SICSS Research Presentations

How, what, when and why

Why Project?

- Top journal publication or top conference paper acceptance ultimate goal of SICSS.
- To shoot for a top journal/conference paper, preparation starts at least 2 years in advance
- The entire momentum and curriculum of SICSS is intended to form the basis of these papers
- What we expect from presentations:
  - A detailed proposal for a long-term research project;
  - Early pilot/test results at the small/sample-scale
  - A roadmap - calendar
  - You can also do a project to develop a package, library or product

to Publication Based on Song et al.'s (2013) Study

Component of Study	Median Hours	Percent of Total
Pre-Study Planning	20	11
Literature Review	21	12
Ethics Process	7	4
Data Collection	41	23
Data Analysis	22	12
Manuscript Preparation	39	22
Manuscript Submission	10	6
Manuscript Post-Submission	17	10
Total	177	100
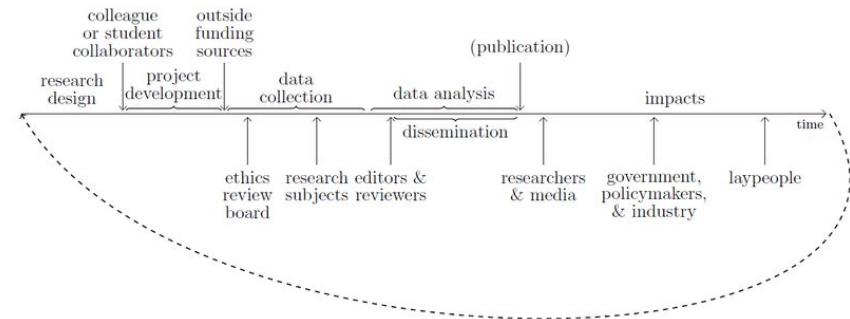
Atypical Combinations and Scientific Impact

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Making an Impact

How big a role do unconventional combinations of existing knowledge play in the impact of a scientific paper? To examine this question, **Uzzi *et al.*** (p. 468) studied 17.9 million research articles across five decades of the Web of Science, the largest repository of scientific research. Scientific work typically appeared to draw on highly conventional, familiar mixtures of knowledge. The highest-impact papers were not the ones that had the greatest novelty, but had a combination of novelty and otherwise conventional combinations of prior work.

Abstract

Novelty is an essential feature of creative ideas, yet the building blocks of new ideas are often embodied in existing knowledge. From this perspective, balancing atypical knowledge with conventional knowledge may be critical to the link between innovativeness and impact. Our analysis of 17.9 million papers spanning all scientific fields suggests that science follows a nearly universal pattern: The highest-impact science is primarily grounded in exceptionally conventional combinations of prior work yet simultaneously features an intrusion of unusual combinations. Papers of this type were twice as likely to be highly cited works. Novel combinations of prior work are rare, yet teams are 37.7% more likely than solo authors to insert novel combinations into familiar knowledge domains.
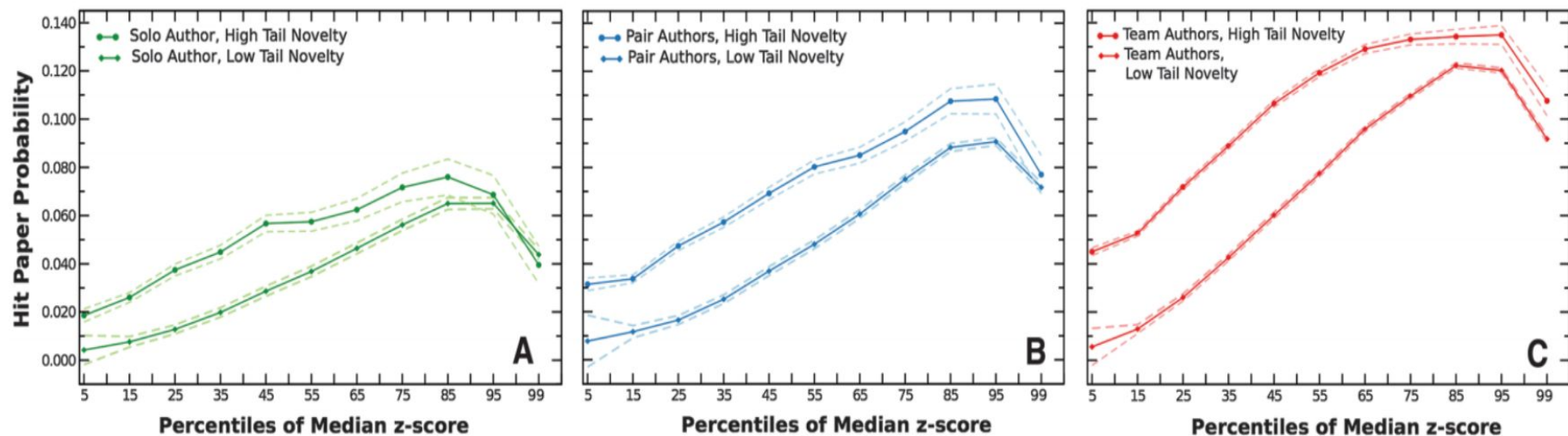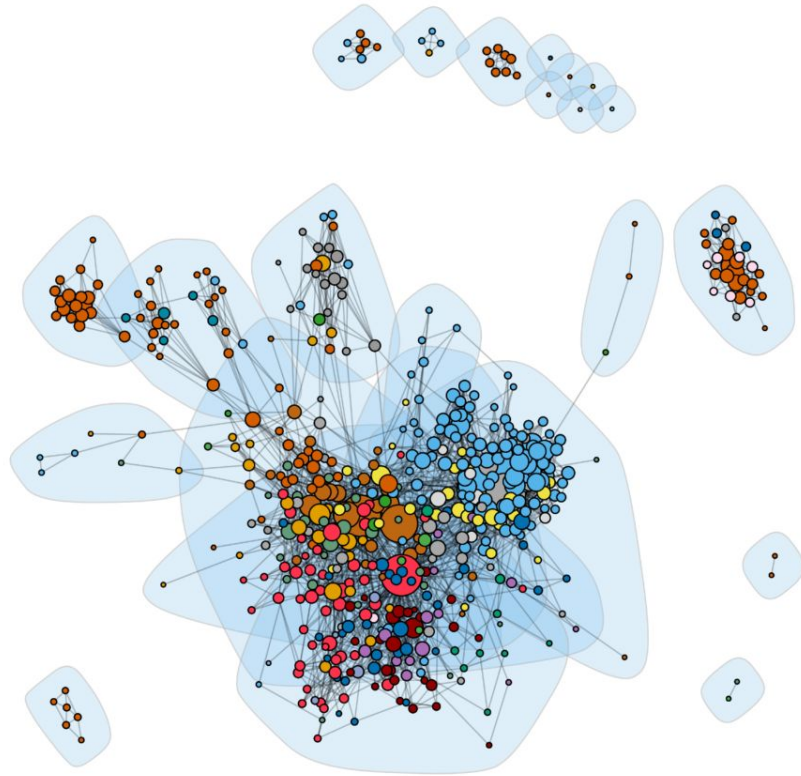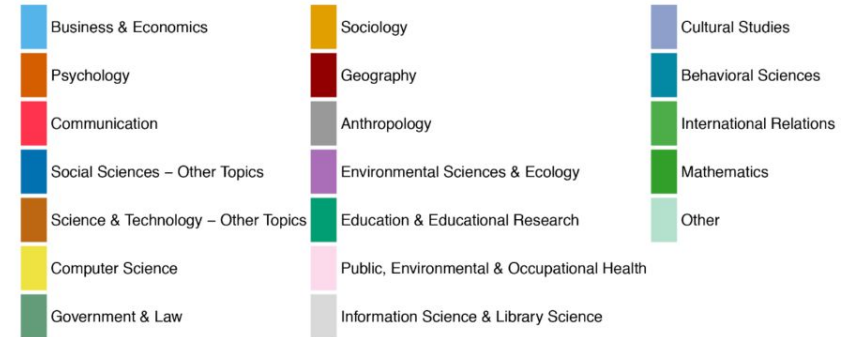
Fig. 4. Novel and conventional combinations in the production of science. (A to C) The interplay between tail novelty, median conventionality, and hit paper probabilities shows remarkable empirical regularities. First, high tail novelty papers have higher impact than low tail novelty papers at (i) any level of conventionality and (ii) regardless of authorship structure. Second, increasing median conventionality is associated with higher impact up to the 85th to 95th percentile of median conventionality, after which the relationship reverses. Third, larger teams obtain higher impact given the right mix of tail novelty and median conventionality. Nonetheless, at low levels of median convention and tail novelty, even teams have low impact, further emphasizing the fundamental relationship between novelty, conventionality, and impact in science.

COMPUTATIONAL SOCIAL SCIENCE AS A NETWORK

Nodes colored by first-listed discipline

- Business & Economics
- Psychology
- Communication
- Social Sciences – Other Topics
- Science & Technology – Other Topics
- Computer Science
- Government & Law
- Sociology
- Geography
- Anthropology
- Environmental Sciences & Ecology
- Education & Educational Research
- Public, Environmental & Occupational Health
- Information Science & Library Science
- Cultural Studies
- Behavioral Sciences
- International Relations
- Mathematics
- Other
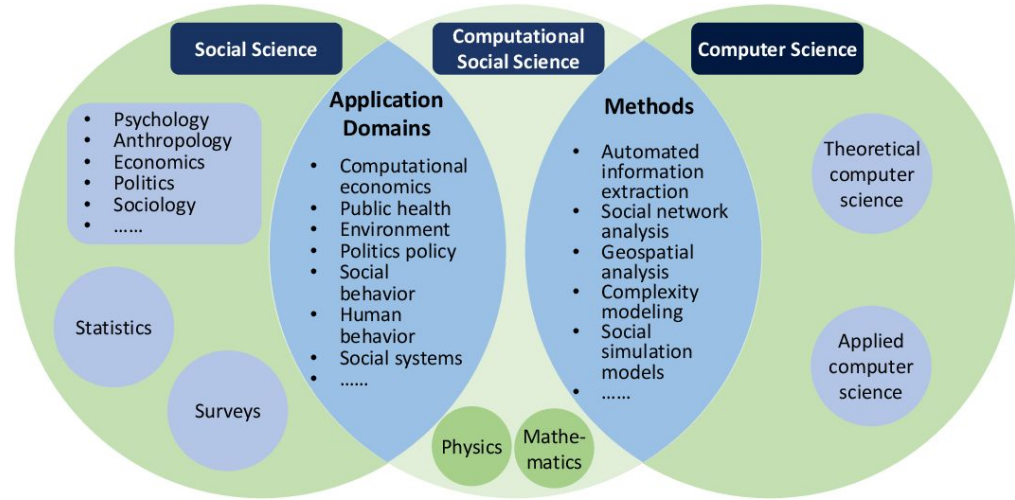
Challenges to Navigate

- Tremendous diversity of skills
- Ensuring good group chemistry
- Limited time
- Different goals?
- Free-riding

Research Clustering Exercise

- What is your research question: which dependent variable you are observing by introducing your independent variable (which is what)?
- Why is this important? How does exploring this relationship improve our understanding of a broader field or discipline?
- What types of studies have been conducted in this similar topic over the last 10 years? What are their results?
- Which social science concept and theoretical framework best captures this phenomenon? Can you link your research interest into a 'big theory'?
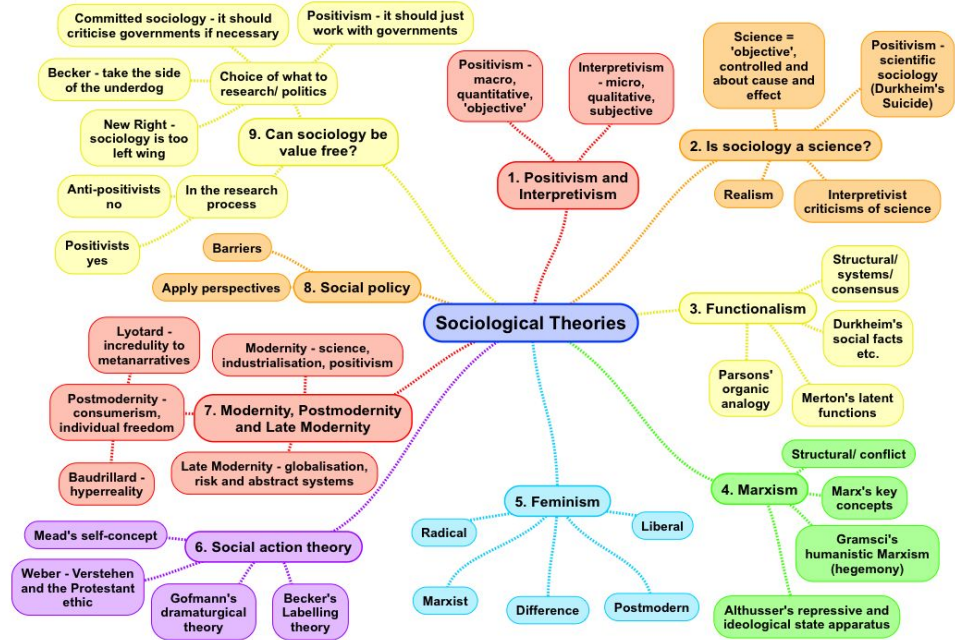
- What are your methods? Why are they better suited to capture the social phenomenon you are observing - compared to alternatives? What are the alternative methods that could be used?
- Where will the data come from? Is this really the best data source or are you falling into the availability bias?
- What is your data retrieval method? Does this method systematically omit certain demographics - such as age, gender or rural groups?
- Which methods will you use to evaluate the phenomenon you are observing?

Let's Start

https://tinyurl.com/SICSSIstanbul2023