The scholarly record and its impact

A
Attention
Atribution
ALM
Assessment
Accuracy
Audiences

L
Leiden

M
Metrics
Monitoring
Mine
Manifesto
Merit

T
Track
Transparency
Traditional

E
Evaluation
Expertise
Excellence
Engagement

T
Tools
Trust
Traces

R
Research
Reward
Recognition
Rank
Reputation

I
Indicators
Identifiers
Impact
Information

C
Change
Credit
CASRAI
CERIF

S
Scientometrics
Snowball metrics
Semantics
Scholarship
Social
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.
Evaluation, 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
Recognition comes from:

**Traditional metrics**
- Based on 50 years ago indicators (still being used and misused) (Leiden manifiesto pointed out about spanish law)
  - 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 College, Director of Research Metrics Elsevier)
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
Leiden 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.

Scenario is different
- Products
- Tools
- Audiences

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

Tools, transparency, track

Who is producing data? and altmetrics data?

Governments, national agencies, HEIs, publishers and of course for-profit companies
Benchmarking tools SciVal and InCites
Management 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 College, Director of Research Metrics Elsevier)
Scientometrics is not new

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

Impact flavors
“(…) a way to understand the distinctive patterns in the diverse impacts of individual products.”


Sciomentrics from past to present (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.

1922-48 Letka’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.
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.

Thank you!

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