
MACQUARIE
BUSINESS SCHOOL
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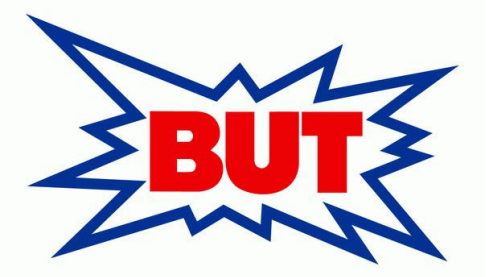
University
Systematic
Literature
Reviews

Key reference

- Linnenluecke, M. K., Marrone, M., & Singh, A. K. (2019). Conducting systematic literature reviews and bibliometric analyses. *Australian Journal of Management.* Available at: https://doi.org/10.1177/0312896219877678

Our Knowledge is Multiplying

- Thousands of new scientific studies are published every day



- Replication is often not encouraged by journals (focus on novelty)
- Unsystematic proliferation

Systematic Reviews

- The assembly, critical appraisal, and synthesis of all relevant studies that address a specific question.
- Application of scientific strategies
  - In ways that limit bias
  - Good reviews have rigorous methods and clear reporting – replicability!
  - Not just a collection of articles you happen to find on Google

Linnenluecke, M. K., Marrone, M., & Singh, A. K. (2019). Conducting systematic literature reviews and bibliometric analyses. Australian Journal of Management.

Common Issues

- The author(s) present a cursory overview only
- The criteria for inclusion and exclusion of articles are not clear
- The selection of some articles over others leads to a sample selection bias
- Important contributions may be missed
- The literature review does not establish a comprehensive background to allow theory development and testing
- Prior theory is mentioned by causal links are not detailed

Sutton, Robert I., and Barry M. Staw. (1995) "What theory is not." *Administrative Science Quarterly* 40(3): 371-384.

How to get started

Different Types of Literature Reviews Have Different Purposes

Parts of a Systematic Literature Review

- Typical structure of a systematic review article
  - Introduction
  - Method (define inclusion/exclusion criteria, locate studies, select studies based on criteria, assess evidence)
  - Results (citation map different research streams)
  - New research directions
  - Conclusions

Inclusion and Exclusion Criteria

- Decide a priori what your inclusion and exclusion criteria will be
  - You would not want to include just any random piece of information into a systematic review.
  - What to consider
    - Your problem/question
    - Your study design
    - If there is a lot of evidence - published since a specific date, published in particular journals or in a particular field
    - Decide how to handle grey literature (e.g., conference papers, reports,…)
- Note: Excluding studies due to methodological flaws is inappropriate and biases a systematic review

Inclusion Criteria – Search Terms

You can use a database, e.g., Thompson Reuters Web of Science

Linnenluecke (2017) – Review on resilience

- Search term “resilien*” * is a wildcard that picks up variations such as resilient or resiliency
- Limit search to Business/Management (?)
- Cited reference check to see if you missed any important contributions

Linnenluecke, M.K. (2017) "Resilience in business and management research: A review of influential publications and a research agenda.“ International Journal of Management Reviews (19): 4-30.

Exclusion Criteria – Data Cleaning

- Similar to triangulation in Qualitative Research
- Have 2 or more researchers examine the list of references obtained from the search for suitability for inclusion in the review
- Another researcher using the same database and the same search terms and the same time period should come up with the exact same set of references
- You should document every step

Analysis

- Broadly search the literature to become familiar with what types of studies exist
  - What has and has not been done
  - Are there already existing reviews?
  - What are the main themes? What are the main gaps?
- Then consider how to best summarise the existing evidence
  - Descriptive statistics/frequency tables
  - Citation maps
  - Lists of studies
  - Meta-analysis

Using Histcite for Visualising Biliometric Data

A brief introduction

Professor Martina Linnenluecke

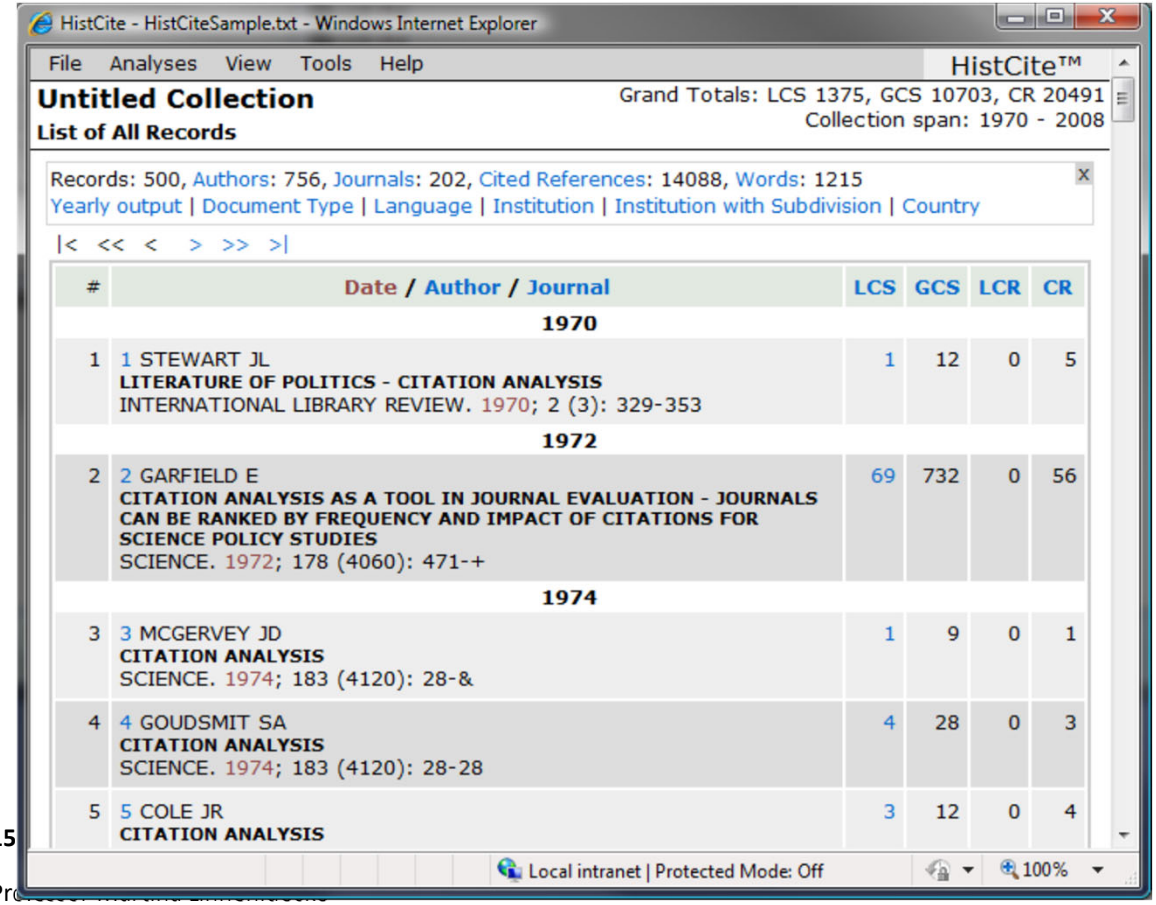
Citation Mapping

- Visual mapping of citation linkages
- Might choose top 50 or so most highly cited
- Note this method will allow you to identify records based on their citation count as a proxy for “important” citations – this method is inherently biased towards older citations
- Application of the method shown here needs proper data cleaning - check for incorrect/inconsistent spelling etc. in references/journal style to unify records

Histcite

- Based on the work of Eugene Garfield
- No longer officially supported but older versions still run under the new Windows versions; works for Web of Science data only but can covert Scopus records
- Histcite does have most functionalities that R has – the program is much less sophisticated, but additions and deletions are easier to do if you are not familiar with the R language
- You have to add missing references manually which is time consuming to do (same issue applies to the R package – missing references also need to be added to your Datafile)

What it looks like



- LCS = Local Citation Score

  Number of citations to the paper from within the collection.

- GCS = Global Citation Score

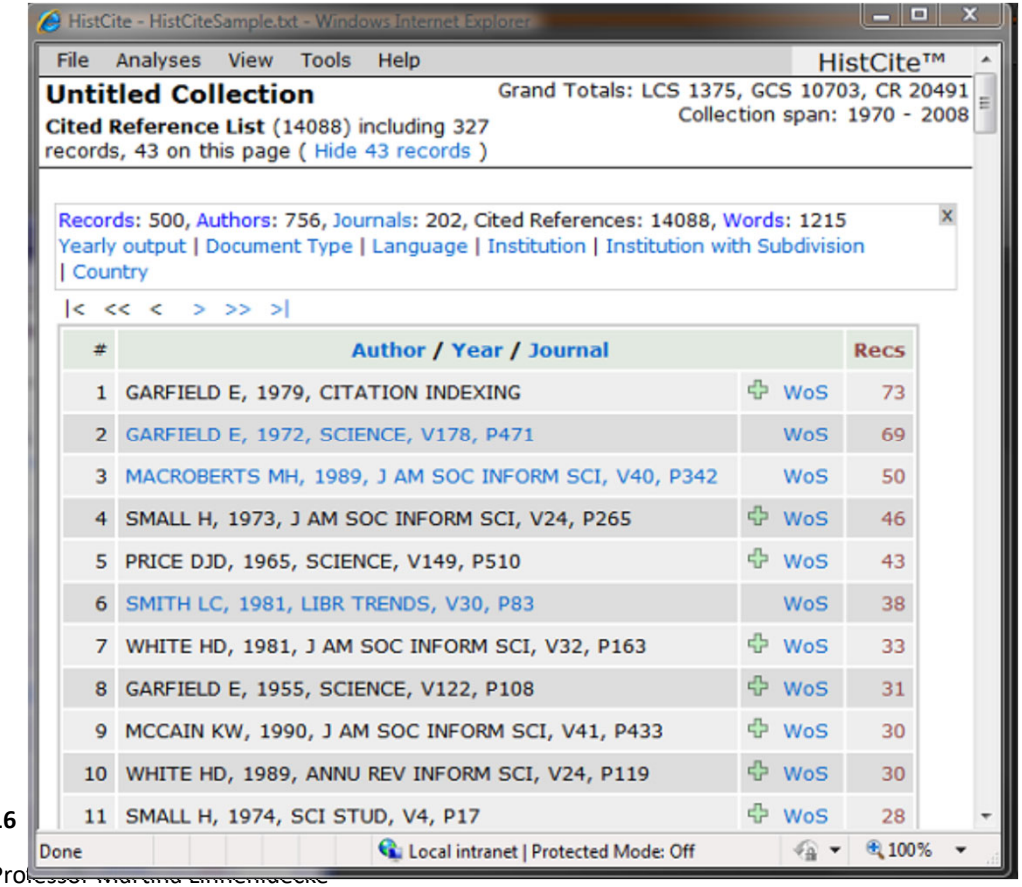
  Number of citations to the paper from all sources, as reported in Web of Science (at time of download)

- LCR = Local Cited References

  Number of papers in the collection that are cited by the paper

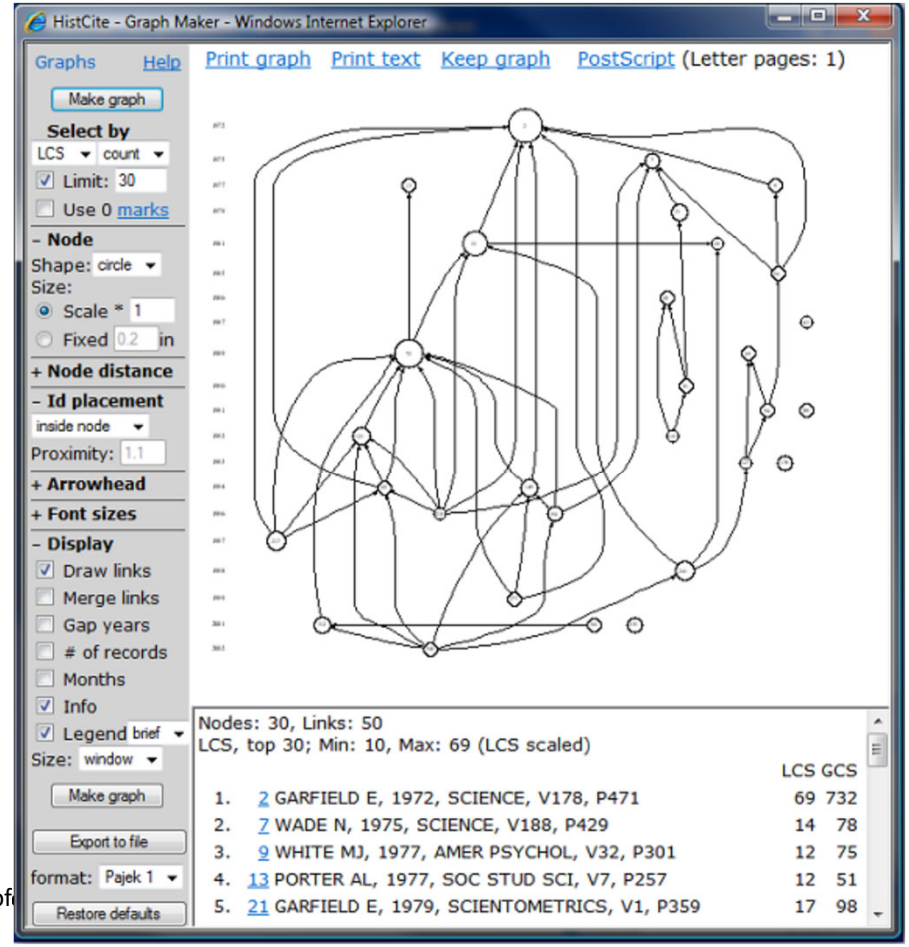
- CR = Number of Cited References

Cited Reference Search



- Important tool to identify potentially missing references!
- Records in blue are part of the collection. Records in black are not part of the collection as they did not meet Web of Science search criteria, or they are not Indexed in Web of Science.
- See manual or video on how to add missing references to your collection

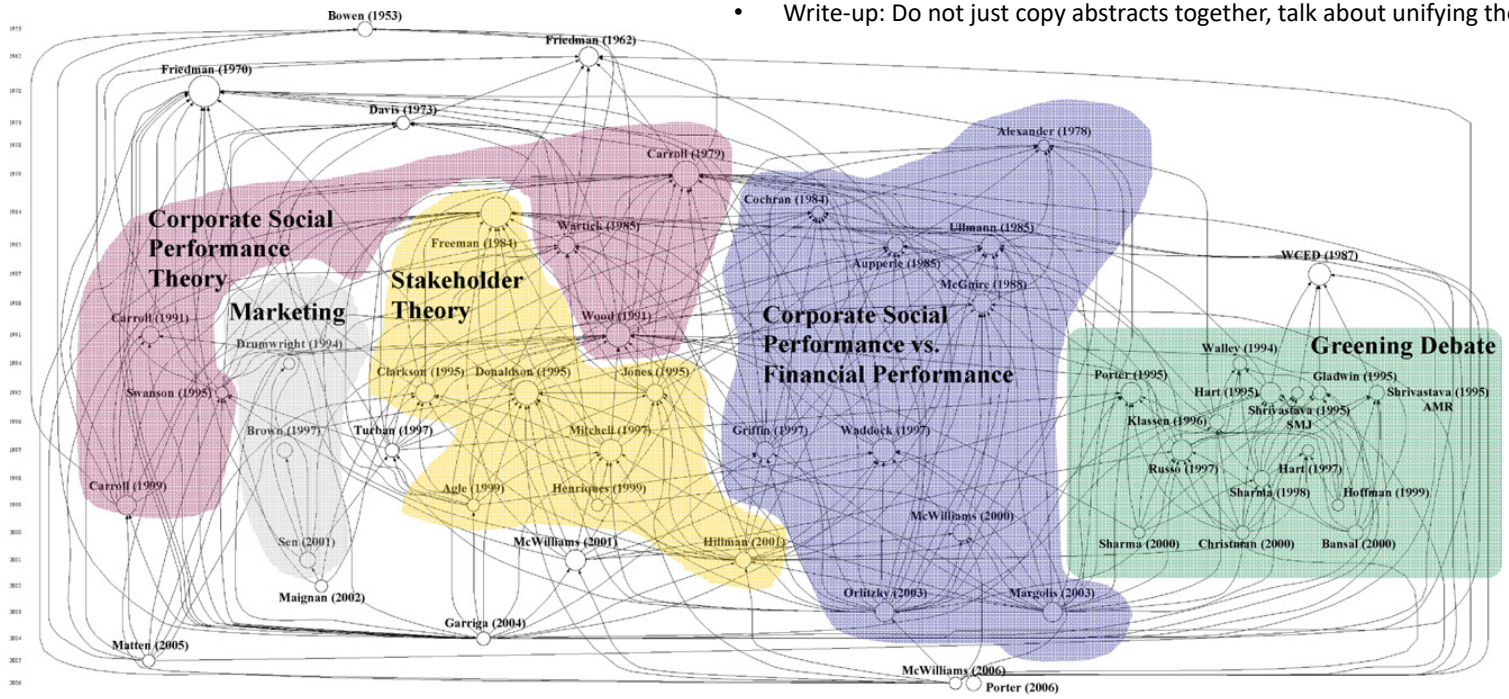
Graph Maker



- Set desired cut off for LCS or GCS
- There are no hard rules how many papers you should include – make judgement call
- If you set your cut off at say 30 papers, make sure that you do not accidentally overlook papers with an equal LCS (e.g., paper 30, 31 and 32 might all have an LCS of 5), in that case expand selection
- Use graphic editor for additional labelling – Histcite cannot do this
- Suggest to do a manual check that all cross-citations are identified

Research Themes

- Identify common themes that make a research area (similar to coding in qualitative research);
- Triangulation across researchers is useful here as well
- Write-up: Do not just copy abstracts together, talk about unifying themes



Nodes: 53 top publications, Links between publications: 292.
For purposes of clarity, only the first author on each publication is listed. See text for further explanation of coloring.

Linnenluecke, M. K., & Griffiths, A. (2013). Firms and sustainability: Mapping the intellectual origins and structure of the corporate sustainability field. *Global Environmental Change*, 23(1), 382-391.

Histcite

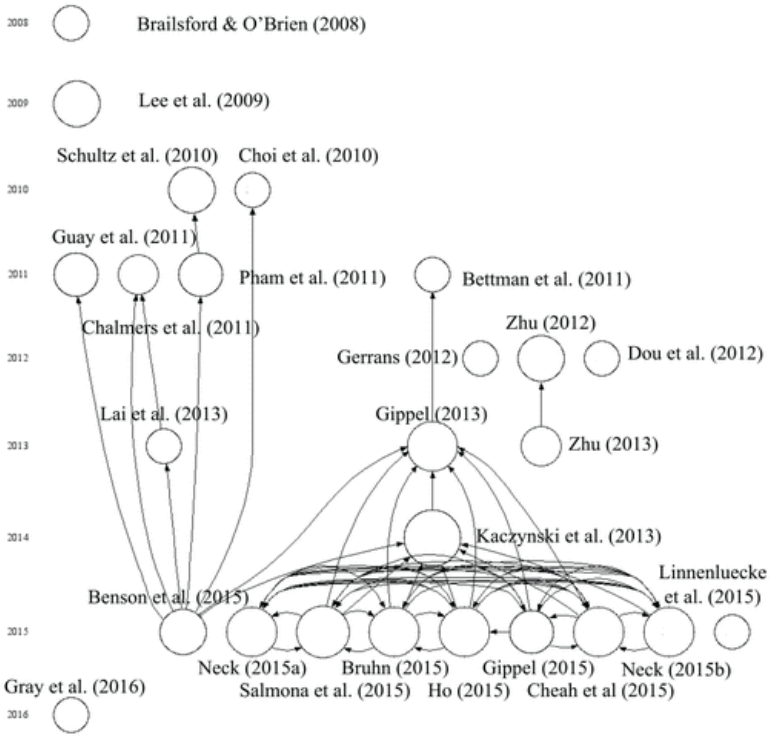


Figure 1. Citation map of the research conversation with AJM (LCS ⩾ 4).

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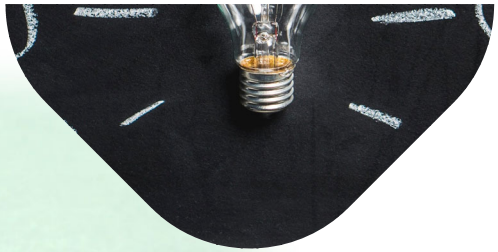
Identification of Emerging Research Themes

- Citation mapping gives more emphasis to earlier papers as they have had more time to attract citations
- Are there emerging themes in the latest papers that should be highlighted
- Again, a triangulation across researchers is useful here
- Systematic reviews can change minds!







Questions?

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