The scholarly record and its impact

A

Attention
Atributtion
ALM
Assessment
Accuracy
Audiences

L

Leiden

T

Track
Transparency
Traditional

M

Metrics
Monitoring
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Research
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Indicators
Identifiers
Impact
Information

C

Change
Credit
CASRAI
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S

Scientometrics
Snowball metrics
Semantics
Scholarship
Social

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Research, record, reward, reputation,…

Research
Research is complex, multiple criteria
Many players involved In the research cycle.
Not only about authors, but about papers.
Acknowledgement and recognition

Record
Scholarly record
Publications may include different types of documents and artifacts.
Impact on both highly cited journals (within the academia) and mass media or social networks.

E valuation, engagement, excellence,…

There's a lot to evaluate when talking about research: authors, publications, departments, institutions, countries, or any combination of them.
Regarding researchers… they are being evaluated in multiple circumstances: for promotion and tenure, for grant submission, to get a new job.

There's a need to know:
Who is evaluating what, for what purpose

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M etrics, mine, monitoring, merit, …

Recognition comes from:

Traditional metrics
- Based on +50 years ago indicators (still being used and misused)
(*Leiden manifiesto* pointed out about spanish law)
[*San Francisco Declaration on Research Assessment* (may 2013)]
- Based on citation counts H-index (2005)

But new ways of scholarly communication are aiming for new metrics:

Altmetrics
- Social usage (Altmetric 2011; Mendeley 2008)
- *Snowball metrics* (mainly UK HEIs and Elsevier under the scenes)
- A "*basket of metrics*"
(Lisa Collegde, Director of Research Metrics Elsevier)

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Attention, assessment, accuracy, ...

Traditional metrics serve as a filter "no one can read everything", but scholarships main filters are failing (peer-review, citation count, JIF)
Altmetrics Manifiesto, 2010

Why altmetrics are different:
- what is making the impact
- fast, immediate after publishing data
- impact of non-article research outputs
- impact outside the scholars (one third of tweeter users not from academia)
- semantic data to gain knowledge of not only how many, but also how and why

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L eiden Manifiesto (2015)

Leiden Manifiesto for research metrics, 2015
Best practices in metric-based research assessment.
"Quantitative evaluation should support qualitative, expert assessment"
Principle 1

Basket of metrics (Lisa Colledge)
Whether we are looking at the performance of a paper, person, group, institution or yourself, the total impact is always multi-dimensional.

GONZÁLEZ MELGOZA, R. Las nuevas herramientas de gestión de la información electrónica y la medición de impacto. [Paper presented at the] 46 Reunión Nacional de Bibliotecarios, 22 - 24 abril, 2014. [ABGRA, Argentina].
http://www.abgra.org.ar/documentos/46RNB_2014_GonzalezMelgoza.pdf

Change, credit, …

Scenario is different
- Products
- Tools
- Audiences

Different approach needed
- Persistent identifiers
- Citation (attribution)
- Evaluation (credit)

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Indicators, impact, identifiers, …

Indicators have to be shared across platforms:

- Unique identifiers
- Data standards
- Data semantics
- Open data processing methods

Already here: CERIF, CASRAI, NISO, DataCite, ORCID

Impact is a combination of usage, citations and alternative metrics

J. Priem, D. Taraborelli, P. Groth, C. Neylon (2010), Altmetrics: A manifesto, 26 October 2010. http://altmetrics.org/manifesto

T ools, transparency, track

Who is producing data? and altmetrics data?

Goverments, national agencies, HEIs, publishers and of course for-profit companies
Benchmarking tools SciVal and InCites
Mangement systems = CRIS PURE, Converis, Elements

Snowball Metrics:
"(...) data-source and system-agnostic metrics (...) not tied to any particular provider of data or tools "

aim is for universities to agree on a set of metrics methodologies that give strategic insight into all of a university's activities.
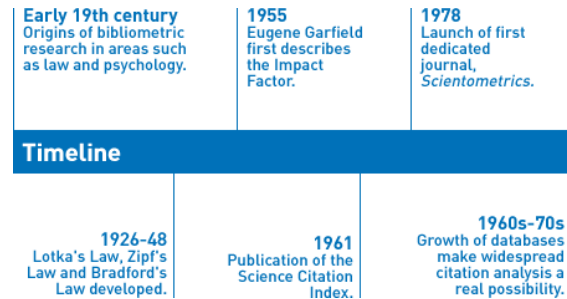
"Basket of metrics" (Lisa Collegde, Director of Research Metrics Elsevier)

S cientometric, semantics, scholarly, Summarizing…

Scientometrics is not new

https://www.researchtrends.com/issue1-september-2007/sciomentrics-from-past-to-present/

Timeline

Early 19th century Origins of bibliometric research in areas such as law and psychology.

1955 Eugene Garfield first describes the Impact Factor.

1978 Launch of first dedicated journal, *Scientometrics*.

1926-48 Lotka's Law, Zipf's Law and Bradford's Law developed.

1961 Publication of the Science Citation Index.

1960s-70s Growth of databases make widespread citation analysis a real possibility.

Scholarly

Methodology: computer models, algorithms, electronic lab notebooks

Evidence: data sets, survey results, new primary source documents

Pre-publication discussion: blog posts, preprints, grant proposals reviews

as well as materials produced after publication:

Post-publication discussion: blog posts, commentaries, reviews

Revisions: enhancement/clarification of findings, corrections

Reuse: conference presentations and posters, versions for non-scholarly audiences

O'Neill, J. Watching and Documenting An Evolving Scholarly Record, Jun 2, 2016

Impact flavors

"(…) a way to understand the distinctive patterns in the diverse impacts of individual products."

Lapinski, Scott, Heather A Piwowar, and Jason Priem. "*Riding The Crest Of The Altmetrics Wave*". College & Research Libraries News 74 (2013): 292-300

S cientometric, semantics, scholarly, Summarizing...

The purpose of the scholarly record (J. O'Neill)
1. To document current investigations
2. To disseminate new findings
3. To enable re-use and/or corroboration
4. To suggest possible directions for future research undertaken by a rising population of scholars

(...)This move has been possible because of web-native scholarship, not only created on the web but also shared, discussed, (...)
Moving the informal scholarship into the digital realm.

Konkiel, S; Cassidy, S; Sierra, W. (2016) The use of altmetrics in promotion and tenure. *Educase Review* vol.51, no 2
https://er.educause.edu/articles/2016/3/the-use-of-altmetrics-in-promotion-and-tenure

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Thank you!

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