Publications Analysis

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Publications Analysis (or Bibliometrics)

“The statistical analysis of written publications.”

Often includes...
- Journal articles (and reviews, editorials, letters, etc)
- Conference proceedings
- Books and book chapters
- Reports
- In some cases, magazine articles, blog posts, data, other media

Makes frequent use of metadata, such as...
- Addresses
- Author names
- Subject areas
- Reference lists

Distinct from textual analysis (topic modelling, LDA, semantic analysis)
What is it based on?

• Library or publisher records

• Institutional records

• Citation indices
  - Web of Science
  - Scopus
  - Google Scholar
  - Subject-specific indices such as the Astrophysical Data Service, RePEc, arXiv, PubMed, etc
Why are bibliometrics important?

• Excellence for Research in Australia
• Researcher CVs
• Grant applications
• International institutional rankings
• Capability mapping
• Journal ranking
• Collaboration and network analysis
What bibliometrics can do...

- Permit quantitative analysis of research
- Show part of the picture of scientific output in great detail
- Present a reliable proxy for academic impact in the form of citations
- Allow the sophisticated analysis of a range of metadata – topical and geographical, for example – at a global scale
- Provide a shared nomenclature and methodology for the analysis of science
- Inform qualitative analysis
What bibliometrics can’t do...

• Tell you about impact

• Tell you about all research outputs

• Treat all subjects with equal reliability

• Talk about quality

• Work without careful application and knowledge

• Replace qualitative analysis