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The Bedrock of Metrics: infrastructure support for research measure development

ALPSP Annual Conference, 15 Sep 2016



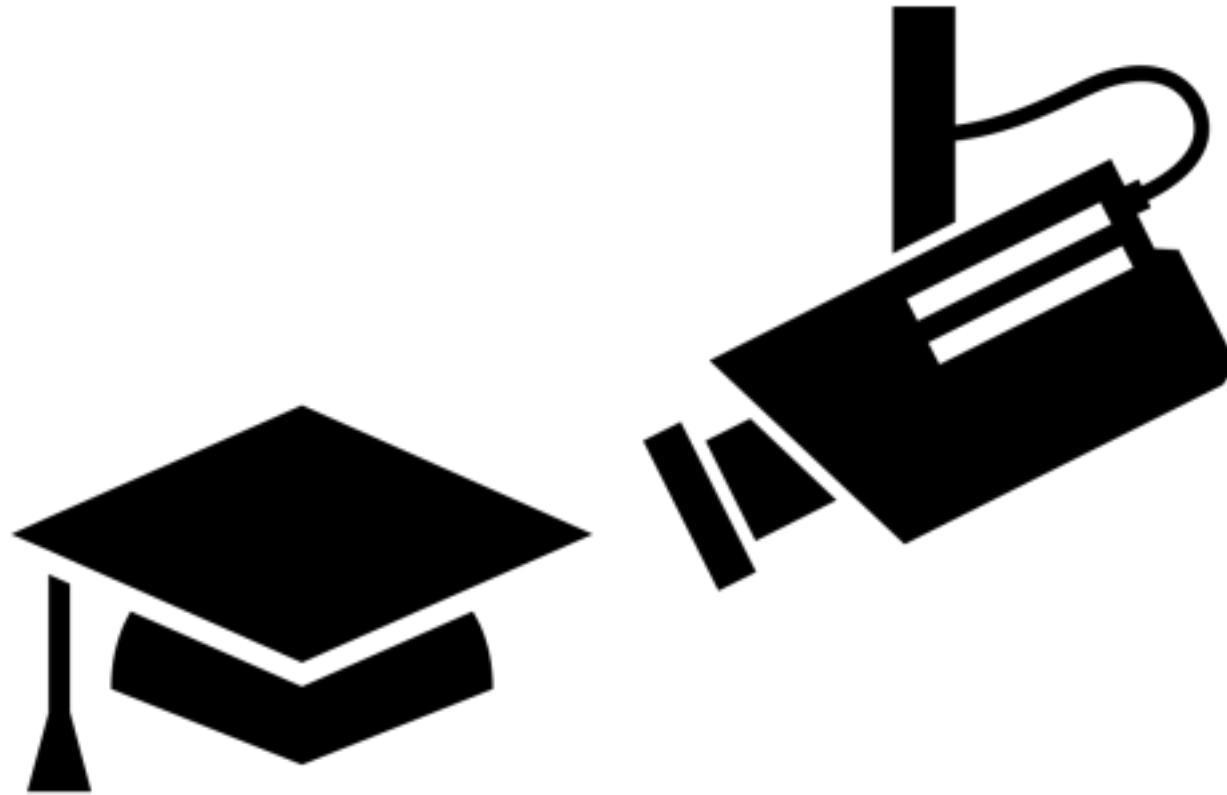
Metrics abound: citation-based

- JIF
- h-index, g-index, e-index
- Google Scholar ranking (h-5 index)
- Source Normalized Impact/Paper (SNIP)
- Impact per Publication (IPP)
- Scilmago Journal Rank (SJR)
- Eigenfactor
- Relative Citation Ratio
- ...

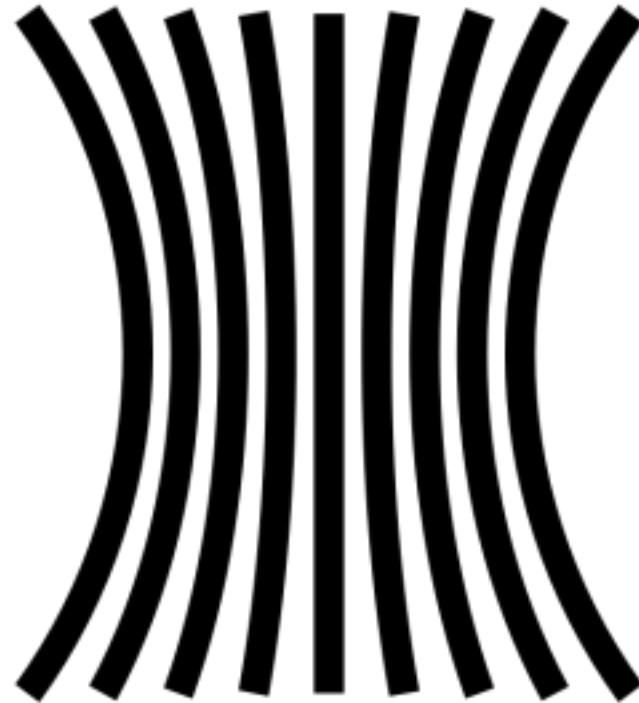
Metrics abound: altmetrics

- social shares
- grey literature references
- media mentions
- social bookmarks
- discussions
- recommendations
- inclusions in educational resources
- patent mentions
- ...

Scholars as subjects



Metrics as disciplinary power



Metrics & reactivity



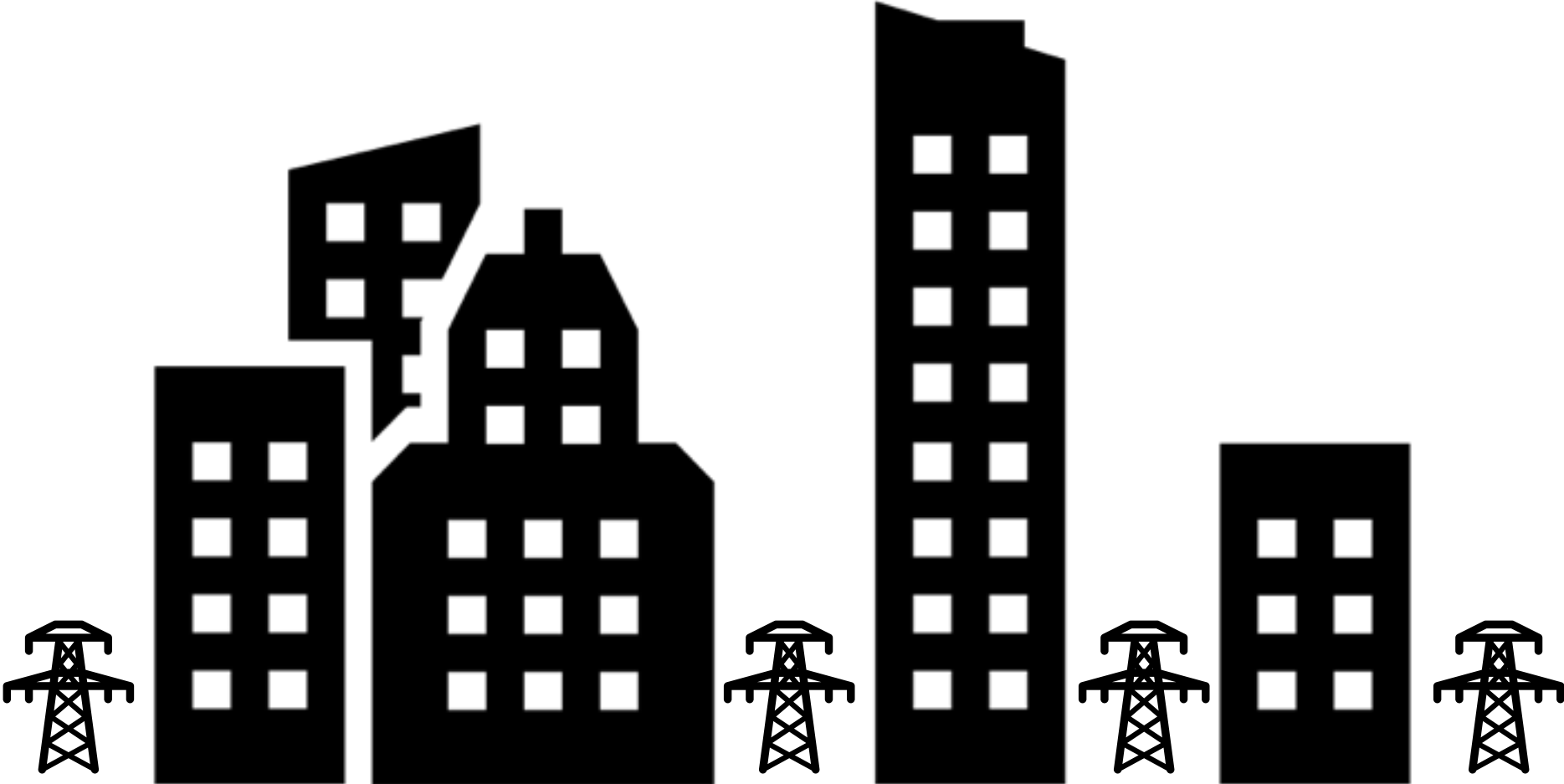
Community & policy responses

- San Francisco Declaration on Research Assessment (2013)
- Leiden Manifesto (2015)
- The Metric Tide (2015)

Infrastructure



Infrastructure



Infrastructure

- **standards** (NISO)
- **data** (DataCite/Crossref)
- **research** (biblio/scientometricians)
- **independent, non-proprietary body** to support the accuracy & validity of research metrics

Infrastructure - standards

NISO Altmetrics Initiative working groups:

1) Altmetrics Definitions and Use Cases

2) Data Quality Code of Conduct

- transparency
- replicability
- accuracy
- reporting

Data environmentalism for metrics

Requirements:

- collected for all scholarly research
- collected in a standard way by all aggregators
- made open to all
- made programmatically available for tool development & reuse

Infrastructure - data

Single clearinghouse:

- central point for collecting & propagating data
- consolidated negotiating power working with external platforms
- remove need for multiple bilateral agreements between individual metrics providers & data sources
- comprehensive coverage across all disciplines & research communities
- supports a diverse ecosystem of metrics tools & services



Infrastructure - people experts

bibliometricians & scientometricians:

- systematic investigation into the measurement & analysis of scholarly research - metrics & alt metrics
- understanding their impact on researchers and their effectiveness of in measurement (Goodhart's law)

Infrastructure - governance & oversight

- Metrics definitions, descriptions & sources
- Gold Standard data
- Audit raw data from providers
- Resources on responsible metrics implementations
- Forum for collaborating on metrics research questions

Opinion piece forthcoming from Allen L., Murphy F., Lin J., Taylor, M.

Publisher Call to Action

- Stop building the data desert
- Deposit & share full metadata
- Consider the metrics you promote



Thank you

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