Ask Not What Altmetrics Can Do for You, But What Altmetrics Can Do for Developing Countries

by Juan Pablo Alperin

EDITOR’S SUMMARY

Traditional citation counting for evaluating scholarly impact unfairly benefits those in North America and Europe and shortchanges the alternative scholars of the developing world. Alternative metrics more accurately measure the impact of scholarly writings, better serve all scholars and can foster a research culture that supports national development goals. The current system favors dominant journals and topics of interest to the prevailing scientific community, captured by the leading bibliographic databases. Yet publishing on platforms more open to underrepresented journals and scholars in developing nations would promote a greater range of ideas and scholarly exchange. With facilitating international development in mind, scholarly communication should encourage research on topics of local and national relevance and be presented through globally accessible channels, disseminated by social media. Publishing technology barriers to participation must be lowered. The value of altmetrics will be evident, providing advantages to alternative scholars, serving public needs and revealing scientific contributions long underrepresented in the standard literature.

KEYWORDS

altmetrics, cultural values, impact of scholarly output, scholarly publishing, developing countries, citation indexes, international aspects, social web

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Altmetrics: What, Why and Where?

The future of scholarly communication needs to be inclusive of diverse local contexts of the developing world and tailored to address national development goals, not simply address the needs of scholars working from privileged positions in the global North, including North America and Europe. However, a recent and unprecedented number of visionary minds have been attempting to reshape scholarly communications through the introduction of new journals, new technologies, new services and, most recently, new metrics, specifically altmetrics, which focus on measuring scholarly impact in the online environment and away from citation counting. These efforts are borne from a desire to break away from the limitations of the current system of communicating and carrying out research. Yet, most scholars, who have a tremendous effect on global scholarly communication practices, have simply ignored the fact that the legacies of the current system are the most pervasive, or most abhorrent, in the developing world.

In this essay, I argue for the potential for altmetrics to serve what I am calling “alternative scholars” and, by doing so, challenge the current global order of scholarly communications that heavily favors the North.

The legacies of the current system work against developing countries in countless ways, but the most emblematic example is the role of international bibliographic databases. These repositories purport to be objective but, in reality, provide journal rankings that highly handicap underrepresented journals from developing nations. Unfortunately, these rankings continue to be used by universities, funding agencies and governments (including those from developing countries themselves) to determine the incentives that guide authors’ decisions as to where to publish. These incentives lead to an outpouring of the best scholarship from developing countries to journals of the North. This, in turn, has two perverse effects. First, it encourages authors
in developing countries to research and publish on topics of interest to the North American and European scientific communities. Second, it discourages dialogue among scholars in developing countries. These effects result in diminished local capacity–or research that is less likely to speak to local needs–and a less cohesive, less national collaborative network of scientists.

Yet, despite such examples, the future of scholarly communication around the world may look markedly different from the closed and self-serving system of the past. As economic, political and technological forces reshape the scholarly communication landscape, it is now possible to imagine forms of scholarly exchange that can help foster a platform for those who have traditionally been excluded from it. The alternative metrics movement–altmetrics–is one such force.

There are many reasons to be excited about the increasing interest and development of altmetrics, many of which are outlined in this special issue of the Bulletin and in the growing body of research around altmetrics. For example, altmetrics is lauded by those who believe the current models and tools for scholarly communication are stifling innovation and hindering discovery [3] [4]. While I agree and share in this excitement, I will argue in this essay that the future of scholarly communication should be about more than bringing better knowledge discovery, increased productivity and new ways of measuring impact to the scientific elite. Instead, I argue that scholarly communication needs to serve all scholars, including those working from the scientific periphery. Fortunately, the two goals need not be incompatible.

The Alternative Scholar

Altmetrics supporters can help us move beyond the journal article as the only source of scholarly output that is valued and beyond citations as the only way of validating what we read. That is, the “alt-“ part simultaneously means alternative types of research products [5] and alternative types of metrics (that is, alternatives to citation counting) [6]. However, I am proposing yet another meaning of “alt-“: an alternative scholar. By alternative scholar, I am suggesting that altmetrics can serve those at the margins of the current system: those working with scarce resources or in areas of scholarship that are not in vogue or without the latest in publishing technologies and, most importantly, those for whom research and publishing are carried out with different objectives than in the North. While alternative scholars can be found all over the world, they are disproportionately found in the developing world. And while the remainder of this essay focuses there, much is applicable to alternative scholars everywhere. By addressing the needs of alternative scholars, altmetrics can have a very different (alternative!) type of impact. Most importantly, altmetrics can foster a research culture that supports national development goals.

To understand what I mean, we must first look more broadly at the relationship between research and national development. Many view the link between research and development primarily in economic terms: the argument is premised on the idea that promoting research leads to knowledge creation, innovation, patents, links to industry and so forth – all of which boost the economy with increased efficiencies or by capturing the revenue of new products. While true in many respects, this mechanism is predicated on a mature and consolidated research system. It does not explain how changes in scholarly communication can support this consolidation. Furthermore, proponents of this view of development undervalue research that does not have direct economic benefit, regardless of its potential relevance to the society it is derived from. What, then, does a system of scholarly communications that supports national development goals look like? And what is the role of altmetrics in the requisite transformation?

First, scholarly communications for development must facilitate and encourage the formation of research communities at the local, national and regional levels. Altmetrics help cultivate such networks by bringing an otherwise invisible community of researchers onto the global stage with the use of social media. While an article may not receive many citations, data on who is downloading, bookmarking, tweeting or Facebook “liking” an article can allow academics to see who is utilizing their research and provide the opportunity to engage with their community of users. Even if researchers focused solely on increasing their altmetric scores, the effect, regardless of the motivation, is the same in the end: attention through social media use promotes ongoing conversations about otherwise unseen research.
Second, scholarly communication for development must encourage research that is socially relevant and that is inclusive of local contexts. And altmetrics can play an important role in this regard. As elsewhere, altmetrics may change the way that research is evaluated by promotion and tenure committees, by research funders and by governments in the developing world. The successful adoption of altmetrics in researcher evaluations would allow scholars to count (and thereby measure and be rewarded for) non-scholarly use of their research (that is, public use), as well as for the use of non-traditional research products. Such a shift would foster a system that is attuned to the public interest and that addresses local, public needs. By contrast the current system of citation measures rewards researchers for producing research articles and publishing them in databases where developing country journals are underrepresented. The result is an incentive system that rewards researching problems of North American and European interest. Altmetrics may change this focus and offer the opportunity to direct funding to researchers, journals, projects or institutions that have proven themselves relevant to interests of developing nations.

Finally, scholarly communication for development must allow scholars from the developing world to assert their worldview on a global stage. Altmetrics can provide the necessary measures for garnering attention from an audience that might otherwise consider the work irrelevant or of low quality. It can also facilitate discovery through social media channels that are more inclusive and democratic than publishers and citation databases. Metrics and tools that can do both of these things have the potential to reverse decades of marginalization in the current system. However, the reversal is neither guaranteed nor automatic. Social media usage is more prominent in the North than in the South, which could lead to skewed results if care is not taken at the time of displaying and interpreting the metrics. While the implications of this imbalance for altmetrics are unclear, no similar metrics have existed until now. And any set of metrics that gives scholars in the developing world the possibility of being on equal footing with scholars in other parts of the world have promise.

Many of altmetrics’ benefits can be realized through the standard altmetrics tools available today. However, there are certain limitations that must still be addressed for altmetrics to serve the alternative scholar. First and foremost, the available metrics must be relevant for the developing country scholar communities. The sources of metrics queried by altmetric tools must, for example, include non-English databases. Mentions in Wikipedia must query all available languages, not just English. Citations must come from regional sources such as SciELO, not just the standard Web of Science and Scopus. Mentions in blogs cannot be harvested only from blog collections that are predominantly from the North. What sources are included in altmetrics data aggregators is not a neutral choice. By tailoring altmetrics to the scientific community of the North, altmetrics would inadvertently replicate the exclusion of developing countries that has plagued the traditional measures of impact – that is, a system biased to give higher scores to journals of the North.

Furthermore, in order to be relevant in the developing world, altmetric tools must also be compatible with the less sophisticated publishing technologies employed by small publishers. The current over-reliance on Crossref’s digital object identifier (DOI) by altmetric providers is problematic. DOIs provide a permanent identifier to articles so that if the URL of an article changes over time, or if there are multiple copies of an article, they can all be uniquely and permanently identified. While the service that Crossref provides is invaluable, DOIs are also disproportionately allocated to journals from the North (and even there, they are disproportionally used by STEM [science, technology, engineering and mathematics] journals over those from the social sciences and humanities). While Crossref has made concerted efforts to lower the barriers for participation, the financial, administrative, technological and language barriers continue to hamper their adoption in the rest of the world. Yet, there are no technical reasons why altmetrics need to rely on the presence of DOIs. DOIs simply provide a convenience that allows altmetrics to be implemented more easily, at the expense of the countless researchers who publish in journals that have not yet adopted the system.

I do not purport to be qualified to provide a complete list of implementation shortfalls. This task is one that I put to altmetric providers and that I ask everyone working to improve scholarly communication to consider. In this essay, I only intend to broaden the possibilities and chart
new directions as the altmetrics movement moves forward. These possibilities are far greater than increased efficiency and broader dissemination, but they can only be brought about if we consider the needs of all scholars, including the alternative scholar.

Other parts of the developing world, Latin America being the most notable example, are already experimenting in a big way with different models of research communication. There is a realization that scholarly communication can serve the public interest and that the modes of scholarly communication from the North are not the appropriate models to follow. The wide adoption of open access (nearly 100% of all journals based in Latin America) is indicative of the region’s desire to make the shift for itself. We are seeing an adoption of open source tools and a general amity towards openness in the developing world, just as the scholarly communication networks and channels in these regions consolidate. All these developments suggest that altmetrics would likely be well received and quickly adopted.

Once adopted, the impact of altmetrics will be more meaningful and far-reaching than in the North. To start, bringing altmetrics to work for the alternative scholar would be a step towards improving systems of higher education, towards steering research towards public needs and towards helping a large swath of the world population have a voice in a global order of science that currently undervalues their contributions. After that, the possibilities are endless. By bringing altmetrics to the developing world, and to alternative scholars everywhere, we can begin to generate a change in scholarly communication that reaches far beyond the walls of academia.

Resources Mentioned in the Article


