To Jump or not to Jump in at the Deep End: The Emergence of Successful Ideas from Social and Content Networks

Dirk Deichmann, Julie M. Birkholz, Christine Moser, Adina Nerghes, Peter Groenewegen, Shenghui Wang

Research question
How do social and content networks relate to idea success?

Theory
• Creativity
• Social networks
• Content networks

Hypotheses
Social network centrality
H1
Ideas success

Social network centrality
H2

Social network centrality
H3

Method
• Conference publication data: Semantic Web Dogfood
• 31 conferences from 2006-2012; 2,492 conference items
• DV: Citations - Microsoft Academic Search API (2-year window)
• IV's: Social and content network betweenness centrality
• Controls: # title words, # authors, x scientific age, x prior citations (x prior publications), x conferences attended
• Mixed-effects regressions, level 1: publication, level 2: conference

Results
All three hypotheses are confirmed

Contributions
• Disentangle the effects on idea success that are driven by the team’s versus the idea’s network position
• Social and content network positions alone only offer parts of the explanation of idea success – we need to study their combined effects

Social network centrality

Content network centrality

H1
H2
H3

Idea success

Low social network centrality
High social network centrality
Low content network centrality
High content network centrality

Idea success

Low
content network centrality

High
content network centrality

Low social network centrality

High social network centrality

Performance
Transition
Structure
Application
Service