not* been made OA by their authors.

As the founder of citation analysis as well as the ISI, [Gene Garfield](#) (1998) has often stressed, the article (author) citation counts need to be analyzed, not just the average citation counts of the journals in which the article appears.

What this kind of analysis is beginning to reveal in the OA era is that there is indeed a "discernible difference" in terms of the frequency with which the article is cited: there is a dramatic advantage in favor of the articles that their authors have made OA ([Lawrence 2001](#); [Kurtz 2004](#); [Brody et al. 2004](#)). Results are only available for computer science, astronomy, and physics so far, but all other disciplines are currently being analyzed. The earlier [Lawrence](#) (2001) study on the impact-enhancing effects of OA in computer science needed to be replicated in other fields to check whether it was merely an artifact of the fact that computer science is conference-based rather than journal-based, and whether the advantage really reflected OA vs. non-OA rather than just online access vs. paper access. Fortunately, thanks to the ISI database licensed to the [Observatoire des Sciences et des Technologies](#) (OST) and a special contract generously provided by ISI to conduct our study, our research team at the Université du Québec à Montréal, Southampton University and Universität Oldenburg is in the process of testing the OA advantage across all disciplines in a 10-year ISI sample.

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