

Boring theory and golden apples of Bibliometrics

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Biblio..what?

- **Bibliometrics** – *the application of statistical methods of the study of bibliographic data.* (Webster's dictionary)
- Part of **Scientometrics**
- Older sister of **Altmetrics**



Source: <https://www.getyarn.io/yarn-clip/eddce405-0154-4b32-9b2f-d2dabc776104/gif>

Little bit of history

- 1927 – **Gross and Gross** – **first citation analysis** ever – 3633 citations from 1926 volume of the *Journal of the American Chemical Society* <- to find out **which journals to purchase**
- Changes in second half of 20th century:
 - Computers
 - Internet
 - Need (calling) for other than peer review system of evaluation



Clarivate
Analytics

WEB OF SCIENCE™

Source: clarivate.com

1956 – Institute for Scientific Information

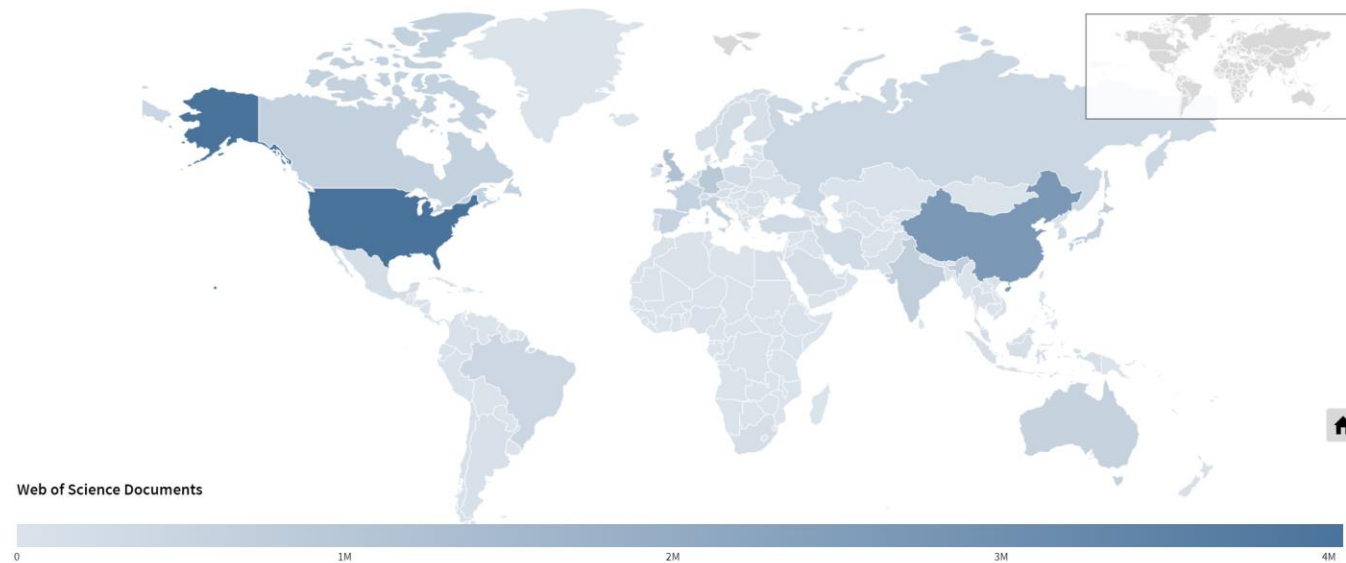
- 1964– Science Citation Index (SCI)
(Expanded 1988; today over 9200 journals)
- 1975 – Arts and Humanities Citation Index
- 1988 – Social Sciences Citation Index
- 2015 – Emerging Sources Citation Index
- Institute for Science information =>
Thomson Corporation => now Clarivate



<https://www.wikidata.org/wiki/Q1379084>

WOS – hugely US centric

Geographic



Web of Science Documents

Indicators: Web of Science Documents. **Time Period:** 2016-2020. **Schema:** Web of Science. **Dataset:** InCites Dataset
InCites dataset updated Nov 26, 2021. Includes Web of Science content indexed through Oct 31, 2021. Export Date: Dec 6, 2021.

AHCI

Arts & Humanities Citation Index contains over 1,800 journals across 28 arts & humanities disciplines. More than 4.9 million records and 33.4 million cited references date back from 1975 to present.

Our expert in-house editors use a single set of 28 criteria throughout the journal selection and curation process. Divided into 24 'quality' criteria and four 'impact' criteria, our editors select the most influential journals in their respective fields (using citation activity as the primary indicator of impact) for the Arts & Humanities Citation Index.

Compared to the clinical, natural and social sciences, the arts & humanities may differ significantly regarding the type of content that is considered to be of scholarly importance, norms for reviewing content, and citation behaviour. The Web of Science™ editors give these differences due consideration when reviewing journals in these subjects for Arts & Humanities Citation Index.



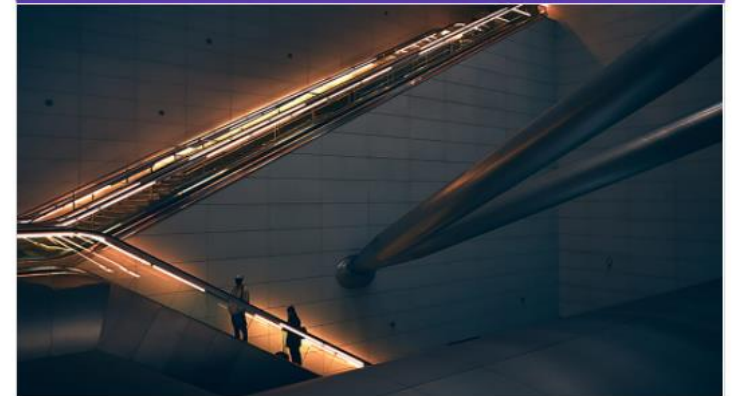
- ✓ 33.4 million cited references dating back to 1900
- ✓ 4.9 million total records
- ✓ 117K+ total Open Access records
- ✓ 28 disciplines

<https://clarivate.com/webofsciencegroup/solutions/webofscience-arts-and-humanities-citation-index/>

SSCI

Social Sciences Citation Index™ contains over 3,400 journals across 58 social sciences disciplines, as well as selected items from 3,500 of the world's leading scientific and technical journals. More than 9.37 million records and 122 million cited references date back from 1900 to present.

Our expert in-house editors use a single set of 28 criteria throughout the journal selection and curation process. Divided into 24 'quality' criteria and four 'impact' criteria, our editors select the most influential journals in their respective fields (using citation activity as the primary indicator of impact) for the Social Sciences Citation Index.



- ✓ 122 million cited references dating back to 1900
- ✓ 9.37 million total records
- ✓ 886K total Open Access records
- ✓ 3,400+ unique global journals
- ✓ 58 disciplines

<https://clarivate.com/webofsciencegroup/solutions/webofscience-ssci/>

ESCI

Since launching the Emerging Sources Citation Index™ in 2015 we have added over 7,800 titles, with backfiles dating back to 2005. Journals included in the Emerging Sources Citation Index cover all disciplines and range from international and broad scope publications to those that provide deeper regional or specialty area coverage.

More than 3 million records and 74.4 million cited references date back from 2005 to present.

Part of the Web of Science Core Collection™, Emerging Sources Citation Index contains quality publications, selected by our expert in-house editors for editorial rigor and best practice at a journal level.



- ✔ 74.4 million cited references dating back to 1900
- ✔ 3 million total records
- ✔ 1.16 million total Open Access records
- ✔ 7,800+ unique global journals
- ✔ 254 disciplines

<https://clarivate.com/webofsciencegroup/solutions/webofscience-esci/>

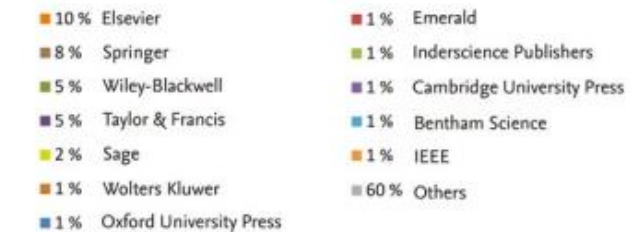
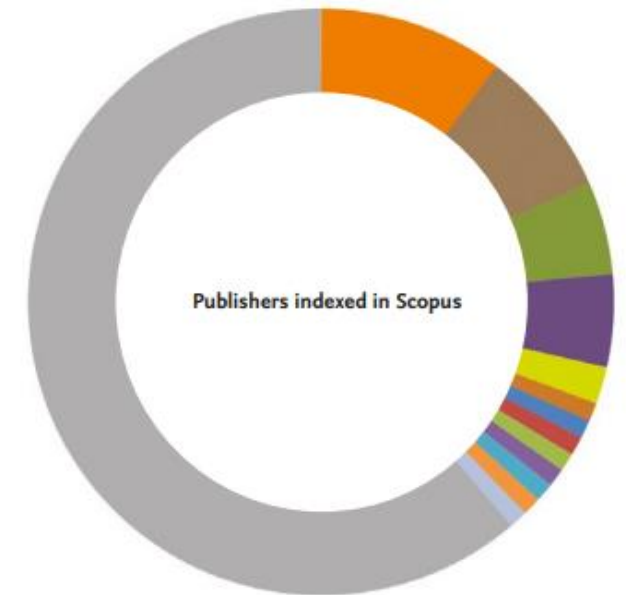


Scopus

Source: scopus.com

2004 – Scopus launched

- Elsevier – publishing company (2500 journals, 500 000 articles, yearly downloads around 1 billion)
- Netherland – West Europe



Source: Scopus Content Coverage Guide [online [elsevier.com](http://www.elsevier.com)]

SCOPUS

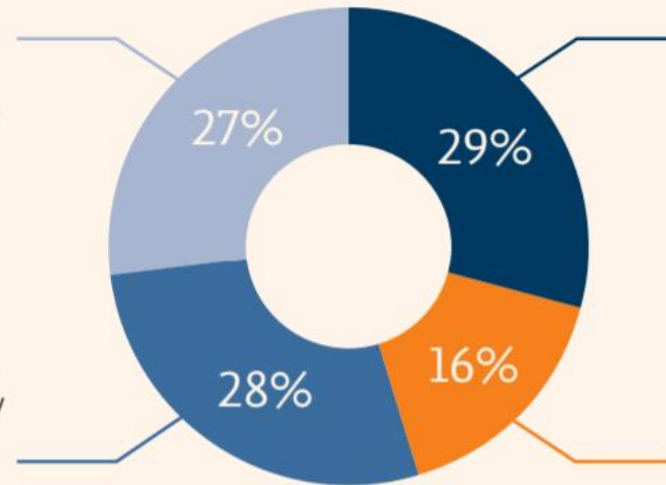
Publications per major subject area*:

Social Sciences

13.5+ thousand titles in arts & humanities; business, management & accounting; decision sciences; economics, econometrics & finance; psychology; social sciences

Physical Sciences

14.0+ thousand titles in chemical engineering; chemistry; computer science; earth & planetary sciences; energy; engineering; environmental science; materials science; mathematics; physics & astronomy



Health Sciences

14.8+ thousand titles in medicine; nursing; dentistry; health professions; veterinary

Life Sciences

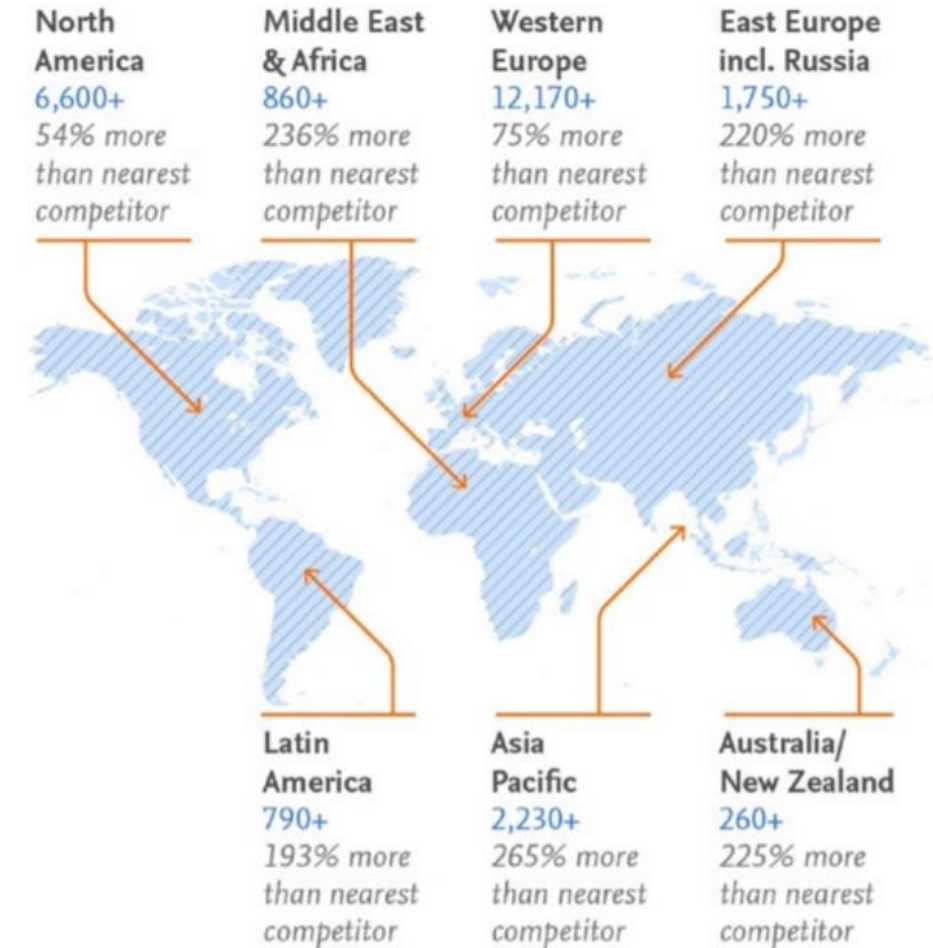
8.1+ thousand titles in agriculture & biological sciences; biochemistry, genetics & molecular biology; immunology & microbiology; neuroscience; pharmacology, toxicology & pharmaceuticals

*Counts include only active titles. Titles may fall into more than one major subject area.

Scopus is updated daily, so numbers are subject to change. Figures are rounded to the nearest decimal point. Source: Scopus title list, August 2021.

SCOPUS – active titles indexed

– Hugely Eurocentric



Source:

https://www.elsevier.com/solutions/scopus/how-scopus-works/content?dgcid=RN_AGCM_Sourced_300005030

Metrics and other magic words

- D1, Q1, Q2, Q3, Q4
- Journal Impact factor
- CiteScore
- H-index
- Article Influence Score
- SCImago Journal Rank
- Eigenfactor
- See more here:

<https://editorresources.taylorandfrancis.com/understanding-research-metrics/>



Source: https://en.wikipedia.org/wiki/Albus_Dumbledore

Comparison

WoS

- Older, bigger
- Journal metrics: JIF
(Journal Impact Factor)
- Author metrics: h-index
- InCites

Scopus

- Younger, faster growing
- Journal metrics: CiteScore
- Author metrics: h-index
- SciVal

Author identifiers

	ORCID	Researcher ID (Publons)	Scopus Author ID
Manner of ID generation	manual	manual	automatic
Matching of publications with ID	manual	manual	automatic
Supported platforms for matching results	different (WoS, Scopus, arXiv, etc.)	only Web of Science	only Scopus
Prerequisite for assigning an identifier	—	at least one record in WoS	at least two records in Scopus
The option to create an author's portfolio	☑	—	—

[Link](#)

So – which is better?

- Both contain high quality peer-reviewed articles – but not all of them; you can find excellent articles indexed only in one of them or in neither
- Good for following new trends in the field
- Good for finding potential collaborators
- Bad for evaluation of researcher
- Not very reliable for humanities and arts
- **BEWARE METRICS** – Metric is the question, not the answer (Taylor and Francis).

Alternatives? – ERIH PLUS

- European Reference Index for the Humanities
- 2014
- Europe focused
- Originally created by European Science Foundation
- Now NSD – Norwegian Centre for Research Data

The screenshot shows the ERIH PLUS website. At the top, there is a dark blue header with the ERIH PLUS logo and the text "EUROPEAN REFERENCE INDEX FOR THE HUMANITIES AND SOCIAL SCIENCES". Below the header, there is a navigation menu on the left with links: Search, Download current list, Submit journal (Login), About, Criteria for inclusion, Approval procedures, Advisory Group, National Experts, Statistics, Help, Contact, Cooperation and membership, Dimensions, COPE, and DOAJ. The main content area features a paragraph describing ERIH PLUS as an academic journal index for the HSS (Humanities and Social Sciences) society in Europe, providing article search facilitated by Dimensions. Below this is a search bar with the text "Find Journals" and a "Switch to advanced search" link. The search bar contains the text "Title or ISSN" and a "Search" button. At the bottom, there are three orange boxes: "Find Articles" (Search and browse articles using the ERIH PLUS by Dimensions search.), "Submission" (Is your favourite journal not in ERIH PLUS? Submit a journal here.), and "Statistics" (Contact us if the statistic you are looking for is not included.).

Usage in evaluation – Faculty of Arts MU

Váha	Zkratka	Informace
40	J_IMP_Q4	články v databázi WoS, které spadají do 4. kvartilu podle impakt faktoru.
60	J_IMP_Q3	články v databázi WoS, které spadají do 3. kvartilu podle impakt faktoru.
80	J_IMP_Q2	články v databázi WoS, které spadají do 2. kvartilu podle impakt faktoru.
100	J_IMP_Q1	články v databázi WoS, které spadají do 1. kvartilu podle impakt faktoru.
40	J_IMP	ostatní články ve WoS, které nespady do žádného kvartilu
30	J_NEIMP_WOS	článek v neimpaktovaném časopise indexovaném v databázi Web of Science v indexech: Arts & Humanities Citation Index (A&HCI); Emerging Sources Citation Index (ESCI)
40	J_SCOPUS	článek v recenzovaném časopise zahrnutém ve světově uznávané databázi - databáze SCOPUS; nespádající do kvartilů
40	J_SCOPUS_Q4	článek v recenzovaném časopise zahrnutém ve světově uznávané databázi - databáze SCOPUS; náležící do 4. kvartilu podle Scimago Journal Rank

80	J_SCOPUS_Q2	článek v recenzovaném časopise zahrnutém ve světově uznávané databázi - databáze SCOPUS; náležící do 2. kvartilu podle Scimago Journal Rank
100	J_SCOPUS_Q1	článek v recenzovaném časopise zahrnutém ve světově uznávané databázi - databáze SCOPUS; náležící do 1. kvartilu podle Scimago Journal Rank
20	J_ERIH; J_ERIH_NRRE	článek v recenzovaném časopise zahrnutém v seznamu ERIH PLUS
5	J_REC	článek v časopise zařazeném v Seznamu recenzovaných neimpaktovaných periodik vydávaných v ČR
5	J_OSTATNÍ_RIV	článek v odborném periodiku nespádajícím do předchozích kategorií; v této kategorii se na rozdíl od ostatních zohlední pouze výsledky odvedené do RIVu, aby nedocházelo k neodpovídajícímu hodnocení výstupů, které věcně nejsou plnohodnotným odborným článkem, ale jsou autory v ISu omylem nebo z bibliografických (nenalezení jiného vhodného formuláře) pod tuto kategorii vloženy. Odborný článek je text prezentující původní výsledky výzkumu, prošlý recenzním řízením a publikovaný ve vědeckém recenzovaném časopise.

Thank you for your attention

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