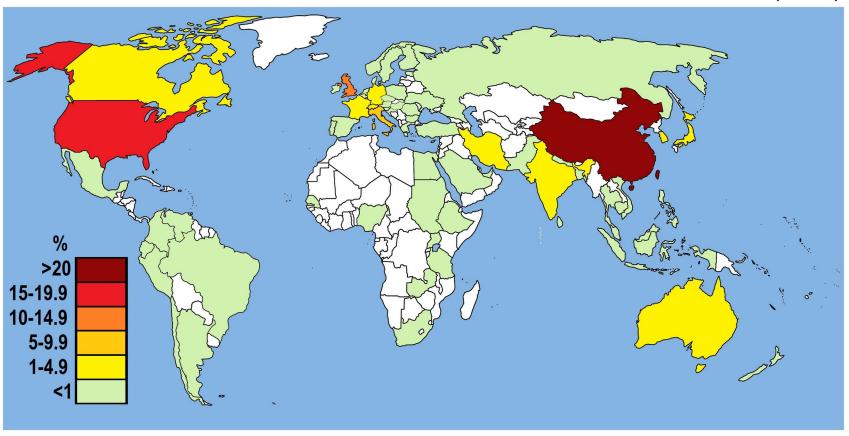


# Bibliometric Analyses with R

**Mathias Scharinger** 



#### Nowakowska et al. (2020)

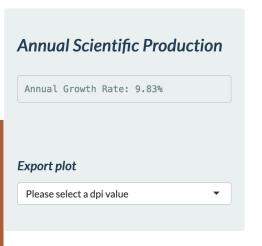


Distribution of corresponding authors of scholarly articles on SARS-CoV-2 and COVID-19 between January and March 2020

#### **Bibliometric analysis:**

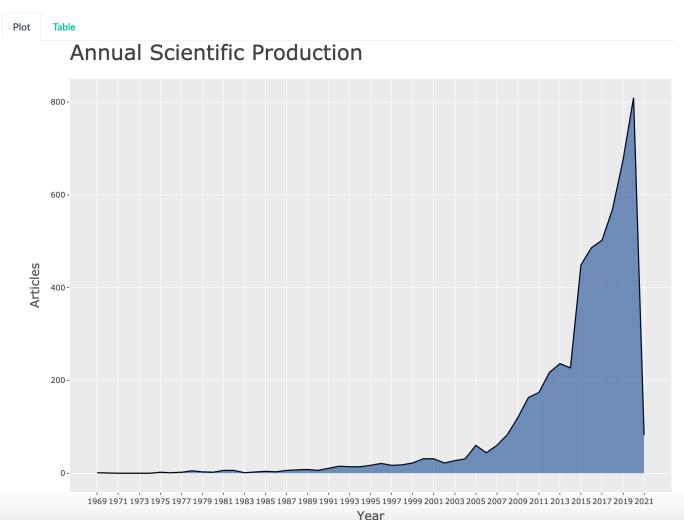
- statistical evaluation of published scientific works
- effectual way to measure the influence of publication in the scientific community
- **bibliometrics**: Alan Pritchard (1969), "Statistical Bibliography or Bibliometrics?": "The application of mathematics and statistical methods to books and other media of communication".



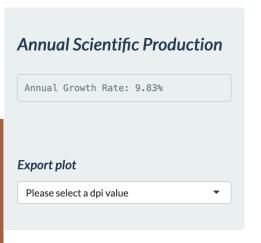


Search term:

**Bibliometrics** 

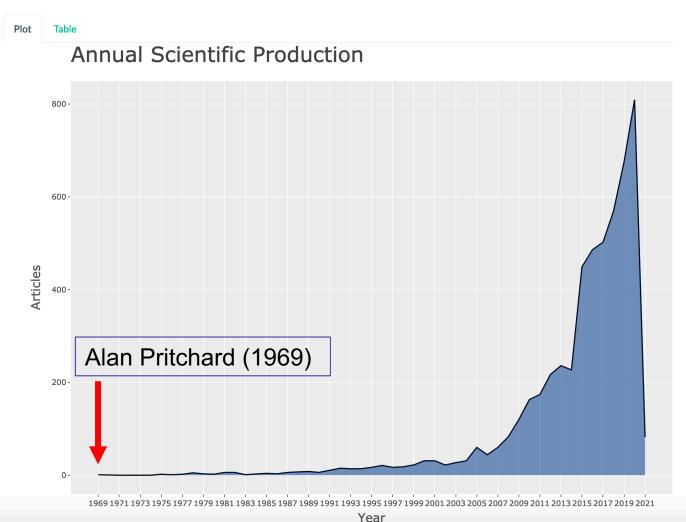




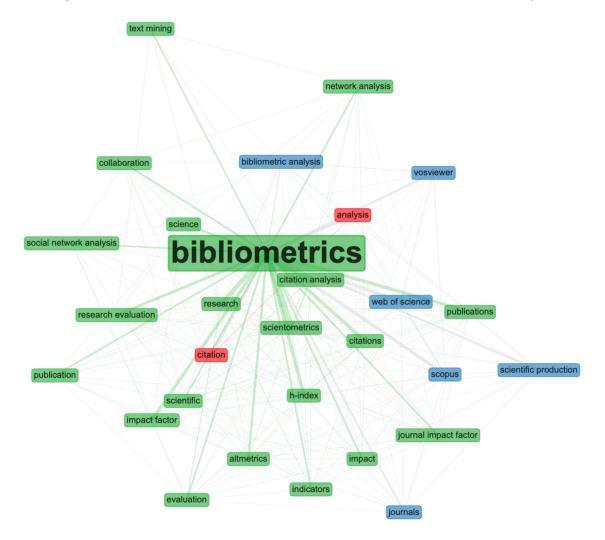


Search term:

**Bibliometrics** 













### Units of measurements (items):

- (co)-authors
- keywords
- sources (Institutes, Universities etc.)
- countries
- publication types



#### Source of data:

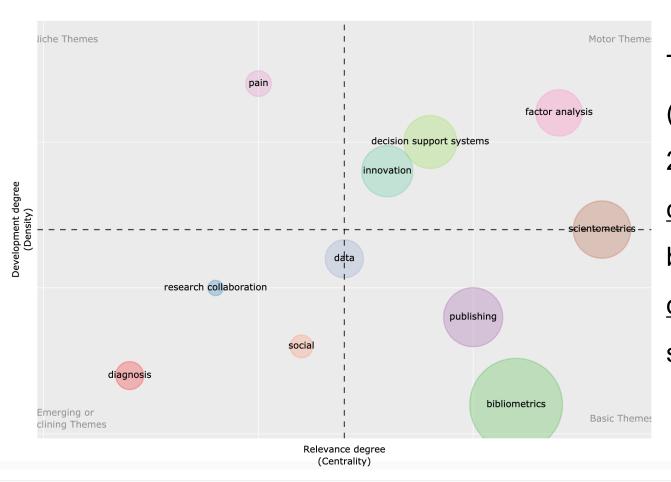
- Web of Science (WoS)
- Scopus
- Pubmed
- Google Scholar
- Dimensions



### **Analysis types:**

- Number of publications per year
- Number of citations per year
- Productivity of authors, institutions, or countries
- Co-occurrence analyses
  - Frequency
  - Strengths of links
- Bibliographic coupling

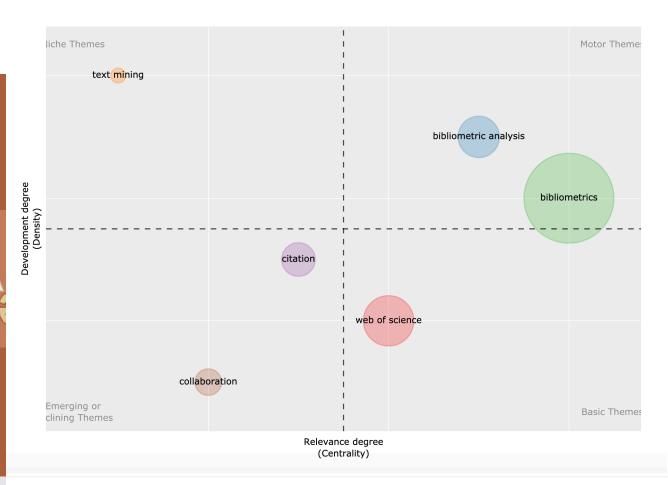




Thematic Evolution
(situation before
2005)

centrality: interaction
between networks
density: internal
strength of network





Thematic Evolution
(situation after
2005)

centrality: interaction
between networis
density: internal
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### Links

- Web of Science: <a href="http://apps.webofknowledge.com">http://apps.webofknowledge.com</a>
- GitHub with material: <a href="https://github.com/matselingua/bibliometrix">https://github.com/matselingua/bibliometrix</a>
- Bibliometrix: <a href="https://www.bibliometrix.org">https://www.bibliometrix.org</a>
- VosViewer: <a href="https://www.bibliometrix.org">https://www.bibliometrix.org</a>



### **Practical illustration**

- biblioShiny (R: Bibliometrix)
- Data: GitHub with material:
   <a href="https://github.com/matselingua/bibliometrix">https://github.com/matselingua/bibliometrix</a>
- Search terms:
  - Predictions in language
  - Auditory hallucinations



### **Practical illustration**

WoS-Search: 06.12.2020

Predictions: TI=((predicti\* AND language) OR (predicti\* AND speech) OR (preactivat\* AND language) OR (preactivat\* AND speech)) AND AK=(predicti\* OR expectation\*)

Auditory hallucinations: TS=(auditory AND hallucination\* AND voice\*)

