# The Times, They Are A-Changin': Attitudes Towards Altmetrics in Higher Education

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#### Abstract:

Altmetrics, or non-traditional methods of measuring scholarly impact, are increasingly relevant across a range of disciplines. This paper reports results of an online survey of faculty and higher-education administrators in many disciplines about their use of academic social media and their attitudes towards altmetrics.

#### Résumé

In 1963, Bob Dylan understood that "the times, they are a-changin". Even in the twenty-first century, change remains inevitable, perhaps no place more clearly than in academia. Culturally, academia is becoming ever more subject to a focus on performance management, ranking, accountability, transparency, and commodification. These issues are playing out in a context of increased competition and ever-increasing productivity expectations. It is against this background that attention is being paid to new metrics of scholarly impact, or "altmetrics". Altmetrics is the term applied to non-traditional measures of scholarly impact or influence. Rousseau and Ye (2013) note that "altmetrics...has not (yet) a precise definition, but refers to the use of social media, particularly Web 2.0 media, in assessing the influence of researchers on all type of users."

Social media is affecting academia to a significant degree, helping scholars to forge and build scholarly relationships on a global scale. Common examples of the tools used to do so include Academia.edu, ResearchGate, and LinkedIn. Academics are using these technologies to promote their work, bringing attention to a range of their research products. Although it is apparent that traditional measures of research impact, such as citation counts and the h-index, remain predominant in tenure and promotion decisions, social media presence, particularly in academically-oriented venues, may be beginning to play a minor role. Many scholars use social media to actively promote their work and enhance their scholarly profiles. In addition, some universities are beginning to recognize that social media tools have potential beyond communication and marketing, to support the academic enterprise. It is likely that scholarly impact will be increasingly evaluated not only through quantity and quality of publications, citations and influence on policy and practice, but also by the interest that scholarship creates in the social media sphere.

The relative importance of social media presence for academics is still very much debated. Schroeder et al. (2011) argue that "only a certain amount of research can be said to have impact without making the very notion of impact meaningless." They ask whether "those dominating the online attention space differ from those who

dominate the attention space in the channels of traditional scholarly dissemination? We would expect that although in certain respects, new 'stars' emerge online, the main impact of Web 2.0 will be to make their traditionally disseminated work also garner more attention. Further, only work that is assessed by peer review will enter into 'winnowed' knowledge, thus making Web 2.0 dissemination ancillary." In other words, current social media metrics measure marketing of scholarly work rather than actual impact on other scholars or on practitioner or policy communities. Social media analytics does not yet measure scholarly impact (Bar-Ilan et al, 2012).

Rousseau and Ye (2013) argue that "'mentions" on the internet amount to popularity measures...hence altmetrics data must be approached with caution, and in the context of multi-dimensional evaluation exercises... "likes" or "shares" lack authority and scientific credibility so that the use of altmetrics may still be somewhat premature." Rousseau and Ye propose that "combining informetric data (via a multi-metric approach) and peer review (for the many aspects that are not quantitative, including the interpretation of quantitative data) is necessary for all forms of academic evaluation." A significant challenge to altmetrics is that there exists considerable potential for misinformation in the social media sphere; Cheung (2013) notes that it is relatively easy to manipulate altmetrics such as number of "downloads" or "likes" by setting up multiple user accounts. In addition, Haustein (2014) notes that altmetrics data are limited in both representativeness and scope. Despite these reservations, some scholars are optimistic about the increasing relevance of social media in promotion and tenure decisions (Gruzd et al., 2011).

Disciplinary differences are also important to consider. In professional schools such as medicine and law, academic disciplines bridge scholarship and professional application. This is the case with information-related disciplines such as library and information science (LIS), computer and information science, and management information systems. Usage of scholarly works beyond journal citation, such as to inform practice, is a potential measure of impact. Lay social media outlets can serve as a window for extrascholarly impact.

The study to be presented at the CAIS/ACSI conference is the latest phase in a multiphase project that has examined acceptance and application of altmetrics in the LIS scholarly context. To date, a survey of administrators (deans, directors, and chairs) has found that these respondents have not adopted altmetrics as standard tools to measure scholarship (Julien & Bonnici, 2013). A second phase analysed the social media profiles of representative faculty members in the field and compared those profiles against traditional measures of scholarly impact. We found dramatic variations in use of academic- and non-academic social media, but limited use of non-academic social media for scholarly purposes. For this sample, we found that most scholarly references on lay social media are not substantive, and there was little relationship between academicallyoriented or non-academically-oriented social media measures of impact and traditional measures (citation analyses). We concluded that altmetrics are a low priority for most faculty members in LIS, and are considered only supplemental to traditional metrics (Bonnici & Julien, 2014). A third phase of this research analyzed tenure and promotion policies for departments/schools of information and library science in North America. Results suggested that official tenure and promotion documents do not typically specify impact measures (Julien & Bonnici, 2014). Subsequent interviews with administrators indicated that altmetrics would only be relevant if the social media considered are central to the faculty member's research, teaching, or service area, and if that social media

research and/or teaching (i.e. regular scholarly or professional blog posts) has an impact on an audience (e.g., it was useful to practitioners). Faculty are only encouraged to use altmetrics if it significantly promotes the tenure case, and it is up to the tenure candidate to "make the case that this stuff is valuable." These interview respondents indicated that a significant challenge to including altmetrics in promotion and tenure dossiers was conservative review committees at higher levels in academic institutions. In addition, it isn't clear to many faculty members or administrators exactly what altmetrics are and what they measure. Another concern is the potential for gaming altmetrics (e.g., citing friends, orchestrating tagging, misrepresentation). Thus, significant resistance to widespread use of altmetrics remains throughout the field (Julien & Bonnici, 2014).

The current phase of this ongoing research (to be presented at CAIS/ACSI) is expanding analysis of attitudes towards altmetrics by surveying faculty members and administrators (deans, directors, and chairs) across a wide range of disciplines. The survey seeks to determine the current practices of these respondents regarding their use of academic social media sites such as Academia.edu, ResearchGate, and LinkedIn, to promote their scholarly works. In addition, the data will reveal respondents' perspectives about the inclusion of altmetrics data in promotion and tenure processes. Web-based surveys (one each for faculty and administrators) are being distributed via email, academic listservs, and academic social media sites to solicit voluntary participants for the study. Results will take the form of descriptive statistics, and content analyses of responses to openended questions. These data will situate attitudes and practices in LIS within a larger context of multiple disciplines.

The data presented at the CAIS/ACSI conference will be useful to inform appropriate application of altmetrics in disciplines, including LIS, which are responsible for preparing students for practice. Indeed, information professionals are most appropriately suited to contributing to discussions of scholarly communication and to evaluations of those practices. Scholarly impact remains an important and intriguing issue, and the landscape in which that impact is being evaluated demands our critical attention during these times of significant change.

### References

Bar-Ilan, J., Haustein, S., Peters, I., Priem, J., Shema, H., & Terliesner, J. 2012. "Beyond Citations: Scholars' Visibility on the Social Web." Éric Archambault, Yves Gingras and Vincent Larivière, eds. *Proceedings of 17th International Conference on Science and Technology Indicators*, Montréal: Science-Metrix and OST. Volume 1, pp. 98-109.

Bonnici, Laurie, & Julien, Heidi. 2014. "Altmetrics: An Entrepreneurial Approach to Assessing Impact on Scholarship and Professional Practice." Presented at the annual conference of the Association for Library and Information Science Education, Philadelphia, January 21-24.

Cheung, Man Kit J. 2013. "Altmetrics: Too Soon for Use in Assessment." *Nature* 494,176 (14 February 2013). doi:10.1038/494176d.

Gruzd, Anatoliy, Staves, Kathleen, & Wilk, Amanda. 2011. "Tenure and Promotion in the Age of Online Social Media." *Proceedings of the American Society for Information Science and Technology*, 48, 1-9.

http://onlinelibrary.wiley.com/doi/10.1002/meet.2011.14504801154/abstract

Haustein, Stefanie. 2014. "Readership Metrics." In Cronin, B., & Sugimoto, C.R. (Eds.). (2014). *Beyond bibliometrics: Harnessing multidimensional indicators of scholarly impact* (pp. 327-44). Cambridge, MA: The MIT Press.

Julien, Heidi, & Bonnici, Laurie. 2013. "Sooner or Later? The Diffusion and Adoption of Social Media Metrics to Measure Scholarly Productivity in LIS Faculty." Presented at the 2013 International Conference on Social Media and Society, Halifax, NS, Canada, September 14-15.

Julien, Heidi, & Bonnici, Laurie. 2014. Altmetrics in Library and Information Science: Trickle or Tsunami? Presented at the Social Media & Society Conference, Toronto, September 27-28.

Priem, Jason, and Hemminger, Bradley M. 2010. "Scientometrics 2.0: Toward new metrics of scholarly impact on the social Web." *First Monday* 15(7). <a href="http://firstmonday.org/ojs/index.php/fm/article/viewArticle/2874/2570">http://firstmonday.org/ojs/index.php/fm/article/viewArticle/2874/2570</a>

Rousseau, Ronald and Ye, Fred Y. 2013. "A Multi-Metric Approach for Research Evaluations." *Chinese Science Bulletin*. http://users.telenet.be/ronald.rousseau/altmetrics influmetrics.pdf.

Schroeder, Ralph, Power, Lucy, and Meyer, Eric T. 2011. "Putting Scientometrics 2.0 in its Place." Presented at Altmetrics11: Tracking scholarly impact on the social Web. Koblenz (Germany), 14-15 June 2011. <a href="http://altmetrics.org/workshop2011/schroeder-v0/">http://altmetrics.org/workshop2011/schroeder-v0/</a>.

Sud, Pardeep, and Thelwell, Mike. 2014. "Evaluating Altmetrics." *Scientometrics* 98:1131-1143. doi 10.1007/s11192-013-1117-2.