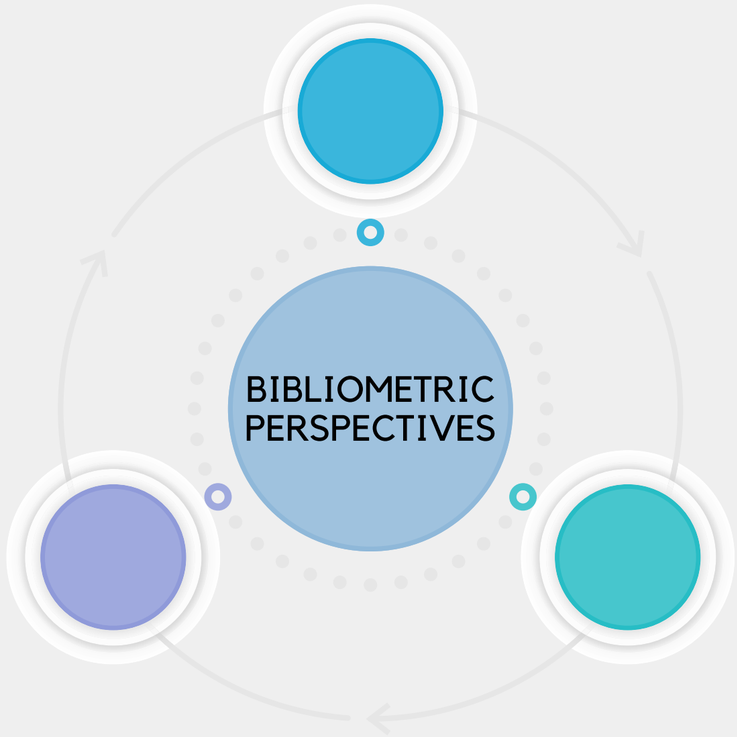
SCIENCE OF SCIENCE

Bibliometric Analysis in Published Research

November 8, 2023

WHAT IS BIBLIOMETRIC DATA?

TEXT &
JOURNALS



PEOPLE &
INSTITUTIONS

CONTENT &
THEORIES

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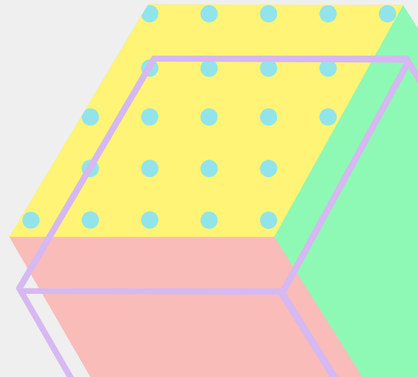
	A	B	C	D	E	F	G	H	I	J	K	L
1	Publication Type	Authors	Book Authors	Book Editor	Book Group	Author Full Names	Book Autho	Group Auth	Article Title	Source Title	Book Serie	Book Ser
2	J	Saab, M; Dartus, J; Erivan, R; Reina, N; Ollivier, M; Devos, P				Saab, Marc; Dartus, Julien; Erivan, Roger; Reina, Nicolas; Ollivier, Matthieu; Devos, Patrick			Publication output of French orthopedic and trauma surgeons: Quantitative and quali	ORTHOPAEDICS & TRAUMATOLOGY-SURGERY & RESEAI		
3	J	Silz, P				Silz, Piotr			Data Mining Process Maturity - Result of Empirical Research	PROBLEMY ZARZADZANIA-MANAGEMENT ISSUES		
4	J	Irfan, M; Liu, XH; Hussain, K; Mushtaq, S; Cabrera, J; Zhang, PP				Irfan, Muhammad; Liu, Xianhua; Hussain, Khalid; Mushtaq, Suraya; Cabrera, Jonnathan; Zhang, Pingping			The global research trend on cadmium in freshwater: a bibliometric review	ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH		
5	J	Rong, CX; Fu, WX				Rong, Caixia; Fu, Wenxue			A Comprehensive Review of Land Use and Land Cover Change Based on Knowledg	LAND		
6	J	Yuan, J; Li, QX; Zhao, YQ				Yuan, Jie; Li, Qianxi; Zhao, Yanqiang			The research trend on arsenic pollution in freshwater: a bibliometric review	ENVIRONMENTAL MONITORING AND ASSESSMENT		
7	J	Liu, X; Wang, XF; Chang, J; Zhang, HM; Cao, PX				Liu, Xin; Wang, Xiaofan; Chang, Jing; Zhang, Hongmin; Cao, Pengxiu			Landscape analysis and overview of the literature on oxidative stress and pulmonary	FRONTIERS IN PHARMACOLOGY		
8	J	Thottoli, MM				Thottoli, Mohammed Muneerali			The tactician role of FinTech in the accounting and auditing field: a bibliometric analy	QUALITATIVE RESEARCH IN FINANCIAL MARKETS		
9												
10												

WHAT CAN BE MEASURED?

1. Current research also shows that education patterns in the world-system of social sciences is rather similar to the network of subsequent collaboration between world regions.

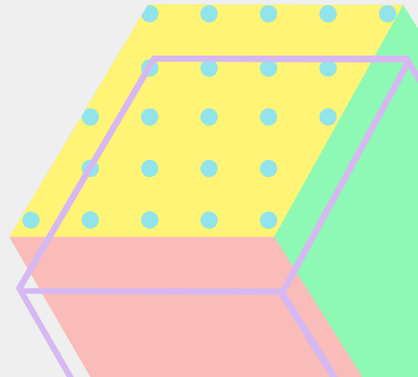
Demeter, M. (2019). The World-Systemic Dynamics of Knowledge Production: The Distribution of Transnational Academic Capital in the Social Sciences. Journal of World-Systems Research, 25(1), 111–144. https://doi.org/10.5195/jwsr.2019.887



WHAT CAN BE MEASURED?

2. It was not until the development of automatic author name disambiguation techniques that bibliometric approaches were capable of tracking scientific mobility at a large scale. There is now a sizeable portion of scholarly papers indexed by major bibliometric databases (e.g., Web of Science and Scopus) that include linkages between authors and their specific affiliations. This allows researchers to not only establish institutional ties, but also to discern between authors who have a single affiliation and those that have multiple institutional affiliations. This linkage between authors and affiliations has improved the reliability of author name disambiguation algorithms (Caron & van Eck, 2014), which have been implemented in Scopus since 2011 (Moed et al., 2013), as well as in the in-house version of the Web of Science of CWTS (Caron & van Eck, 2014). These disambiguated datasets have allowed for analyses of mobility flows at the meso- and macro- levels.

Robinson-Garcia, N., Sugimoto, C. R., Murray, D., Yegros-Yegros, A., Larivière, V., & Costas, R. (2019). The many faces of mobility: Using bibliometric data to measure the movement of scientists. *Journal of Informetrics, 13*(1), 50–63. https://doi.org/10.1016/j.joi.2018.11.002



HOMEWORK

- Read your section of ICR article (located in project folder)
- In your groups, 1 will explain what your mode of analysis can show and why it is useful in science, the other will attempt the analysis using your data set
- Present 3 slides each in Google Slides next Friday
- Watch **VosViewer video**, share one thing learned next mtg

Surya/Geetha with Open Alex - Co-citation analysis
Amulya/Akarsh with Scopus - Bibliographic coupling
Ashika with Web of Science - Main Path Analysis

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FINAL PROJECT - GITHUB, OWN RESEARCH ? AND ANALYSIS/TOOLS (2 CAN WORK TOGETHER ON A DATA SOURCE, CAN USE ANOTHER ONE FROM VIDEO SLIDE OF ADDITIONAL DATA SOURCES)