Enter Alternative Metrics: Indicators that capture the value of research and richness of scholarly discourse

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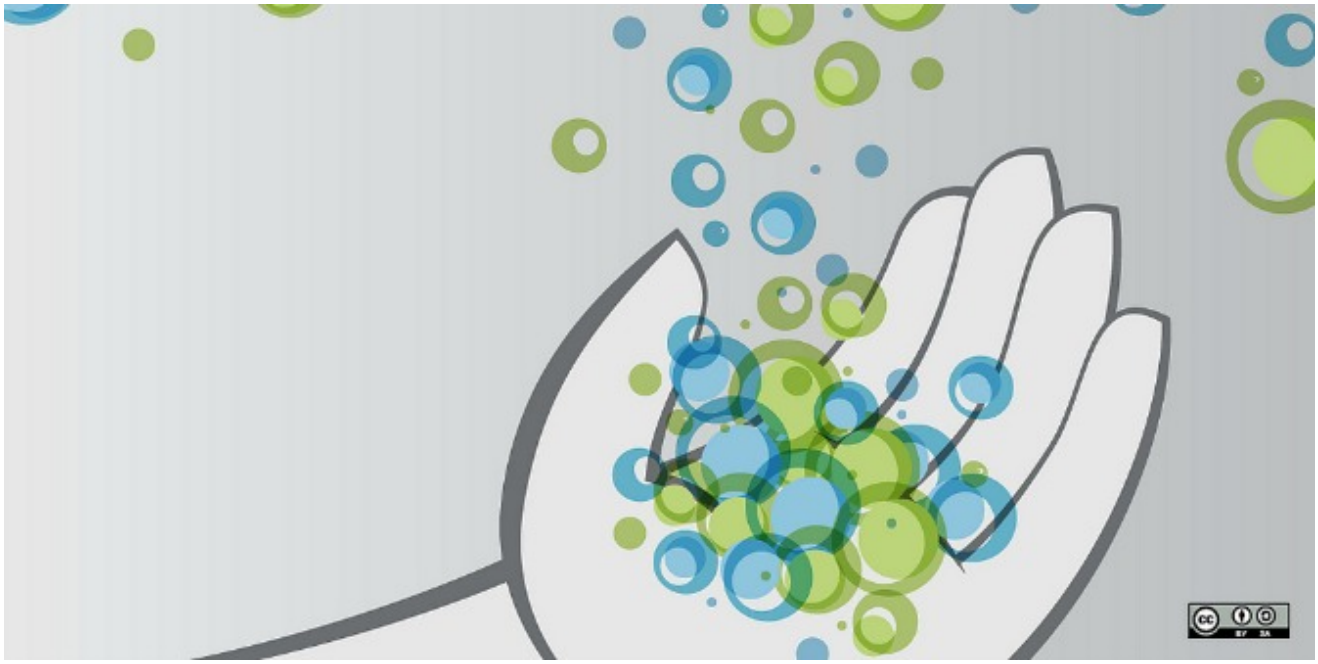
Many scholars have begun to turn to alternative metrics over traditional impact indicators as the online transmission and referencing of research outputs requires an updated understanding of how research makes an impact. **Danielle Padula** *and* **Catherine Williams** *introduce the changing landscape.*

This article is an excerpt from The Evolution of Impact Indicators: From bibliometrics to altmetrics , a collection on the state of research impact co-produced by Scholastica and Altmetric.

Given the limitations of bibliometrics, many academics and editors are looking to new non citation-based article-level indicators of impact as an alternative. Altmetrics, a type of article level metric, are metrics gathered from mentions of research in nontraditional online outlets that can be used to analyze how scholarship is being found, shared, cited, and discussed. Depending on the information source, altmetrics can encompass a range of insights including the number of views and downloads a research output receives, and how often that research is referenced online in public policy documents, databases, social media, news media, post-publication peer review forums, blogs, Wikipedia, and more.

In recent years, companies have emerged with different tools and services to track article level metrics and altmetrics including Impact Story, Plum Analytics (owned by EBSCO), and Digital Science company Altmetric. These tools can be used by journals to gather altmetrics data for their publication at the journal and article level, and by individual scholars to track the online activity surrounding their published works.



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What are the benefits of altmetrics?

Rachel Borchardt, Science Librarian at American University Bender Library, said it well in a recent interview with Scholastica: “different impact indicators can say different things about the same article.” Over time, scholars and journals have become increasingly concerned that traditional impact indicators may not be saying enough, and so many scholars have begun to turn to altmetrics to tell a fuller story, particularly of the impact of alternative research outputs.

Unlike the IF and other bibliometric impact indicators, altmetrics can be applied to nontraditional scholarly outputs because altmetrics consist of data from much more than journal article citations alone. Additionally, altmetrics address an important logistical challenge of the Impact Factor (IF): it can take months to years to generate article citations, especially for research in the humanities and social sciences. Alternative metrics make it possible for authors of newer works to show that their research is being read and used long before it is formally cited, and often almost immediately following publication.

Many are beginning to embrace altmetrics as an alternative impact indicator because they:

- Track the dissemination of research beyond academia
- Show the attention, reception, and response to a published work prior to it being cited
- Can be applied to non-traditional research outputs like data-sets and blog posts
- Show research impact in real-time — scholars and journals don’t have to wait for their score to be released, like in the Journal Citation Reports

As more and more universities and funding institutions in the UK, US, and beyond seek proof of the impact of scholars’ work beyond academia, prominent organizations such as the Wellcome Trust are gradually accepting altmetrics (and in particular the underlying data – such as examples of news stories featuring scholarly works) as a way scholars can show how their research is being used and commented on by non academics in areas like business or public policy proceedings, as well as mainstream social media.

Questions surrounding altmetrics

While academics, journals, and funding bodies are beginning to embrace altmetrics, certain questions remain.

> *“For so long, many academics and journals have perceived IF as untouchable and many are quick to say altmetrics will be riddled with issues,” said Rachel Borchardt. “The truth is IFs are subject to many of the same concerns people have about altmetrics – such as gaming the system. There is no perfect impact indicator – when it comes to showing the reach of research the truth is somewhere in between. Looking at multiple impact indicators can offer a more holistic view.”*

One misconception surrounding altmetrics is that high counts of online shares or media mentions are meant to show whether research is good or bad. Consequently, many people worry that scholars and journals will try to game the system by heavily promoting catchy articles that may not in fact be quality scholarship. In reality, as explained by Brochardt and stressed by altmetrics producers like Altmetric, alternative metrics are meant to be impact indicators showing that research is being discussed but leaving it to the reader to determine whether that buzz is warranted, or indeed occurring for positive or negative reasons. The cause of altmetrics impact can vary, much like high counts of bibliometric article citations can be linked to article endorsements or references to previous articles’ errors.

As scholars, journals, and funders continue to navigate what altmetrics are meant to be and what they are not, many are seeking greater standardization of these new impact indicators. The National Information Standards

Organization (NISO) has heeded the call by launching the Alternative Assessment Metrics (Altmetrics) Initiative, which has the goal of developing greater standardization of altmetrics for use in displaying research impact on the journal, article, and individual scholar level. Rachel Brochardt is a member of NISO's committee on altmetrics definitions and use cases, which has been looking closely at the Becker Medical Library Model for Assessment of Research Impact (known as the Becker Model) as they try to come up with standards for altmetrics use. The Becker Model offers an organized list of different indicators that can be used to show biomedical research impact.

> *"Standardization has been the biggest impetus for this committee," Brochardt explained. "For altmetrics toolmakers, journal editors and publishers, and researchers, we want to determine the best ways to use altmetrics to be as rigorous, unambiguous and productive as they can be."*

The NISO committee hopes these standards will encourage journals, scholars, and funding bodies to use altmetrics to their full capacity. In the meantime, many scholars and journals are beginning to adopt these indicators on their own to show the value of the research they produce and to make for a richer scholarly discourse.

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Note: This article gives the views of the authors, and not the position of the Impact of Social Science blog, nor of the London School of Economics. Please review our Comments Policy if you have any concerns on posting a comment below.

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