MPACT Family Trees: Quantifying academic genealogy in library and information science

http://ils.unc.edu/mpact

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MPACT

Description

The MPACT Project is an ongoing project devoted to defining and assessing Mentoring as a scholarly activity. We're collecting data on dissertations and dissertation committee service.

Current Statistics

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disciplines</td>
<td>7</td>
</tr>
<tr>
<td>Schools</td>
<td>42</td>
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<tr>
<td>Dissertations</td>
<td>3782</td>
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<tr>
<td>Advisorships</td>
<td>3767</td>
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<tr>
<td>Committeeships</td>
<td>9733</td>
</tr>
<tr>
<td>People</td>
<td>6831</td>
</tr>
</tbody>
</table>
“The initial list of author names was compiled using the UMI Dissertation Abstracts database, WorldCat, two published bibliographies (Eyman, 1973; Schlacter & Thomison, 1982), and the online catalogs of the respective university libraries. Data on advisors and committee members were gathered from full-text versions of the dissertations held in Dissertation Abstracts for most dissertations completed in 1997 and later. Physical searches were made of the print and microforms dissertation collection at the University of North Carolina at Chapel Hill; other copies were obtained through interlibrary lending. A number of ILS schools provided additional information, including missing dissertations and advisor and/or committee member names that were illegible in the copies consulted. In some cases, personal contact with authors was made.”

Academic Genealogy

- Historically done manually/locally
  - Lineage of current prominent scholar
  - Descendants of “patriarch” of a field
  - By Department
    - http://www.lib.utexas.edu/chem/genealogy/
- By Discipline
  - Artificial Intelligence Genealogy Project at the University of Texas at Austin
  - Mathematics Genealogy Project at North Dakota State University
Example MPACT Tree
http://ils.unc.edu/mpact
MPACT – Metrics

- Seven proposed metrics
  - A – Advising
  - A+C – Advising and Committeeship
  - T – Tree
  - D – Decaying Tree
  - G – Generations
  - W – Width
  - TA – Advisors on Tree
A Score – Advising

Measure of direct influence and “production”
A+C Score – Advising and Committeeship

5A + 7C = 12
T Score – Tree

Shows influence on the discipline

\[ 28 = 5 + 10 + 6 + 7 \]
D Score – Decaying Tree

Rewards direct influence, allows advisees to “catch” their mentors

\[
12.375 = \left(\frac{5}{1} = 5\right) + \left(\frac{10}{2} = 5\right) + \left(\frac{6}{4} = 1.5\right) + \left(\frac{7}{8} = .875\right)
\]
G Score – Generations

The depth of a tree
Could capture a culture shift (e.g. a move to “Big Science”)
Warm Score – Advisors on Tree

Hardest ladder to climb
Implications

- Could investigate
  - Longevity of lines of inquiry
  - Comparison across disciplines
  - Influence of disciplines

- Automated via larger databases
  - ProQuest/UMI
  - Scopus
  - Google Scholar
Related and Future Work

- Correlation with other established metrics of scholarly activity
  - Citation Counts
  - Generation of Grant Funding?
  - Salaries?
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