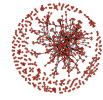


**Self-monitoring of universities using social network analysis:
best practice between research and university consultancy**

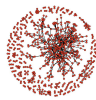
Uwe Obermeier, Petra Ahrweiler
UCD Innovation Research Unit (IRU)

Concepts of (New) Knowledge Production



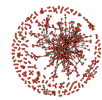
- Mode 2 (Gibbons et al, 1994)
- Academic Capitalism (Slaughter and Leslie, 1997)
- Post-academic science (Ziman, 2000)
- Triple Helix (Etzkowitz and Leydesdorff, 2000)
- not only peer review but economic, political, social, or cultural nature, more difficult to determine good science
- Increasing market and market like activities at universities, competition for external funding, grants and contracts, (but only some universities manage to make money)
- pressure for scientists to deliver more 'value for money', competition for money becomes (almost) as important as competition for scientific credibility

Changes within academia

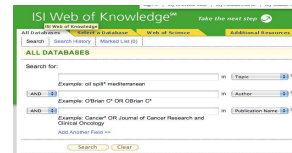


- Increasing dominance of teams in knowledge production (Wuchty, Jones, Uzzi, 2007)
- Study over 5 decades 19,9 million papers 2,1 million patents
- Teams typically produce more highly cited research, even where that distinction was once the domain of solo authors, social sciences, sciences and engineering, mathematics
- Advantage is increasing over time in almost all areas, as well when removing self-citations
- Growth of co-authors has still not reached a steady state
- Networks have become the dominant and most promising way to produce high-quality research output (Guimera/Uzzi/Spiro et al 2005)
- Research at disciplinary frontiers and in novel terrains is often interdisciplinary
- University management gets interested in internal R&D structures

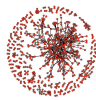
Data



- Where does the data come from? Bibliometric Approach
- Data from ISI Thompson Citation Index, known as Web of Knowledge
- Only publications classified as normal articles, reviews, letters and notes
- Science Citation Index (SCI), Social Science Citation Index (SSCI) Arts and Humanities Index (A&HCI), approximately 8 000 datasets

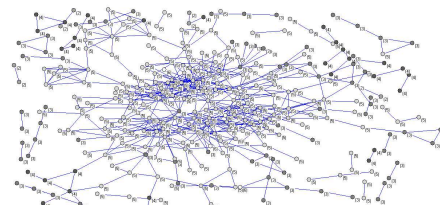
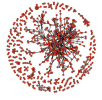


Limitations



- Publication culture differs between the disciplines
- Van Raan (2005) estimated that in the natural and medical sciences field the share of publications covered by citation index is about 80% to 95%, in social sciences fields and humanities this share might be much lower
- In Psychology the share of citation index covered journals may vary between 50% and 70%, the engineering science fields it might be about 50%
- co-authorship within more theoretical fields is less frequent compared to the more experimental fields
- Online publications seem to become more important
- There is a lot of cooperation below the level of putting a paper together (Laudel 2002, Laudel and Glaeser 2006)

Researchers, Co-Publications within and between colleges 1998-2007



College	1	2	3	4	5	6
Count	62	44	139	97	291	9

Tab 1: (1) College of Arts & Celtic Studies, (2) College of Business & Law, (3) College of Engineering, Mathematics & Physical Sciences, (4) College of Human Sciences, (5) College of Life Sciences, (6) Others. Source: UCD Research

College	2	3	4	5	6
Count	10	74	30	222	5

