2011

Enhancing library services: utilizing bibliographic databases for social network analysis

Michele R. Tennant  
University of Florida

Cathy C. Sarli

Kristi L. Holmes

Follow this and additional works at: http://digitalcommons.wustl.edu/becker_pubs

Part of the Medicine and Health Sciences Commons

Recommended Citation

http://digitalcommons.wustl.edu/becker_pubs/19

This Presentation Poster is brought to you for free and open access by the Becker Medical Library at Digital Commons@Becker. It has been accepted for inclusion in Becker Library Publications and Presentations by an authorized administrator of Digital Commons@Becker. For more information, please contact engeszer@wustl.edu.
Enhancing Library Services: Utilizing Bibliographic Databases for Social Network Analysis

Michele R. Tennant, AHP, Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute, University of Florida, Gainesville, FL; Cathy C. Sarli, AHP, Scholarly Communications Specialist; Kristi L. Holmes, Bioinformaticist; Bernard Becker Medical Library; School of Medicine, Washington University, St. Louis, MO

Social network analysis (SNA) can be a powerful method of visualizing the efforts of a group. Forty faculty from the University of Florida's Genetics Institute were selected for SNA, based on their academic standing (20 assistant and associate professors and 20 full professors). A literature search was carried out in Scopus for each group of faculty (both junior and more experienced faculty). The bibliographic data from the literature search was downloaded and subsequently used to create a network to compare collaborations, evidenced by coauthorship on papers. The social network analysis was carried out using the Network Workbench Tool (NWB) from the Cyberinfrastructure for Network Science Center. 

Assistant & Associate Professors
University of Florida Genetics Institute
n = 20, January 2009 - April 2011

Social network analysis can be a powerful method of understanding the authoring relationships of a single investigator. Data for the analysis originated from a literature search in Web of Science (search query below) and the social network analysis was carried out using NWB.

**POTENTIAL DATA SOURCES**
- Personal Bibliographies
- Bibliographic (bib)
- Endnote Export Format (RefMan)
- Google Scholar
- Pubmed
- Scopus
- Web of Science
- Wikipedia

**OTHER FOSSILS:**
- Map collaborations, publication and funding profiles of investigators
- Track changes in collaborative networks over time (using papers, conference abstracts, proposals)
- Examine a faculty “before and after” an active, unit, funding or a change in directorship
- Promote understanding of the processes and productivity over the course of defined time
d - Track research and teams for grants
- Visualize co-occurrences – those queries on areas of research using bibliographic information
- Breadth analysis – examine the emergence of concepts over time
- Visualize core facilities, those areas, potential patterns of users
- Utilize bibliographic information to develop new areas as “directly connected”
- Understand the network of a publication like a CMS in a geographic sense – different relationships, properties, efforts

**WHAT SEARCH QUERY?**
- PubMed: (exp_neurobiology OR exp_neurological OR LIFE SCIENCES | MEDICINE | BIOLOGY OR MEDICINE | PLANT AND PLANKTON SCIENCE) AND ((退款元) OR (退款元) OR (退款元) OR (退款元) OR (退款元))
- Web of Science: (JCR_2011/JCR_2011) (JCR_2012/JCR_2012)
- WoS: WoS SEARCH Query:
  - WoS: (Title/Abstract/Article-Title) OR (Title/Abstract/Article-Title)
  - WoS: (Title/Abstract/Article-Title) OR (Title/Abstract/Article-Title)
  - WoS: (Title/Abstract/Article-Title) OR (Title/Abstract/Article-Title)
  - WoS: (Title/Abstract/Article-Title) OR (Title/Abstract/Article-Title)
  - WoS: (Title/Abstract/Article-Title) OR (Title/Abstract/Article-Title)
  - WoS: (Title/Abstract/Article-Title) OR (Title/Abstract/Article-Title)
  - WoS: (Title/Abstract/Article-Title) OR (Title/Abstract/Article-Title)
  - WoS: (Title/Abstract/Article-Title) OR (Title/Abstract/Article-Title)
  - WoS: (Title/Abstract/Article-Title) OR (Title/Abstract/Article-Title)
  - WoS: (Title/Abstract/Article-Title) OR (Title/Abstract/Article-Title)

The role of the library
Libraries and librarians bring a wealth of knowledge and expertise that can be applied in these types of analyses:

- Expert searches
  - Expertise with disambiguation
  - Knowledge of databases
  - Expertise in database selection
- Knowledge of publication types
- Understanding of ontologies
- Understanding of controlled vocabularies
- Knowledge of relationships with data sources
- Understanding of their organization

Librarians can apply their skills and expertise to all stages of SNA:
1. Identify appropriate analysis
2. Identify appropriate data source
3. Develop search query, search
4. Data clean-up
5. Analysis

**Social Network Analysis**

Social network analysis (SNA) can be a powerful method of understanding the authoring relationships of a single investigator. Data for the analysis originated from a literature search in Web of Science (search query below) and the social network analysis was carried out using NWB.