Altmetrics and Grey Literature Perspectives and Challenges

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Altmetrics?

4278

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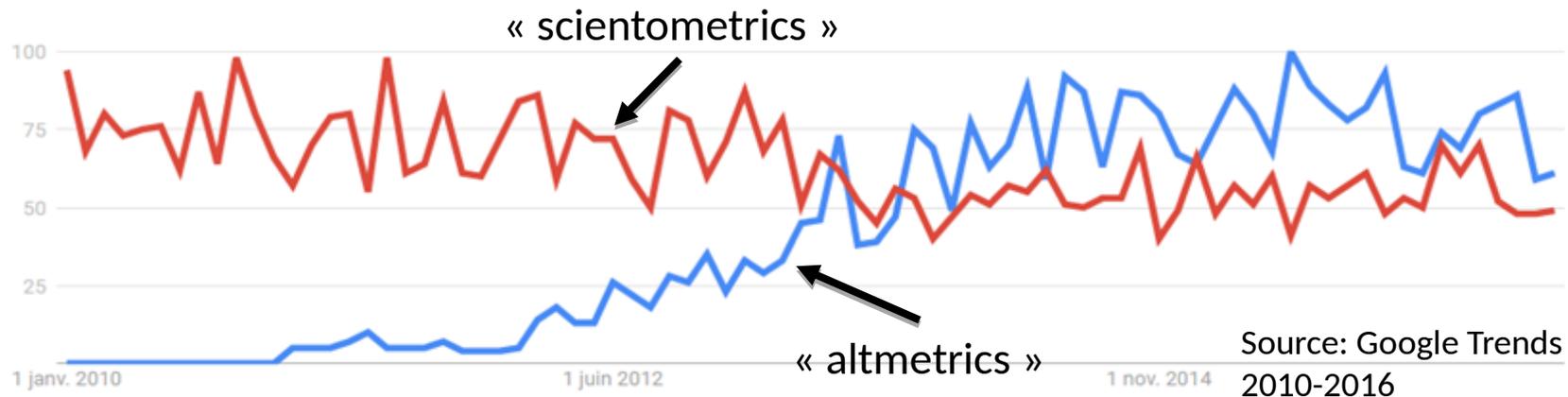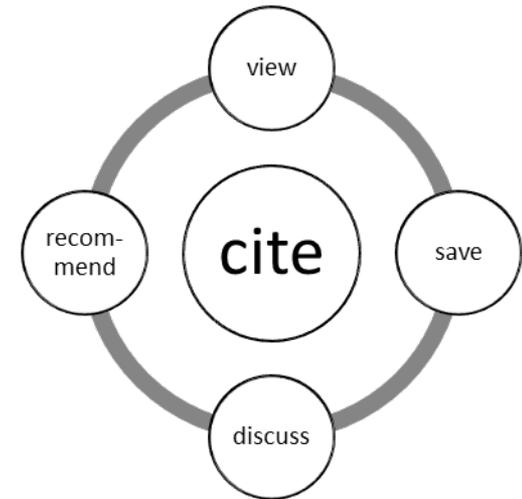
5 readers on Mendeley
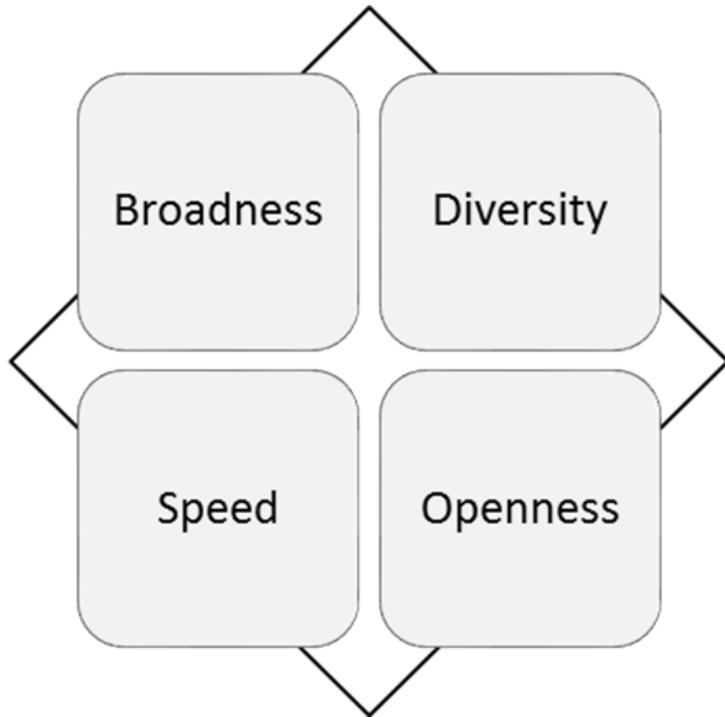**0** readers on CiteULike

See more details

- Social web metrics for academic publications.

- Interesting for measuring societal impact, beyond the academic community.

- Count of views, downloads, clicks, likes, tags, posts (blogging) and tweets (micro-blogging), shares, discussions etc.

- The term "usually describes metrics that are alternative to the established citation counts and usage stats—and/or metrics about alternative research outputs, as opposed to journal articles." (NISO 2014)

The future of (not only) metrics

- Alternative or enhancement?

- Relevant for research evaluation
- Emergence of altmetrics part of the transition to a more accountable and transparent research system
- Levers in support of open science
- Decisions on grants, hiring and tenure

« scientometrics »

« altmetrics »

Source: Google Trends 2010-2016

Benefits

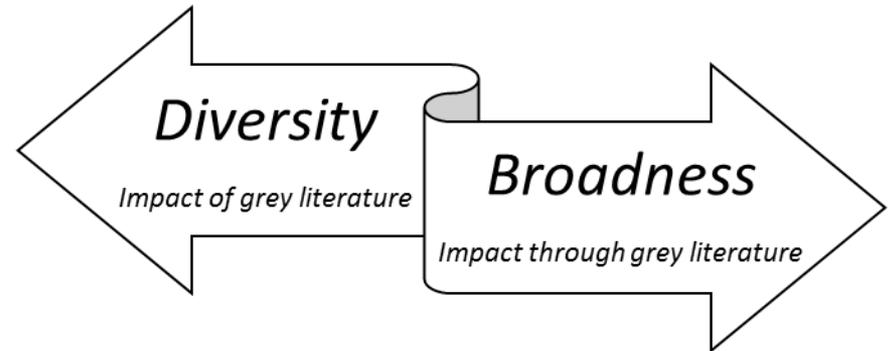Broadness Diversity

Speed Openness

Altmetrics

- measure impact beyond science
- can include scholarly products other than papers (articles)
- allow impact to be measured shortly after the output
- as a rule, it is easy to obtain altmetric data

What about grey literature?

Diversity

- Impact assessment on article level such as download counts also applies to grey literature.
- "Altmetrics (...) allow for evaluation of a greater diversity of products, i.e., not just publications (...). These products might be datasets, software, copyrights, algorithms, grey literature, and slides (...)." (Bornmann 2014)

Diversity
Impact of grey literature

Broadness
Impact through grey literature

Broadness

- Altmetrics are not limited to scientometric databases
- Their impact assessment based on citations, links and referrals can take account of a broader range of scientific information, including citations in dissertations, reports, white papers etc.
- Thus, grey literature can serve as material to measure impact of scientific output

Altmetrics of grey literature

- Repositories
  - (HAL, figshare, IRUS-UK, CORE)
- Social networks
  - (ResearchGate, Academia)
- Reference managers
  - (Mendeley, CiteULike)
- Academic search engines
  - (Microsoft Academic Search, Google Scholar)
- Altmetric tools
  - (Altmetric.com, PlumX, ImpactStory, ArnetMiner)

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Abstract fr Notre proposition est de valoriser le cœur même de l'enseignement et de la recherche universitaire et de construire une démarche « données de la recherche » autour des thèses de doctorat. Pour plusieurs raisons : les thèses appartiennent à l'enseignement supérieur, hors tout circuit commercial, et elles ont, du fait de leur nombre, leur richesse et qualité mais aussi leur représentativité, un grand intérêt pour la veille et l'innovation. Elles sont déjà, pour une grande part, dématérialisées, l'infrastructure numérique est en place ; par ailleurs, il y a une incitation forte à la diffusion en libre

CITATION

Stéphane Chaudiron, Catherine Maignant, Joachim Schöpfel, Isabelle Westeel. Les données de la recherche dans les thèses de doctorat - Livre blanc. [Rapport de recherche] Université de Lille 3. 2015. <hal-01192930>

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The most influential journals: Impact Factor and Eigenfactor

by: Alan Fersht

Proceedings of the National Academy of Sciences, Vol. 106, No. 17. (28 April 2009), pp. 6883-6884, doi:10.1073/p

Abstract

10.1073/pnas.0903307106

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How consistent are **altmetrics** providers? Study of 1000 PLOS ONE ...lications using the PLOS ALM, Mendeley and **Altmetric**. com APIs

Z Zahedi, M Fenner, R Costas - **altmetrics** 14. ..., 2014 - ndownloader.figshare.com

Altmetrics track the impact of scholarly works on the social web. The term was introduced in ...10 (Priem, et al.) as an alternative way of measuring the broader research impact of scholarly outputs using the social web; aimed at enhancing and complementing the more ...

Cité 12 fois   Autres articles   Citer   Enregistrer   Plus

Workshop paper in Google Scholar

Altmetrics offer a unique opportunity to exhibit the real impact of conference papers, dissertations, working papers etc. and to contribute to improved visibility.

Yes, but...

- This work remains more or less exceptional. Most studies include only journal articles.
- The main reason is that altmetrics tools need **unique identifiers, standard metadata and good availability**.
- "One of the critical issues is that these aggregators concentrate on documents that have a unique object identifier, which inevitably neglects certain document types (...) For example, Altmetric.com (...) focuses its data collection on DOIs, which has led to a de facto reduction of altmetrics studies to journal articles, excluding many types of documents and journals." (Sugimoto et al. 2016)

Altmetrics through grey literature?

- Grey literature "presents great opportunities for alternative metrics, providing data and indicators that cannot be found anywhere else." (Euan Adie)
- But - do altmetrics tools make use of grey literature? And if so, how?

Two examples

- **Web-based grey literature can serve as source to increase impact of other grey literature.** Wilkinson et al. (2014) conducted their study on WIRe with a small sample of 20 research reports. Their results showed that most of them (17) had been cited by other reports, conference papers, white papers, MA and PhD theses and speeches and/or dissertations available on the web. But without standard or automated procedures, including grey literature involves a lot of human work.

- **New content mining tools improve the efficiency and broadness of data aggregators.** Thus, Altmetric has developed a text-mining solution (Altmetric Policy Miner) to discover mentions of publications in policy documents on selected websites . Due to this APM-software, Bornmann et al. (2016) were able to assess the societal impact of climate change publications mainly through grey literature from governmental agencies, international organizations and NGOs.

Yes, but…

- Grey literature as source for altmetric impact assessment produce significant and complementary results based on citations, links and referrals from a broader range of scientific information, including dissertations, reports, white papers etc.

- This approach is more complicated and time-consuming than the usual WoS or Scopus-based work.

- In contrast to traditional metrics which usually exclude grey literature, altmetrics are not limited to scientometric databases. But when it comes to larger empirical studies, this exploitation of grey literature remains an exception and is sometimes limited to science blogs, while proceedings, dissertations etc. are dismissed.

So what?

Getting grey literature into the heart of the coming mainstream adoption of altmetrics is essential for the future of grey literature in open science. Some suggestions:

- Contribute to research on altmetrics for or with grey literature, for instance in the fields of economics (working papers) or computer science (conference papers).
- Cooperate with altmetrics companies and teams for the development of appropriate tools that fit with grey literature.
- Accelerate the allocation of unique identifiers for grey literature and their authors and why not their institutions, above all this means partnership with DOI, ORCID and CASRAI, in particular for electronic theses and dissertations and for scientific reports.
- Contribute to further standardization of grey literature metadata.
- Contribute to increasing availability of grey literature in institutional repositories.