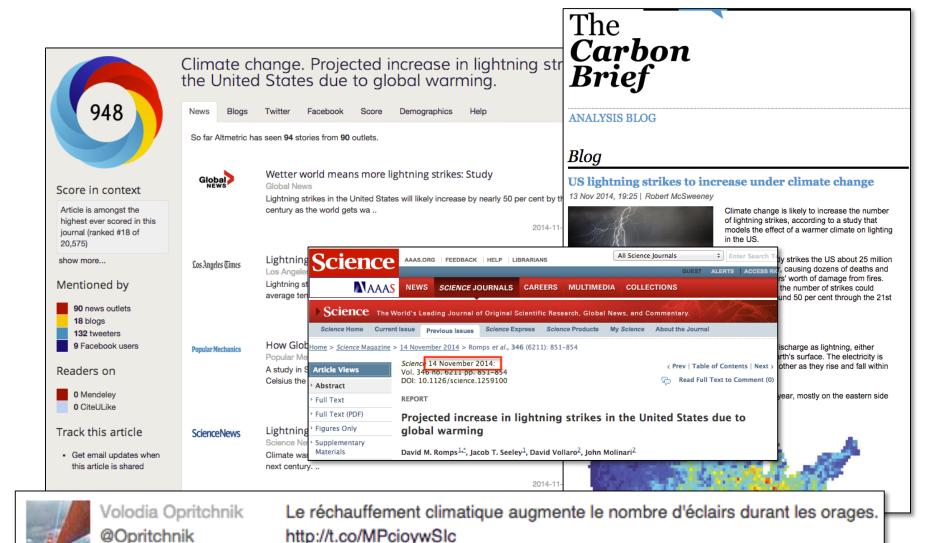


Making sense and making use of Altmetrics in research evaluation



966 followers

Citation metrics lag behind





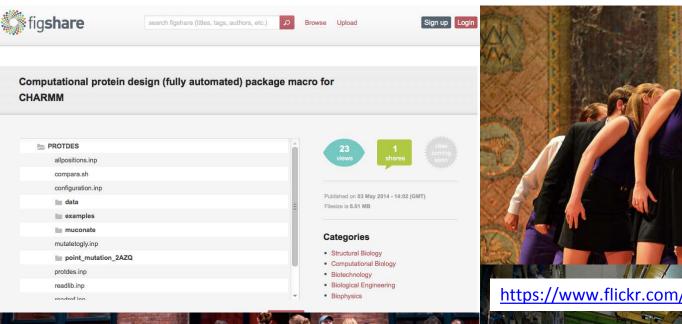
Academics aren't the only audience



https://www.flickr.com/photos/wwworks/8722043674



Articles aren't the only academic outputs





https://www.flickr.com/photos/nonorganical/8478337494

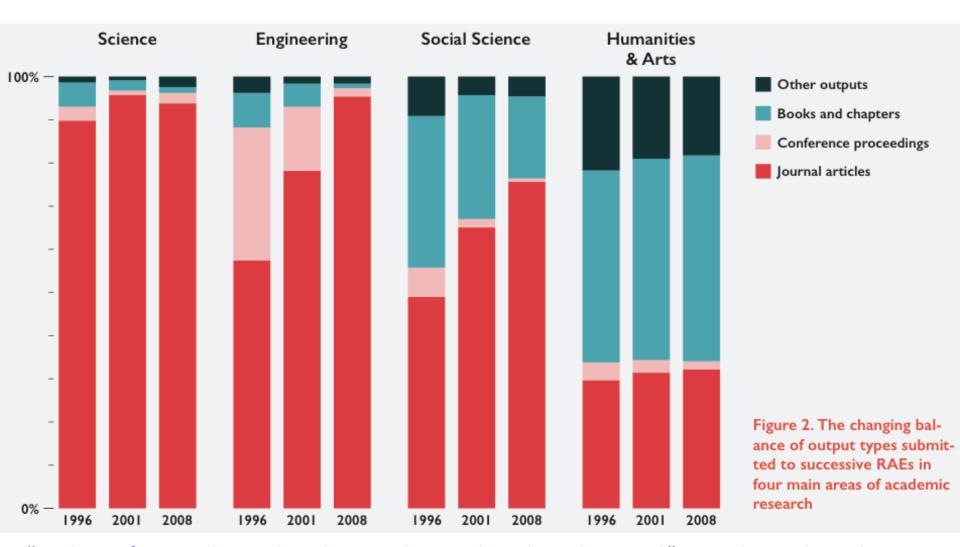


https://www.flickr.com/photos/seeminglee/397721189

https://www.flickr.com/photos/dominiqs/3559233039



Distortion of the research landscape



"Evidence for excellence: has the signal overtaken the substance?", Jonathan Adams & Karen Gurney, Digital Science, June 2014



Research evaluation is changing

Grant funders looking for proof of "broader impacts" often defined as "an effect, change, or benefit to the economy, society, culture, public policies, health, the environment, etc."



http://www.ref.ac.uk/panels/assessmentcriteriaandleveldefinitions/



Broaden dissemination to enhance scientific and technological understanding, for example, by presenting results of research and education projects in formats useful to students, scientists and engineers, members of Congress, teachers, and the general public.

http://www.nsf.gov/pubs/2007/nsf07046/nsf07046.jsp

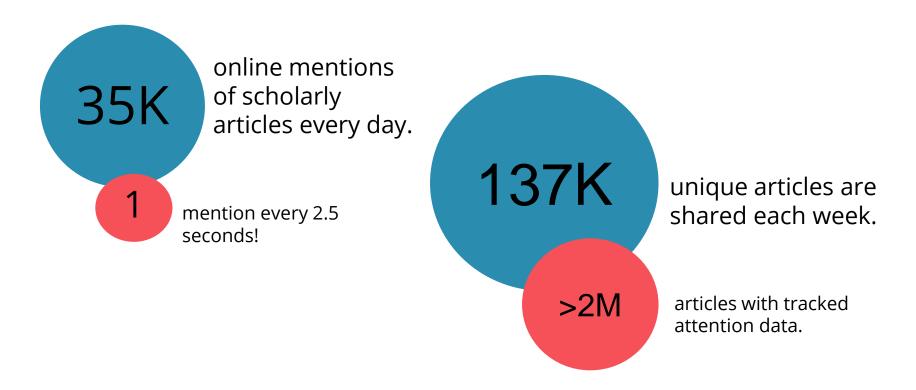
The assessment committee bases its judgement on three assessment criteria: research quality, relevance to society, and "viability".



KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN



The conversation is moving online



Source: Altmetric internal data, June 2014



Sources of Attention

News outlets

- Over 1,300 sites
- Manually curated list
- Text mining
- Global coverage

Social media and blogs

- Twitter, Facebook, Google+, Sina Weibo
- Public posts only
- Over 8,000 blogs

Post-publication peer review

- Publons
- PubPeer

Reference managers

- Mendeley, CiteULike
- Reader counts
- Don't count towards the Altmetric score

Other sources

- YouTube
- Reddit
- F1000
- Pinterest
- Q&A

Policy documents

- NICE Evidence
- Intergovernmental Panel on Climate Change
- 15 others and counting



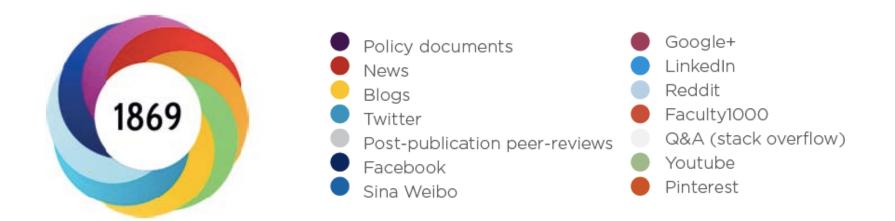
What does Altmetric do?



- We follow a manually curated list of sources – where academic research is regularly mentioned.
- We pick up mentions that contain *links* to papers.
- We text mine news sources and blogs to determine which article they refer to.
- We collate the attention paid to different versions of the same paper.
- We show you the actual mention, so you can assess the context.



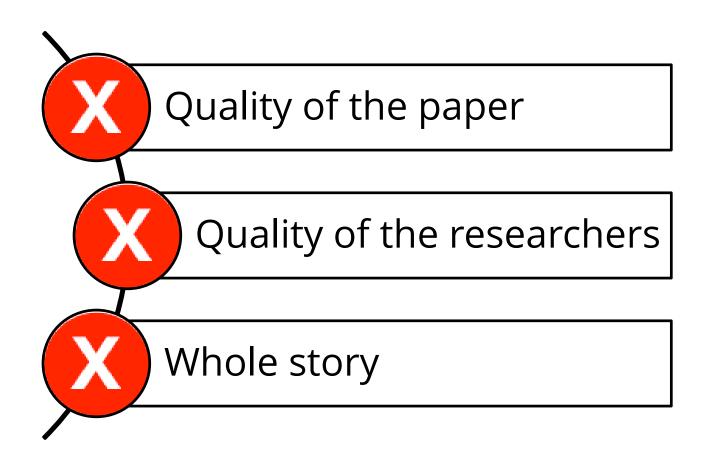
The donut visualization



Volume	Sources	Authors
The score for an article rises as more people mention it.	Each category of mention contributes a different base amount to the final score.	How often the author of each mention talks about scholarly articles influences the contribution of the mention.



The Altmetric score does not tell you...





Metrics that we avoid

We don't show...

- Facebook likes
- Twitter favourites
- Usage data



Because...

- They can be bought or gamed
- Offering usage data from just a few sources does not allow meaningful analysis or comparisons



What can the data tell you?



What type of attention is this research receiving?



Where has this article received the most traction?



Which countries are engaging most with the content?



Has this article influenced policy, spurred new research, or engaged a new audience?

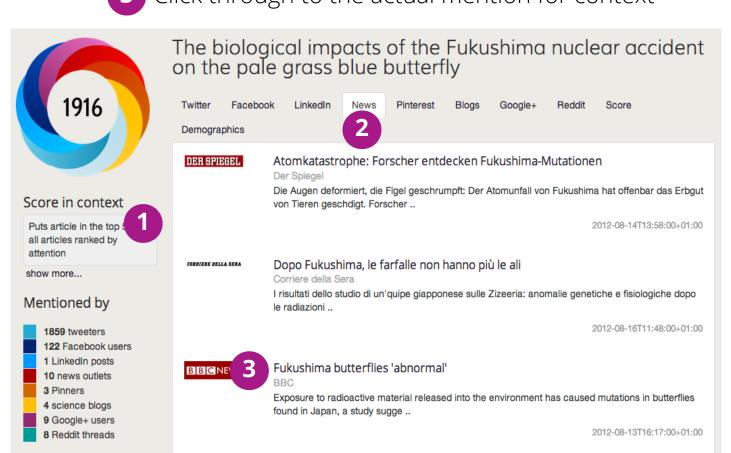


Are reactions to this article positive or negative?



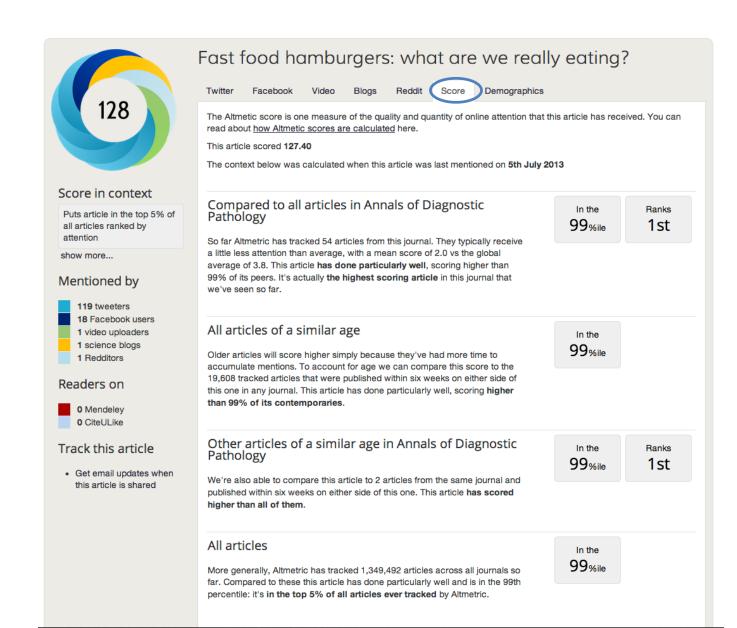
Navigating the Details Pages

- 1 Estimate the amount of attention from the score
- Browse each type of source, or interpret the significance of the score, or see the demographics of mentions
- 3 Click through to the actual mention for context





The score in context



A mitochondrial genome sequence of a hominin from Sima de los Huesos.

News Blogs Twitter Facebook Google+ Reddit Video Score Demographics Help

Twitter attention

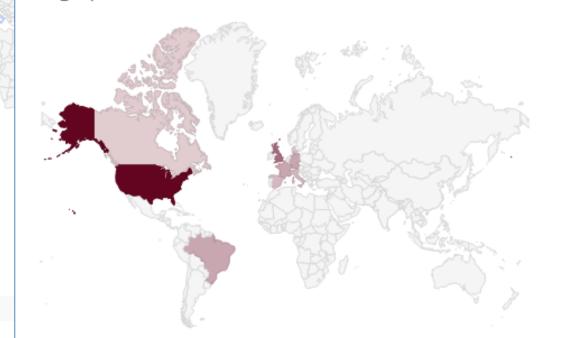
The data shown below were collected from the profiles of tweeters who shared this article. Click <u>here</u> to find out more about how the information was compiled.

Geographical breakdown



The data shown below were compiled from readership statistics for **221** Mendeley readers of this article. the article's page on the Mendeley website.

Geographical breakdown



Tweeter demographics

Type Members of

Members of the public

Scientists

CA Other

Country

US

GB

DE

BR

FR

ES

IT

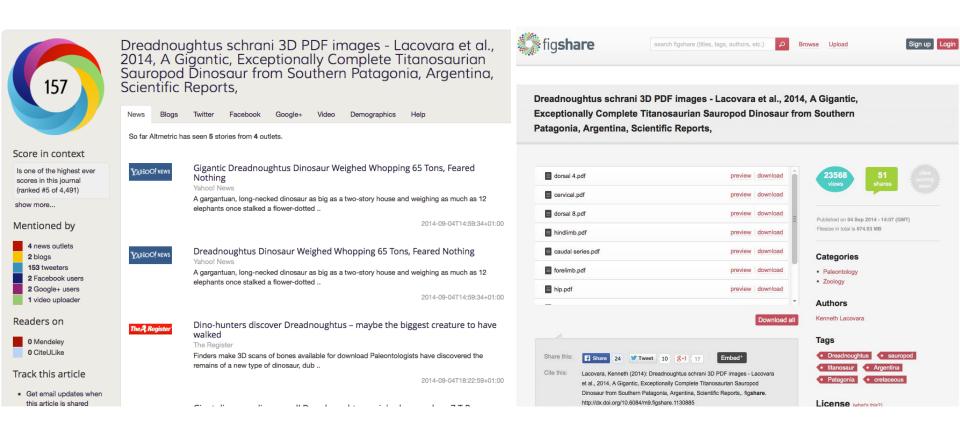
DK



Not just journal articles

We track all CrossRef and DataCite DOIs, PubMed IDs, arXiv IDs, RePEc IDs, and we can track handles too.

e.g. article details page for figshare DOI 10.6084/m9.figshare.1130885
 http://www.altmetric.com/details.php?doi=10.6084/m9.figshare.1130885





BUT DOES ANY OF THIS MATTER? OR IS IT JUST NOISE?

Bornman L (2014). "Alternative metrics in scientometrics: A meta-analysis of research into three altmetrics", arXiv preprint.

http://arxiv.org/abs/1407.8010

Reports a medium/strong correlation between Mendeley readership and citations, a weak one between blog posts and citations, and little or no correlation between Twitter mentions and citations.

Haustein S, Peters I, Sugimoto C, Thelwall M and Larivière V (2014). "Tweeting Biomedicine: An Analysis of Tweets and Citations in the Biomedical Literature", *Journal of the Association for Information Science and Technology*, 65(4), 656–669.

http://onlinelibrary.wiley.com/doi/10.1002/asi.23101/abstract

Using an analysis of 1.4 million documents covered by both PubMed and Web of Science and published between 2010 and 2012, shows that "correlations between tweets and citations are low, implying that impact metrics based on tweets are different from those based on citations"

Mohammadi E, Thelwall M, Haustein S and Larivière V (2014). "Who Reads Research Articles? An Altmetrics Analysis of Mendeley User Categories", Academia.edu pre-print.

http://www.academia.edu/6298635/Who Reads Research Articles An Altmetrics Analysis of Mendeley User Categories

Suggests that "Mendeley readership can reflect usage similar to traditional citation impact, if the data is restricted to readers who are also authors, without the delay of impact measured by citation counts" and that "Mendeley statistics can also reveal the hidden impact of some research papers, such as educational value for non-author users inside academia or the impact of research papers on practice for readers outside academia."

Shema H, Bar-Ilan J and Thelwall M (2014). "Do Blog Citations Correlate With a Higher Number of Future Citations? Research Blogs as a Potential Source for Alternative Metrics", Journal of the Association for Information Science and Technology, 65(5), 1018-1027.

http://onlinelibrary.wiley.com/doi/10.1002/asi.23037/abstract

Finds evidence of correlations between articles reviewed in blogs, and future citations.

Thelwall M, Haustein S, Larivière V and Sugimoto CR (2013). "Do Altmetrics Work? Twitter and Ten Other Social Web Services", *PLoS ONE 8(5): e64841.*

http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0064841

Provides evidence that altmetrics can provide intelligence on the readership of academic research that traditional citation metrics can't: "It seems that altmetrics probably capture a broad, or at least a different, aspect of research visibility and impact in comparison to citation counts. For example, non-publishing so called "pure" readers are estimated to constitute one third of the scientific community and these may tweet or blog articles without ever citing them."

Zahedi Z, Costas R and Wouters P (2014). "How well developed are altmetrics? A cross-disciplinary analysis of the presence of 'alternative metrics' in scientific publications", *Scientometrics* 101(2), 1491-1513.

http://link.springer.com/article/10.1007%2Fs11192-014-1264-0

In a study of metrics for 20,000 random publications from the Web of Science found that 62.6% of the articles had Mendeley readership metrics, and found a moderate Spearman correlation (r = 0.49) between Mendeley readership counts and citation indicators.

Conclusions from evidence – 1

 Academic readings in Mendeley are an indicator that the article has influenced thought and may be cited by that author in the future.

A recent article with lots of Mendeley readership might be a better bet for REF than a recent article with little Mendeley readership

Conclusions from evidence – 2

 Articles reviewed (favourably) in blogs and other online sites are likely to be well-cited in the future.

A recent article with positive online reviews might be a better bet for REF than a recent article with no positive online reviews.

Conclusions from evidence – 3

- Social media attention on sites like Twitter, Facebook, Google+ might indicate impact amongst practitioners, policy makers, and the general public.
- ➤ You need to check the mentions for significance of author, and reach. Maybe contact them to find out more.
- ➤ Authors need to manage their social media network to help reach the right audience.
- ➤ Authors need to actively promote their own research.

How can Altmetric for Institutions help?

Researchers

- Monitor immediate uptake of articles
- Provide evidence of impact for CVs and funders
- Help choose which articles to submit to RFF
- Make informed decisions on future publishing choices

Research admin officers

- Monitor and report on activity by department
- Assist in grant applications
- Comply with funder and governmental mandates
- Evaluate need for additional support

Comms team

- Measure success of (social) media engagement
- Find success stories to share (e.g. through press releases, media interviews, Alumni magazine)
- Find researchers who are engaged with social media

Librarians

- Help researchers track the impact of their articles
- Provide evidence for CVs and grant applications
- Provide a current awareness service
- Help lecturers populate suggested reading lists

Monitor uptake of a new article



Score in context

Puts article in the top 5% of all articles ranked by attention

show more...

Mentioned by

7 news outlets

2 tweeters 1 Facebook user

Readers on

19 Mendeley
1 CiteULike

Track this article

 Get email updates when this article is shared Female monopolization mediates the relationship between pre- and postcopulatory sexual traits

News Twitter Facebook Score Demographics Help

So far Altmetric has seen 2 tweets from 2 accounts.



@razibkhan @evolbrain Female monopolization mediates the relationship between pre- and postcopulatory sexual traits http://t.co/EA3z3QBg8O

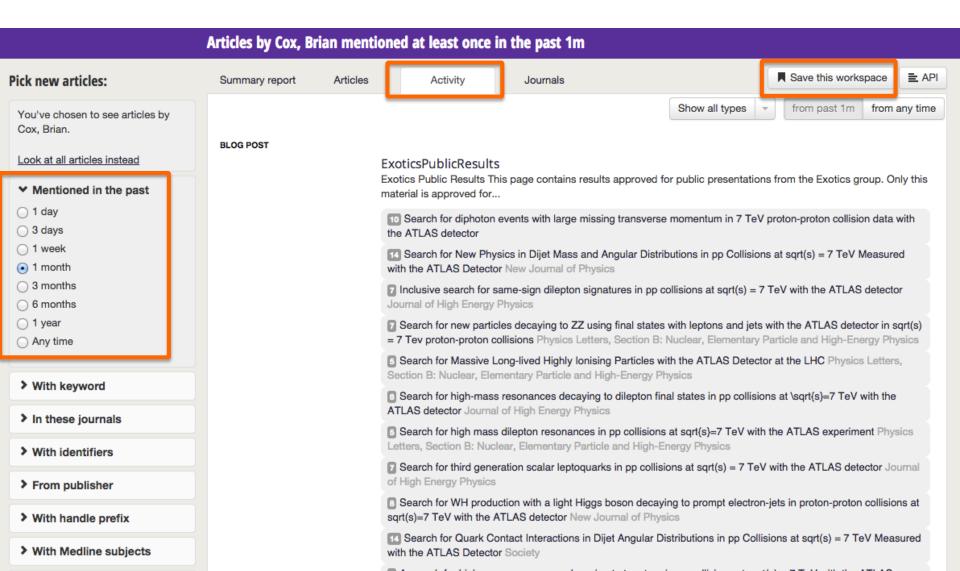


Female monopolization mediates the relationship between pre- and postcopulatory sexual traits http://t.co/uzddQmlimN

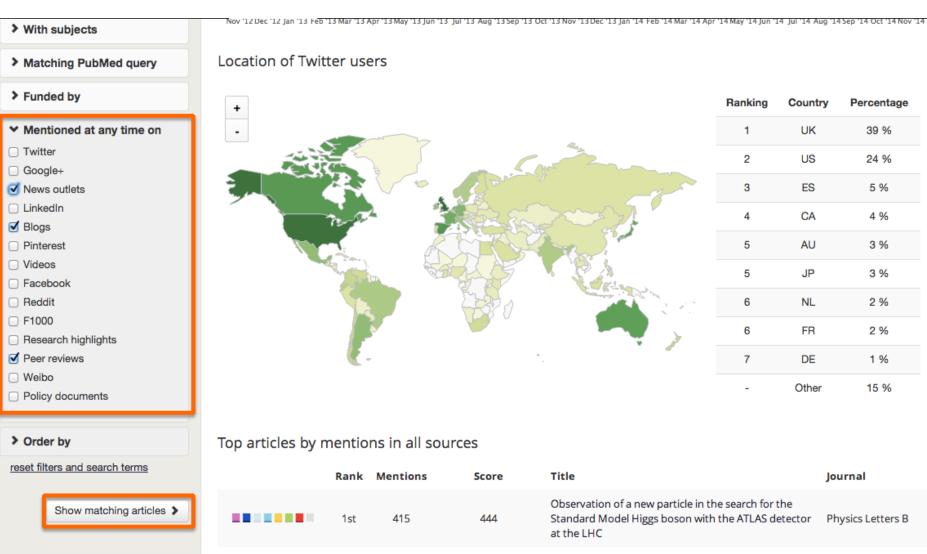
13-Mar-2014

29-Jan-2014

Daily or weekly alert of new mentions of any of your articles



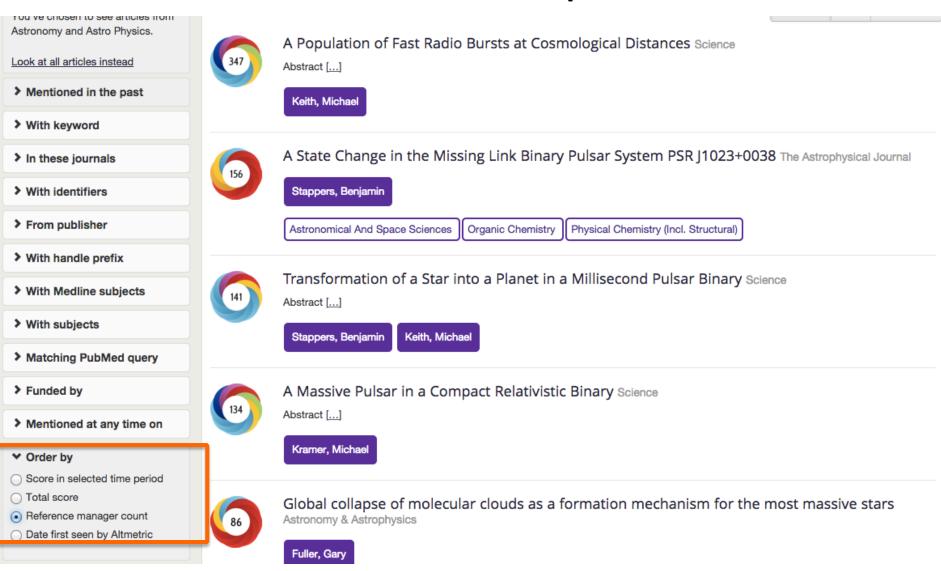
Track critiques of your articles that might require a response



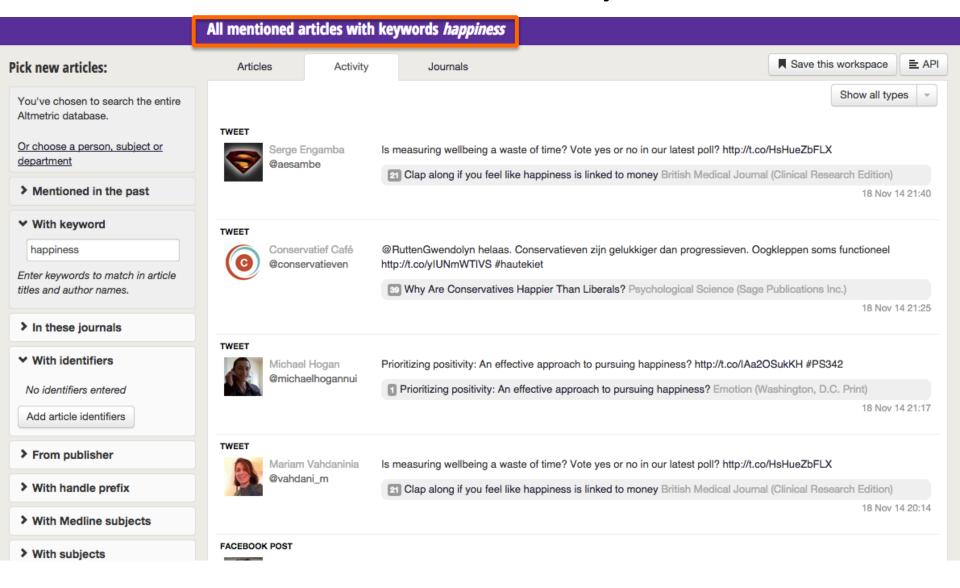
Prevalence of abnormalities in knees detected by MRI

Pritich Modical

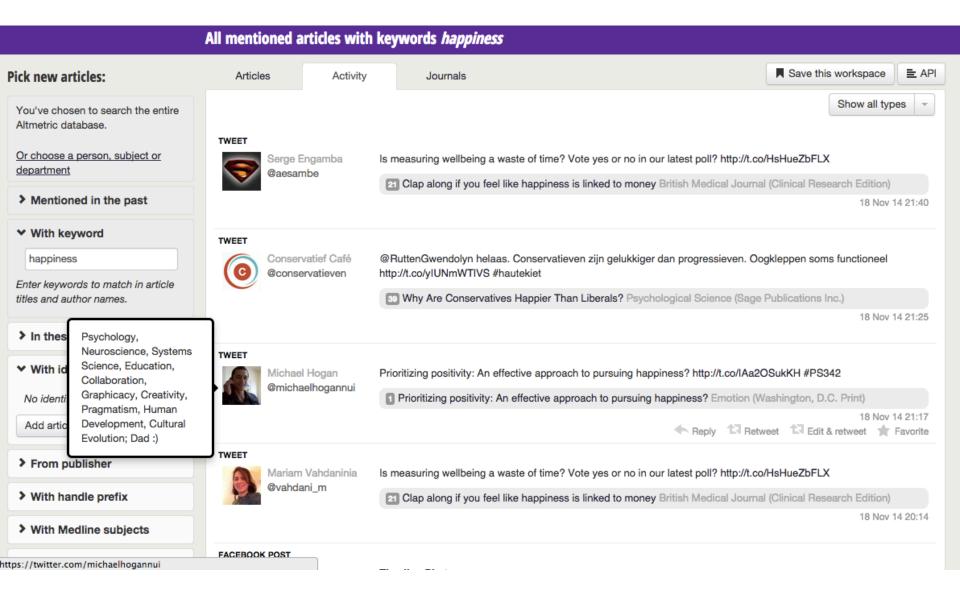
Find articles with the highest Mendeley readership



Track the online conversations in your field of study



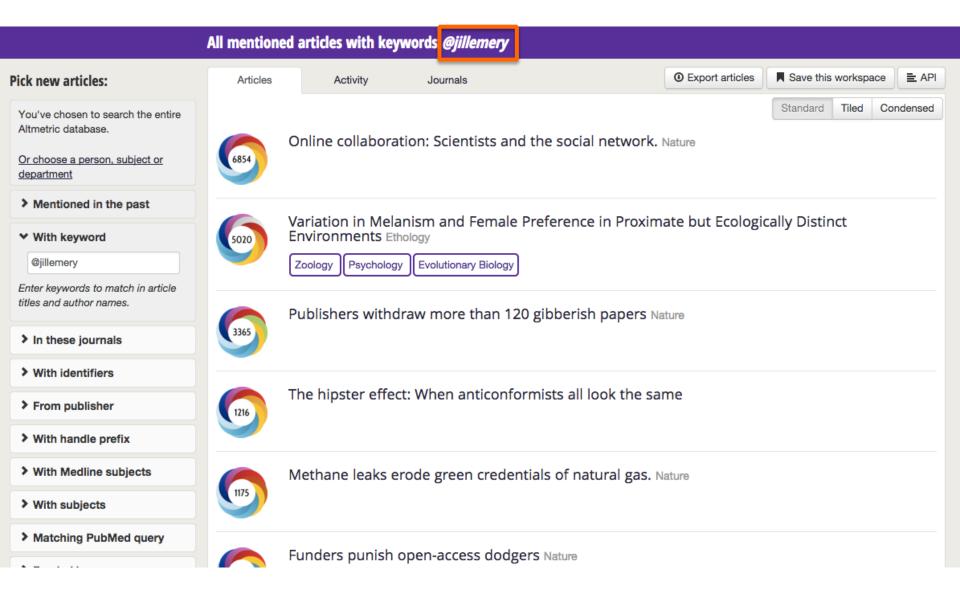
Find social media accounts to follow



Find social media accounts to follow



Track the research that others in your field mention



Benchmark yourself

Edit group article list

×

Enter a list of up to 10,000 DOIs, arXiv IDs, RePEc identifiers, handles or PubMed IDs corresponding to the articles you are interested in below. Each one should be on a separate line.

10.1002/9781118227978.ch11

10.1002/9781119974260

10.1002/9781119974260.ch3

10.1002/9781119974260.ch4

10.1002/9781444392494.ch10

10.1002/9781444396775

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10.1002/9781444396775.ch1

10.1002/9781444396775.ch8

10.1002/9781444396805.ch2

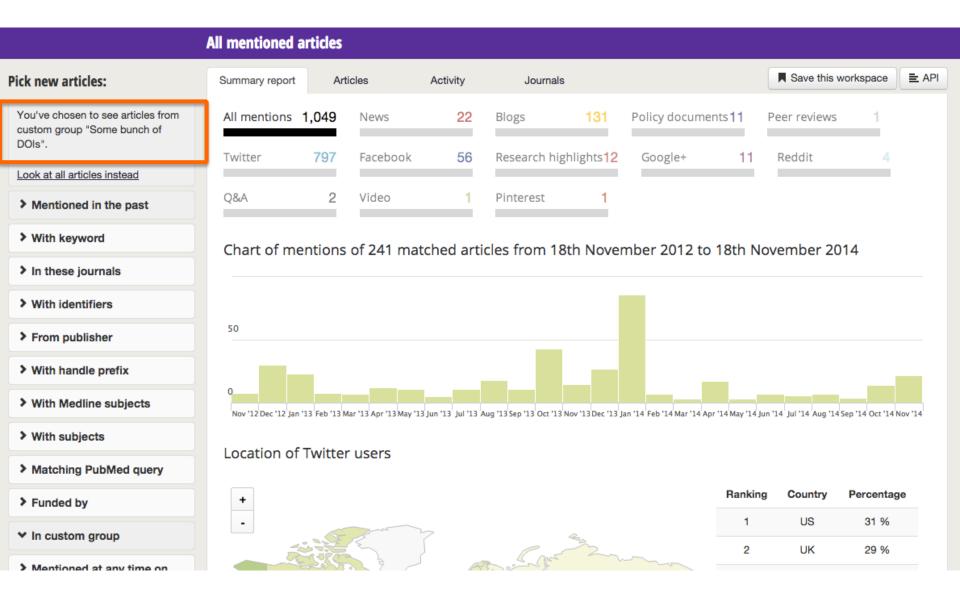
10.1002/9781444397161.ch1

0.4000/0704444007404 1.00

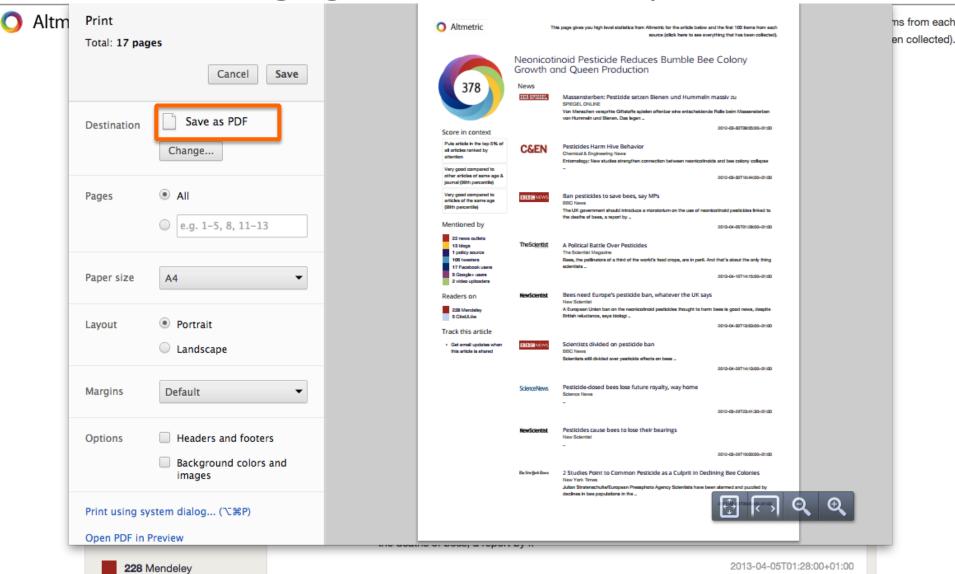
Close

Save changes

Benchmark yourself against others



Keep a record of evidence of engagement and impact



5 CiteULike

Thanks for listening!

Twitter: @altmetric

Website: altmetric.com

E-mail: info@altmetric.com

t.bucknell@digital-science.com

