Altmetrics: Present and Future – Panel

Sponsored by: ASIS&T SIG/MET

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ABSTRACT

Scholars are increasingly incorporating social media tools like blogs, Twitter, and Mendeley into their professional communication. Altmetrics tracks usage of these and similar tools to measure scholarly influence on the social Web. Altmetrics researchers and practitioners have amassed a growing body of literature and working tools to gather and analyze altmetrics and there is growing interest in this emerging subfield of scientometrics. In this panel, sponsored by SIG/MET, we will present results demonstrating the utility of alternative metrics from a variety of stakeholders: researchers, librarians, publishers and those participating in academic social media sites. We will discuss and debate the value and validity of such metrics with strong degrees of participation from the audience encouraged. Metrics, for better or worse, have had a presence in the lives of scholars—we will discuss the challenges and opportunities of altmetrics for the future.

Keywords
Altmetrics, bibliometrics, scholarly communication, social media.

INTRODUCTION

Scholars are increasingly incorporating social media tools like blogs, Twitter, ResearchGate and Mendeley into their scientific and professional communication. Because these and similar tools are online and public, they make visible the once-invisible practices of scholarly discourse, including bookmarking, annotation, and (particularly) informal discussion. The growing "altmetrics" movement seeks to assess scholarly impact in new ways using data mined from the social Web. Altmetrics are suggested to support faster, broader, and more diverse metrics of scholarly impact (Priem, Taraborelli, Groth & Neylon 2010).

Recent research on altmetrics has focused on the microblogging platform Twitter, social reference managers CiteULike (citeulike.org) and Mendeley (mendeley.com), and blogs. Mendeley and CiteULike are Web-based alternatives to traditional bibliography management tools like EndNote and RefWorks. The number of users who have bookmarked or saved an article in these systems can be counted to assess that article's impact. Several studies have shown that these counts correlate significantly with citations, but medium correlations suggest that they do not reflect the same impact (e.g., Li & Thelwall: r=.69; Li, Thelwall, & Guistini, 2012: r=.55; Bar-Ilan, Haustein, Peters, Priem & Terliesner, 2012: r=.448; Priem, Piwowar, & Hemminger, 2012: r=.4). Haustein and Siebenlist (2011) demonstrated that tags assigned to bookmarked publications reflect a reader-specific view on journal content, differentiating it from previous indicators that measured the impact of the journals only for those who create subsequent journal content.

As scholarly use of Twitter grows (Priem, Costello, & Dzuba, 2011), it too has attracted significant altmetrics investigation. Priem and Costello (2010) showed that scholars cite scholarly literature on Twitter, and Eysenbach (2011), using a small sample of papers published in one journal, provided preliminary evidence that early "tweetations" can predict later citations. Shuai, Pepe, and Bollen (2012) compared Twitter mentions, arXiv downloads and citations. Letierce, Passant, Decker and Breslin (2010), Weller, Dröge, and Puschmann (2011) explored the use of tweets at conferences as a way to document informal scholarly communication. Long-form blogging has also been investigated as an altmetrics source; studies of Researchblogging.org, an aggregator of blog posts discussing peer reviewed articles, have shown that articles from high impact journals are reviewed more (Groth & Gurney, 2010; Shema, Bar-Ilan & Thelwall, 2012).

Alongside these research developments, a number of altmetrics-gathering tools have appeared; these take advantage of the fact that much altmetrics data is freely available in well-structured form via open Web APIs. These tools include http://citedin.org and http://altmetric.com. Impactstory (http://impactstory.org/), another such tool, aims to improve altmetrics collection and display, with the goal of supplementing and diversifying researcher and funder evaluations. Publishers and online scholarly networks have also been active in using and developing altmetrics. Two prominent examples of these are PLOS and Mendeley. Both are large and growing quickly: Mendeley has 2.3M
academics using the service and those researchers are collectively adding over a half a million documents every day to the service. Both companies are also building their growth in part around altmetrics. The growing open access publisher Public Library of Science (PLOS) displays altmetrics next to each of their online articles across its growing corpus of over 70k articles, allowing readers to assess their impact in a variety of different systems in real time. PLOS continues to expand its Article-Level Metrics program. For its part, Mendeley sees its future as a powerful tool for recommending literature to scholars, building on the altmetrics mined from its own database. With the rapid pace of research today, usage data from social Web services such as Mendeley could offer early indicators of popularity to scholars and funders well before citations begin to accumulate.

As an important hub of digital scholarly communications (Cummings, 1992; Atkinson, 1996; Borgman, 2000), libraries are essential in the move toward social media metrics of scholarly impact. An increasing number of scientific publications are now available open access through institutional repositories (IRs), and a discussion of altmetrics as a measure of “visibility” is necessary in this context (Scholtz & Dobratz, 2006)—especially as the number of OA mandates and IRs continue their exponential rise (ROAR, 2012). The three major IR platform developers (DSpace, BePress, EPrints) have responded to the need for usage statistics by developing means to display download metrics next to items, and there is a burgeoning interest in displaying a more diverse suite of metrics (Wacha & Wisner, 2011; Konkiel & Scherer, 2013).

Researcher interest in altmetrics has grown, as evidenced by a full-day altmetrics workshop in 2011, with a followup workshop in summer 2012 and a three-day Article Level Metrics workshop in 2012. However, there remains an unmet need to synthesize the perspectives of actors throughout the altmetrics ecosystem: social media services, libraries, publishers, altmetrics tools, and researchers. Not only does this panel have potential to introduce altmetrics to an interested audience, it also can push forward the integration of theory, use, and practice on this emerging research front. It also offers a platform for engagement in a critical discourse about the use and validity of these sources. Given ASIST attendees’ strong tradition of interdisciplinarity and interest in both social media and scholarly communication, this would be an excellent venue for such a panel.

**ISSUES TO BE DISCUSSED AND PANEL FORMAT**

In this panel, we intend to present results supporting the feasibility and the value of alternative metrics from a variety of perspectives. Drawing on expertise and experience in their respective areas, panel members will discuss (for their area):

1. The current “state of the art” in altmetrics, along with expected altmetrics developments in the near future;
2. The types of “impacts” that altmetrics can measure;
3. Challenges in the use of altmetrics; and
4. Potential use of altmetrics in the future.

Each panel member will give a 10-minute talk presenting her perspective. Following the presentations, we will discuss with the audience the future of altmetrics and what the utility and validity of altmetrics for various stakeholders. The audience will take an active role in the second part of the panel. A Twitter moderator will allow remote audience members to participate in this, as well.

**PANELISTS**

**Moderator:** Dr. Cassidy Sugimoto is an Assistant Professor at the School of Informatics and Computing at Indiana University Bloomington. Her broad research interests are in scholarly communication, with a focus on quantitative indicators of disciplinary and implications for higher education. She will introduce each of the panelists and facilitate the interaction between the audience and panelists.

**Panelists in alphabetical order:**

**Judit Bar-Ilan** is professor at the Department of Information Science at Bar-Ilan University. She has a solid bibliometric background and will offer her insights on altmetrics. Altmetrics results have reached a “critical mass” where altmetrics cannot be ignored anymore and has to be taken into account alongside traditional bibliometric indicators. In her talk she will emphasize the need for careful data collection, data cleansing, the need for free access to data and the need for developing improved data collection and data analysis tools. The long term potential of altmetrics is influenced both by future technological developments and by its acceptance by the research evaluation community.

**William Gunn** William got his PhD in biomedical science from Tulane University, switched to private industry as research director for a biotech startup, and now straddles both as Head of Academic Outreach for Mendeley. William will discuss the challenges and future directions of the social metadata layer of Mendeley before showing examples of these metrics being used “in the wild”. William’s talk will focus on how altmetrics promote the concept of reuse as impact and enable more dynamic forms of scholarship that go beyond the traditional journal format.

**Stefanie Haustein** is a Postdoc at Université de Montréal and a bibliometric analyst at Science Metrix. In her PhD from the University of Düsseldorf she introduced the
analysis of social bookmarks as an indicator of journal usage as a substitute for download statistics, which are either unavailable for analysis or lack detail, and explored social tags as a reader-specific perspective on article and journal content. Stefanie will discuss the need for qualitative and quantitative evaluations of altmetrics and their sources to find out in how far they can be used for evaluation and retrieval purposes. Especially with tools like impactstory and Altmetric a systematic assessment is needed to explore which social media tool is used by whom (e.g., researchers, students, professionals, interested public) for what purpose (e.g., scholarly communication, teaching, marketing, informing the public) to analyze their validity and significance as impact indicators.

Stacy Konkiel is the Science Data Management Librarian at Indiana University Bloomington. Stacy will be speaking on the challenges and opportunities that lie ahead in implementing altmetrics tools in institutional repositories (IRs)--an as-yet underrepresented but valuable “market” to test the deployment and adoption of such metrics. In addition, she will discuss both the sociotechnical barriers to participation that exist for repository managers, and her university’s experience implementing Altmetric.com in their DSpace repository.

Vincent Larivière Vincent Larivière is assistant professor of information science at the Université de Montréal, where he teaches research methods and bibliometrics. He is also an associate researcher at the Observatoire des sciences et des technologies and a regular member of the Centre interuniversitaire de recherche sur la science et la technologie. His work in the area scholarly communication has been published in journals such as the Journal of the American Society for Information Science and Technology, Scientometrics and Journal of Informetrics. Vincent holds a B.A. in Science, Technology and Society (UQAM), an M.A. in history of science (UQAM) and a Ph.D. in information science (McGill), and has performed postdoctoral work at Indiana University’s School of Library and Information Science.

Jennifer Lin is a senior product manager at Public Library of Science for the Article-Level Metrics initiative. She received her PhD in political theory at Johns Hopkins, which has informed her knowledge and interest in how ontologies and techniques of measurement express and serve the underlying processes that support a system. She will be speaking on how altmetrics serves an innovative and disruptive techno-political end, all the while preserving the traditional scientific confidence in the aspiration and ability of “measuring what we want to know.” She will extend this argument to discuss the ways in which PLOS’s work as a publisher-advocate of altmetrics challenges the structural incentive system through its engagement with researchers, institutional decision-makers, other publishers, and funding bodies.

REFERENCES


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