Altmetrics: An App Review

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Overview

- Current University Research Environment
- Altmetrics: Definition and Services Primer
  - Altmetric
  - ImpactStory
  - Plum Analytics
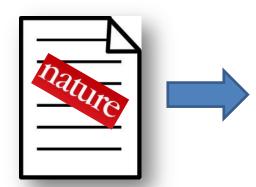- How Can Libraries Use Altmetrics?
- Limitations
- Q&A

The Current University Research Environment

- Traditional incentives for researchers reign
  - Publish or perish…and that's it!
    - Values journal articles and monographs over emerging forms of scholarship
    - "Real world" worth not always taken into account (e.g. translational research (Deschamps, 2012; Hobin et al, 2012; Kain, 2008), popular relevance)
  - Metrics are used to evaluate impact
    - Grants received
    - Awards won
    - Journal Impact Factor (JIF) of published work

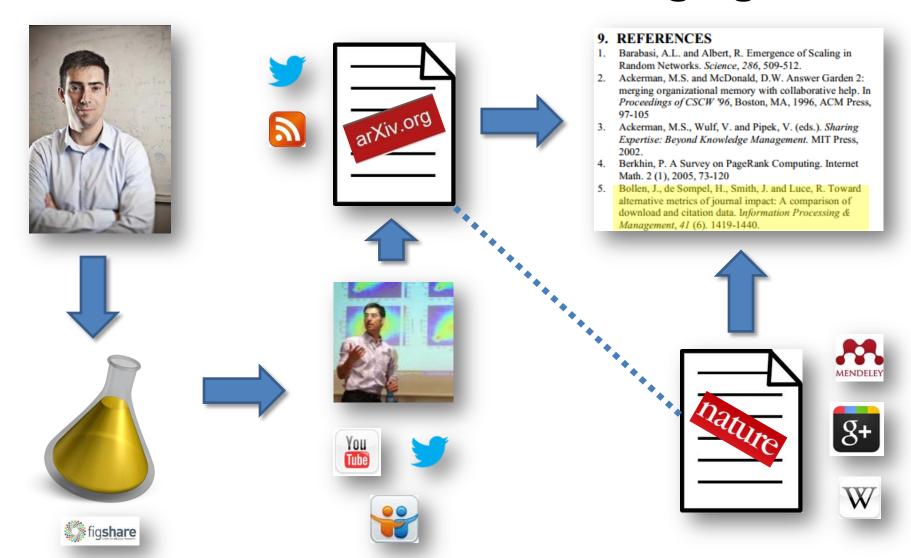# The Current University Research Environment

The Current University Research Environment...is Changing

- "Peer review" is broader
  - Not just for journal articles anymore
  - Pre- and Post-publication peer review
- New findings reported more quickly, in a variety of forums
- Measures of impact are plentiful and instant
- Impact can be tracked both inside and outside of the academy
- Feedback loop is shortened, accelerating research (Konkiel & Noel, 2012)

The Current University Research Environment…is Changing
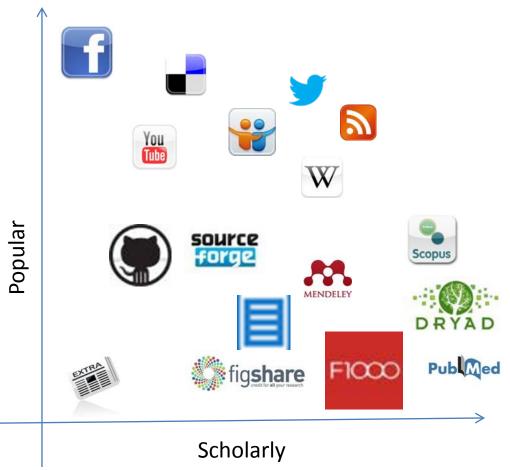
The Current University Research Environment...is Changing

Previously measured

- Journal Impact Factor
- Grant monies received
- Awards

Potentially measured

Altmetrics

How many times an output

– article, website, blog, dataset, grey literature, software, etc

has been:

– Viewed (Publisher websites, Dryad)

– Downloaded (Slideshare, publisher websites, Dryad)

– Cited (PubMed, CrossRef, Scopus, Wikipedia, DOI, Web of Science)

– Reused/Adapted (Github)

– Shared (Facebook, Twitter)

– Bookmarked (Mendeley, CiteULike, Delicious)

– Commented upon (Twitter, Mendeley, blogs, publisher websites, Wikipedia, Faculty of 1000)

Altmetrics

- Generally gather stats using COUNTER standards and open APIs
- Provide item-specific, up-to-the-minute glimpses of the impact of many types of scholarship (Neylon & Wu, 2009; Priem et al., 2010)
- Can help researchers filter information to find relevant research more quickly and easily (Neylon & Wu, 2009).
- More transparent than the closely guarded impact factor formula (Priem et al., 2010)

!

Image: http://bit.ly/T6rEKf
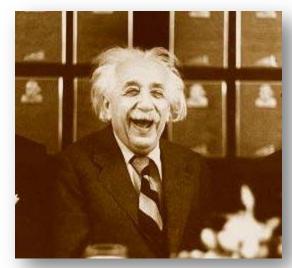
Image: http://bit.ly/VmzSOV

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Image: http://bit.ly/UHAVUU

Altmetrics Services: a Primer

- Measure attention received by various types of research outputs
- Reports
- Visualizations

Caveats

- Altmetrics should not be used by non-peer policy makers to evaluate a researcher's performance (Russell & Rosseau, 2002)

- Use in context and to supplement other evaluative techniques (Priem et al., 2010; Steele, Butler, & Kingsley, 2006)

Epson291 via
http://bit.ly/PZBrxl

Altmetric

- Freemium service
  - Free bookmarklet, limited use API; paid full-service API, reports
- Aimed at commercial publishers
- Tracks usage of traditional outputs:
  - DOIs
  - PubMedIDs
  - arXiv IDs

Sources

Altmetric

- Strengths
  - Context-based metrics
  - Free (limited use) API available
  - Boolean querying and filtering
  - Reports and visualizations available, can export
- Weaknesses
  - Aimed at commercial publishers, not libraries
  - Does not track non-traditional outputs

Altmetric

Altmetric

This page mashes up alt-metrics data from Altmetric with articles from the Public Library of Science (PLoS). Check which articles are seeing the most buzz from social media sites, newspapers and in online reference managers.
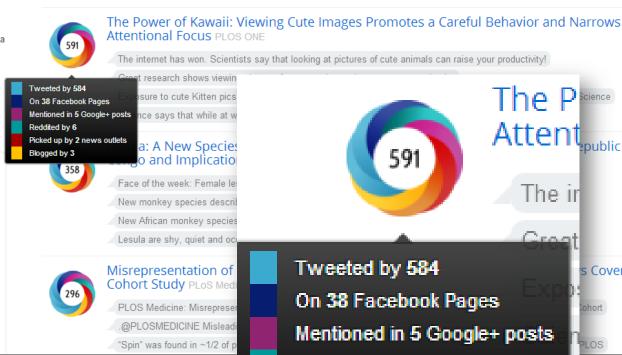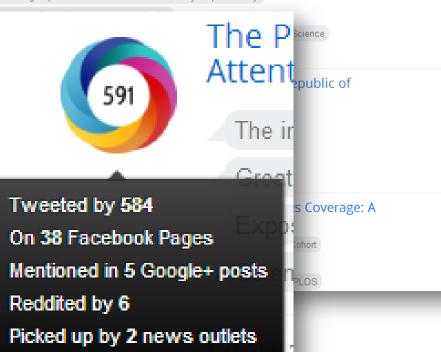
POWERED BY PLoS

Browse articles with mentions in the past:
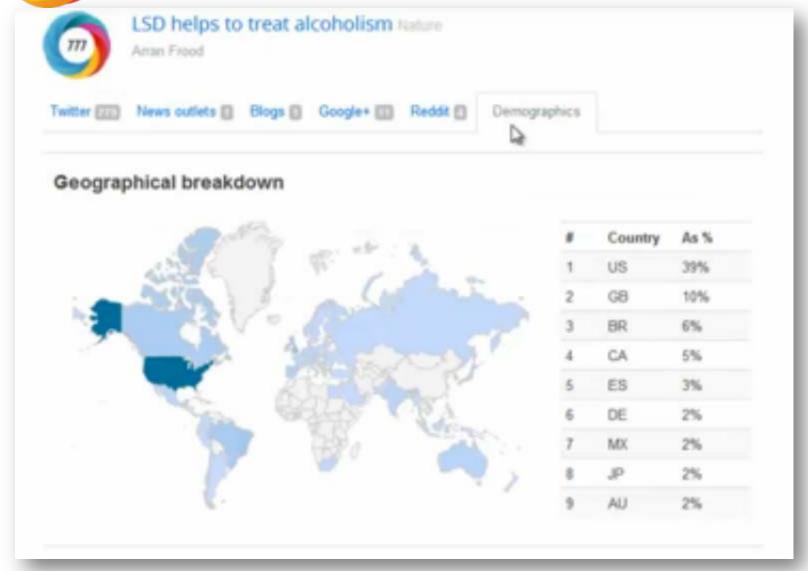
1d, 3d, 1w, 1m, 3m or all time

In these journals (all by default):

- ☐ PLoS One
- ☐ Genetics
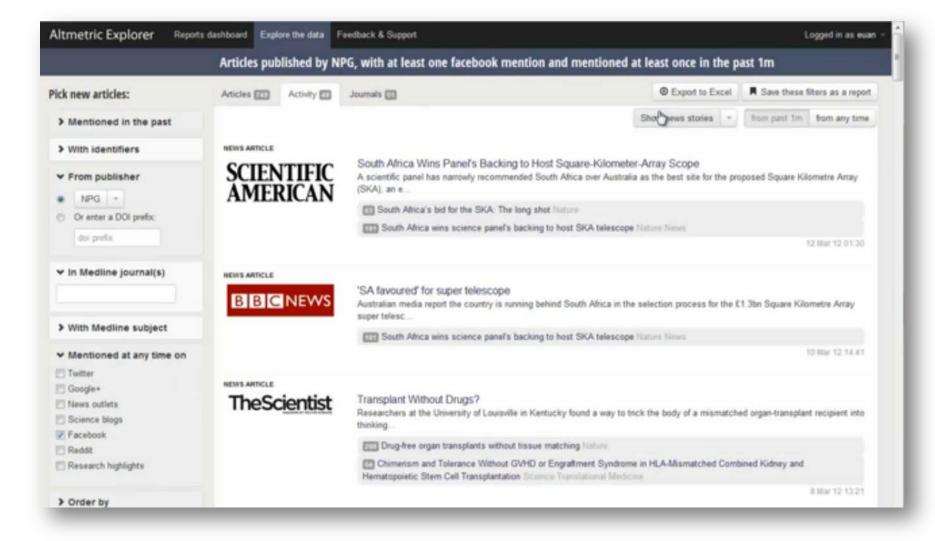- ☐ Computational Biology
- ☐ Pathogens
- ☐ Medicine

Viewing **2,369** PLoS articles mentioned sometime in the past 1m. Hover over a score for more information, click it for details.

591

The Power of Kawaii: Viewing Cute Images Promotes a Careful Behavior and Narrows Attentional Focus PLOS ONE

The internet has won. Scientists say that looking at pictures of cute animals can raise your productivity!

Great research shows viewin...

Exposure to cute Kitten pics...

...nce says that while at w...

Tweeted by 584
On 38 Facebook Pages
Mentioned in 5 Google+ posts
Reddited by 6
Picked up by 2 news outlets
Blogged by 3

358

...a: A New Species...
...go and Implication...

Face of the week: Female le...

New monkey species descri...

New African monkey species...

Lesula are shy, quiet and oc...

296

Misrepresentation of ...
Cohort Study PLoS Medi...

PLOS Medicine: Misrepresen...

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"Spin" was found in ~1/2 of p...

The P
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591

Tweeted by 584

On 38 Facebook Pages

Mentioned in 5 Google+ posts

Reddited by 6

Picked up by 2 news outlets

Blogged by 3

Altmetric

LSD helps to treat alcoholism Nature
Arran Frood

Twitter | News outlets | Blogs | Google+ | Reddit | **Demographics**

Geographical breakdown

#	Country	As %
1	US	39%
2	GB	10%
3	BR	6%
4	CA	5%
5	ES	3%
6	DE	2%
7	MX	2%
8	JP	2%
9	AU	2%

Altmetric

Articles published by NPG, with at least one facebook mention and mentioned at least once in the past 1m

Pick new articles:

> Mentioned in the past

> With identifiers

▾ From publisher

- ● NPG ▾
- ○ Or enter a DOI prefix:
  - doi prefix

▾ In Medline journal(s)

> With Medline subject

▾ Mentioned at any time on

- ☐ Twitter
- ☐ Google+
- ☐ News outlets
- ☐ Science blogs
- ☑ Facebook
- ☐ Reddit
- ☐ Research highlights

> Order by

Articles 240   Activity 48   Journals 55   ⊕ Export to Excel   🔖 Save these filters as a report

Show news stories ▾   from past 1m   from any time

NEWS ARTICLE

SCIENTIFIC AMERICAN

South Africa Wins Panel's Backing to Host Square-Kilometer-Array Scope
A scientific panel has narrowly recommended South Africa over Australia as the best site for the proposed Square Kilometre Array (SKA), an e...

03 South Africa's bid for the SKA: The long shot *Nature*

111 South Africa wins science panel's backing to host SKA telescope *Nature News*

12 Mar 12 01:30

NEWS ARTICLE

BBC NEWS

'SA favoured' for super telescope
Australian media report the country is running behind South Africa in the selection process for the £1.3bn Square Kilometre Array super telesc...

111 South Africa wins science panel's backing to host SKA telescope *Nature News*

10 Mar 12 14:41

NEWS ARTICLE

TheScientist

Transplant Without Drugs?
Researchers at the University of Louisville in Kentucky found a way to trick the body of a mismatched organ-transplant recipient into thinking...

293 Drug-free organ transplants without tissue matching *Nature*

64 Chimerism and Tolerance Without GVHD or Engraftment Syndrome in HLA-Mismatched Combined Kidney and Hematopoietic Stem Cell Transplantation *Science Translational Medicine*

8 Mar 12 13:21

ImpactStory.

- Free service
- Aimed at individual researchers
- Tracks usage of:
  - DOIs
  - PubMedIDs
  - URLs
  - Slideshare
  - Github
  - Dryad

Sources

ImpactStory.

- Strengths
  - Flexible
  - Easy to implement
  - Fully Open API
  - Context-based metrics
- Weaknesses
  - Scalability (resource intensive to create reports)
  - Less technical support than competitors

create   about   follow | hi, skonkiel@indiana.edu! (logout)

BETA
Send us your
feedback!

create collection

**Articles from Google
Scholar Profiles**
(Click here for help)

[Select file]

Article IDs
Paste DOIs or PubMed IDs
(limit 100)

> 10.1038/171737a0
> 13054692

Webpage URLs
(No articles; they go above)

> http://www.example.com
> http://www.zombo.com

Slideshare username

GitHub username
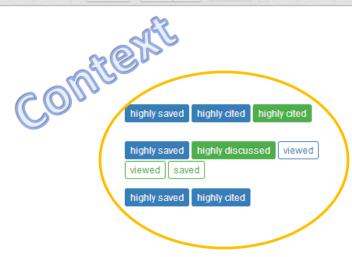
Dryad author name

Twitter Mood as a Stock Market Predictor ⬈

(2011) Bollen, Mao *Computer*

highly saved   highly cited

❓ What do these numbers mean?
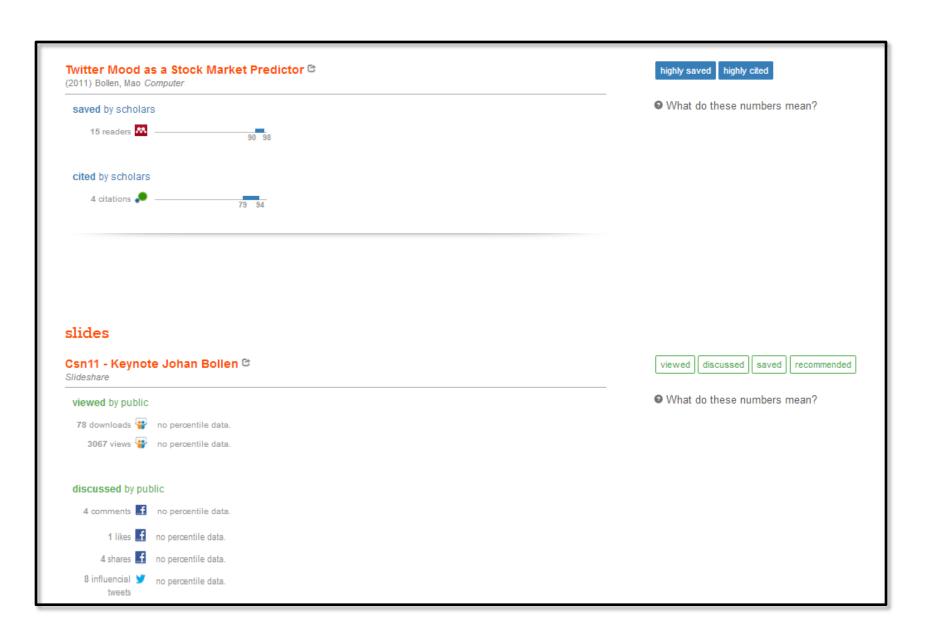
slides

Csn11 - Keynote Johan Bollen ⬈

Slideshare

viewed   discussed   saved   recommended

❓ What do these numbers mean?

```
{
    "_id": "aseh85",
    "_rev": "1-9f572f3a3089298fcb62b6116d6d3cd9",
    "created": "2012-10-06T11:53:44.057983",
    "items": [
        {
            "_id": "8ape2279sv4oh700hncchw4k",
            "_rev": "1-ebc4463b5e92a6c1491413fc49254bfa",
            "aliases": {
                "url": [
                    "http://arxiv.org/pdf/1010.3003.pdf?iframe=true&width=90%25&height=90%25"
                ]
            },
            "biblio": {
                "genre": "webpage"
            },
            "created": "2012-10-06T11:53:44.184465",
            "currently_updating": false,
            "last_modified": "2012-10-06T11:53:44.184465",
            "metrics": {},
            "type": "item"
```

JSON

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	tiid	title	doi	citeulike:l	delicious:	facebook:	facebook:	facebook:	facebook:	mendeley	mendeley	mendeley	mendeley	mendeley	plosalm:c	plosalm:h	plosalm:p	plosalm:p	plosalm:p	plosalm:p
2	8ape2279sv4oh700hncchw4k																			
3	anbenwp83ymq1685		10.1109/MC.2011.323							[{'name': '	[{'name': '	[{'id': 6, 'value': 73, 'r		15						
4	m8yph2df206ir2nwc		10.1016/j.	8						[{'name': '	[{'name': '	[{'id': 6, 'va	4	55						
5	o6jvf82dyzmzy1ys5ngyayng				3															
6	s5vw4183	A Principa	10.1371/jc	86	1	1	2	10	3						39	21437	3507	138	95	682
7	up4euz1yxclju9u993xd9nu2																			
8	xog868ua98chkoq4wcndhnin				1		4	1	4											

CSV

- Paid service
- Aimed at libraries and institutions

- Measures "artifacts":
  - articles
  - book chapters
  - books
  - clinical trials
  - datasets
  - figures
  - grants
  - patents
  - presentations
  - source code
  - videos

- Usage - Downloads, views, book holdings, ILL, document delivery, software forks

- Captures - Favorites, bookmarks, saves, readers, groups, watchers

- Mentions - blog posts, news stories, Wikipedia articles, comments, reviews

- Social media - Tweets, +1's, likes, shares, ratings

- Citations - Web of Science, Scopus, Google Scholar, Microsoft Academic Search (Plum Analytics, 2012)

Sources:

- Strengths
  - Largest and most diverse research outputs, sources of metrics
  - Could potentially incorporate other library metrics (e.g. IR pageview and download statistics)
- Weaknesses
  - No API available (for now)

- View demo here:
  http://www.youtube.com/watch?v=pRnU8aJQQ0U

How can librarians use altmetrics?

- Value added service
  - IRs, assessment reporting
- Determining value
  - Collection development, resource allocation
- Prove value to stakeholders
  - "Look at how much use our IR gets!" "Look at how many faculty we serve, and the attention their work receives!"
- Teach information literacy skills to patrons (identifying experts in certain subject areas)
- Conduct/filter our own research

Limitations

- Lack of author identifiers (disambiguation)
- Low (or zero) metrics available for some items (Piwowar & Priem, 2012)
- Gaming (Abbott et al., 2010)
- Little adoption among traditional publishers, libraries, and university administrators.

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Q&A

- Download this presentation at:

    > http://hdl.handle.net/2022/586 <

- Get in touch!

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