# How can we make energy social science more impactful?

## Invited Keynote Address to the 5th European Conference on Behavior and Energy Efficiency (BEHAVE), Zurich, Switzerland, September 5th – 7th 2018


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# Overview and preview

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- What is “energy social science?”
- How prevalent is (or was) it?
- How can we improve interdisciplinarity?
- How can we improve (academic and non-academic) impact?

# What is social science (or energy social science)?

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Arts & Humanities
**Suggested Disciplines:** American Studies; Archaeology; Architecture/Built Environment; Area Studies; Art & Design; Classics, Drama, Dance & Performing Arts; English Language & Literature; History; Languages & Linguistics; Music; Philosophy; Theology, Divinity & Religious Studies

Engineering & Technology
**Suggested Disciplines:** Chemical Engineering; Civil Engineering; Computer Science; Electrical & Electronic Engineering; General Engineering; Mechanical, Aeronautical & Manufacturing Engineering; Mineral & Mining Engineering; Nanotechnology

Life Sciences & Medicine
**Suggested Disciplines:** Agriculture; Biological Sciences; Clinical Psychology; Dentistry; Food Science & Technology; Health Sciences; Medicine and Medical-related Studies; Neuroscience; Nursing; Pharmacy & Pharmacology; Psychiatry; Public Health; Veterinary Science

Natural Sciences
**Suggested Disciplines:** Applied Mathematics; Astronomy; Chemistry; Earth Sciences; Environmental Sciences; Geography; Metallurgy & Materials; Physics; Pure Mathematics

Social Sciences & Management
**Suggested Disciplines:** Accounting & Finance; Anthropology; Business & Management Studies; Communication, Cultural & Media Studies; Development Studies; Economics & Econometrics; Education; Law; Library & Information Management; Politics & International Studies; Sociology; Social Policy & Administration; Social Psychology; Social Work; Sports-related Subjects; Statistics & Operational Research; Town & Country Planning

# A broad take on energy social science

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- However, energy “social science” is more than a collection of disciplines
  - A social or epistemic *community* of scholars, an identity
  - A *method* or way of doing (often qualitative) research
  - A collection of *concepts* or theories
  - The domain or interest of particular *topics*
  - A family of *journals*

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# How much is energy social science used? (Answer, from a slightly older study: not much)

# Sample of articles in our content analysis

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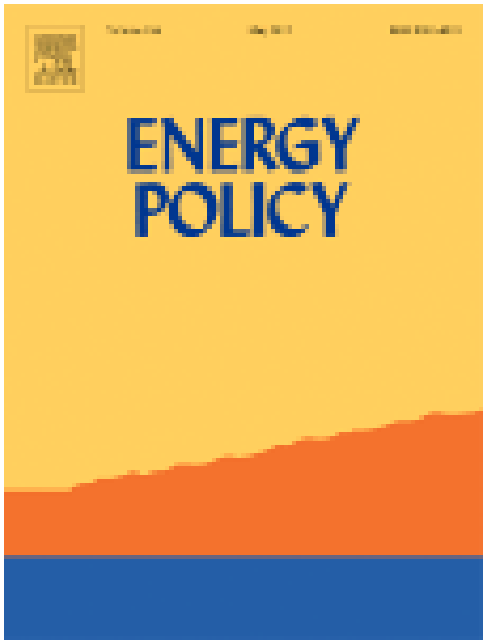


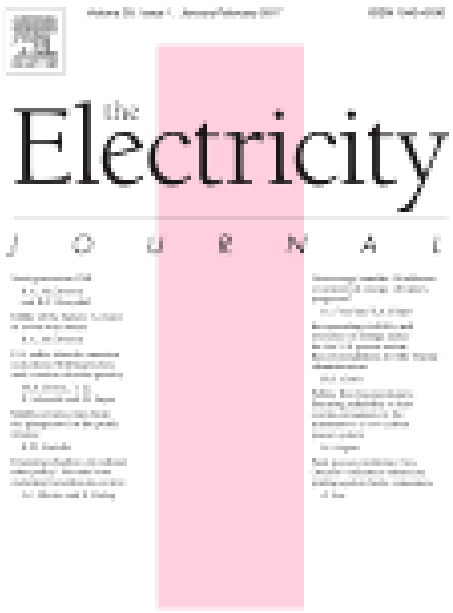


# Sample of articles in our content analysis

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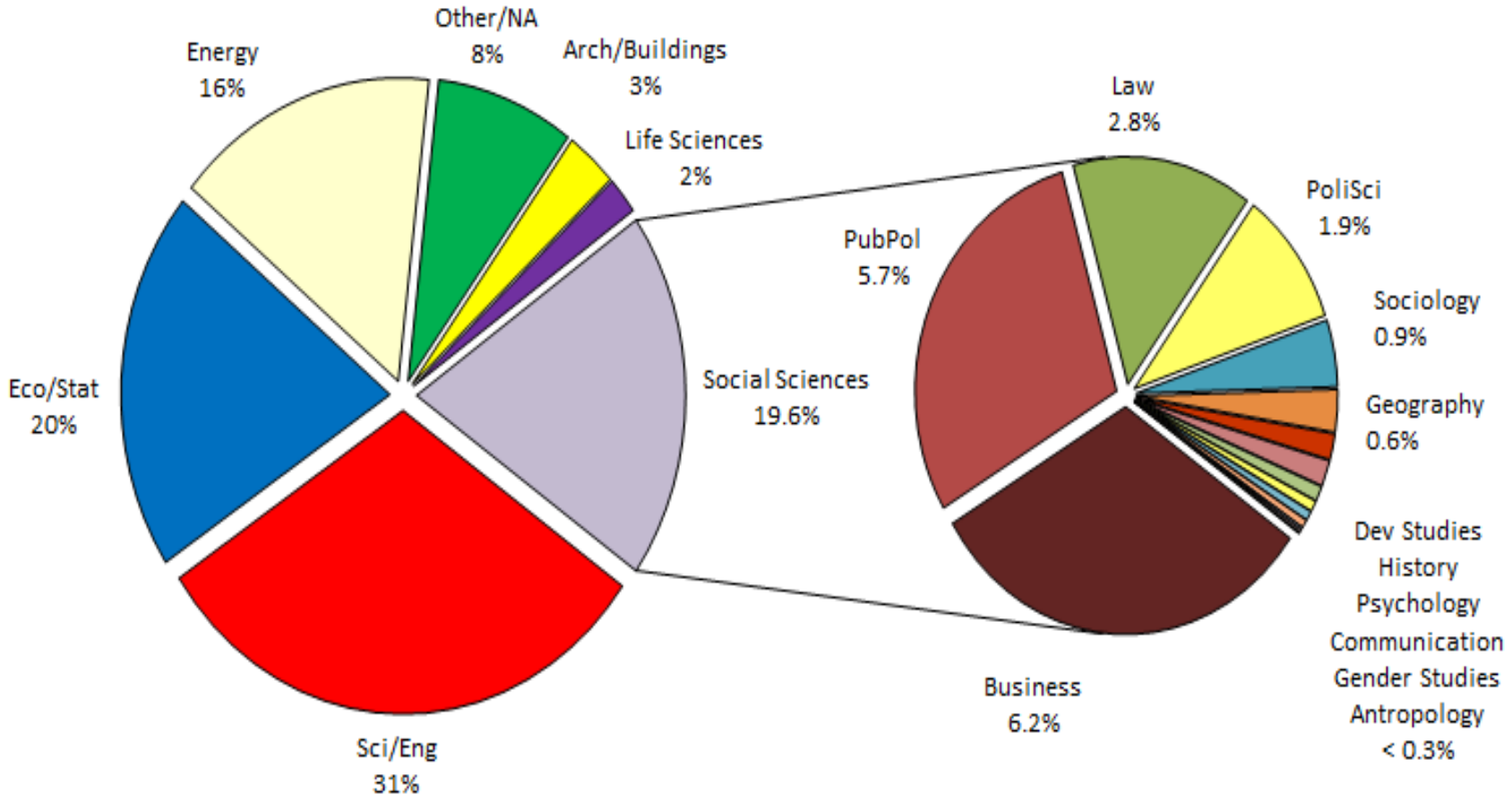
General statistics for energy studies journal articles, 1999–2013.

| Year | Number of total articles | Number of authors | Number of disciplinary affiliations | Number of institutional affiliations | Number of disclosed funding sources | Number of methodological approaches | Number of country case studies | Number of discussed technologies | Number of discussed topics | Number of references[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1999 | 187 | 368 | 346 | 355 | 196 | 206 | 206 | 296 | 425 | 1780 |
| 2000 | 183 | 332 | 281 | 277 | 190 | 213 | 170 | 253 | 325 | 2451 |
| 2001 | 199 | 420 | 500 | 413 | 224 | 225 | 239 | 415 | 635 | 2940 |
| 2002 | 202 | 361 | 374 | 311 | 220 | 211 | 207 | 266 | 519 | 2879 |
| 2003 | 219 | 425 | 448 | 389 | 235 | 231 | 252 | 350 | 594 | 3288 |
| 2004 | 238 | 508 | 597 | 483 | 295 | 262 | 293 | 473 | 822 | 4778 |
| 2005 | 276 | 609 | 653 | 548 | 296 | 299 | 290 | 439 | 610 | 5539 |
| 2006 | 474 | 1102 | 932 | 1016 | 532 | 499 | 540 | 1080 | 1266 | 12,833 |
| 2007 | 287 | 670 | 626 | 504 | 332 | 320 | 329 | 809 | 773 | 5221 |
| 2008 | 237 | 523 | 470 | 470 | 147 | 275 | 241 | 772 | 698 | 5108 |
| 2009 | 314 | 684 | 707 | 680 | 334 | 383 | 322 | 938 | 903 | 6820 |
| 2010 | 384 | 822 | 799 | 810 | 414 | 469 | 401 | 1121 | 1250 | 8486 |
| 2011 | 392 | 850 | 852 | 842 | 398 | 445 | 410 | 1219 | 1298 | 8534 |
| 2012 | 383 | 844 | 883 | 809 | 420 | 414 | 390 | 1335 | 1258 | 8576 |
| 2013 | 469 | 1031 | 1129 | 974 | 505 | 560 | 525 | 1490 | 1432 | 10,846 |
| Total | 4444 | 9549 | 9597 | 8881 | 4738 | 5012 | 4815 | 11,256 | 12,808 | 90,079 |

[a] Includes only *Energy Policy* for all years and the *Energy Journal* from 2003 to 2013.

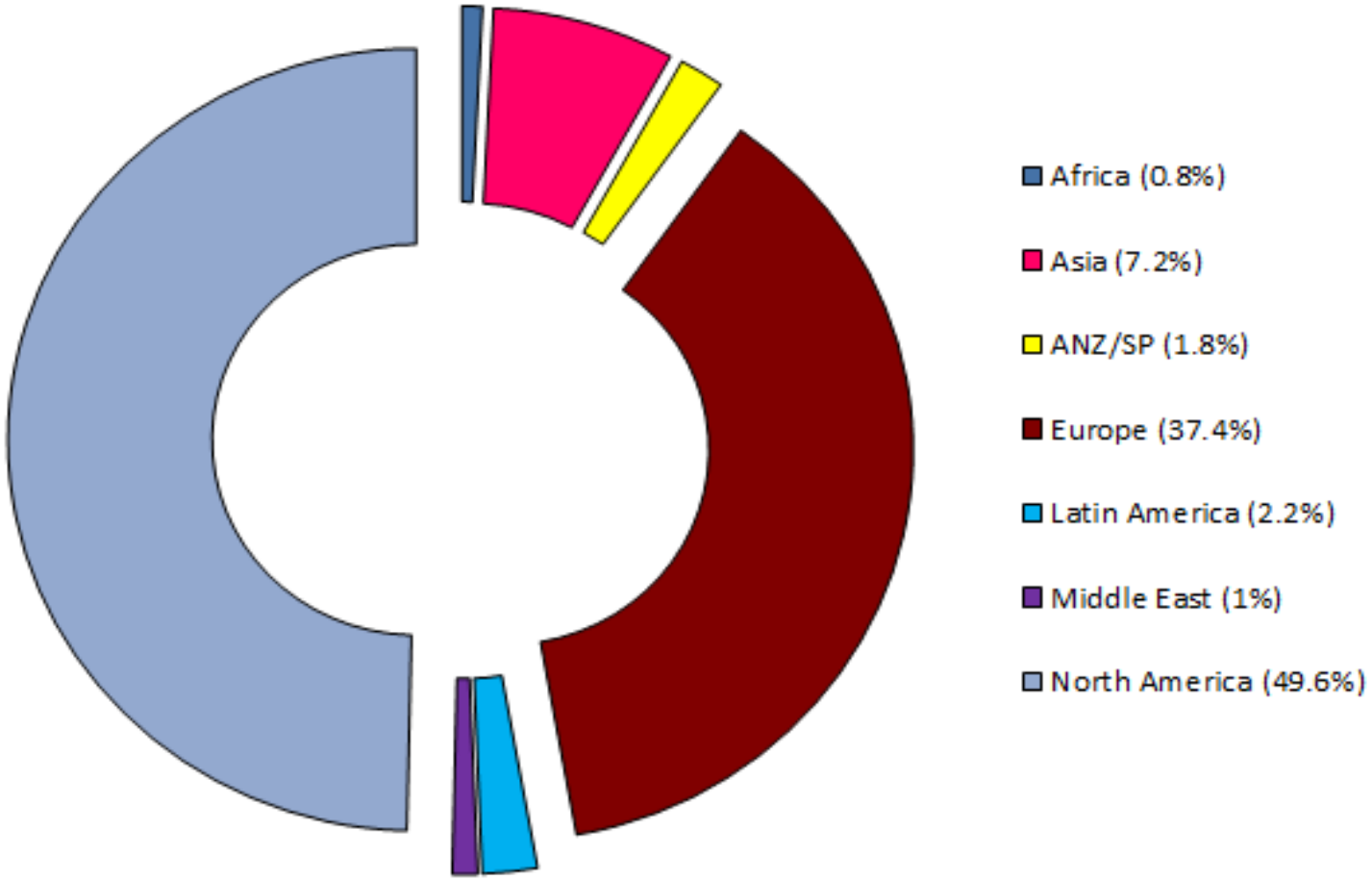
Source: Sovacool, BK. "What Are We Doing Here? Analyzing Fifteen Years of Energy Scholarship and Proposing a Social Science Research Agenda," *Energy Research & Social Science* 1 (March, 2014), pp. 1-29

# Disciplinary Affiliation for Energy Studies Journal Articles, 1999 to 2013 (n=9,597)




Source: Sovacool, BK. "What Are We Doing Here? Analyzing Fifteen Years of Energy Scholarship and Proposing a Social Science Research Agenda," *Energy Research & Social Science* 1 (March, 2014), pp. 1-29

# Country Affiliation for Energy Studies Journal Authors, 1999 to 2013 (n=9,549)




Source: Sovacool, BK. "What Are We Doing Here? Analyzing Fifteen Years of Energy Scholarship and Proposing a Social Science Research Agenda," *Energy Research & Social Science* 1 (March, 2014), pp. 1-29

# Share of Female Authors for Energy Studies Journal Articles, 1999 to 2013 (n=9,549)

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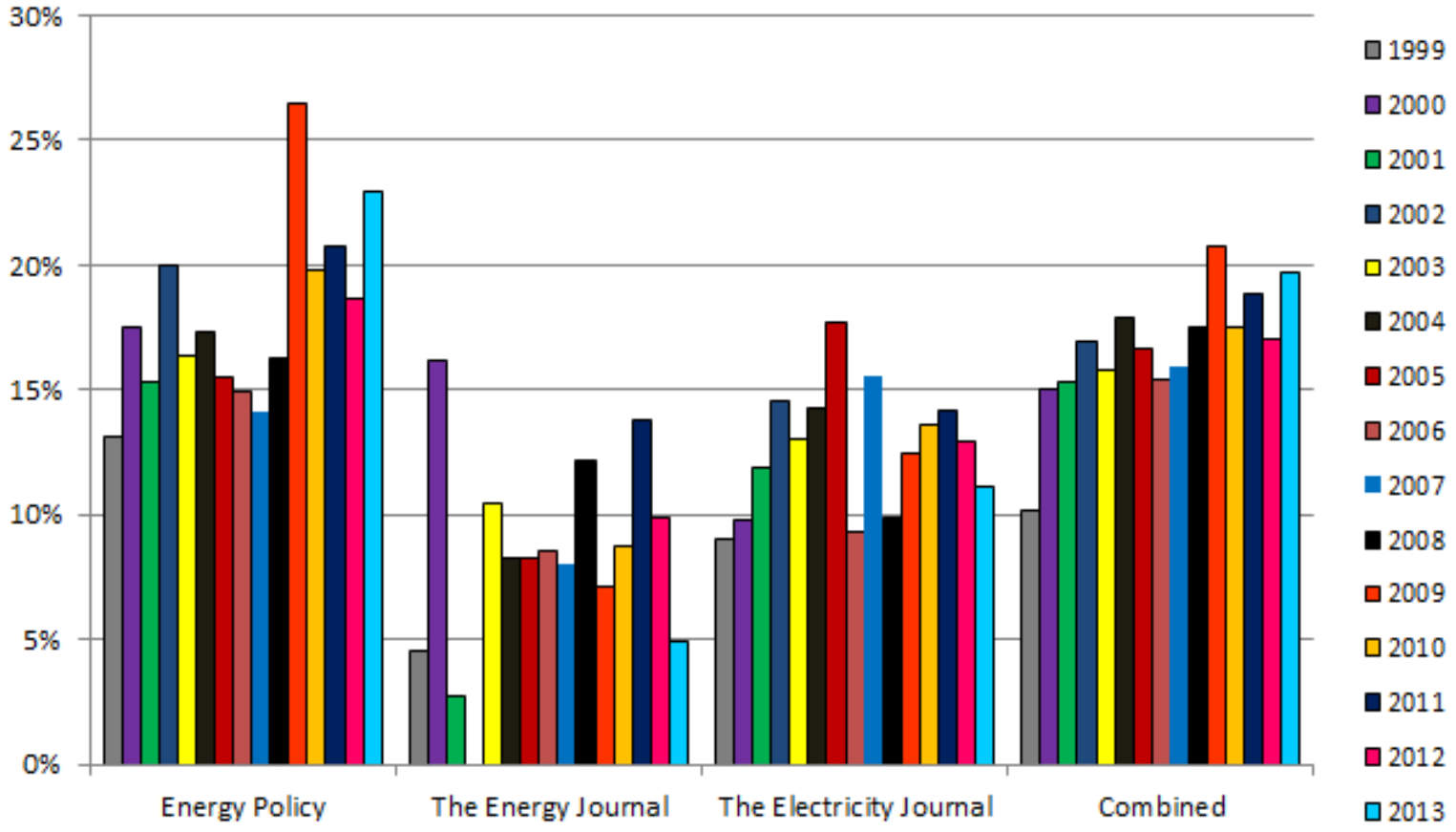
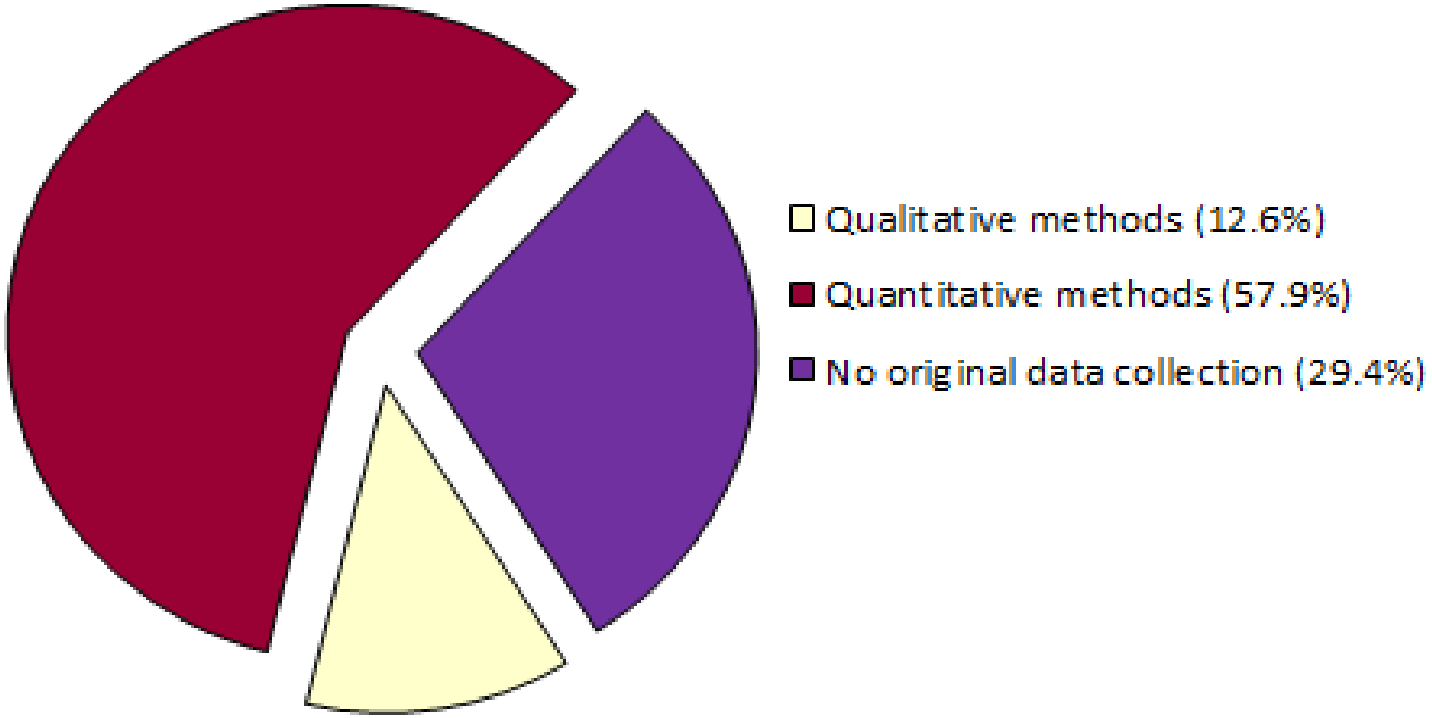



Source: Sovacool, BK. "What Are We Doing Here? Analyzing Fifteen Years of Energy Scholarship and Proposing a Social Science Research Agenda," *Energy Research & Social Science* 1 (March, 2014), pp. 1-29

# Methodological Approaches of Energy Studies Journal Articles, 1999 to 2013 (n=5,012)




*Qualitative methods" refer to original data collected through research interviews, surveys, questionnaires, or field research. "Quantitative methods" refer to original data collected through economic modeling, forecasting, econometric analysis, programming, statistical analysis, input/output analysis, cost benefit analysis, lifecycle assessments, remote sensing, and other similar tools.*

# Citations from Energy Studies Journal Articles, 1999 to 2013 (n=90,079)

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| | Non-Classified/Grey Literature | Self-Citations | Economics | Science | Books | Social Science | Arts & Humanities |
|---|---|---|---|---|---|---|---|
| 1999 | 1018 | 75 | 217 | 141 | 274 | 55 | 0 |
| 2000 | 1540 | 170 | 187 | 178 | 320 | 54 | 2 |
| 2001 | 2054 | 203 | 241 | 127 | 255 | 60 | 0 |
| 2002 | 1959 | 158 | 196 | 208 | 295 | 63 | 0 |
| 2003 | 2287 | 229 | 250 | 213 | 223 | 85 | 1 |
| 2004 | 2950 | 304 | 474 | 472 | 434 | 144 | 0 |
| 2005 | 3552 | 400 | 515 | 483 | 377 | 212 | 0 |
| 2006 | 7439 | 964 | 1209 | 1608 | 884 | 714 | 15 |
| 2007 | 2847 | 430 | 659 | 677 | 328 | 279 | 1 |
| 2008 | 2823 | 352 | 616 | 663 | 273 | 379 | 2 |
| 2009 | 4137 | 466 | 747 | 656 | 519 | 292 | 3 |
| 2010 | 5363 | 594 | 812 | 748 | 611 | 354 | 4 |
| 2011 | 5179 | 686 | 798 | 951 | 554 | 355 | 11 |
| 2012 | 5046 | 682 | 869 | 945 | 649 | 372 | 13 |
| 2013 | 6588 | 826 | 1108 | 1054 | 849 | 402 | 19 |
| Total | 54782 | 6539 | 8898 | 9124 | 6845 | 3820 | 71 |
| % | 60.8 | 7.3 | 9.9 | 10.1 | 7.6 | 4.2 | 0.08 |

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# How do we promote interdisciplinarity?

# (1) Use more human-centered methods

- Only 13 percent of articles reported using “human-centered” research methods


- These were dominated by surveys (7.8 percent)
- Far fewer studies utilized field research, research interviews, participant or field observation, or focus groups

Source: Sovacool, BK. “What Are We Doing Here? Analyzing Fifteen Years of Energy Scholarship and Proposing a Social Science Research Agenda,” *Energy Research & Social Science* 1 (March, 2014), pp. 1-29

# (2) Seek inclusion and involvement of particular disciplines and sources (and countries)

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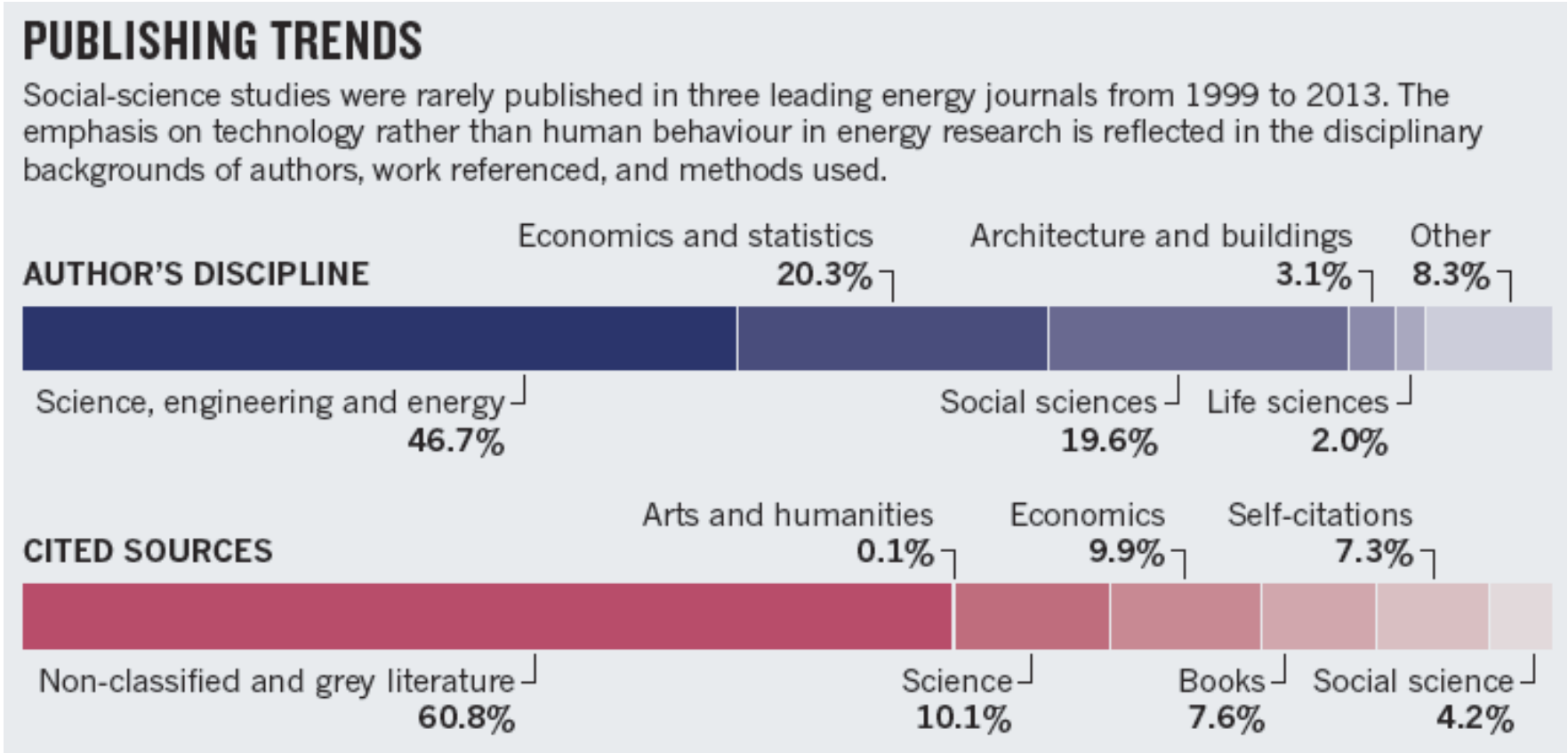


Source: Sovacool, BK. "Energy Studies Need Social Science," *Nature* 511 (7511) (July 31, 2014), pp. 529-530.

# (3) Explore under-represented topics or themes (which we have begun to do)

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**NEGLECTED TOPICS**
Twelve subjects seldom considered in energy studies.

| Topic | Example |
|---|---|
| Gender and identity | Pollution from cooking stoves posing greater risk to women than men |
| Philosophy and ethics | Future generations bearing the burden of pollution |
| Communication and persuasion | Energy information changing individual or firm behaviour |
| Geography and scale | Mismatching the size of energy systems to patterns of demand |
| Social psychology and behaviour | Shaping energy choices by trust, control and denial |
| Anthropology and culture | Temporal and regional differences in conceptions of energy services |
| Research and innovation | How people, markets and institutions drive innovation |
| Politics and political economy | Resources contributing to conflict or stymying growth |
| Institutions and energy governance | Evolving rules and norms to address collective energy problems |
| Energy and development | Energy use contributing to economic growth and falling poverty |
| Externalities and pollution | Costs to society of erosions of environmental and ecological capital |
| Sociology of technology | Economic, political and social drivers of energy consumption |

Source: Sovacool, BK. "Energy Studies Need Social Science," *Nature* 511 (7511) (July 31, 2014), pp. 529-530.

# (4) Change incentive structures

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1. *If you like social science, fund it:* **public and private organizations** should give a bigger slice of funding to social scientists ($1-35 bias)
2. *Collect social data*: to reduce disciplinary bias, **energy ministries, statistical agencies and public utility commissions** should focus more on energy behaviour and demand, rather than just supply, and employ focus groups, interviews, surveys, etc. to create rich, complex narratives
3. *Focus on problems, not disciplines:* **University administrators** should make energy research more problem-oriented, including social perspectives, and tweak promotion guidelines to account for trans-disciplinary approaches
4. *Include others:* **researchers** should do more to accommodate expertise and data from laypersons, indigenous groups, community leaders and other non-conventional participants, and reach across disciplines, and beyond Europe and North America
5. *Incentivize social science methods and concepts*: **journal editors** can prioritize interdisciplinary, inclusive, comparative mixed-methods research in their aims and scope

Source: Sovacool, BK, SE Ryan, PC Stern, K Janda, G Rochlin, D Spreng, MJ Pasqualetti, H Wilhite, L Lutzenhiser, "Integrating Social Science in Energy Research," *Energy Research & Social Science* 6 (March, 2015), pp. 95-99

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# How do we enhance excellence and impact?

# As an editor, my take is that:

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- North American and European authors still dominate, the English language barrier is real
- 50% (or more) of submissions are easy desk rejects for not reading aims and scope
- Weak research designs, or none at all
- Single country case studies (90% plus?)
- Reliance on a single method (often primary data, which is good, but still …)
- An emphasis on either theory, or policy relevance or application, but not both
- Missing all of the above: authorship inclusive of the Global South, with strong research design, comparative cases, triangulated with mixed methods, that contribute both to theory and practice, <1%

# *One idea is that you can explicitly design for impact and excellence:*

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- Interdisciplinary
- Mixed methods / triangulation
- Replicability / confirmability
- Comparative cases
- Address a practical problem/puzzle
- Advance or apply concepts and theories
- Well written
- Well cited (eventually)
- Top-performing on alt-metrics

# What makes an excellent (or at least good) output?

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*Robust methods (and time intensity) sometimes a rough proxy:*

- Primary data (interviews, focus groups, surveys), especially hard to access places >>>
- Modelling (access to supercomputers) >>>
- New/innovative methods (shadowing, stalking, diaries)
- Meta-analysis (meta-surveys, systematic reviews)
- Content analysis

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Perspectives

## The hidden economic benefits of large-scale renewable energy deployment: Integrating heat, electricity and vehicle systems

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Renewable integration
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ABSTRACT

The transition to large-scale renewable energy in order to mitigate climate change is necessity. Much academic literature has begun to focus on the technical and economic plausibility of such a transition to renewable energy, but these studies often explore one to several potential energy systems and their costs and benefits as compared to the existing system. This paper summarizes the policy implications of a recent analysis that builds on the literature of the integration of renewable electricity, electric vehicles and electric heat by modeling and testing nearly 86 million different combinations of wind, solar, natural gas, vehicle-to-grid capable electric vehicles, and electric heat. After each system was modeled for four years of operation to ensure reliability, the costs of energy systems were then calculated both with and without externalities to better understand how this cost affects implementation. We present the results and policy implications of our analysis across the 86 million energy systems and conclude with the role of social science in future research.

# Another equally valid way: social usefulness

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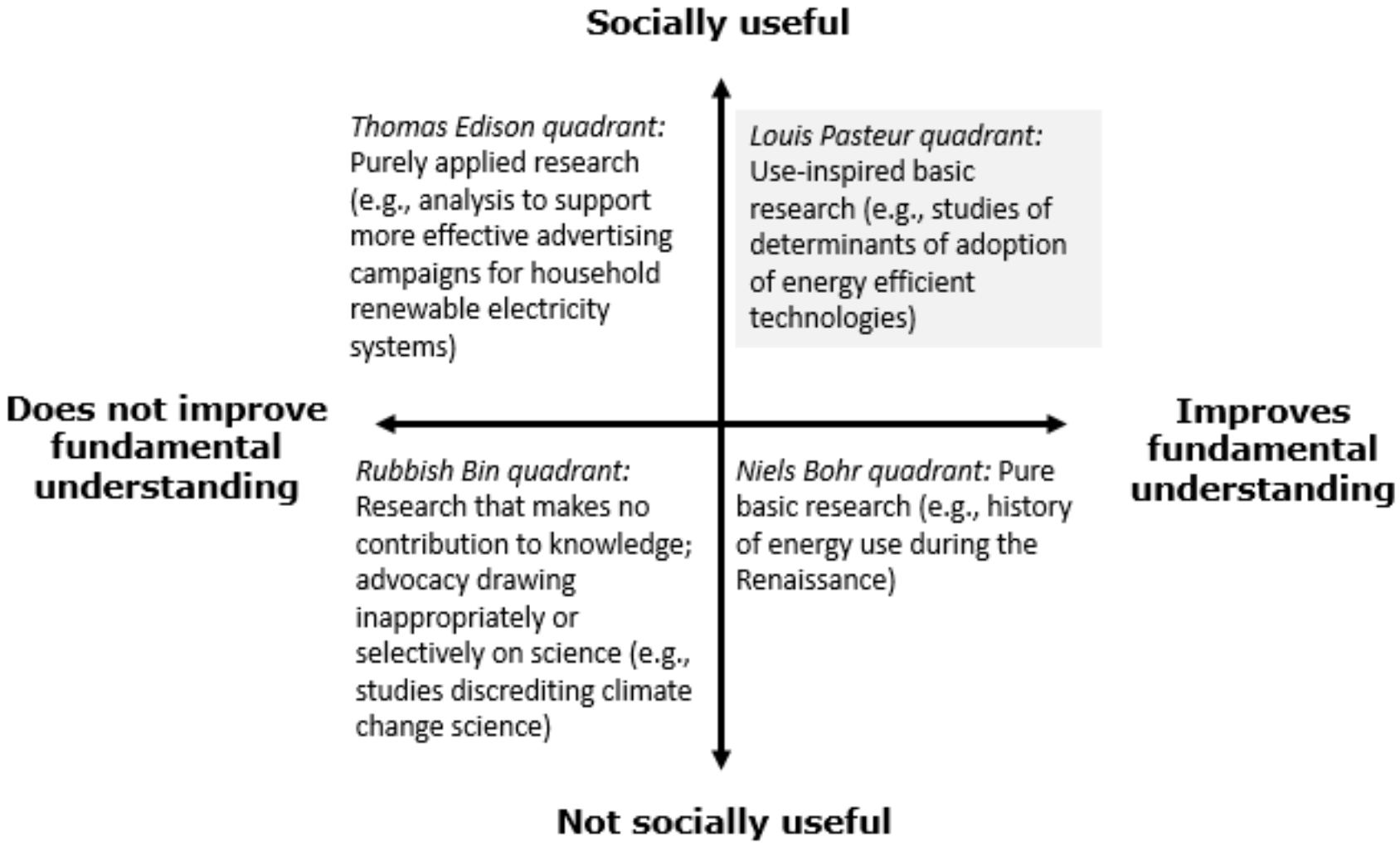


Source: Stern, PC, BK Sovacool, and T Dietz. "Towards a Science of Climate and Energy Choices," *Nature Climate Change* 6 (June, 2016), pp. 547-555

# Yet another: hierarchies of validity or rigor

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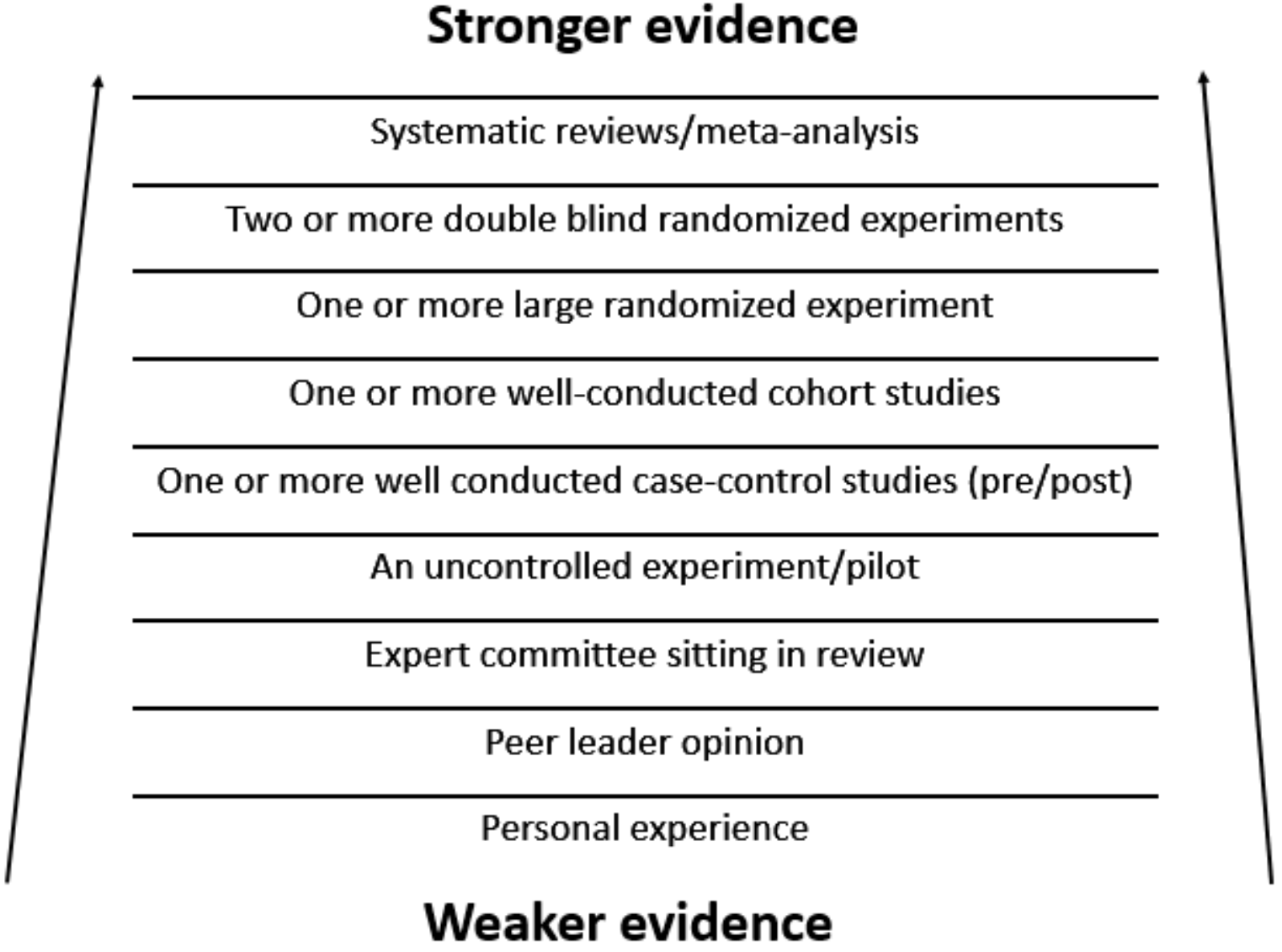
*For experimental, behavioural, or psychological designs*:

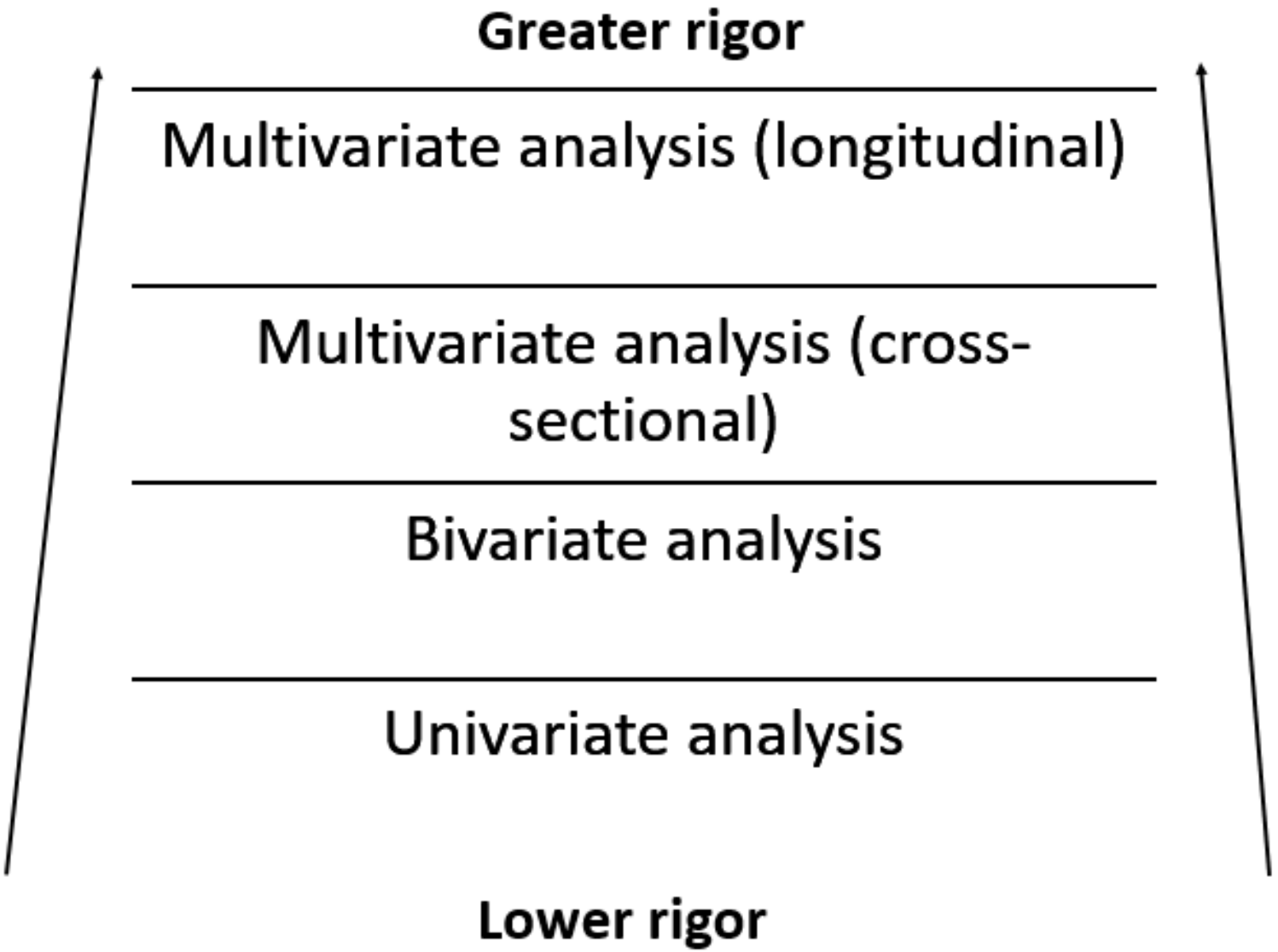



Source: Sovacool, BK, J Axsen, and S Sorrell. "Promoting novelty, rigor, and style in energy social science: Towards codes of practice for appropriate methods and research design," *Energy Research & Social Science* (in press, 2018)

# Hierarchies of validity or rigor

*For data analysis / econometrics*:

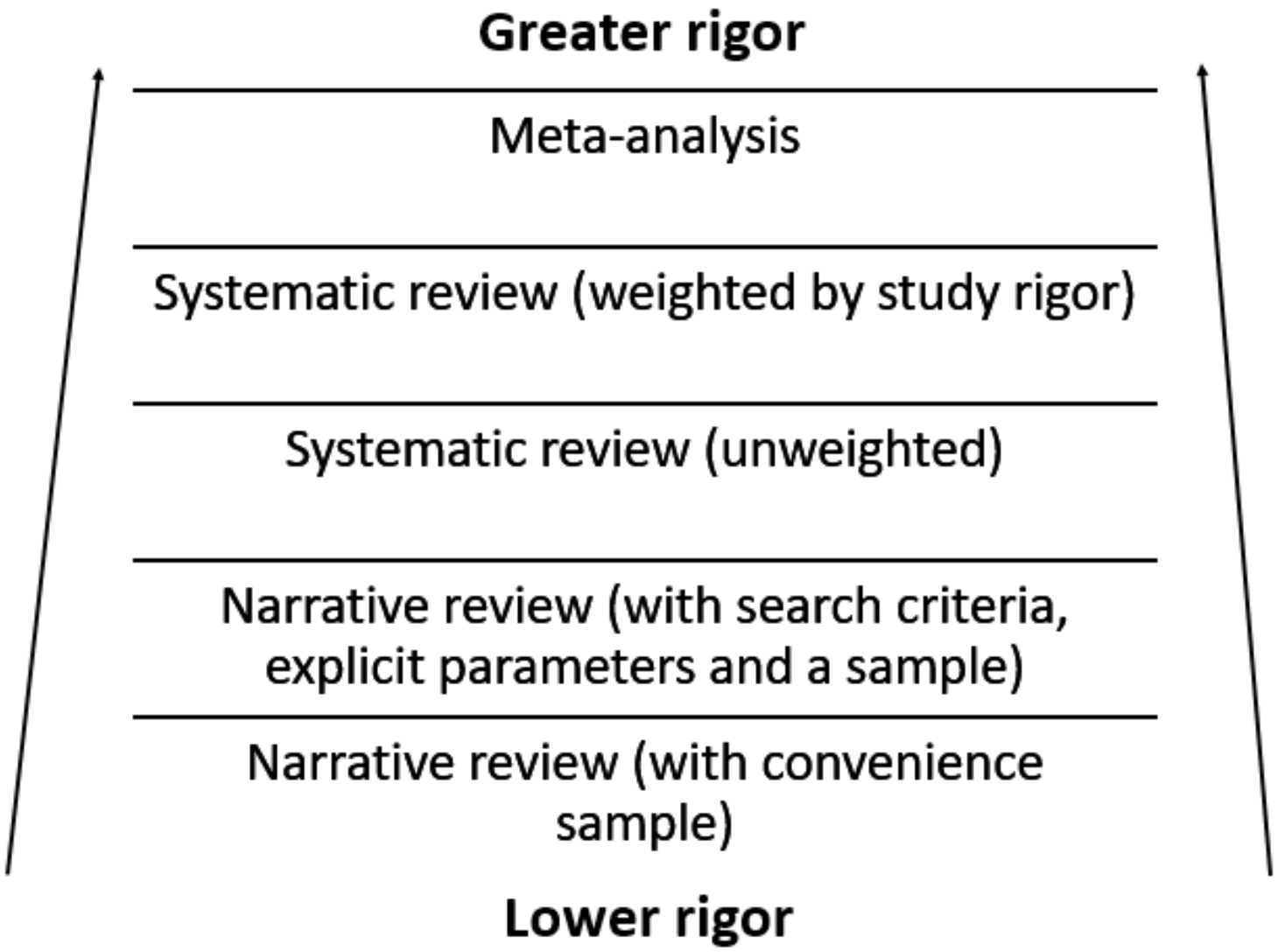
Source: Sovacool, BK, J Axsen, and S Sorrell. “Promoting novelty, rigor, and style in energy social science: Towards codes of practice for appropriate methods and research design,” *Energy Research & Social Science* (in press, 2018)



# Hierarchies of validity or rigor

*For literature reviews*:

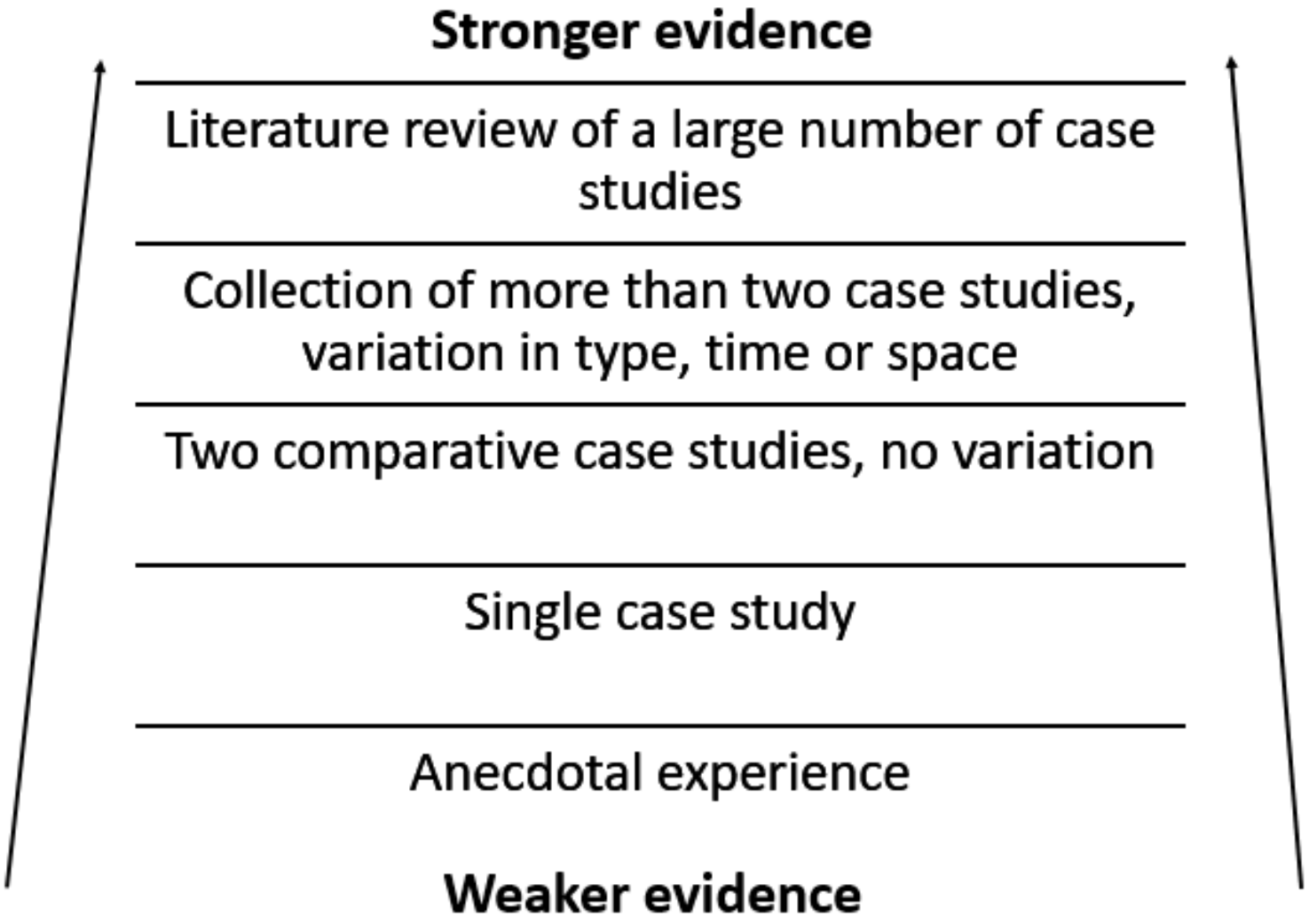
Source: Sovacool, BK, J Axsen, and S Sorrell. “Promoting novelty, rigor, and style in energy social science: Towards codes of practice for appropriate methods and research design,” *Energy Research & Social Science* (in press, 2018)



# Hierarchies of validity and rigor

*For case studies*:

Source: Sovacool, BK, J Axsen, and S Sorrell. “Promoting novelty, rigor, and style in energy social science: Towards codes of practice for appropriate methods and research design,” *Energy Research & Social Science* (in press, 2018)



# Hierarchies of validity and rigor

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- *There are others (modelling, surveys, qualitative methods)*
- *Often requires a balancing between them, no article excels in all, especially those with mixed designs*
- *We advocate more of a "codes of practice" or "horses for courses" mentality*
- *Don't choose higher forms if*
  - *Cannot execute (lack of time, funding, access)*
  - *Marginal value to moving up (confidence interval stays roughly the same)*

# A final valid type of contribution: theoretical

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*Original Article*

S|S|S

Social Studies of Science
1–48

DOI: 10.1177/0306312717709363
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SAGE

## Ordering theories: Typologies and conceptual frameworks for sociotechnical change

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**David J Hess**
Department of Sociology, Vanderbilt University, Nashville, TN, USA

# “Ordering” theories?

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- **Internal components.** The “pieces” of what makes an individual theory work, what separates it from others, what makes it unique
- **A menu.** A list of options for students, researchers, and other stakeholders.
- **A way of classifying.** Better grappling with ontologies and epistemologies, assumptions behind theories, ways of comparing them across each other, taxonomies and typologies.

# Ordering theories: the long-list

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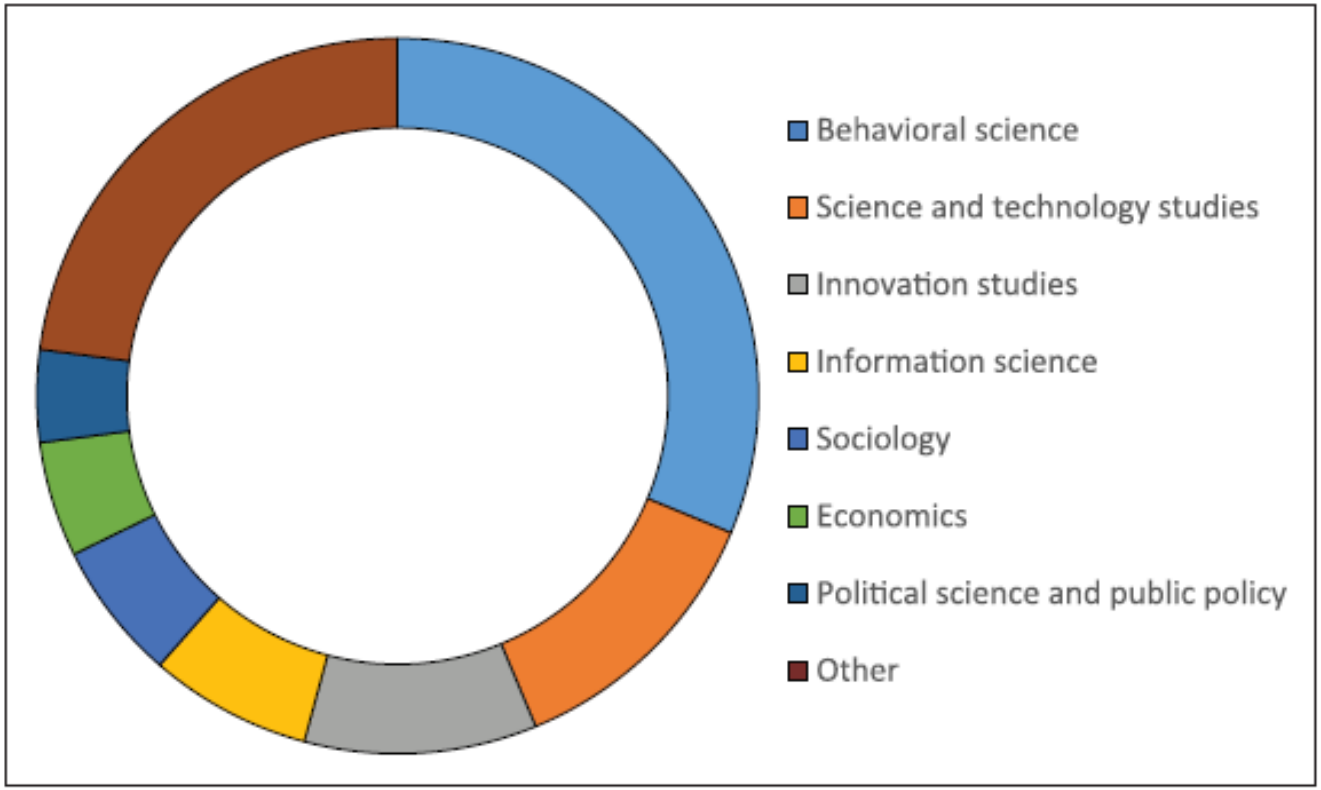


**Figure 2.** Academic discipline for selected theories (n = 96). 'Other' disciplines include history, organization studies, political ecology and geography, transport studies, business studies, communication studies, conflict resolution, consumption studies, development studies, energy studies, ethics and moral studies, legal studies and jurisprudence, linguistics and semiotics, marketing, and mathematics.

# Ordering theories: the long-list

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| No. | Discipline | Name | Key author(s) | Application to sociotechnical diffusion and acceptance |
|---|---|---|---|---|
| 1 | Behavioral science | Attitude-Behavior-Context (ABC) Theory | Paul C. Stern, Stuart Oskamp | A kind of field theory for behavior intended to be environmentally sustainable, inclusive of accepting environmentally friendly technologies. Behavior (B) is an interactive product of 'internal' attitudinal variables (A) and 'external' contextual factors (C). |
| 2 | Behavioral science | Attribution Theory | Kelvin Lancaster, F. Heider | Attempts to explain why ordinary people explain events as they do, including the adoption of new technology, and it suggests that the two most influential factors are internal attribution to characteristics of the individual or external attribution to a situation or event outside of personal control |
| 3 | Behavioral science | Comprehensive Technology Acceptance Framework | N.M.A. Huijts, Linda Steg | Proposes a complex model of technological diffusion predicated on experience and knowledge which are then mediated by trust, issues of procedural and distributive fairness, social norms, attitudes, and perceived behavioral control |
| 4 | Behavioral science | Cognitive Dissonance Theory | Leon Festinger | Argues that people in general are motivated to avoid internally inconsistent (dissonant) beliefs, attitudes and values, including when they adopt new technologies or practices |

# Ordering theories: the short-list

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**Table 1.** Most frequently mentioned theoretical approaches (respondents = 35).

| No. | Name | Frequency mentioned by respondents (n) | Frequency mentioned (%) |
|---|---|---|---|
| 1 | Sociotechnical Transitions | 15 | 43 |
| 2 | Social Practice Theory | 14 | 40 |
| 3 | Discourse Theory | 10 | 29 |
| 4 | Domestication Theory | 9 | 26 |
| 5 | Large Technical Systems | 9 | 26 |
| 6 | Social Construction of Technology | 9 | 26 |
| 7 | Sociotechnical Imaginaries | 7 | 20 |
| 8 | Actor-Network Theory | 7 | 20 |
| 9 | Social Justice Theory | 7 | 20 |
| 10 | Sociology of Expectations | 6 | 17 |
| 11 | Sustainable Development | 6 | 17 |
| 12 | Values Beliefs Norms Theory | 5 | 14 |
| 13 | Lifestyle Theory | 4 | 11 |
| 14 | Universal Theory of Acceptance and Use of Technology | 4 | 11 |

# Ordering theories: analytical focus

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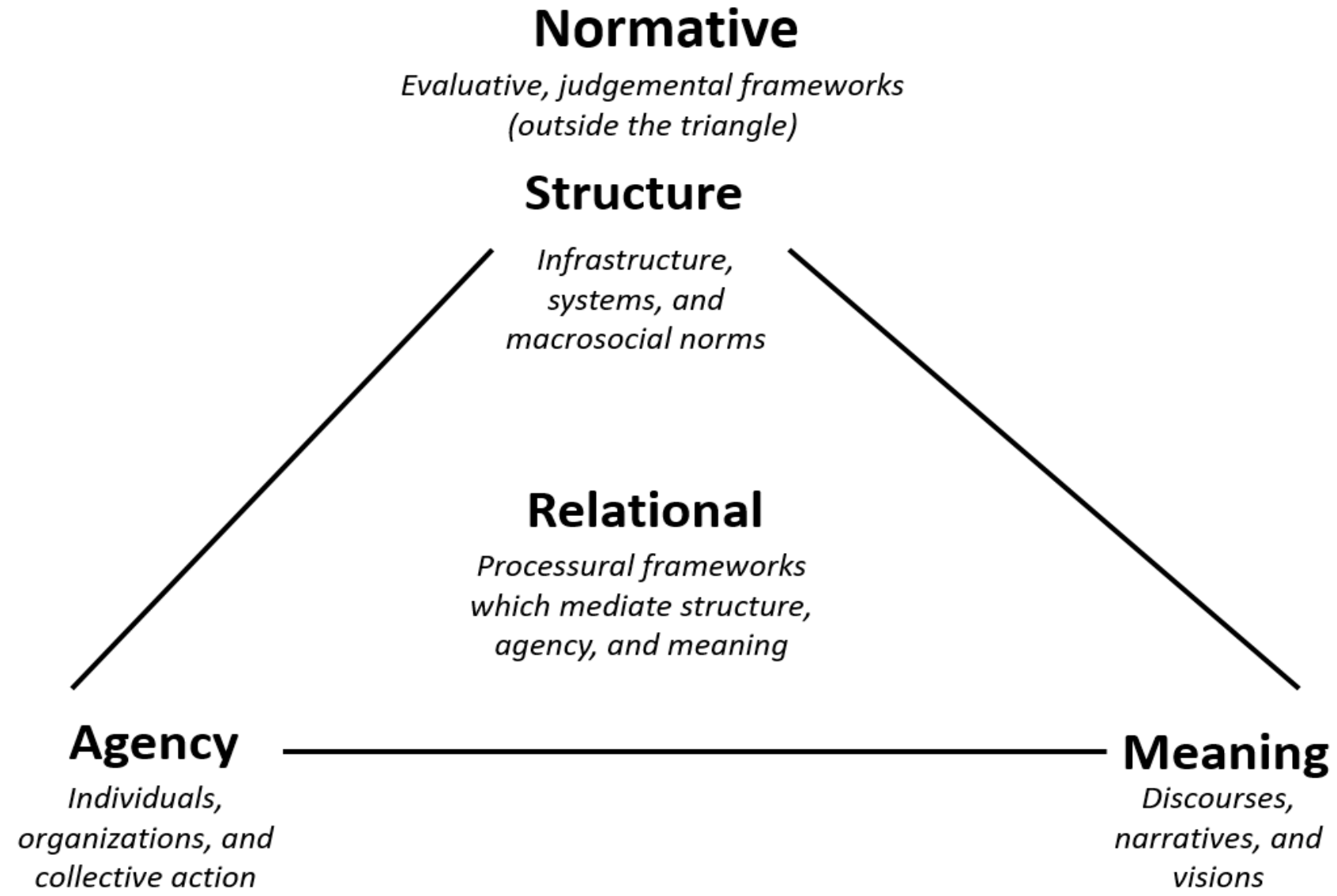

# Ordering theories: fundamental assumptions

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| | Functionalist-Institutionalist | Interpretivist | Critical Humanist | Conflict |
|---|---|---|---|---|
| **Goals** | To search for regularities and sources of disequilibrium | To describe and understand social complexity and multiple perspectives | To describe and problematize assumptions in order to identify potential for change | To identify and modify patterns of domination |
| **Assumptions** | Society as a self-regulating system | Society as socially constructed action | Society as historical change and development | Society as a system of struggle and oppression |
| **Topical focus** | Norms, values, and institutions | Discourse, practice, and culture | Historical change and cultural difference | Societal conflict |
| **Approaches** | Refinement through causal analysis | Discovery through code analysis | Insight through critical analysis | Liberation through structural analysis |
| **Methods** | Probing representative samples of subjects | Identifying specific cases, questioning informants | Comparing specific cases or existing research, questioning assumptions | Evaluating historical evidence and structural conditions |
| **Exemplary articulations of theories that fit** | UTAUT, VBN | Domestication Theory, Sociology of Expectation | Discourse Theory, Sociotechnical Imaginaries | Social Justice Theory, Sustainable Development |

# Conceptual contributions can have substantial impact

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- Making a theoretical or conceptual contribution does not necessarily require new theories, or that all or many theories be integrated – merely that different representations are accounted for, or rigorously examined
- We may need to avoid dogmatism, privilege-seeking, and power-yielding, aim for more "theoretical triangulation"

> "Theoretical monogamists or dogmatists remind me of obsolete aristocrats arguing over the maintaining of their 'pure' lineal bloodlines … discipline focused pretensions amount at root to little more than vain bids for privilege and power."

# UK's Research Excellence Framework

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REF2014 Research Excellence Framework

| | |
|---|---|
| Four star | Quality that is world-leading in terms of originality, significance and rigour. |
| Three star | Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence. |
| Two star | Quality that is recognised internationally in terms of originality, significance and rigour. |
| One star | Quality that is recognised nationally in terms of originality, significance and rigour. |
| Unclassified | Quality that falls below the standard of nationally recognised work. Or work which does not meet the published definition of research for the purposes of this assessment. |

- *Self admission, I probably produce a 4 star myself only once every few years*
- *Especially hard to distinguish 3 star from 4 star: Like erotic films and pornography, you "know it when you see it"*

# It fits closely with criteria for "thought leaders"

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Research Policy 41 (2012) 1219–1239

Contents lists available at SciVerse ScienceDirect

Research Policy

journal homepage: www.elsevier.com/locate/respol

## The evolution of science policy and innovation studies

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Highly cited publications

ABSTRACT

This article examines the origins and evolution of the field of science policy and innovation studies (SPIS). Like other studies in this Special Issue, it seeks to systematically identify the key intellectual developments in the field over the last 50 years by analysing the publications that have been highly cited by other researchers. The analysis reveals how the emerging field of SPIS drew upon a growing range of disciplines in the late 1950s and 1960s, and how the relationship with these disciplines evolved over time. Around the mid-1980s, substantial parts of SPIS started to coalesce into a more coherent field centred on the adoption of an evolutionary (or neo-Schumpeterian) economics framework, an interactive model of the innovation process, and (a little later) the concept of 'systems of innovation' and the resource-based view of the firm. The article concludes with a discussion of whether SPIS is perhaps in the early stages of becoming a discipline.

# It fits closely with criteria for "thought leaders"

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| | Citations |
|---|---|
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# What is “Impact” beyond the REF then? Not only citations:

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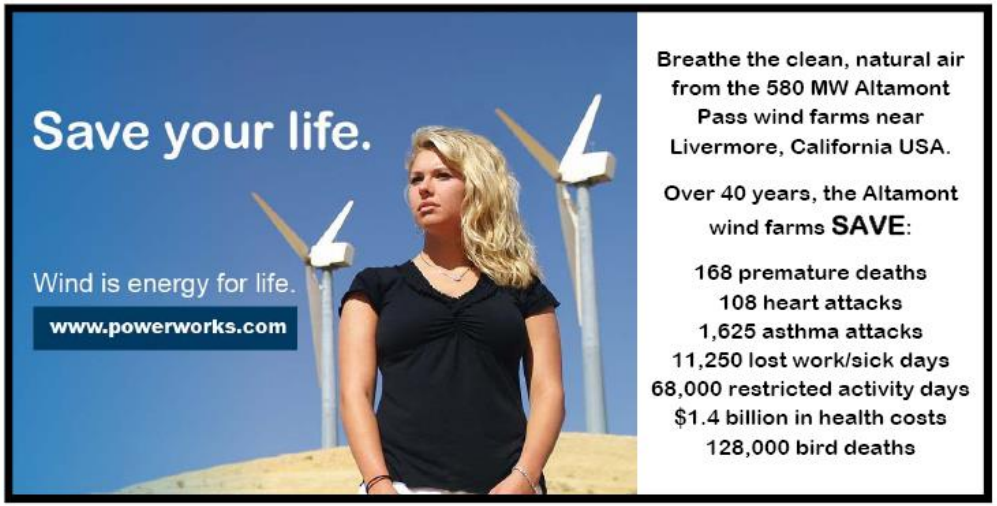
- Citation counts (ISI, Scopus, or Google Scholar)
- Author impact factor/h-index
- Downloads (journal, institutional website, or SSRN)
- Court decisions / testimony
- Political debates documenting use
- Press releases or citations in the popular press
- Personal communications/emails/requests
- Requests for consultancies
- Media interview requests
- Invitations to conferences
- In rare cases, advertising?



# Translate your work

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UNIVERSITY OF SUSSEX

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**PRESS RELEASE**
**Date: September 19, 2016**

## RISK OF ANOTHER CHERNOBYL OR FUKUSHIMA TYPE ACCIDENT PLAUSIBLE, EXPERTS SAY

### BIGGEST-EVER STATISTICAL ANALYSIS OF HISTORICAL ACCIDENTS SUGGESTS THAT NUCLEAR POWER IS AN UNDERAPPRECIATED EXTREME RISK AND THAT MAJOR CHANGES WILL BE NEEDED TO PREVENT FUTURE DISASTERS

A team of risk experts who have carried out the biggest-ever analysis of nuclear accidents warn that the next disaster on the scale of Chernobyl or Fukushima may happen much sooner than the public realizes.

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## Accelerating low-carbon innovation: the role for phase-out policies

**Policy Briefing** 05

March 2017

## Summary

### Recommendations

1. The Government's plan to phase out unabated coal in electricity generation is a good start, but similar approaches should be applied to decarbonise the heat and transport sectors.
2. The Government's Industrial Strategy should consider how high-carbon practices will be phased out to make space and build investor confidence in low-carbon innovations.

# *Mimic and imitate those you admire*

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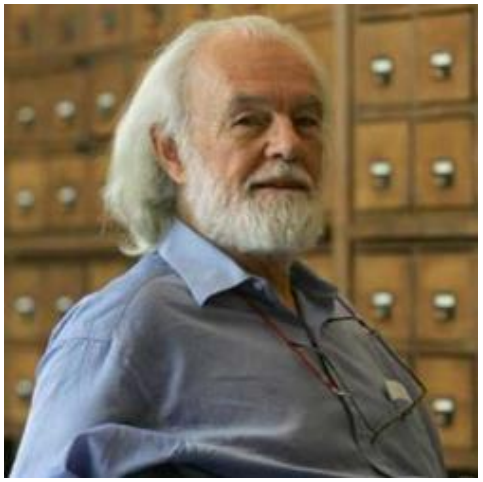
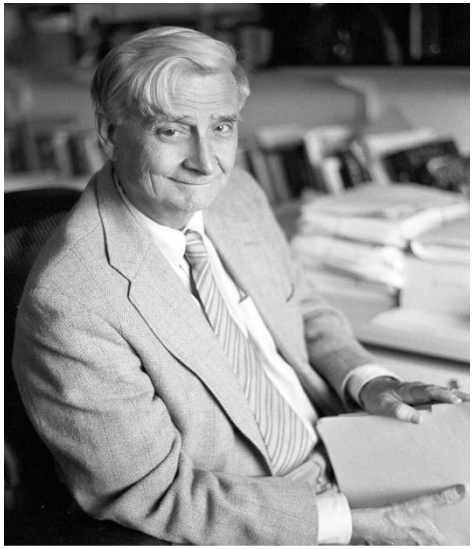
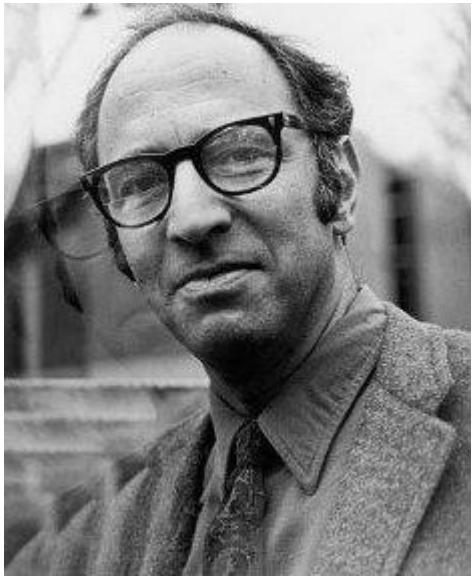


IMITATION
IS THE
SINCEREST
FORM OF
FLATTERY





# *Mimic "look", structure, feel, framing, execution, etc.*

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## Typology of sociotechnical transition pathways

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**Abstract**

Contributing to debates about transitions and system changes, this article has two aims. First, it uses criticisms on the multi-level perspective as stepping stones for further conceptual refinements. Second, it develops a typology of four transition pathways: transformation, reconfiguration, technological substitution, and de-alignment and re-alignment. These pathways differ in combinations of *timing* and *nature* of multi-level interactions. They are illustrated with historical examples.


*Keywords:* Transition pathways; Sociotechnical regime; Multi-level perspective

# Summary: Some actionable, near-term suggestions

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- Design some articles for maximum impact from the start, even at the proposal or pre-paper phase
  - Excel in some methods and/or mixed methods design
  - Have robust and triangulated data
  - Definitively answer a question
  - Or, address a timely social problem/debate
  - Or establish, test, and triangulate a theory
- Also realize the value to fecundity and 2-3 contributions a year, “less” excellent

# Summary: Some actionable, near-term suggestions

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- Choose good journals, with good reputations and impact factors, don't "waste" your precious time
- Gently mimic (and cite) those you admire, even write to them or write with them
- Don't be disciplinary chauvinists or theoretical monogamists
- Post publication, translate into press releases and policy briefs
- Be creative (and have fun)

# Concluding thoughts

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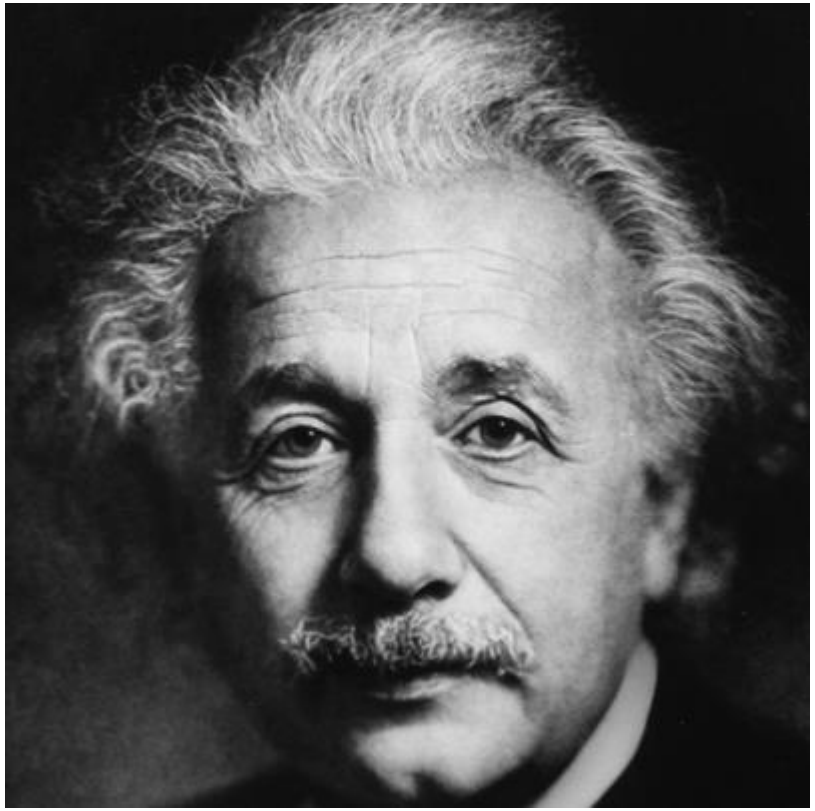
*If we knew what we were looking for, it wouldn't be called "re-search."*



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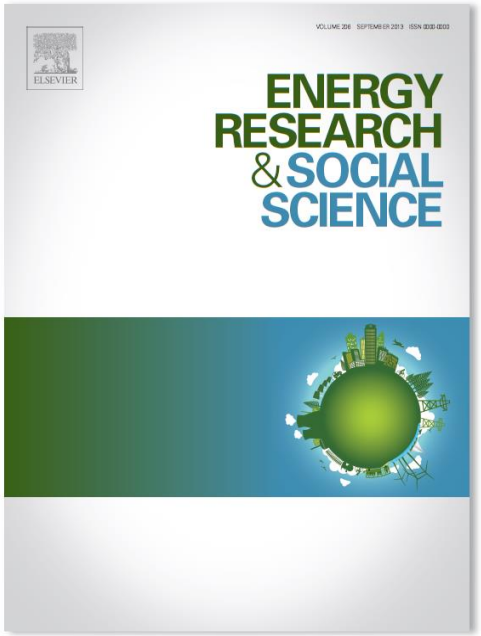


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