

Open Metrics

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Technical Lead Article-Level Metrics

Public Library of Science

A piece of data or content is open if anyone is free to use, reuse, and redistribute it — subject only, at most, to the requirement to attribute and/or share-alike.

<http://opendefinition.org/>

It has become more important where we publish than what we publish.

The tools we use for impact assessment are slow, limited and proprietary.

We need to move beyond **Open Access** for all research outputs.

Open Metrics are needed for the timely, comprehensive and reproducible evaluation of the impact of research.

Open up (and standardize) the publication metadata



Authors



Institutions



Funding Information



Subject Area
Classification

Open up reference lists (and make them machine-readable)

References

1. Kahn P, Hazledine D (1988) NAR's new requirement for data submission to the EMBL data library: information for authors. *Nucleic Acids Res* 16(10): I–IV.
2. Science as an Open Enterprise (2012) The Royal Society. Available: <http://royalsociety.org/policy/projects/science-public-enterprise/report/>. Accessed 2013 Apr 8.
3. Rebholz-Schuhmann D, Arregui M, Gaudan S, Kirsch H, Yepes AJ (2007) Text processing through Web services: calling Whatizit. *Bioinformatics* 24(2):296–298.
4. McEntyre JR, Ananiadou S, Andrews S, Black WJ, Boulderstone R, et al. (2011) UKPMC: a full text article resource for the life sciences. *Nucleic Acids Res* 39:d58–65.
5. Névéal A, Wilbur WJ, Lu Z (2011) Extraction of data deposition statements from the literature: a method for automatically tracking research results. *Bioinformatics* 27(23):3306–3312.
6. Névéal A, Wilbur WJ, Lu Z (2012) Improving links between literature and biological data with text mining: a case study with GEO, PDB and MEDLINE. *Nucleic Acids Res Database (Oxford)* 2012: bas026.
7. Fink JL, Kushch S, Williams PR, Bourne PE (2008) BioLit: integrating biological literature with databases. *Nucleic Acids Res* 36(Web Server Issue):W385–9.
8. Haeussler M, Gerner M, Bergman CM (2011) Annotating genes and genomes with DNA sequences extracted from biomedical articles. *Bioinformatics* 27(7):980–6.
9. Finn RD, Mistry J, Tate J, Coggill P, Heger A, et al. (2010) The Pfam protein families database. *Nucleic Acids Res Database Issue* 38:D211–222.
10. Parkinson H, Sarkans U, Shojatalab M, Abeygunawardena N, Contrino S, et al. (2005) ArrayExpress – a public repository for microarray gene expression data at the EBI. *Nucleic Acids Res* (2005) 33 (Suppl 1): D553–D555.
11. Mulder NJ, Apweiler R, Attwood TK, Bairoch A, Bateman A, et al. (2002) InterPro: an integrated documentation resource for protein families, domains and functional sites. *Brief Bioinform* (3):225–35.

Open up links to data and other resources

Data Availability: The authors confirm that all data underlying the findings are freely available without restriction. Specimen data may be accessed through the Museum of Comparative Zoology at Harvard University's MCZbase (<http://mczbase.mcz.harvard.edu/>) under the sample IDs <http://mczbase.mcz.harvard.edu/guid/MCZ:IZ:24804>, <http://mczbase.mcz.harvard.edu/guid/MCZ:IZ:24805>, <http://mczbase.mcz.harvard.edu/guid/MCZ:IZ:95557>, <http://mczbase.mcz.harvard.edu/guid/MCZ:IZ:95901>. MicroCT scans are available through GigaScience's GigaDB (<http://gigadb.org/site/index>) at <http://dx.doi.org/10.5524/100092>.

Open up what we measure

RESEARCH ARTICLE

VIEWED

PLOS HTML
PLOS PDF
PLOS XML
PMC HTML
PMC PDF

SAVED

CiteULike
Mendely

DISCUSSED

NatureBlogs
ScienceSeeker
ResearchBlogging
PLOS Comments
Wikipedia
Twitter
Facebook

RECOMMENDED

F1000 Prime

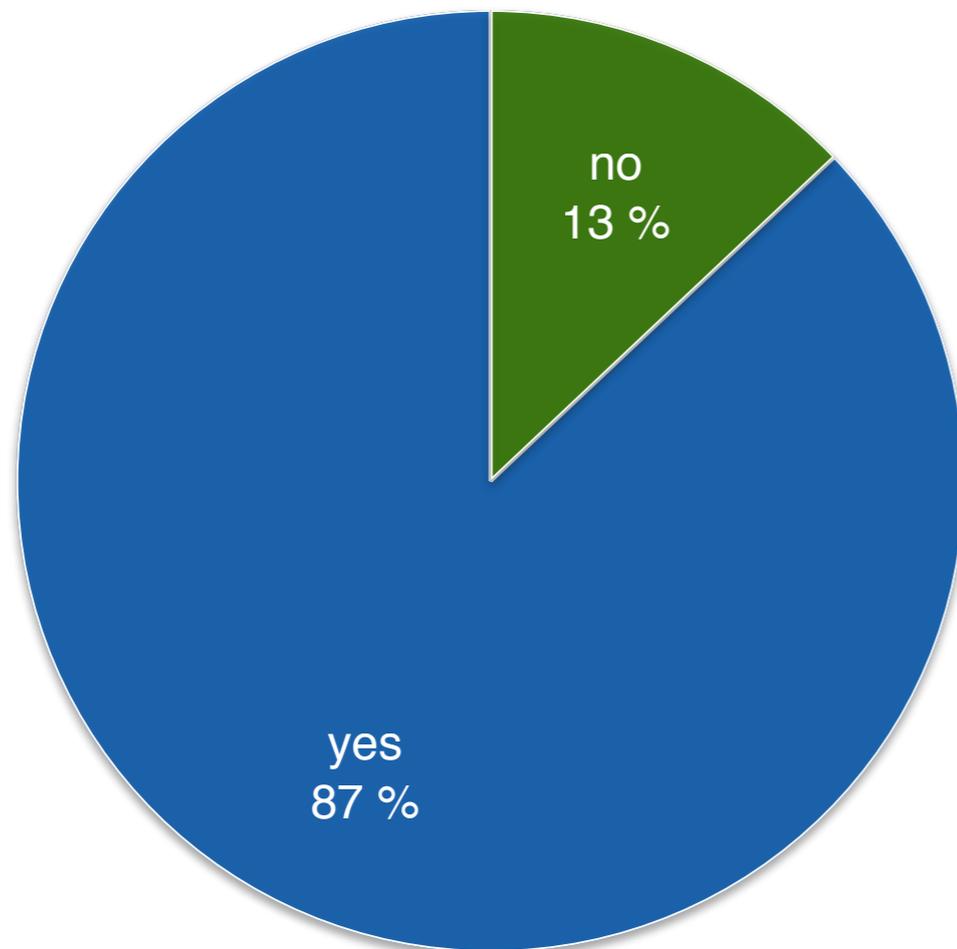
CITED

CrossRef
PMC
Web of Science
Scopus

Increasing Engagement

Open up content to be alm-able

Facebook can't resolve all DOIs to a canonical URL



Cookies

Circular redirects

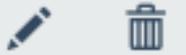
Permissions

Canonical URL mismatch

Data from 9,969 random CrossRef DOIs from 2011 and 2012, collected June 22, 2014.
Facebook Debugger: <https://developers.facebook.com/tools/debug>
DOIs: <http://dx.doi.org/10.6084/M9.FIGSHARE.821209> (2011) and <http://dx.doi.org/10.6084/M9.FIGSHARE.821213> (2012)

Open up what is measured

Software for UCE (and general) phylogenomics



Publication Date April 28, 2014
Type dataset
Publisher Github
URLs <https://github.com/faircloth-lab/phyluce>

Metrics

Events

Details

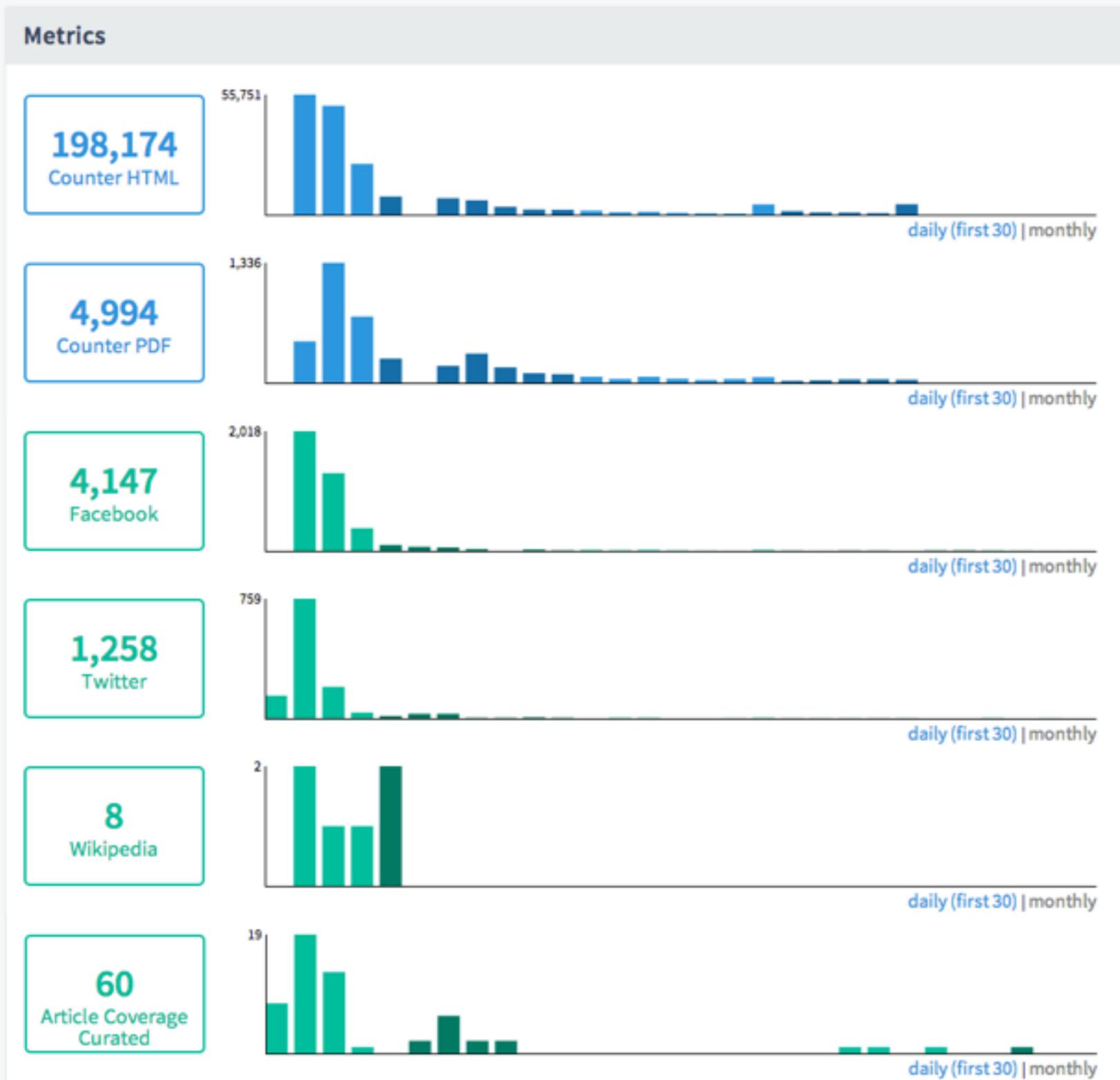
Alerts

Metrics

1
Facebook



Open up the time window



Days since publication
August 27, 2014

Open up the events behind the numbers

2014

Congratulations!

Ronald Chapman. *PLOS Comments*. Personal communication. December 08, 2014.

<http://dx.doi.org/10.1371/journal.pone.0105948>

Porque se mueven las piedras en el desierto? Superficies cubiertas de hielo y viento. nada sobrenatural... <http://t.co/FxilpqvNbY>

Fefo Cles. *Twitter*. Personal communication. November 11, 2014.

<http://twitter.com/Fedocles/status/532204152940945408>

Racetrack Playa mystery in Death Valley solved

GrindTV. News. November 06, 2014. <http://www.grindtv.com/outdoor/nature/post/racetrack-playa-mystery-death-valley-solved/>

<http://t.co/c8nL3JdLU6> They finally solved the mystery behind those moving desert rocks.

Rune Devros. *Twitter*. Personal communication. November 05, 2014.

http://twitter.com/rune_devros/status/529841610776133632

Open up the metrics data



search figshare (titles, tags, authors, etc.)



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Cumulative PLOS ALM Report - February 2014

	A	B	
1	doi	publication_date	title
2	10.1371/journal.pcbi.0010005	6/24/2005	An Open Forum for Computatic
3	10.1371/journal.pcbi.0010011	6/24/2005	A Phenomenological Theory of
4	10.1371/journal.pcbi.0010030	8/26/2005	Molecular Origin of Polyglutam
5	10.1371/journal.pcbi.0010033	8/26/2005	ISMB 2005 Conference Report
6	10.1371/journal.pcbi.0010051	10/28/2005	The ISCB: Growing and Evolvi
7	10.1371/journal.pcbi.0010052	11/25/2005	Bioinformatics EducationäóîPe
8	10.1371/journal.pcbi.0010077	12/30/2005	The Eighth Annual Bio-Ontolog
9	10.1371/journal.pcbi.0020011	2/24/2006	ISMB 2006

alm_report_2014-03-10

252
views

1
shares

cites
coming
soon

Published on 01 Oct 2014 - 19:53 (GMT)

Filesize is 24.48 MB

Categories

- Information Systems

Authors

PLOS ALM

Open up the software to collect and analyze the metrics data

Lagotto

build failing code climate 2.0 coverage 79%

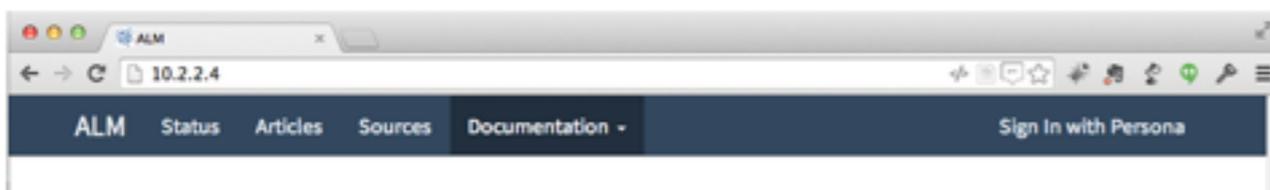
Lagotto allows a user to aggregate relevant performance data on research articles, including how often an article has been viewed, cited, saved, discussed and recommended. The application was called Article-Level Metrics (ALM) until September 2014 and was started in March 2009 by the Open Access publisher [Public Library of Science \(PLOS\)](#). We are continuing to expand Lagotto because we believe that articles should be considered on their own merits, and that the impact of an individual article should not be determined by the journal in which it happened to be published. As a result, we hope that new ways of measuring and evaluating research quality (or 'impact') can and will evolve. To learn more about Article-Level Metrics, see the [SPARC ALM primer](#).

How to start developing now?

Lagotto uses [Vagrant](#) and [Virtualbox](#) for setting up the development environment. To start developing now on your local machine (Mac OS X, Linux or Windows):

1. Install Vagrant: <https://www.vagrantup.com/downloads.html>
2. Install Virtualbox: <https://www.virtualbox.org/wiki/Downloads>
3. Clone this repository `git clone git@github.com:articlemetrics/lagotto.git`
4. Cd into it
5. Copy the file `.env.example` to `.env` and make any changes to the configuration as needed
6. Run `vagrant up`

Once the setup is complete (it might take up to 15 minutes), you'll be able to open up a browser and navigate to <http://10.2.2.4>, and you should see this screen:



ALM Reports

build failing code climate 1.7 coverage 73%

How to start developing now?

ALM Reports uses [Vagrant](#) and [Virtualbox](#) for setting up the development environment. To start developing now on your local machine (Mac OS X, Linux or Windows):

1. Install Vagrant: <https://www.vagrantup.com/downloads.html>
2. Install Virtualbox: <https://www.virtualbox.org/wiki/Downloads>
3. Clone this repository `git clone git@github.com:articlemetrics/alm-report.git`
4. Cd into it and run `vagrant up`

Once the setup is complete (it might take up to 20 minutes), you'll be able to open up a browser and navigate to <http://10.2.2.2>, and you should see this screen:



ALM Reports

Your List 0

ALM Reports allows you to view article-level metrics for any set of Public Library of Science (PLOS) articles as well as summarize and visualize the data results.
[Home](#) | [About](#) | [Samples](#)

1 Select Articles 2 Preview List 3 View Report

Search all Articles [Advanced Search](#)

Keyword

Author

Author Country

Institution

Find Specific Articles

[By DOI/PMID](#)

[Upload File](#)

Open up the service to collect and analyze the metrics data

CrossRef Labs has started a pilot project to collect events around all CrossRef DOIs issued since January 2011.

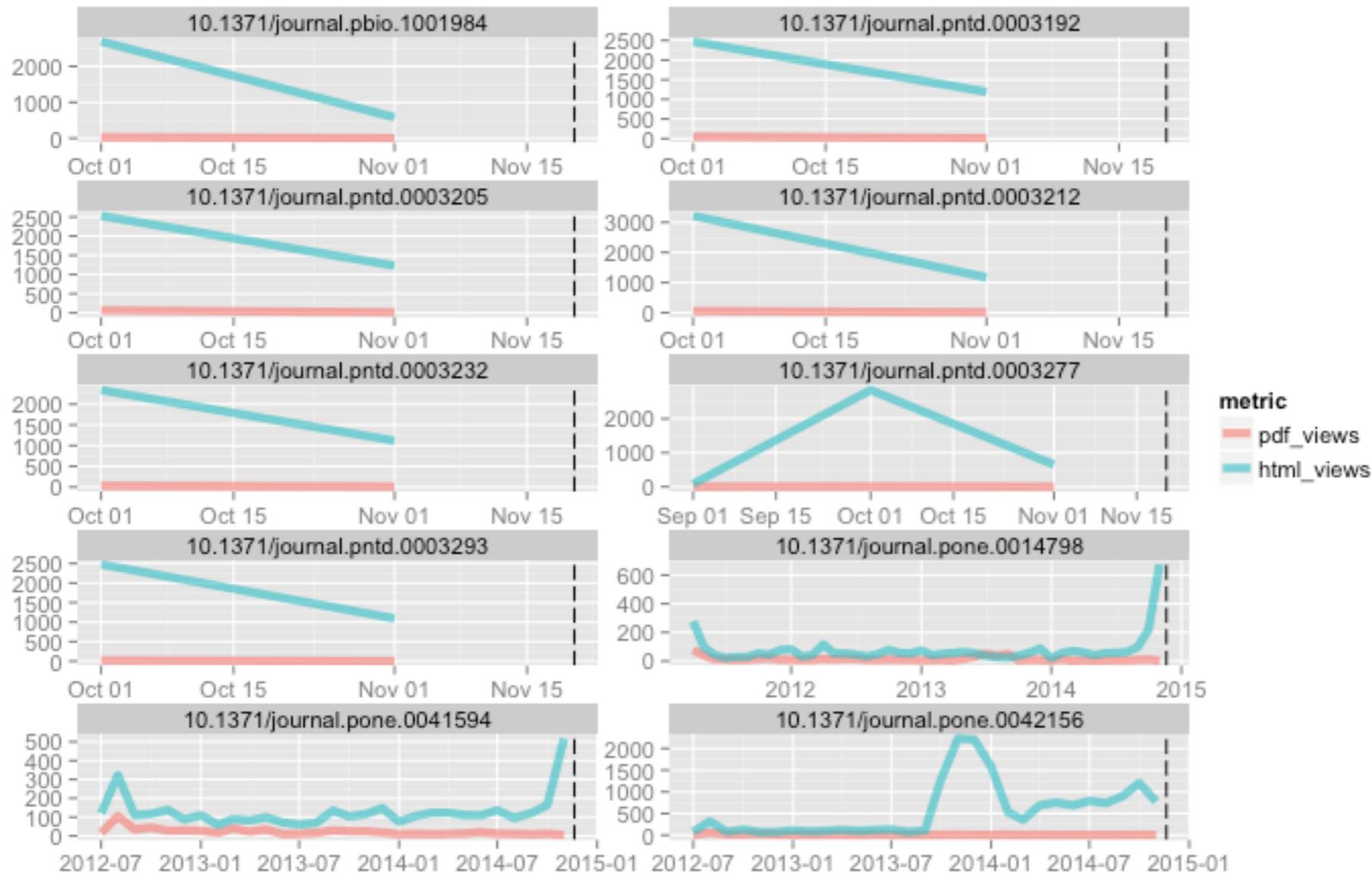
A DOI Event Tracker (DET) CrossRef working group was formed in May 2014 to support this pilot.

The service is available at <http://det.labs.crossref.org>, and is using the Lagotto software.

Using the Lagotto software, the Public Knowledge Project is providing an ALM service for publishers running Open Journal Systems (OJS)

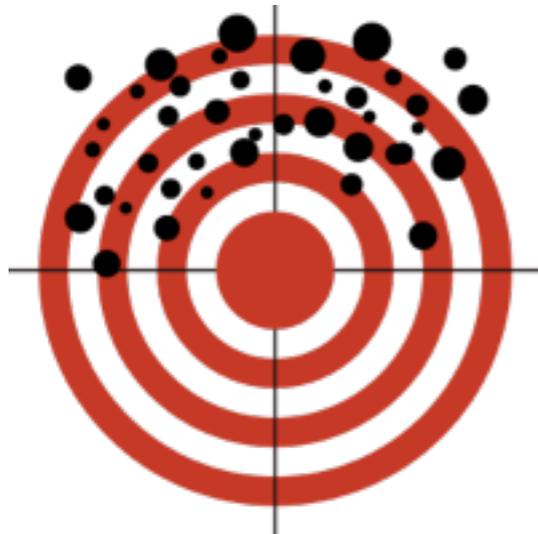
Open up data quality checks

HtmlRatioTooHighError - Top ten highest HTML/PDF ratio articles

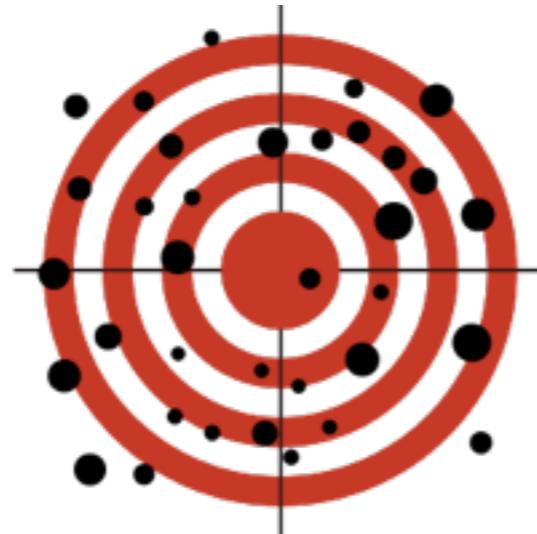


Work by Scott Chamberlain using
the rOpenSci R package alm
<https://github.com/ropensci/alm>

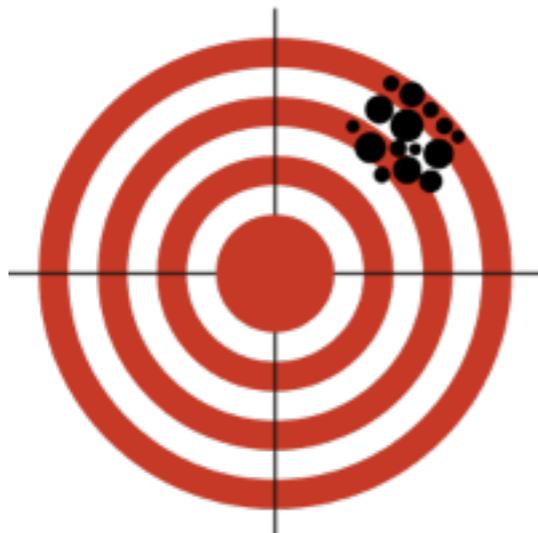
Open up your mind to the limitations of metrics



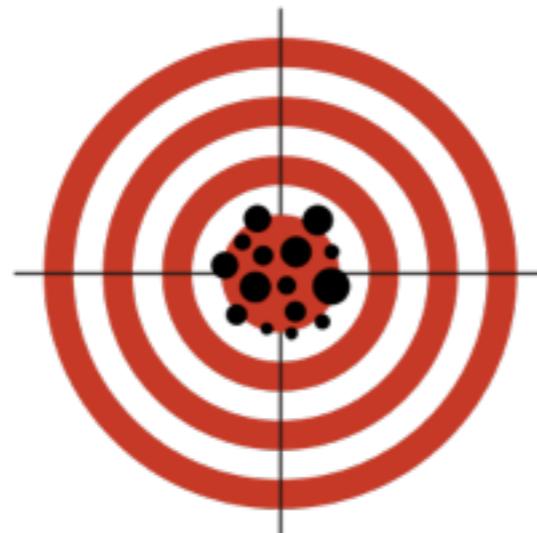
Unreliable & Invalid



Unreliable, But Valid



Reliable, Not Valid



Both Reliable & Valid

Any metric we use should have good **reliability** (consistency) and **validity**.

Open up the discussion



Alternative Metrics Initiative Phase 1 White Paper

June 6, 2014

Phase II of the project starts in early 2015



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PKP's Article Level Metrics Service

Juan Pablo Alperin (@juancommander)

our **main** motivation is
to *offer*

ALMs and altmetrics
for
developing countries

what *should* be our
motivation
for *caring* about
altmetrics/ALM

- new ways gaining **visibility**
- new ways **demonstrating visibility**

- good articles can **stand out** from journal
- researchers can **stand out** for good work

- counting some forms of **public impact**
- being rewarded for other kinds of **impact**

- incentive to gear research to **public**_(local?) interests
- move away from dependencies on measures biased against the South



¡¡CAUTION!!!

the signal is

LOW

**I looked at all articles
published in SciELO for
2013**

only ~20% had
Mendeley readers

only 6% had Tweets

only 3% had Facebook

so *altmetrics* may not tell
us much in the developing
country context....yet

PKP

PUBLIC
KNOWLEDGE
PROJECT

launched an

ALM

using



giving **priority** to the **developing world**

PKP

PUBLIC
KNOWLEDGE
PROJECT

launched an

ALM

using



giving **priority** to the **small publishers**

our plan

make these metrics
prominent
on article pages

the tried and true “shove it in people’s faces” approach

hopefully:

- change culture around **communicating** research
- **open minds** to alternative measures of impact
- attract readers to a **different** group of journals
- give an incentive to do research of **public interest**

caveat

- we are doing this as a pilot...
- which means: we are not fully supporting this.

That said...

- we are collecting metrics for over 150,000 articles already

also

- The ALM plugin has TWO parts:
 - Usage Metrics: anyone can show these
 - ALMs: these require a little bit of setup

requirements

- must upgrade to latest OJS (at least 2.4.3)
 - ALM plugin already built in!
- For ALMs, you must assign DOIs
 - not required for you to show your download stats
- PKP has a new partnership with CrossRef and a new plugin that makes this easier in OJS 2.4.5: <https://pkp.sfu.ca/crossref/>

Resumen

El objetivo de este artículo es presentar los resultados de una investigación acerca de las condiciones y experiencias de vida de las mujeres indigentes. Participaron cuatro mujeres gestantes indigentes. La investigación se enmarcó en un diseño cualitativo de tipo fenomenológico. La recolección de los datos se ejecutó mediante la aplicación de la entrevista a profundidad, empleando la grabación para realizar observaciones repetidas; luego se analizaron los datos y se contrastó con el marco referencial. Entre las peculiaridades más relevantes que forman el perfil de una mujer embarazada indigente se encontró como factores comunes alcoholismo, drogadicción, prostitución, violencia física, sexual, psicológica y la delincuencia. Se concluye que las condiciones de vida están entrelazadas por las experiencias de vida de las mujeres embarazadas indigentes, condición a partir de la cual se determina su perfil

Palabras clave

condiciones-de-vida, experiencias-de-vida, embarazo, indigencia, fenomenología

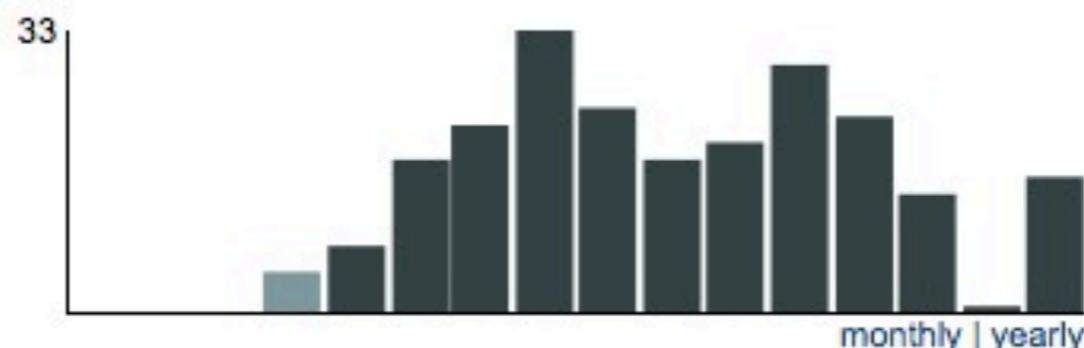
Texto completo:

PDF

Métricas de artículo

Vistas PDF. ⁱ

PKP **231**
Esta revista



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LinkedIn

interested?

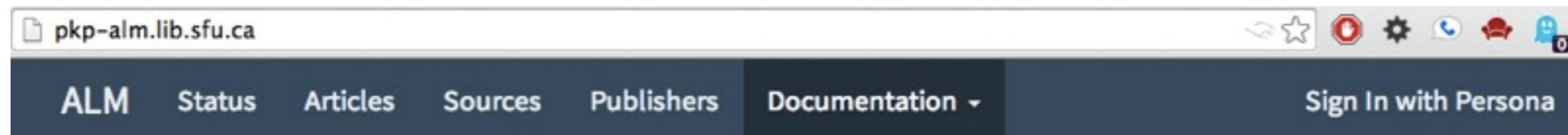
1. upgrade to OJS 2.4.5 (2.4.3 OK, but 2.4.5 better)

this is harder than it looks. Make sure you get some support to make sure your usage metrics are migrated properly from older installations.

You have the option of processing your server logs to capture these correctly

interested?

2. if you want to collect ALMs, set up your DOIs in OJS (preferably to automatic deposit, see details: <http://pkp.sfu.ca/crossref/>)
3. go to <http://pkp-alm.lib.sfu.ca> and make an account (try to login, you'll be redirected to Mozilla Persona Sign-on)



Home

interested?

4. enter your API key into the Plugin Settings page

juan@alperin.ca



Username juan@alperin.ca
Email juan@alperin.ca
Role Admin - full access to the ALM application
API Key koz58qgTfDhSi89Ekpth

5. email me with (juan@alperin.ca): the URL to your journal, your DOI prefix

that is it!

thank

you