Research design and codes of practice for maximizing the impact of energy and climate social science

Research Workshop for the Center for Engineering Sustainability and Resilience, Northwestern University, United States, January 21-22, 2021

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Overview and preview

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- Some mind-boggling professional statistics
- What is novelty?
- What is rigor?
- What is style?
- Some thoughts and suggestions for research impact
- Implications for you in this very room

The source for almost everything in this presentation, at least the first bit, is: 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* 45 (November, 2018), pp. 12-42.

Boggling the mind

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- *Elsevier, the top academic publisher, receives about 1.3 million submissions a year*
- *365,000 are accepted, adding to about 69 million articles available on Scopus*
- *700 million downloads a year from 11 million researchers across 120 countries*
- *30-90% rejected (average around 82%)*

Boggling the mind

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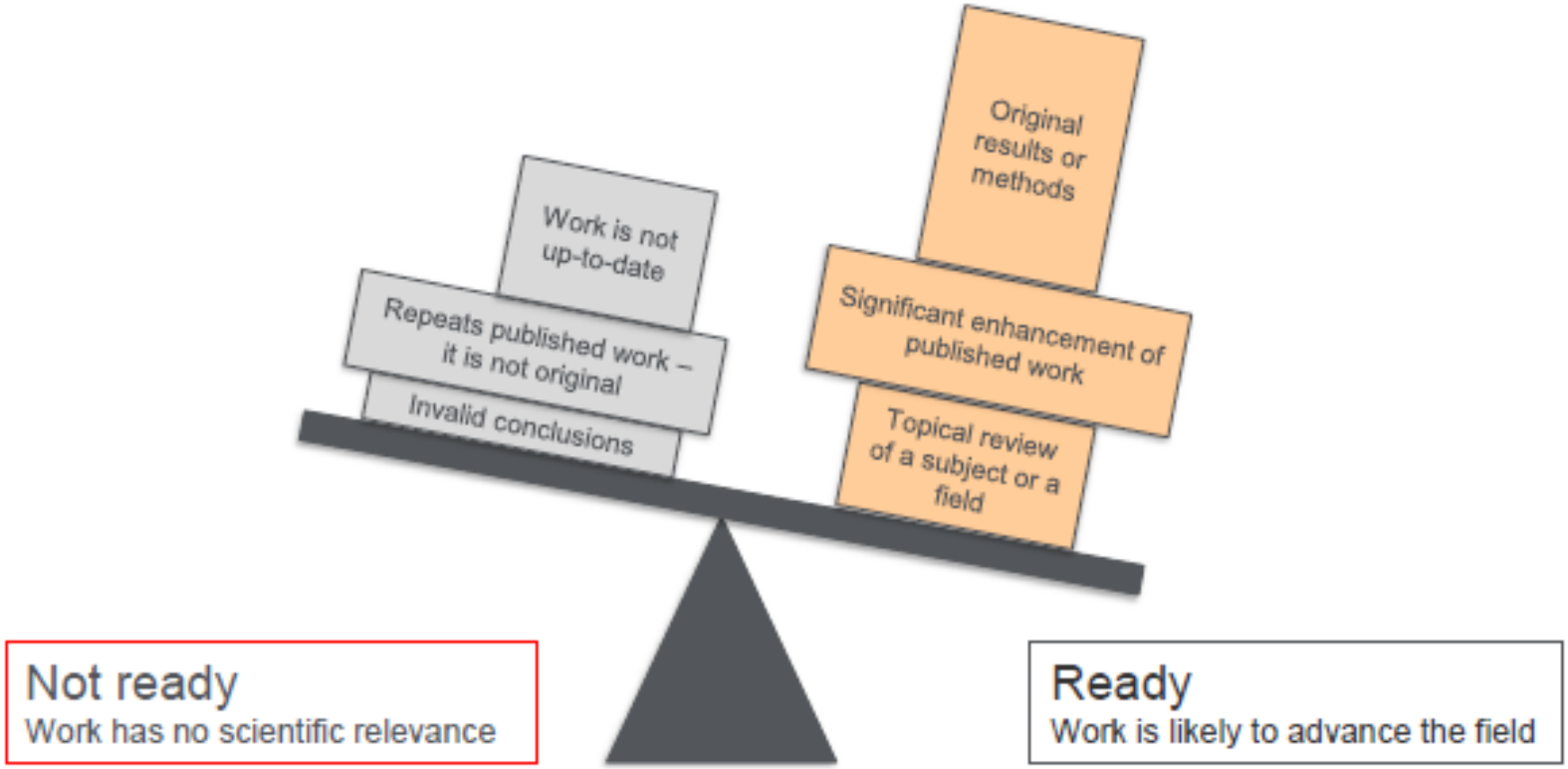

- *A lot of garbage is submitted!*
- *But, it also makes excellent articles much easier to spot*
- *My own 20-70-10 rule*

How do we get better (myself included)?

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- *Bring attention to the importance of clearly articulating research questions, objectives, and designs*
- *Provide a framework for conceptualizing novelty*
- *Suggest codes of practice to improve the quality and rigor of research*
- *Provide guidelines for improving the style and communication of results*

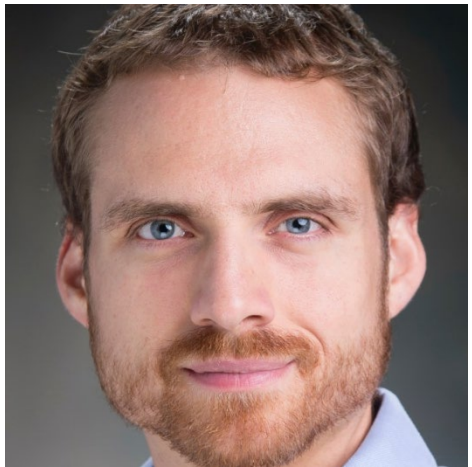

Figure out what *type* of contribution you want to make

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1. *Theory dependent* – test a theory, your own, someone else's; tend to be deductive (e.g., symbolic convergence theory and the hydrogen economy);
2. *Problem or puzzle dependent* – something curious, touches upon concepts learned in graduate school (e.g., socio-technical systems theory, regulatory capture, bounded rationality, market failure, realism and how they all relate to energy systems);
3. *Data driven or grounded*: entirely inductive or empirical (e.g., what's stopping solar panels in Papua New Guinea? Is the EITI effective?)
4. *Hypothesis driven*: test, confirm, or disprove certain hypotheses in bodies of literature (e.g., energy security survey, RIPE hydropower article)

The mechanics of (most) strong articles

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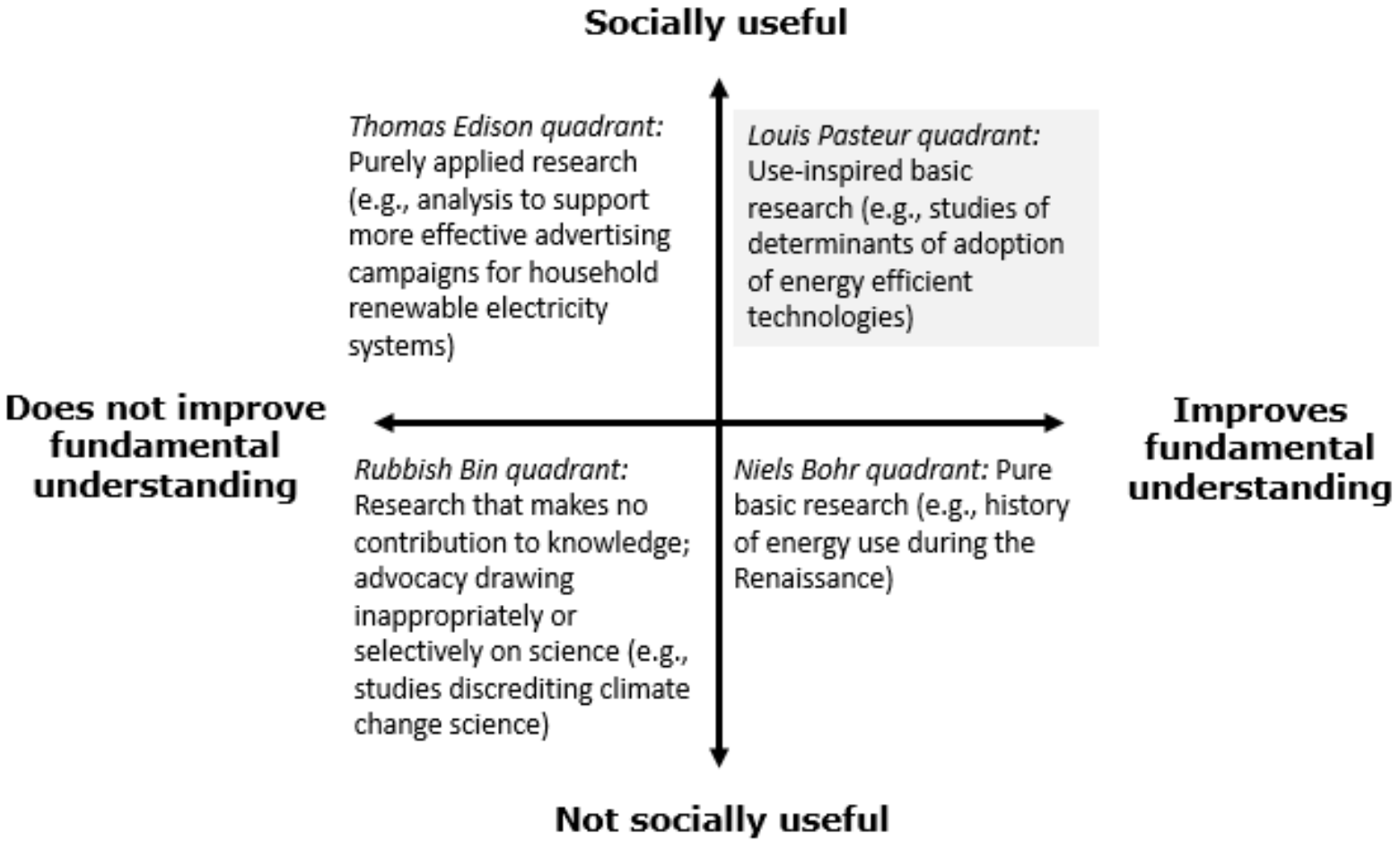
Ask a socially relevant, interesting, answerable research question



The mechanics of (most) strong articles

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- *Engage with/recognize theory and conceptual frameworks, sometimes advance them*
- *State research aims or objectives*
- *Explicate a specific research design, methods working on concert to achieve your objectives and answer that question*
  1. *Experiments and quasi-experiments*
  2. *Literature reviews*
  3. *Surveys and quantitative data collection*
  4. *Data analysis and statistics*
  5. *Quantitative energy modelling*
  6. *Qualitative research*
  7. *Case studies*

	Experiments and quasi-experiments	Literature reviews	Surveys and data collection	Data analysis and statistics	Quantitative energy modeling	Qualitative research	Case studies
Core Disciplines	Behavioral science, social psychology, behavioral economics, medical and life sciences	All disciplines, though meta-analysis is more common in quantitative disciplines (e.g. psychology and economics)	Various, but especially economics, sociology and marketing	Various, but especially, economics, psychology and some traditions within political science	Economics, engineering, environmental science (for Integrated Assessment Models)	Anthropology, sociology, history, geography, policy studies, science and technology studies	Various, but similar to qualitative research
Description	Exemplified by randomized controlled trials, but also includes controlled before-and-after studies and various types of matched comparisons. Potentially provides reliable evidence of the causal effect	Reviews generally do not present new or original data. Instead, they scour existing peer-reviewed or grey literature, with the aim of identifying the current state of knowledge. Reviews occasionally use content or discourse analysis.	Survey data can provide valuable information about a given sample and population (e.g. consumers, citizens, or stakeholders), including descriptive statistics and test of association or causality among variables	Technique for exploring quantitative hypotheses, such as comparing means across samples or testing associations of variables; can be performed on either new data collected by the researcher or analysis of existing (secondary) data.	Covers a variety of approaches to analyzing the operation and consequences of different mechanisms using simplified mathematical models.	A variety of techniques for obtaining information regarding the opinions, understandings, attitudes and perceptions of individuals and groups in different contexts.	In-depth, examination of one or more subjects of study (cases) and associated contextual conditions. Relies upon multiple sources of both quantitative and qualitative evidence.

	Experiments and quasi-experiments	Literature reviews	Surveys and data collection	Data analysis and statistics	Quantitative energy modeling	Qualitative research	Case studies
Research culture	Convergent, subject to rigorous scientific evaluation	Convergent for meta-analysis and systematic reviews, but largely divergent for other forms	Somewhat convergent, practices vary by discipline and nature of research question (e.g. descriptive or causal)	Somewhat convergent, general principles hold across disciplines, but some disciplines have developed more specific practices (e.g. econometrics)	Divergent, research questions and model assumptions differ greatly across disciplines and approaches	Divergent, split among different subcategories of qualitative/ intepretivist research, e.g. post-positivism, relativism, and constructivism	Divergent, split between different objectives, types of case (e.g. illustrative, exploratory, cumulative, critical) and types of evidence
Codes of practice for methodological rigor	Can be based upon a hierarchy of evidence, studies assessed against predetermined criteria, standardized reporting structures	Some standardized assessment criteria exist, particularly for systematic reviews and meta-analysis	Can be based upon increasingly accepted assessment structures	Based upon statistical principles, but preferred techniques and practices vary between disciplines	Some codes have been proposed, but these vary with the model type	Data collection not always guided by explicit criteria	Depends on case study types, whether single or comparative cases are needed, and spatial or temporal variation

What is novelty?!

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- ***Theoretical novelty***
  - *Invention or creation (TIS, social practice)*
  - *Synthesis or reformation (UTAUT)*
  - *Testing or triangulation (fun!)*

JOURNAL ARTICLE

Conceptual Models and the Cuban Missile Crisis

Graham T. Allison

The American Political Science Review

Vol. 63, No. 3 (Sep., 1969), pp. 689-718

Published by: American Political Science Association

DOI: 10.2307/1954423

https://www.jstor.org/stable/1954423

Page Count: 30

What is novelty?!

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- ***Methodological novelty***
  - *Mixed or multi-methods*
  - *Behavioural realism (for models)*
  - *Repeated data collection or longitudinal research*

ELSEVIER

Energy Research & Social Science
Volume 22, December 2016, Pages 125-136

Original research article

Laundry, energy and time: Insights from 20 years of time-use diary data in the United Kingdom

Ben Anderson ✉

What is novelty?!

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- ***Empirical novelty***
  - *New applications (regions, cases, contexts, theories)*
  - *New data from hard to reach groups (children, indigenous people, survivors > see next slide)*
  - *New evidence (big data, telematics, remote sensing)*

Nonstate Actors and the Diffusion of Innovations: The Case of Suicide Terrorism

Michael C. Horowitz [a1]

DOI: https://doi.org/10.1017/S0020818309990233 Published online by C

Abstract

Studies of terrorism in general and suicide terrorism ir
However, what if the propensity for a terrorist group t
and the relationship between the organizational capab
capabilities of the group? This article shows that the o
significantly influence the overall adoption pattern, alc
the universe of terrorist groups, not only those groups
that Pape's key variable of interest, occupation, does r
Thinking about suicide terrorism as a special case of d
—can help bring the study of suicide terrorism further
not just differences, but similarities, to other innovatio

ELSEVIER

Energy Research & Social Science
Volume 44, October 2018, Pages 411-418

Original research article

Terrorism, geopolitics, and oil security: Using remote sensing to estimate oil production of the Islamic State

Quy-Toan Do [a], Jacob N. Shapiro [b], Christopher D. Elvidge [c], Mohamed Abdel-Jelil [d], Daniel P. Ahn [e], Kimberly Baugh [f], Jamie Hansen-Lewis [g], Mikhail Zhizhin [f], Morgan D. Bazilian [h]

What is rigor?

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- A working definition: “the quality of being extremely thorough and careful”

Defining validity.

Researchers will inevitably be concerned with validity when they design, implement and interpret their study. Broadly speaking, and more in line with the positivist paradigm, validity relates to whether the result or interpretation is correct. Although the concept is most clearly applicable to experiments and quasi-experiments [180]—that is, studies of causation or explanation—it is also relevant to other quantitative and qualitative methods [181]. Shadish et al. [182] present four types of validity, the two most commonly discussed of which are internal and external validity. Internal validity relates whether the observed effects are due to the identified variable(s) and not some other factors, whereas external validity refers to the generalizability of the study's results to other groups, contexts or time periods. Researchers will want to consider both forms of validity within their research design—through considering alternative explanations for what they observe (internal validity), and assessing how current observations may or may not apply to other contexts (external validity). Hammersley argues that while concepts of validity are useful, they must be applied differently for different research questions, methods and intentions for the produced knowledge [183].

What is rigor: Hierarchies of validity and evidence for experiments?

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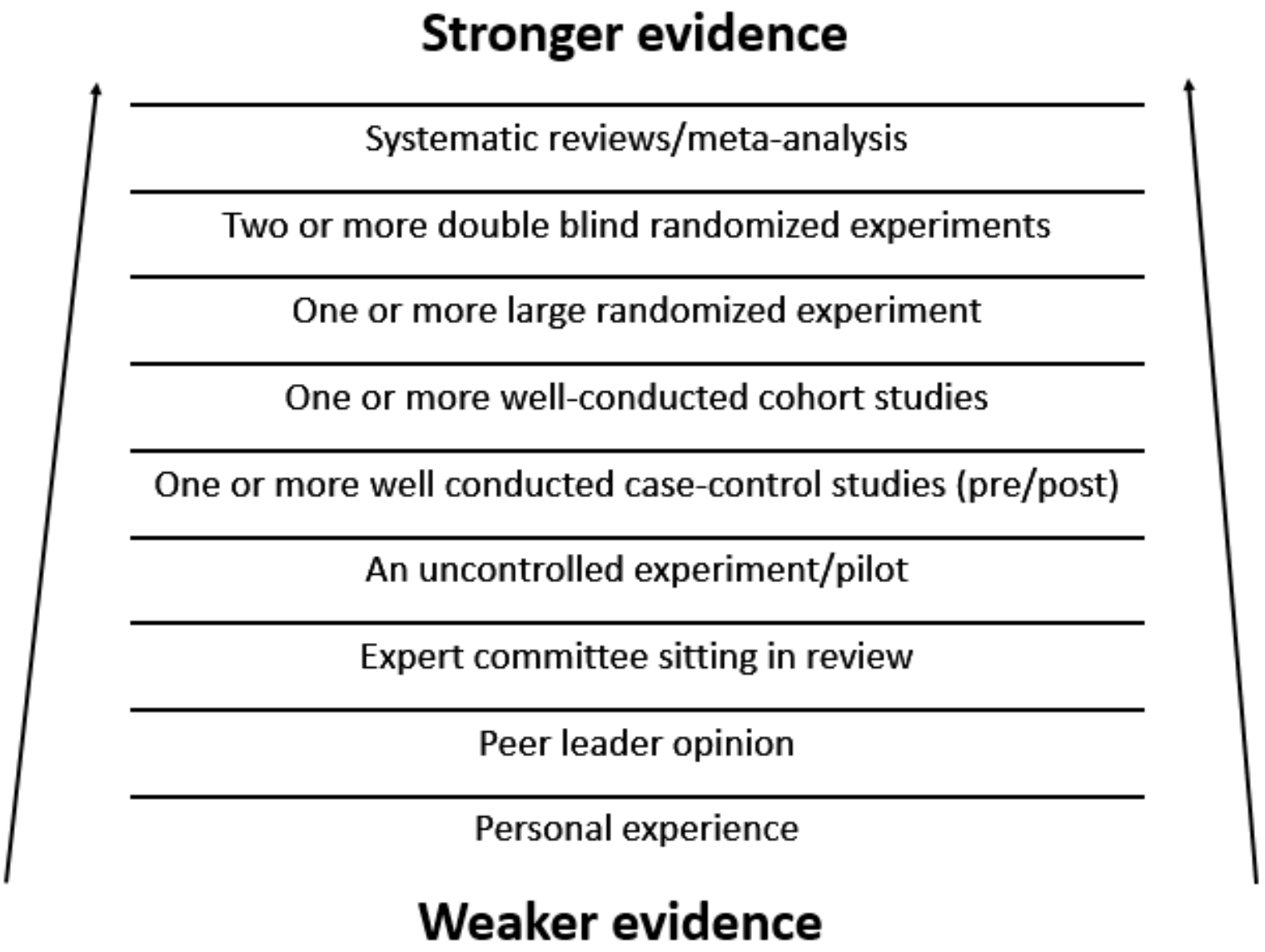

What is rigor: Hierarchies of validity and evidence for reviews?

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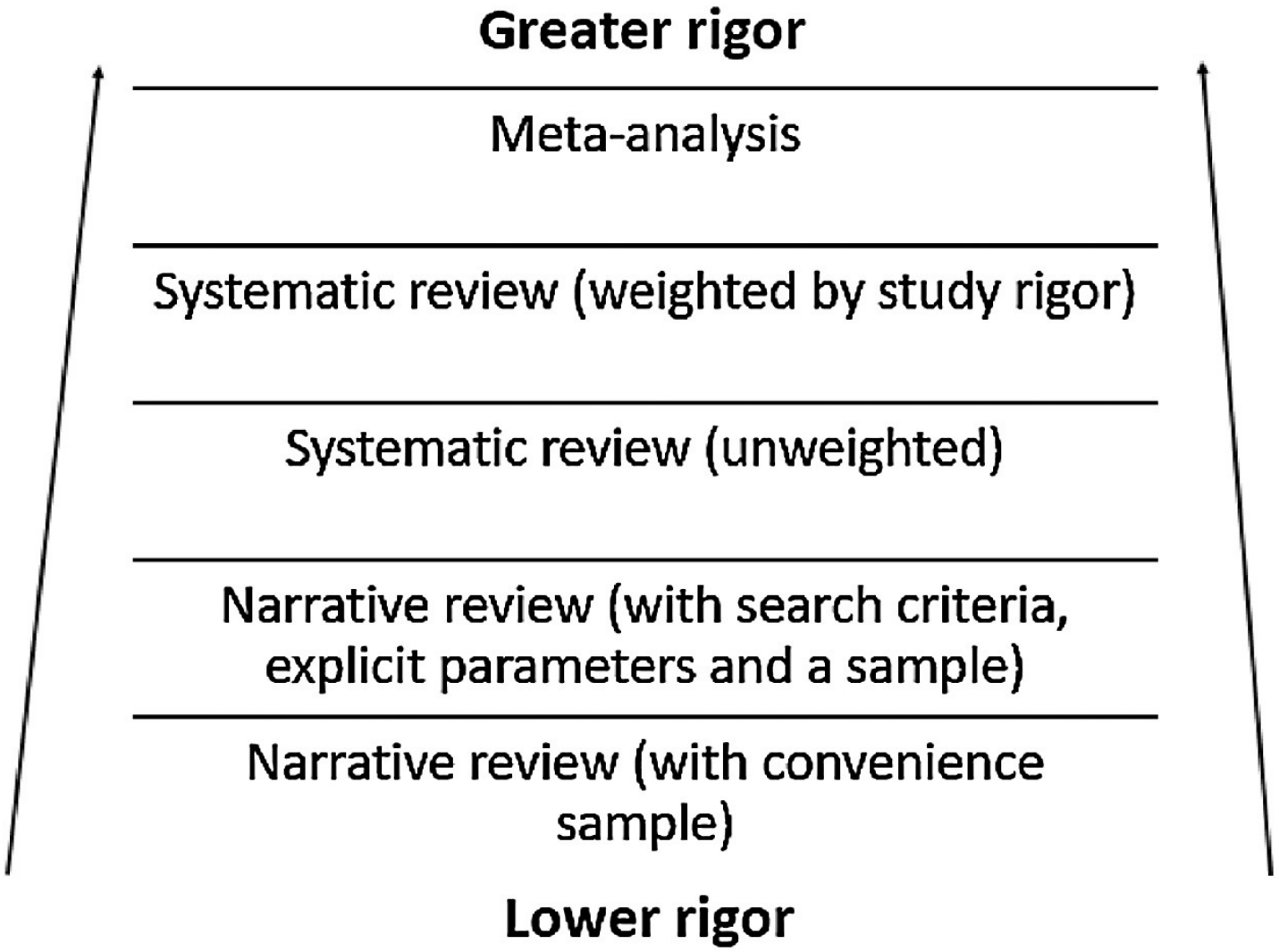

What is rigor: Hierarchies of validity and evidence for data analysis?

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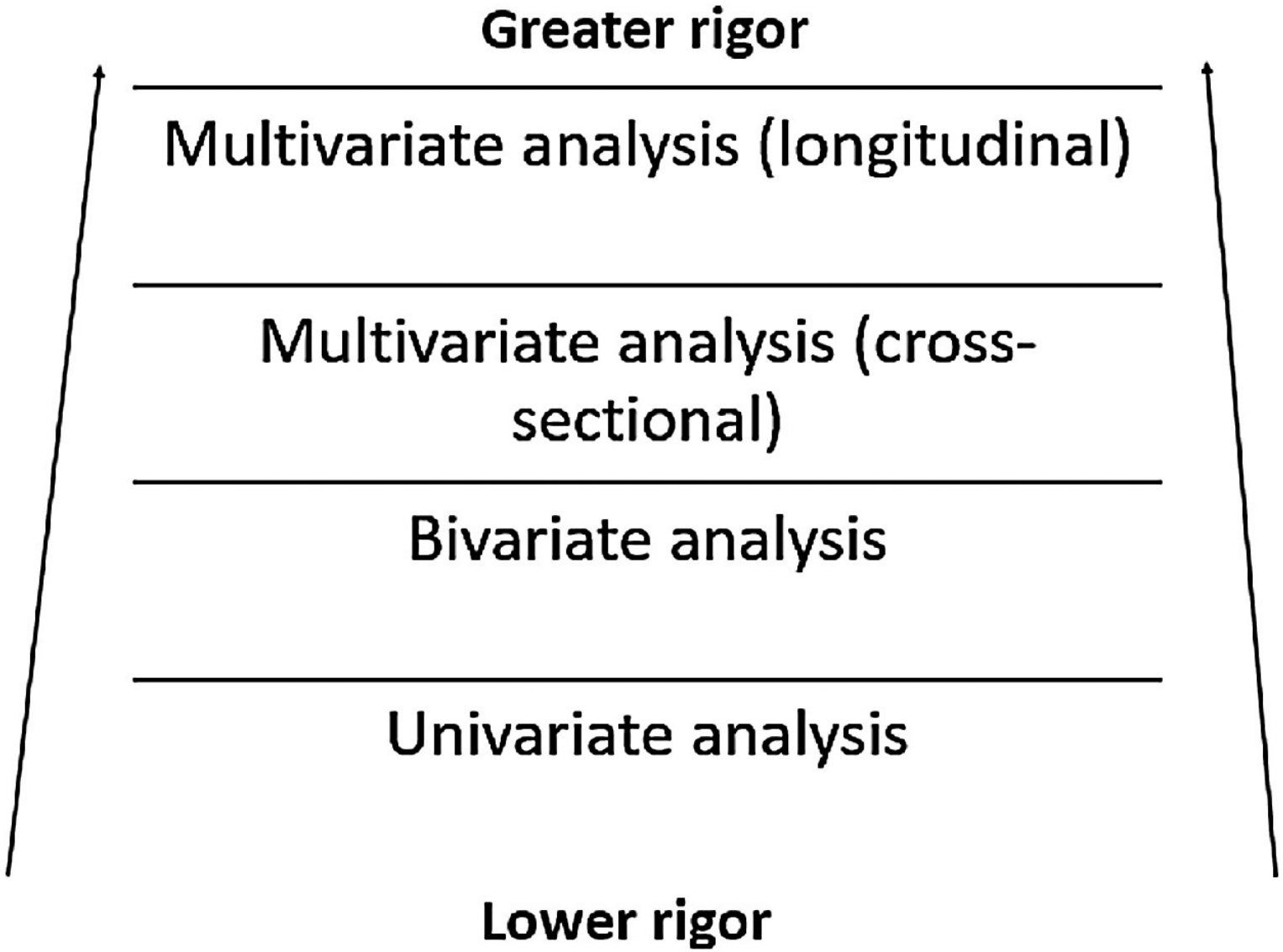

Hierarchies of validity and evidence for case studies?

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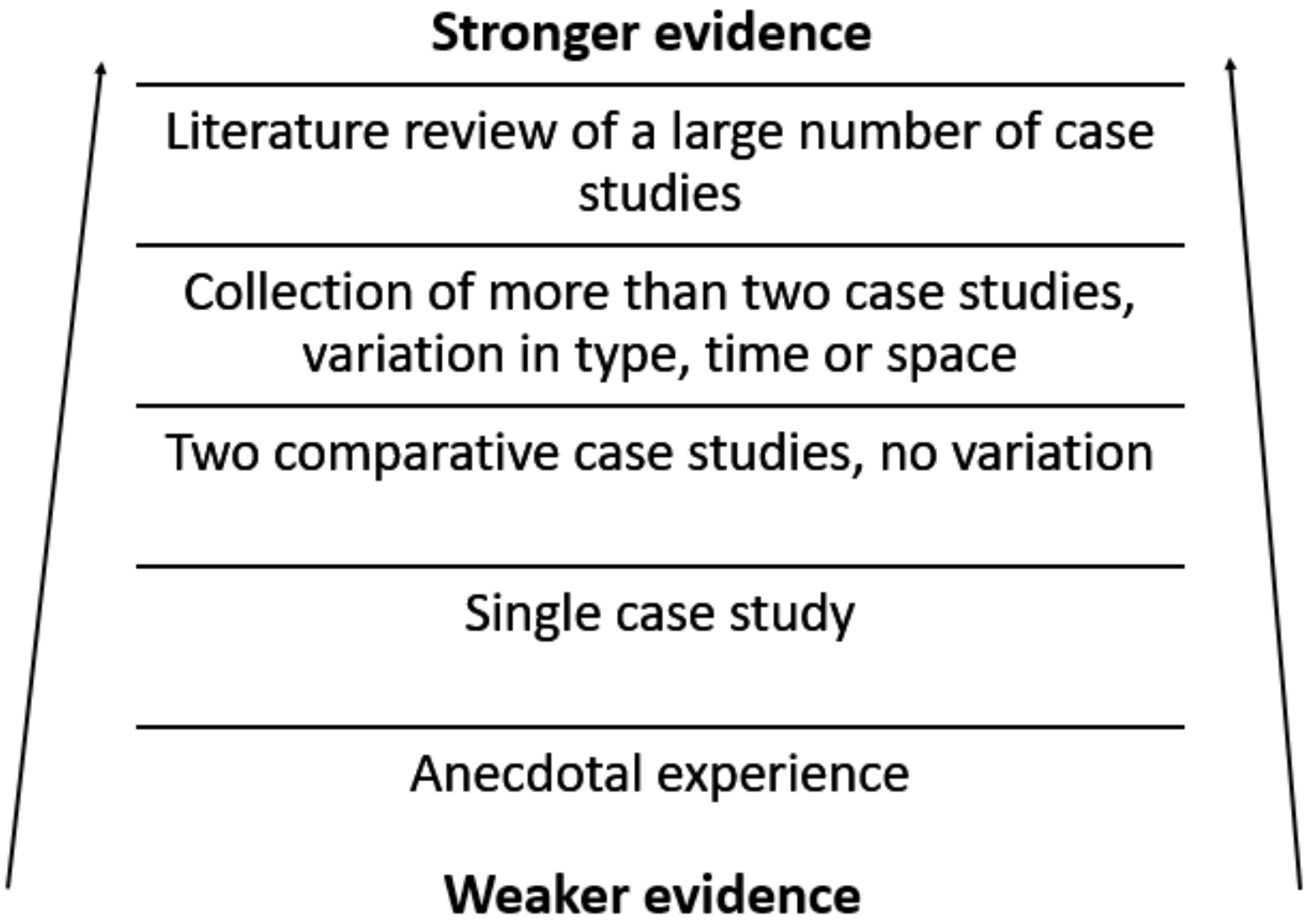

Problematizing hierarchies of validity and evidence

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- *You need the lower levels or rungs to lead to the higher ones, someone has to do them*
- *Often requires a balancing between them, no article excels in all, especially those with mixed designs*
- *Differs greatly between disciplines, imagine submitting a quantitative meta-analysis to a discourse journal*
- *A "horses for courses" mentality as well, don't choose higher forms if*
  - *Cannot execute (lack of time, funding, access)*
  - *Marginal value sometimes to moving up (confidence interval stays roughly the same)*

The required sample size for obtaining an estimate of specified precision from different population sizes

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Population size	Sample sizes for the 95% confidence intervals					
	+/- 10%		+/- 5%		+/- 3%	
	50/50 split	80/20 split	50/50 split	80/20 split	50/50 split	80/20 split
100	49	38	80	71	92	87
200	65	47	132	111	169	155
400	78	53	196	153	291	253
600	83	56	234	175	384	320
800	86	57	260	188	458	369
1,000	88	58	278	198	517	406
2,000	92	60	322	219	696	509
4,000	94	61	351	232	843	584
6,000	95	61	361	236	906	613
8,000	95	61	367	239	942	629
10,000	95	61	370	240	965	640
20,000	96	61	377	243	1,013	661
40,000	96	61	381	244	1,040	672
100,000	96	61	383	245	1,056	679
1,000,000	96	61	384	246	1,066	683
1,000,000,000	96	61	384	246	1,067	683

What is style?!

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- ***Robust macro-structure***
  - *Titles*
  - *Abstract*
  - *Sub-headings*
  - *Placement of paragraphs*
  - *Regular signposting*
  - *Often achieved with a high level outline from the start*

What is style?!

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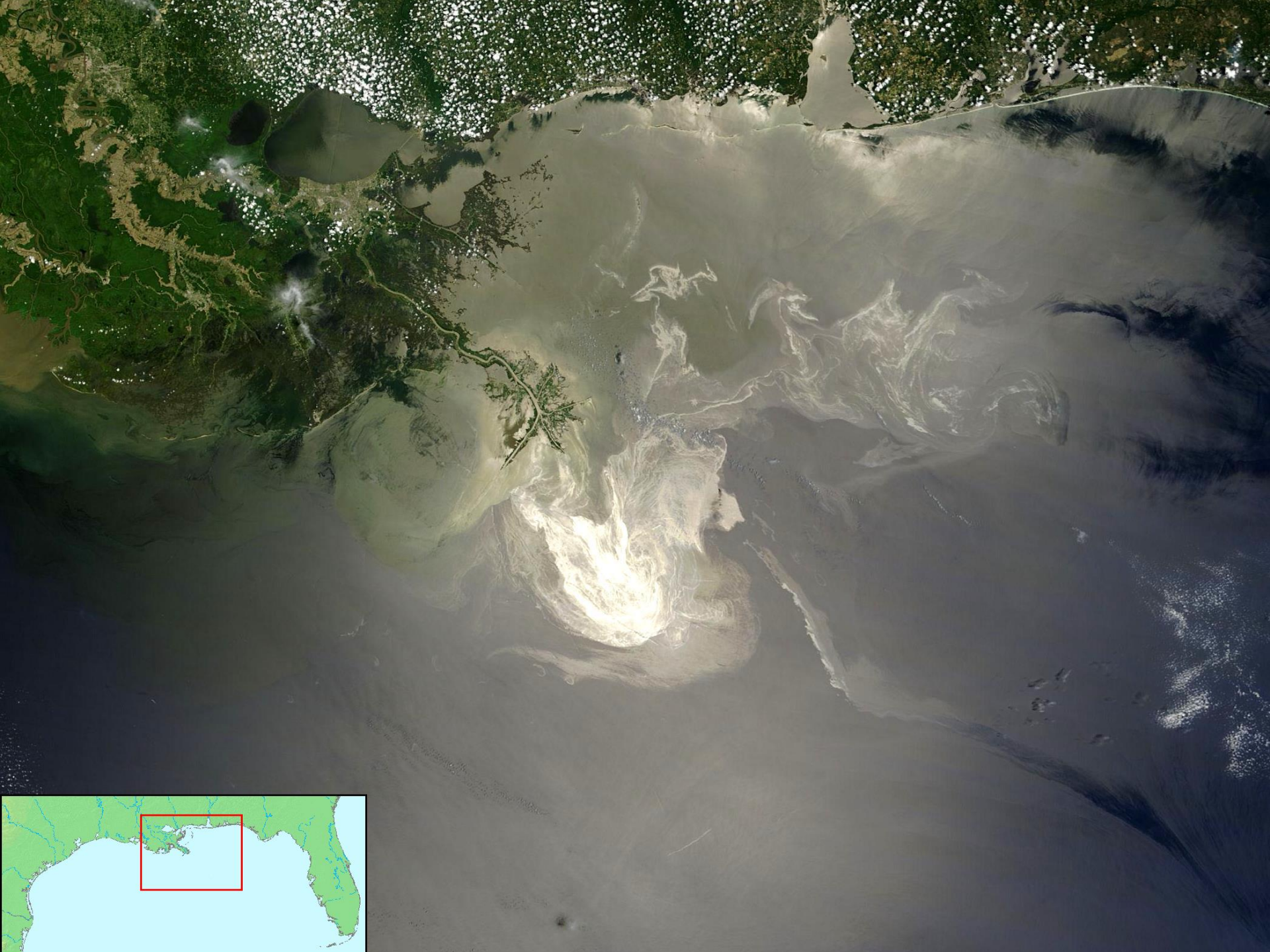
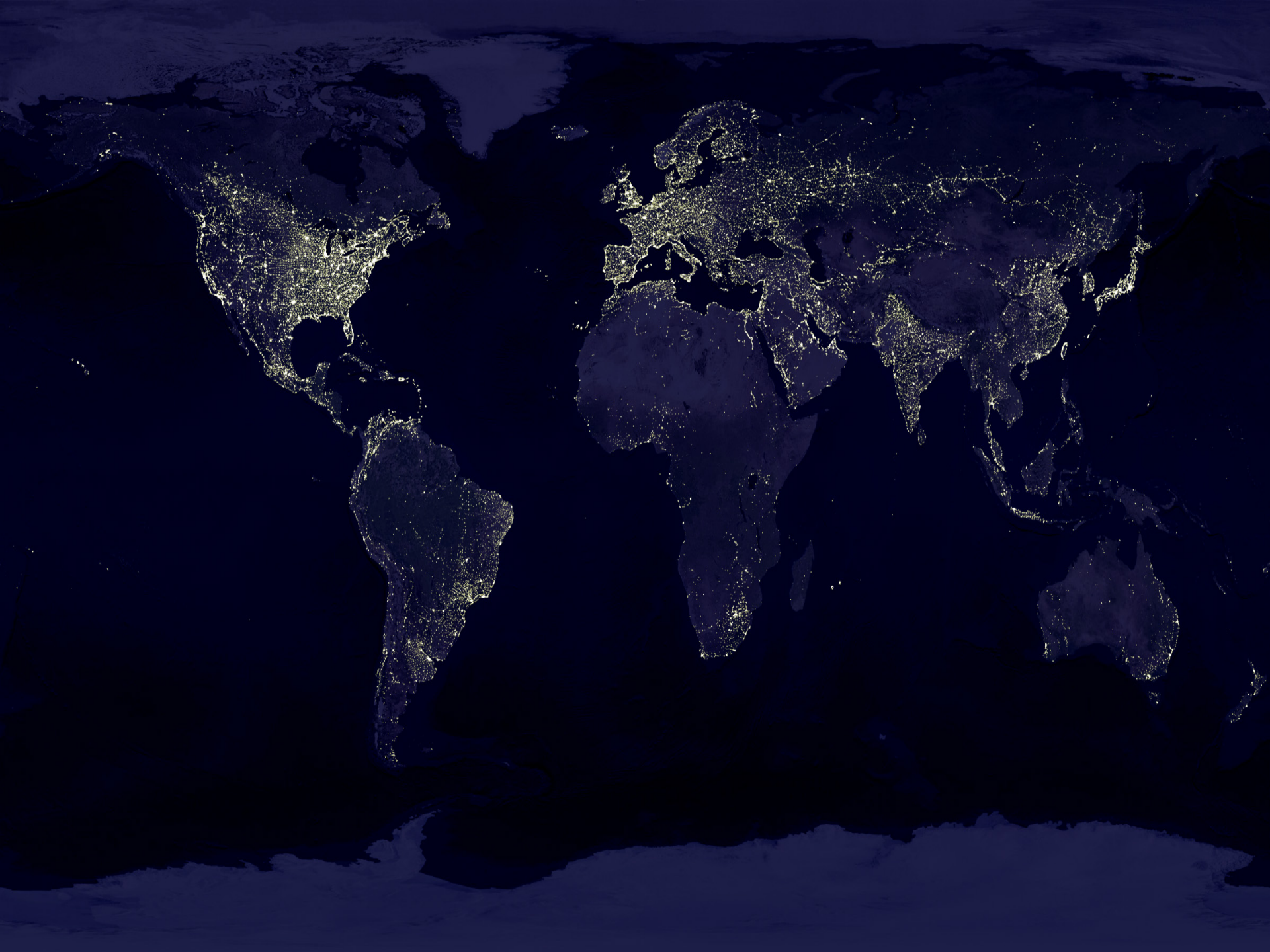
- ***Clarity of expression in microstructure***
  - *Paragraph unity*
  - *Paragraph parsimony*
  - *Subject/object congruence and active/passive voice*
  - *Comprehensive but accurate referencing*
  - *Appropriate length (aim for short)*
  - *Minimal jargon and acronyms*
  - *Use visual elements such as diagrams, photographs, figures and charts*


Coast
Range
Sacramento
Valley
Sierra
Nevada
Nevada
Pacific Ocean
San Joaquin
Valley
100 km
N





Previewing

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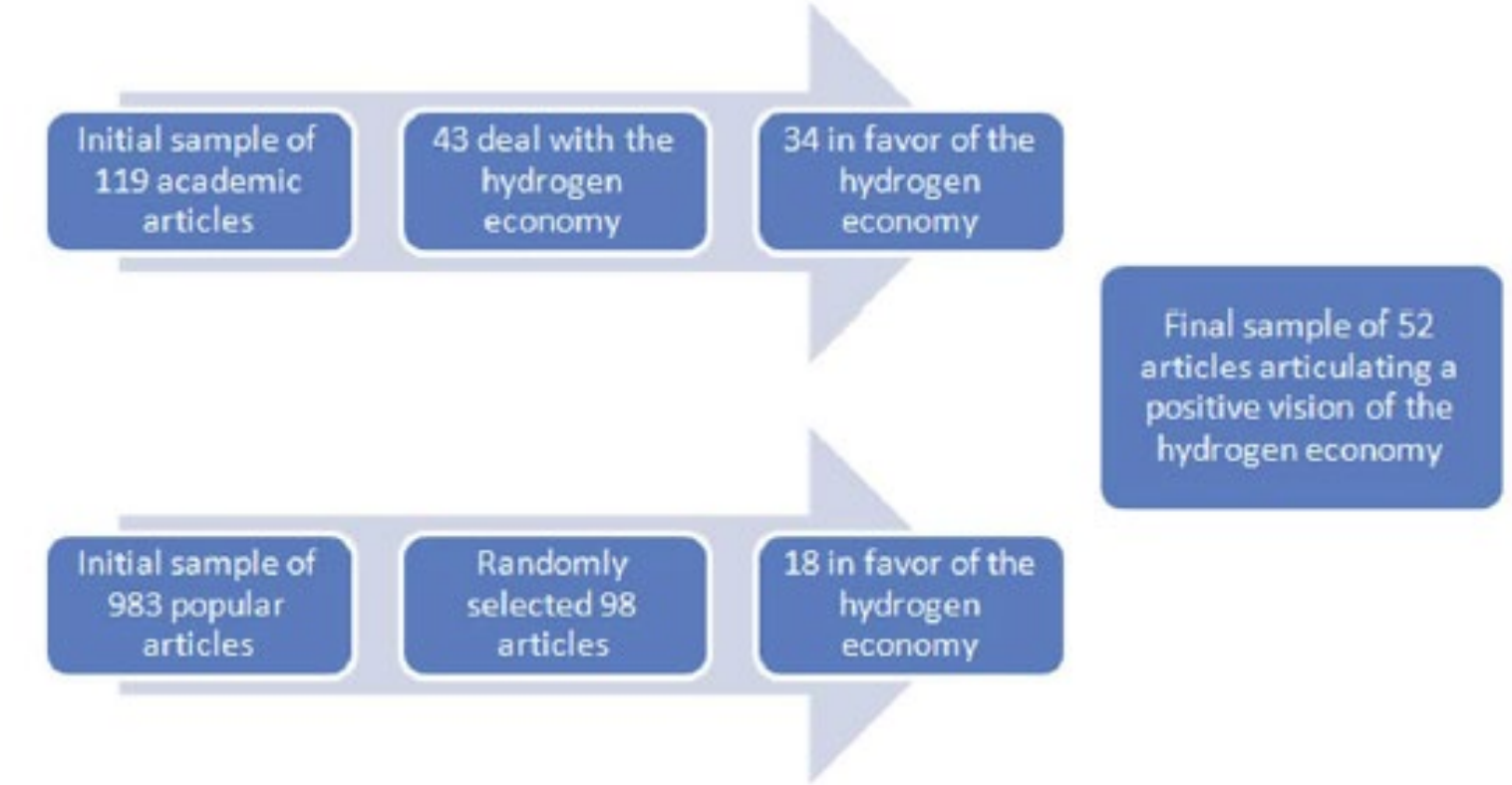
Sovacool, BK, SV Valentine, MJ Bambawale, MA Brown, TDF Cardoso, S Nurbek, G Suleimenova, L Jinke, X Yang, A Jain, AF Alhajji, and A Zubiri. "Exploring Propositions about Perceptions of Energy Security: An International Survey," *Environmental Science & Policy* 16(1) (January, 2012), pp. 44-64.

Table 2 (Continued)

Proposition	Explanation	Survey question(s)
P3: Defending one's vocation	One would expect that perspectives on energy security held by those employed in the private sector would be significantly more conservative, with those participants rating and ranking climate change and environmental dimensions poorly. Industry representatives and government officials would also be expected to rate energy research expenditures highly	When you think about energy security for your country of residence in the next five years, how important is it to minimize the impact of climate change (i.e., adaptation); and to reduce greenhouse gas emissions (i.e. mitigation)?; to minimize the destruction of forests and the degradation of land and soil; to provide available and clean water; and to minimize air pollution?; to conduct research and development on new and innovative energy technologies?
P4: Feminism and mother earth	We would expect women to prioritize climate change, environmental issues, and renewable energy more than men	When you think about energy security for your country of residence in the next five years, how important is it to minimize the impact of climate change (i.e., adaptation); to reduce greenhouse gas emissions (i.e. mitigation)?; to minimize the destruction of forests and the degradation of land and soil; to provide available and clean water; and to minimize air pollution?
P5: The influence of affluence	We would expect developing countries such as Brazil, China, India, Kazakhstan and Papua New Guinea to be predominantly concerned about the security of fossil fuel supply, given their rapid economic growth, whereas developed economies such as Germany, Japan, Singapore, and the United States would prioritize energy efficiency and energy research and development	When you think about energy security for your country of residence in the next five years, how important is it to have a secure supply of oil, gas, coal, and/or uranium?; to have low energy intensity (unit of energy required per unit of economic output)?; to conduct research and development on new and innovative energy technologies?
P6: The have and have nots	One would expect major energy importers such as Germany, Japan, and the United States to be concerned with lessening dependence on foreign supplies and increasing diversification and decentralization, whereas exporters such as Kazakhstan and Saudi Arabia would emphasize trade and the value of energy exports. The rapidly industrializing economies of Brazil, China, and India would be expected to "scramble" for as many energy resources as they could acquire.	When you think about energy security for your country of residence in the next five years, how important is it to promote trade in energy products, technologies, and exports?

Summarizing



Sovacool, BK and B Brossmann. "Symbolic Convergence and the Hydrogen Economy," *Energy Policy* 38(4) (April, 2010), pp. 1999-2012.

Summarizing

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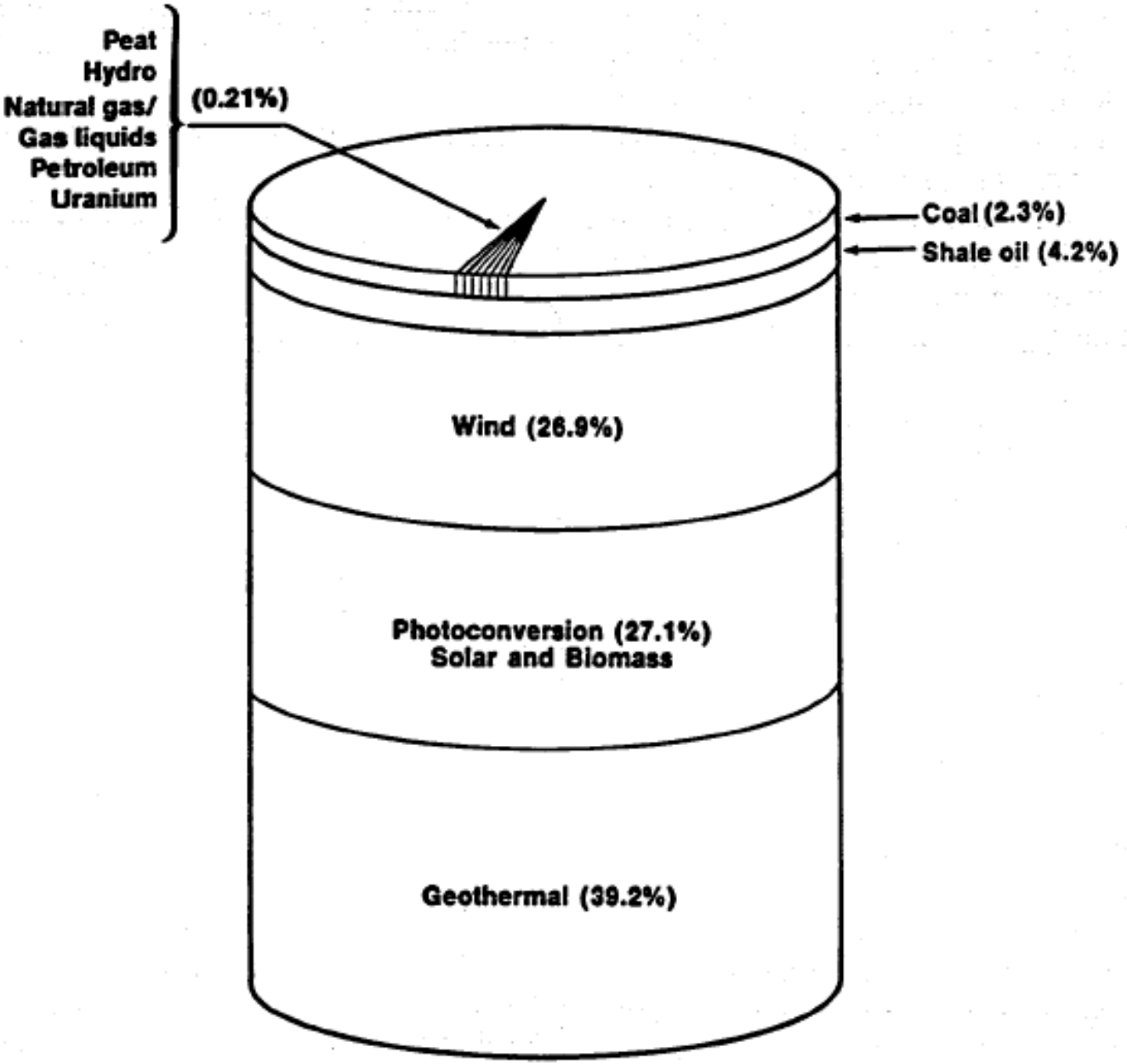
Table 1
Qualitative comparison of four governance networks.

	Clarity of purpose	Resources/ funding	Institutional formality	Scope of power	Level of Resilience
ASEAN Centre for Energy (ACE)	Lack of specific mandate	Moderately supported	Semi-Formal	Limited	Somewhat resilient
Renewable Energy and Energy Efficiency Partnership (REEEP)	Very Clear	Broad based funding	Robust	Influences members and policy	Very Resilient
ASEAN Regional Knowledge Network on Forest Law Enforcement and Governance (FLEG)	Somewhat clear but ambitious	Weak	Semi-Formal	Limited	Not very Resilient
ASEAN Regional Knowledge Network on Forests and Climate Change (FCC)	Not clear due to complexity of the issue	Weak	Semi-Formal	Limited	Not very Resilient

Poocharoen, Ora-Orn and BK Sovacool. "Exploring the Challenges of Energy and Resources Network Governance," *Energy Policy* 42 (March, 2012), pp. 409-418.

Illustrating

Domestic
U.S. Energy
Resources
and Reserves



U.S. Department of Energy, Characterization of U.S. Energy Resources and Reserves (Washington, DC: DOE/CE-0279, 1989).

Documenting

Sovacool, BK. "Rejecting Renewables: The Socio-technical Impediments to Renewable Electricity in the United States," *Energy Policy* 37(11) (November, 2009), pp. 4500-4513.

Subpart A – INTERCONNECTION PROCEDURES

36 Interconnection Requests

36.1 General: Generation Interconnection Requests and Transmission Interconnection Requests shall be governed by this Section 36.

36.1.01 Generation Interconnection Request: Except as otherwise provided in this Subpart A with respect to Behind The Meter Generation, an Interconnection Customer that seeks to interconnect new generation in, or to increase the capacity of generation already interconnected in, the PJM Region shall submit to the Transmission Provider a Generation Interconnection Request. A Generation Interconnection Request shall include: (i) the location of the proposed generating unit site or existing generating unit; (ii) evidence of an ownership interest in, or right to acquire or control the generating unit site, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; (iii) the size of the proposed generating unit or the amount of increase in capacity of an existing generating unit; (iv) a description of the equipment configuration and if the generating unit is a wind generation facility, a set of preliminary electrical design specifications depicting the wind plant as a single equivalent generator; (v) the planned date the proposed generating unit or increase in capacity of an existing generating unit will be in service, such date to be no more than seven years from the date the request is received by the Transmission Provider unless the Generation Interconnection Customer demonstrates that engineering, permitting, and construction of the generating unit or increase in capacity will take more than seven years; and (vi) any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; (vii) an executed Generation Interconnection Feasibility Study Agreement, a form of which is contained in Attachment N, pursuant to which the Generation Interconnection Customer agrees to reimburse the Transmission Provider for the cost of the Generation Interconnection Feasibility Study; and (viii) an initial deposit in the amount of $100 for each MW requested if the Generation Interconnection Request is received within the first calendar month of the date of the beginning of the current New Services Queue; an initial deposit in the amount of $150 for each MW requested if the Generation Interconnection Request is received within the second calendar month of the date of the beginning of the current New Services Queue; or an initial deposit in the amount of $200 for each MW requested, if the Generation Interconnection Request is received within the third calendar month of the date of the beginning of the current New Services Queue, up to a maximum amount not to exceed $100,000 and (ix) a base non-refundable deposit in the amount of $10,000, if the Generation Interconnection Request is received within the first calendar month of the date of the beginning of the current New Services Queue; a base non-refundable deposit in the amount of $20,000 if the Generation Interconnection Request is received within the second calendar month of the date of the beginning of the current New Services Queue; or a base non-refundable deposit in the amount of $30,000, if the Generation Interconnection Request is received within the third calendar month of the date of the beginning of the current New Services Queue.

Simplifying

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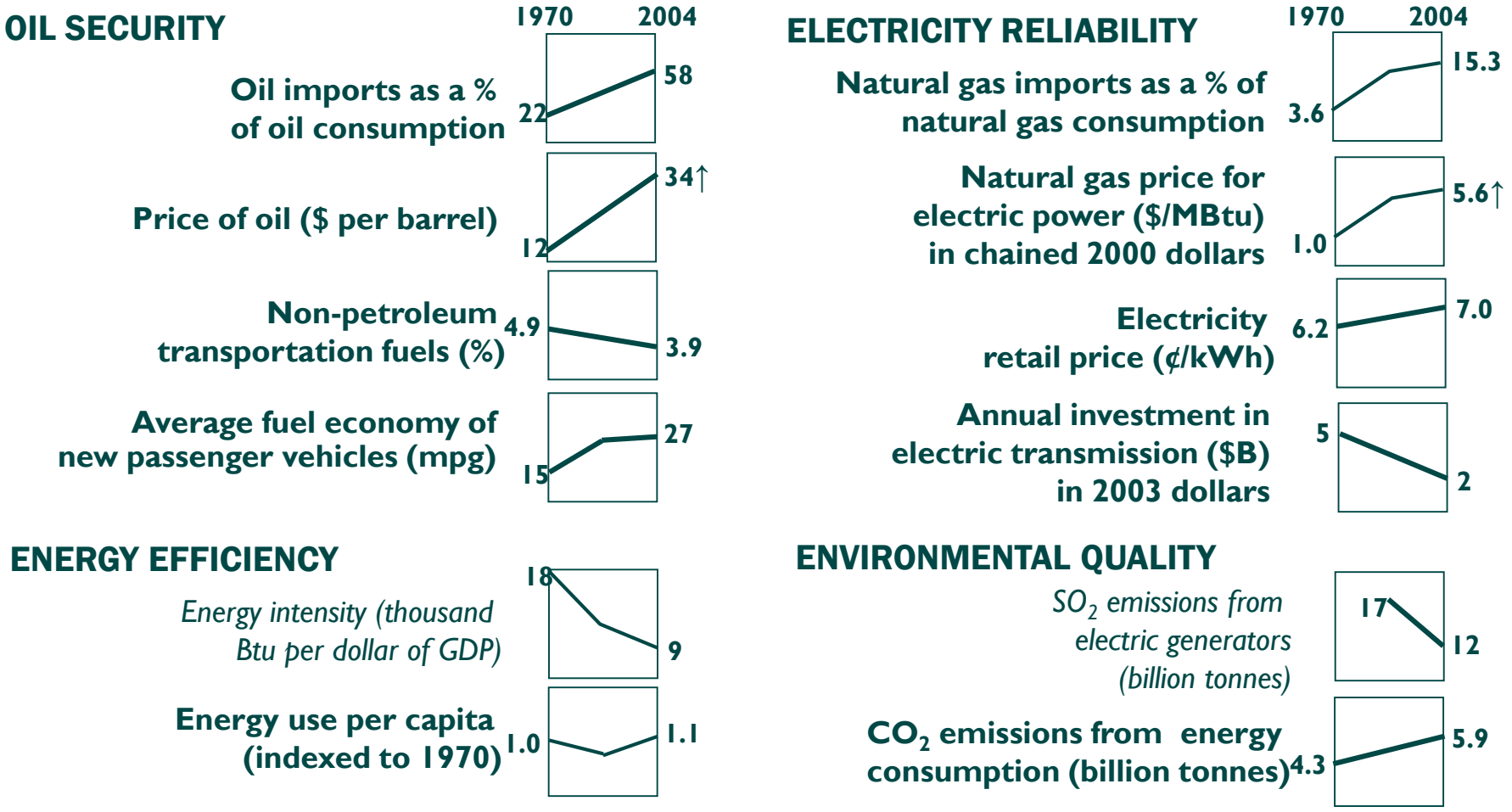

Brown, MA and BK Sovacool. "Developing an 'Energy Sustainability Index' to Evaluate Energy Policy," *Interdisciplinary Science Reviews* 32(4) (December, 2007), pp. 335-349.

Humouring

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Humouring

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What is style?!

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- ***Transparency and humility***
  - *Err on the side of transparency*
  - *Proactively list your limitations*
  - *Be respectful to those you critique and especially to your peer reviewers*
  - *Solicit criticism from colleagues*
  - *Write and rewrite, a "willingness to be terrible!"*

What is style?!

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	Good papers	Bad papers
Title	Describes topic but also key findings, themes, and contributions, and/or cases	Describes only the topic or method
	Identifies the geographic location of the research (if relevant)	Does not mention location or case study (if relevant)
Abstract	Clearly states research objectives or questions, methods, findings, limitations, and future directions	Focuses only on one or two aspects of the manuscript
	Is closely copy edited, is not repeated later in the text	Is full of typos, or repeated in the text itself verbatim
Introduction	Is short and sharp, often with an attention getting device at the start	Has a messy introduction that is too long
	Presents the core argument or question within the first few paragraphs	Presents the core argument too late
	Is well linked with the rest of the paper	Is poorly-linked with the rest of the paper
	Is well linked with the conclusion and findings	Ignores the link between the introduction and conclusion
	Previews the structure of the paper to come	Does not give the structure of the argument

What is style?!

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	Good papers	Bad papers
Research Questions, Frameworks, Methods and Designs	Has a clear, answerable, interesting research question or questions	Has an unclear research question or none at all
	If appropriate, engages with a conceptual framework or frameworks	Does not state an appropriate theoretical or conceptual framework
	Is explicit about research design	Does not clarify research design
	Follows or acknowledges codes of practice for its research design	Does not consider codes of practice
	Mentions and pre-empts methodological limitations	Ignores or hides methodological limitations
Results	Actively interprets data	Lets data speak for itself
	Is selective and judicious about data utilized	Presents data not directly linked to the core argument
	Tightly couples data and analysis	Decouples the presentation of data from the analysis

What is style?!

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	Good papers	Bad papers
Discussion/ Conclusion	Aims to make the conclusion the best part of the article	Has a thin conclusion
	Does not start a new argument in the conclusion	Starts a new argument in the conclusion
	Does not present new data in the conclusion	Presents new data in the conclusion
	Uses the conclusion to discuss findings as well as future research directions	Lets the conclusion be a summary and nothing else
	Cautiously discusses limitations and generalizability of findings (or lack thereof)	Ignores limitations and/or inappropriately presents findings as fully universal or generalizable
General structure	Tells a compelling story for the reader	Lets the reader wonder what the results mean
	Has coherent, logical structure with clear headings and subheadings	Has jumbled structure and no headings or subheadings
	Strong paragraph unity	Lacks paragraph unity
	Is well signposted	Forgets signposts

“Good” is good enough?

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- Don’t wait for perfection, submit early (and publishing takes practice)
  - Publish or maybe perish: life is ephemeral and unpredictable
  - Timeliness: some reviews can take years, article production can take years
  - Idea ownership: stake your claim
  - Contribute to scientific debate and meet your social responsibility (Habermas and “enlightenment”)
  - Free feedback: worst case, you get good critical comments for free, best case, you get published
- Force yourself to write even on bad days, it definitely gets easier (and you get better)

Finally, be ethical!

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Unethical behaviour includes:

- **Scientific misconduct**
  - Falsification of results
  - Fabrication of results
- **Publishing misconduct**
  - Plagiarism
    - Different forms / severities
    - The paper must be original to the authors
  - Duplicate/multiple submission
  - Redundant publication
  - Failure to acknowledge prior research and researchers
  - Inappropriate identification of all co-authors
  - Conflict of interest

Authorship matters

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- Generally order of authors is the order of who did the most work, lead author is mostly responsible
- Sometimes work is divided evenly, then authorship can be rotational (if doing multiple pieces) or alphabetical (by first or last name)
- My own take: all those collecting primary data, and/or actually writing part of the text, deserve to be authors
  - Other takes: research assistants and students can never be authors, part of their job, get placed in acknowledgements
  - Still others: works for hire produce data that “belongs” to somebody else, almost like ghost writing
  - Still another: a professor that advises work, even if he or she does not write, counts as an author (I don’t agree)

Authorship matters

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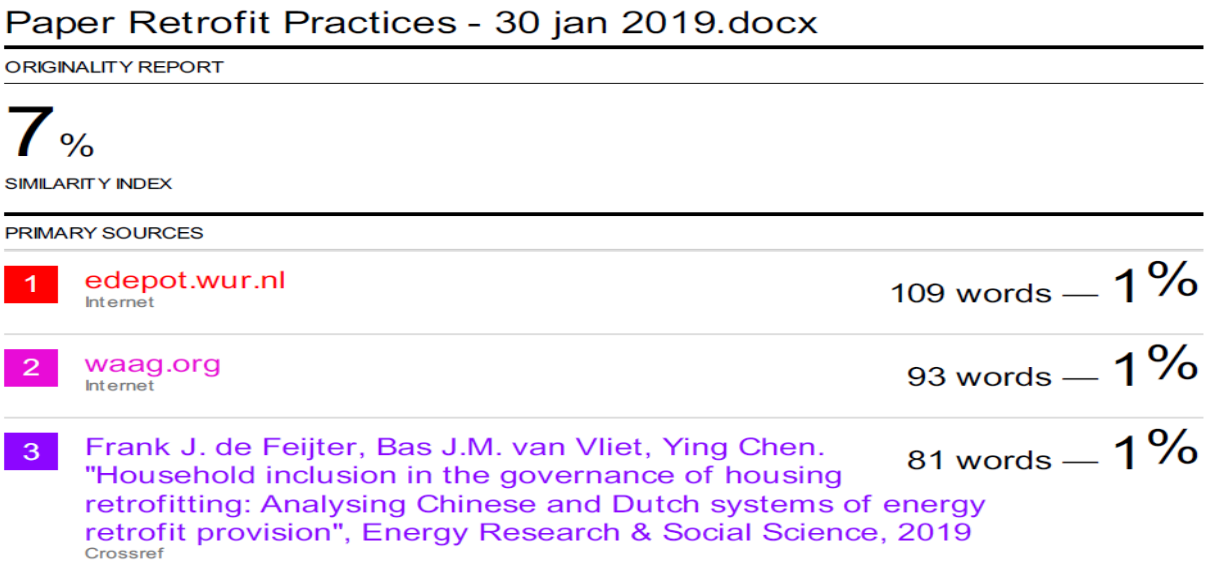
- Agree on authorship before a study starts
- Watch for unintentional plagiarism
  - "Self-plagiarism" (though norms vary, e.g. methods sections and/or use of original data)
  - If possible "iThenticate" or "Turnitin" yourself



Paper Retrofit Practices - 30 jan 2019.docx

ORIGINALITY REPORT

7 %

SIMILARITY INDEX

PRIMARY SOURCES

1	edepot.wur.nl Internet	109 words — 1%
2	waag.org Internet	93 words — 1%
3	Frank J. de Feijter, Bas J.M. van Vliet, Ying Chen. "Household inclusion in the governance of housing retrofitting: Analysing Chinese and Dutch systems of energy retrofit provision", Energy Research & Social Science, 2019 Crossref	81 words — 1%

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Ok, so I have painstakingly followed this advice, and I have a properly designed, novel, rigorous, and well written article I want to publish. Now what?

Choose a non-predatory journal with the right type of peer-review

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Understand different types of peer-review

- "Open access" versus "normal" academic journals
- Page fees and submission fees
- Types of review
  - Peer reviewed double blind *(Energy Research & Social Science)*
  - Peer reviewed single blind (*Energy Policy, Science*)
  - Editorially reviewed (*Electricity Journal, Energy for Sustainable Development)*
  - Law journals (faculty advisor plus 3-4 students)
  - Invitations (*Annual Review of Environment and Resources)*
  - Community review (some physics or natural science journals)
- Consider different angles/types of journals: one paper could fit in a technology and innovation, public policy, energy studies, or area studies journal.

Find a non-predatory, reputable journal with a high impact factor

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- Journals are often ranked by their quality according to different tiers: choose those that matter to your institution and/or indexed on SCOPUS or ISI Web of Science
- Avoid picking predatory journals with hidden review, page or publishing charges, and/or those with “fake” peer-review
- Read aims and scope and a few previous articles or issues to determine not only suitability but reputability
- Usually pick one with an online submission system (email submissions and mailed submissions notoriously slow and/or unreliable)

ABS
ASSOCIATION of BUSINESS SCHOOLS

ACADEMIC JOURNAL GUIDE 2015

Version 1 - 23.01.2015

Autoritetslisten for serier 2015

BFI-nr.	FG-nr.	Faggruppenavn	Kanal	ISSN/ISBN	Titel	Niveau
7659	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	0003-0678	American Quarterly	2
2540	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	0044-8060	American Studies in Scandinavia	2
82971	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	1433-5239	American Studies Journal	2
4878	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	1478-8810	Atlantic Studies	2
4703	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	0067-2378	Austrian History Yearbook	2
12997	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	0261-3050	Bulletin of Latin American Research	2
14142	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	1537-7873	Cultural Analysis	2
7506	1	Områdestudier: Europa, Amerika, Oceanien	Bogserie	0902-7521	Culture & History	2
10708	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	0011-5266	Daedalus	2
10159	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	0013-2586	Eighteenth-Century Studies	2
14731	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	0101-4064	Estudos Ibero-Americanos	2
4993	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	0014-2085	Etudes Francaises	2
9030	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	0966-8136	Europe - Asia Studies	2
4363	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	1350-7486	European Review of History	2
6636	1	Områdestudier: Europa, Amerika, Oceanien	Tidsskrift	0924-0608	European Review of Latin American and Caribbean Studies	2

NUS National University of Singapore

Journal Tierings (University)

TIER 1 - PREMIUM

1.	*	"IET Generation, Transmission & Distribution"
2.	A	Academy of Management Journal
3.		Academy of Management Review
4.		Accounting Review

A	Land Economics: a quarterly journal devoted to the study of economic and social institutions	1402	Applied Economics
A	Oxford Review of Economic Policy	1402	Applied Economics
A	Papers in Regional Science	1402	Applied Economics
A	Public Choice	1402	Applied Economics
A	Real Estate Economics	1402	Applied Economics
A	Regional Science and Urban Economics	1402	Applied Economics
A	Resource and Energy Economics	1402	Applied Economics
A	Review of Industrial Organization	1402	Applied Economics
A	Review of International Economics	1402	Applied Economics
A	Review of International Political Economy	1402	Applied Economics
A	Review of Law and Economics	1402	Applied Economics
A	The Australian Journal of Agricultural and Resource Economics	1402	Applied Economics
A	The Economics of Transition	1402	Applied Economics
A	The Journal of Economic History	1402	Applied Economics
A	The Review of Black Political Economy	1402	Applied Economics
A	The World Economy	1402	Applied Economics
A	World Development	1402	Applied Economics
A*	American Journal of Agricultural Economics	1402	Applied Economics

When in doubt, write to editors

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- If you have questions about the aims and scope of the journal (which you should read), formatting, ethics (milking the data set), authorship, length of review, acceptance rate, impact factor, production schedule, etc., in many cases you can write to the editor or editorial office
    - Most journals have at a minimum an editorial assistant (or team) that handles such requests
    - If they don't, or take a long time to get back to you, that also tells you something
    - Editorial advice can save *everyone* (authors, editors, possible reviewers) a great deal of time
- Follow through with editors after you submit (I do it every 4 months)
    - Example of editor forgetting to send out for review
    - Example of editor forgetting article was submitted
    - Example of editor not realizing reviews were in

What makes an excellent output?

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The idea is that you can design for impact and excellence:

- Interdisciplinary or transdisciplinary
- Mixed methods or triangulation
- Replicability, falsifiability or confirmability
- Comparative cases or generalizability
- Address a practical real-world problem (poverty, species extinction)
- Advance or apply concepts and theories
- All of the above?!

What makes an excellent 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

Energy Research & Social Science 26 (2017) 54–59

Contents lists available at ScienceDirect

Energy Research & Social Science

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

Perspectives

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

Lance Noel

Center for Energy Technologies, Department of Business Development and Technology, Aarhus University, Denmark

ARTICLE INFO

Article history:
Received 24 January 2017
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Keywords:
Renewable energy
Electric vehicles
Renewable integration
Energy modeling

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.

Mimic and imitate those you admire

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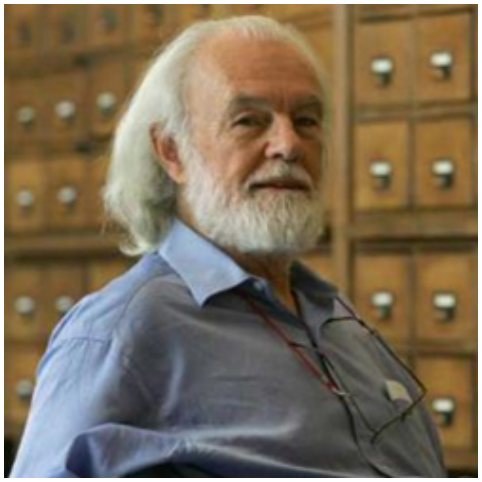
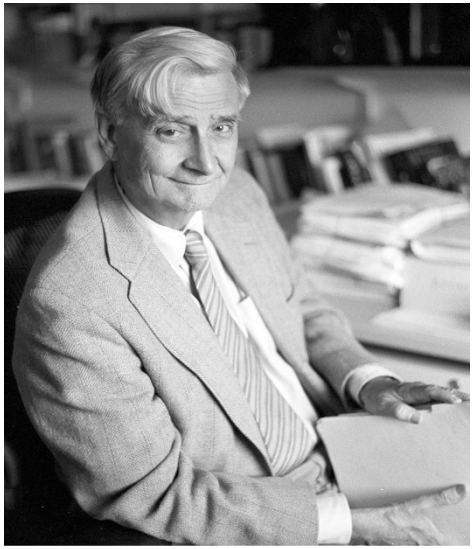
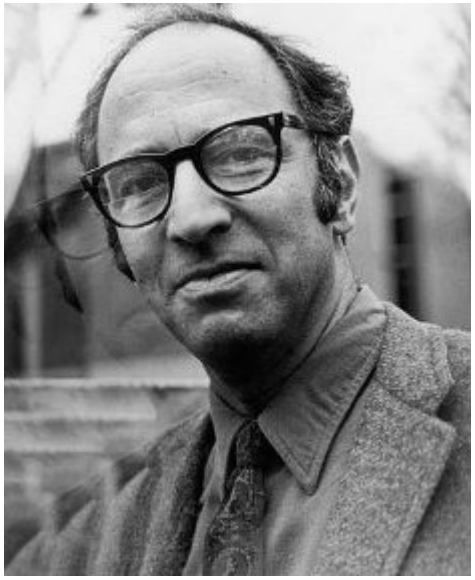


IMITATION
IS THE
SINCEREST
FORM OF
FLATTERY





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

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ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect

Research Policy 36 (2007) 399–417

research policy

www.elsevier.com/locate/respol

Typology of sociotechnical transition pathways

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Received 1 August 2003; received in revised form 1 November 2006; accepted 3 January 2007
Available online 20 February 2007

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

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?

“Impact” can take a variety of forms

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Source: McCubbin, D and BK Sovacool. “Quantifying the Health and Environmental Benefits of Wind Power to Natural Gas,” *Energy Policy* 53 (February, 2013), pp. 429-441.

Tips for self-promotion

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- *It won't happen by itself, sometimes more work than actually writing, submitting, revising, and publishing*
- *Keep on top of the literature and email others your research, perhaps even personalized emails to those you cite or "reference list spamming"*
- *Distribute your material at conferences (my WREC example)*
- *Create e-mail lists of colleagues in particular areas (topical and geographic)*
- *Send to email-lists and networks but don't abuse and always frame*
- *Have a professional and a personal website*

Tips for self-promotion

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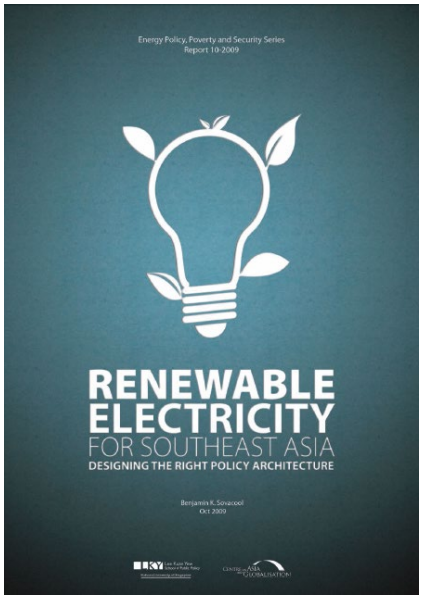
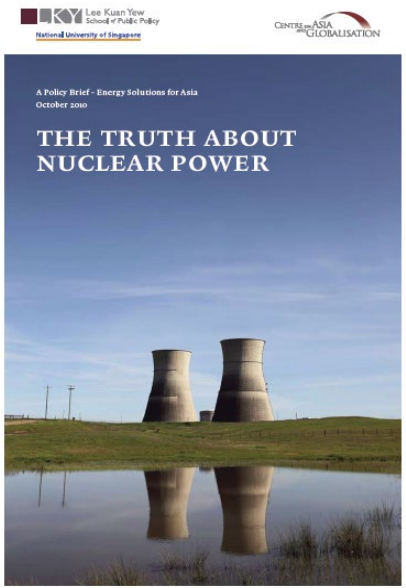
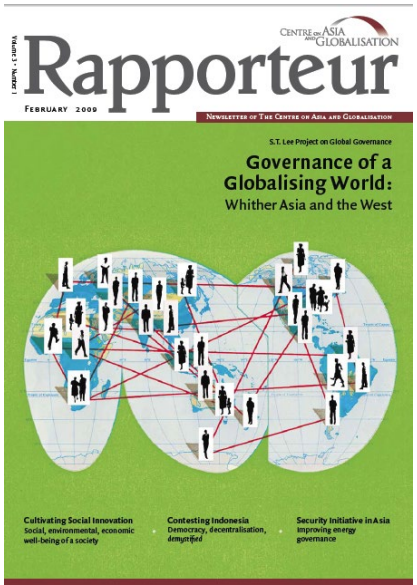
- *Arrange for opinion/editorial newspaper articles (a great strategy, WSJ)*
- *Submit material for our departmental or SEG newsletter*
- *Host press releases and/or media events (e.g., book launch)*
- *Reports and policy briefs, data rewritten for a general audience*







Some actionable, near-term suggestions

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1. *Design some articles for maximum impact from the start*
2. *Also realize the value to fecundity and 2-3 contributions a year, "less" excellent*
3. *Choose good journals, with good reputations and impact factors*
4. *Create a Google Scholar account https://scholar.google.co.uk/*
5. *Create a RG profile https://www.researchgate.net/home*
6. *Create a Mendeley Account https://www.mendeley.com/newsfeed/*

Summary: Some actionable, near-term suggestions

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7. *Join Academia.edu https://www.academia.edu/*
8. *Join ORCID https://orcid.org/*
9. *Join SSRN https://www.ssrn.com/en/*
10. *Join Mailing lists (EASSN, STRN, etc.) and then engage, including promoting your own work www.jiscmail.ac.uk/EASSN*
11. *Create peer review/citation "clubs"*
12. *Generate and use different contact lists*

Summary: Some actionable, near-term suggestions

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13. Post publication, translate into press releases and policy briefs

14. Gently mimic (and cite) those you admire, even write to them or write with them

Conclusion: “Six Battles”

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- Battling the literature to find a contribution to make, a puzzle to address, a question nobody has answered as well as you can
- Battling yourself to be disciplined in writing, in submitting, in revising, in continual self-improvement
- Battling co-authors, supervisors, or colleagues to sharpen the arguments, process feedback, and meet deadlines
- Battling editors to initially respond to your queries, then to pass editorial screens, and then (maybe) to challenge close calls and reviews or to ask for guidance
- Battling peer reviewers, especially that really annoying and negative referee, sometimes over third, fourth, and fifth rounds of revision
- Battling readers and the general public to become interested in the article, to see its findings translated into impact, also handling rebuttals or critical questions (more on that soon)

Concluding thoughts

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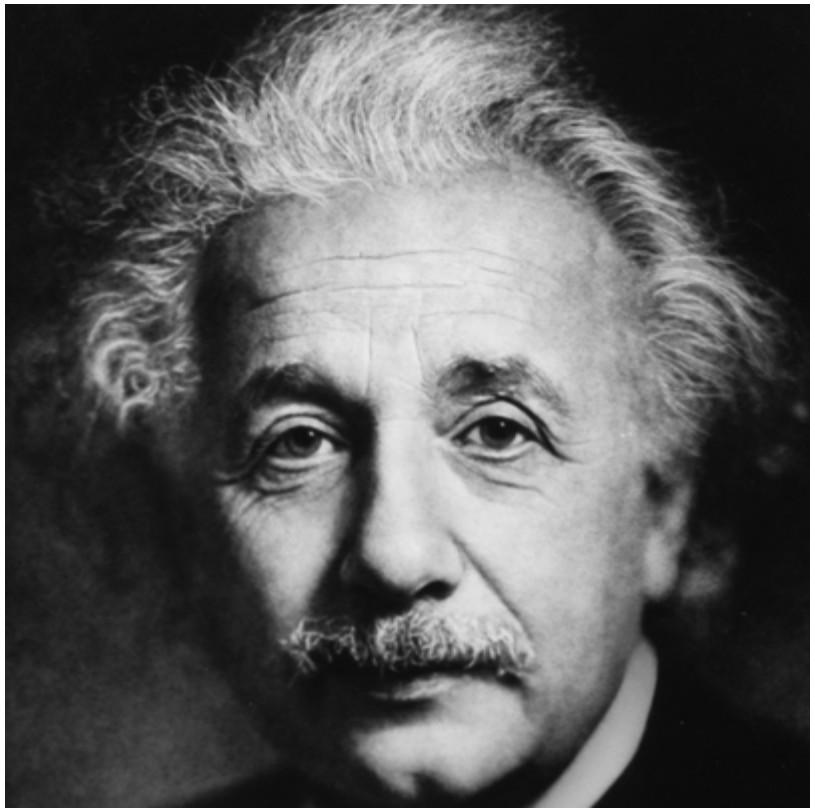
If we knew what we were looking for, it wouldn't be called "re-search."



Contact Information

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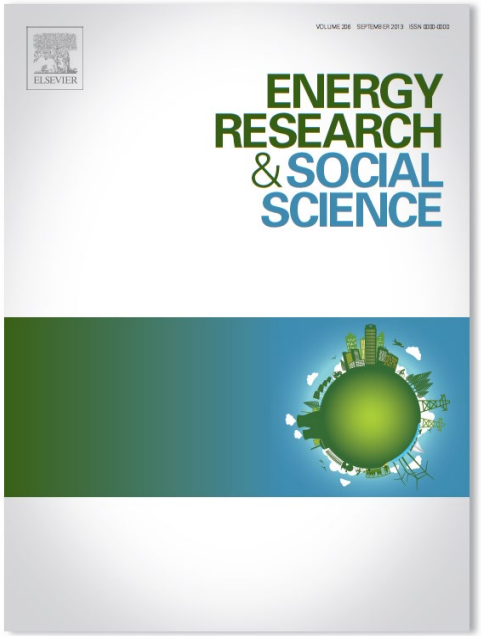

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