

Cumulating Evidence in Environmental Governance, Policy and Planning Research: Towards a Research Reform Agenda

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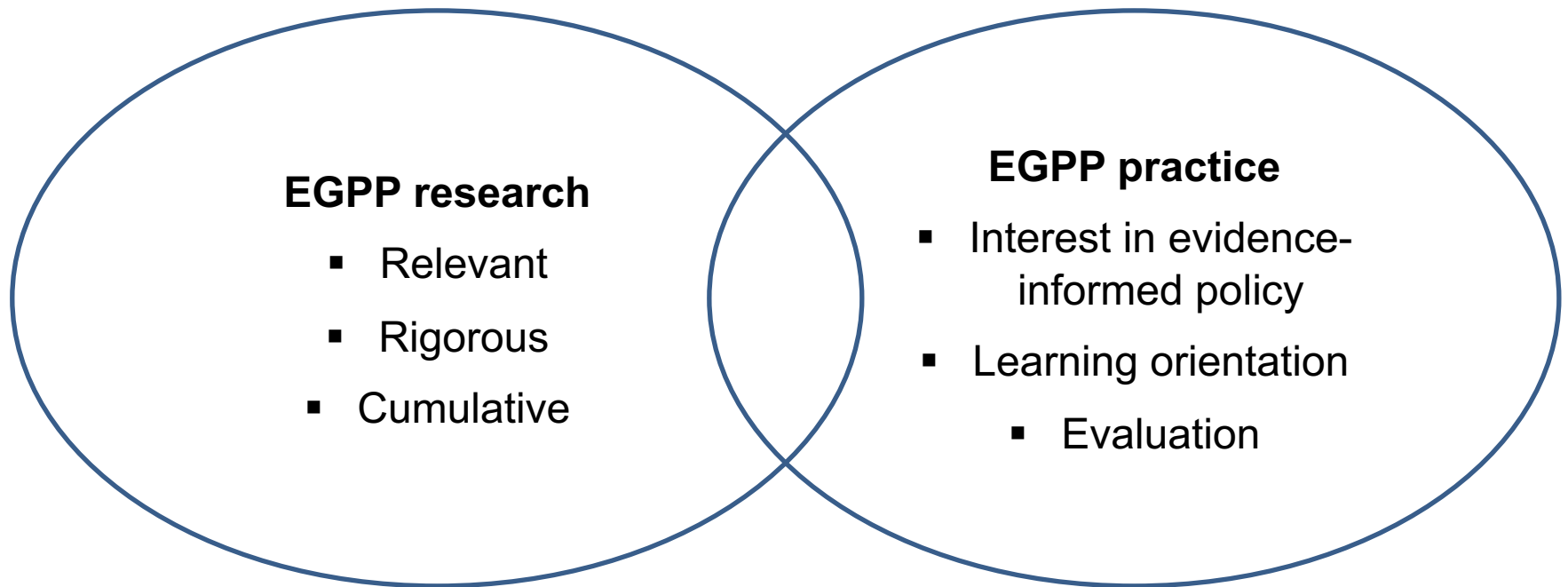


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Why is research in EGPP contributing so little to sustainability transformation?

- Addressing looming problems of environmental sustainability is, if at all, informed by natural science and economics, but hardly by research on environmental governance, policy and planning (EGPP)
 - EGPP research unable to provide robust knowledge on the mechanisms through which policy and planning work towards environmental sustainability
 - We still do not know how and under what conditions governance interventions work towards effectively addressing urgent issues of environmental sustainability.
- At the same time, the body of knowledge is, at least in principle greater than ever and also technically more readily accessible than ever.
- Hower:
 - empirical ‘evidence’ is spread over a myriad of mostly individual case studies; while these are useful and necessary, little effort is made to cumulate knowledge
 - incompatible and unclear concepts, which make knowledge cumulation challenging. Given the heterogeneity, ambiguity and fluidity of concepts, it is hardly possible to define a “state of the art”.

Scope of the paper / agenda

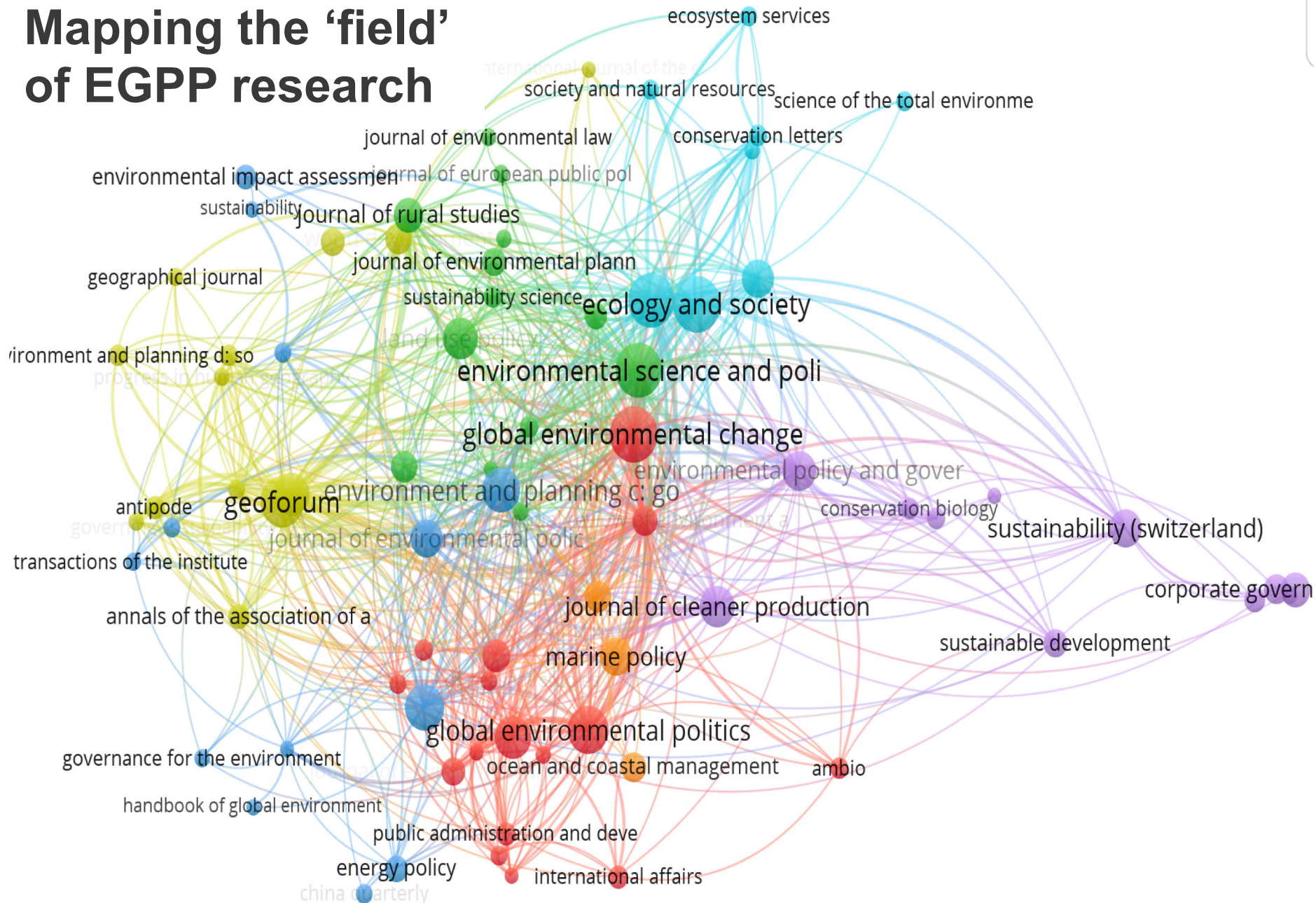


- EGPP as a scientific field of “fragmented adhocracy”
- Develop common concepts, measures and research protocols
- Evidence cumulation through meta-analytical and comparative research
- Mind the context: towards a multi-level framework of governance interventions

EGPP as a scientific field of “fragmented adhocracy”

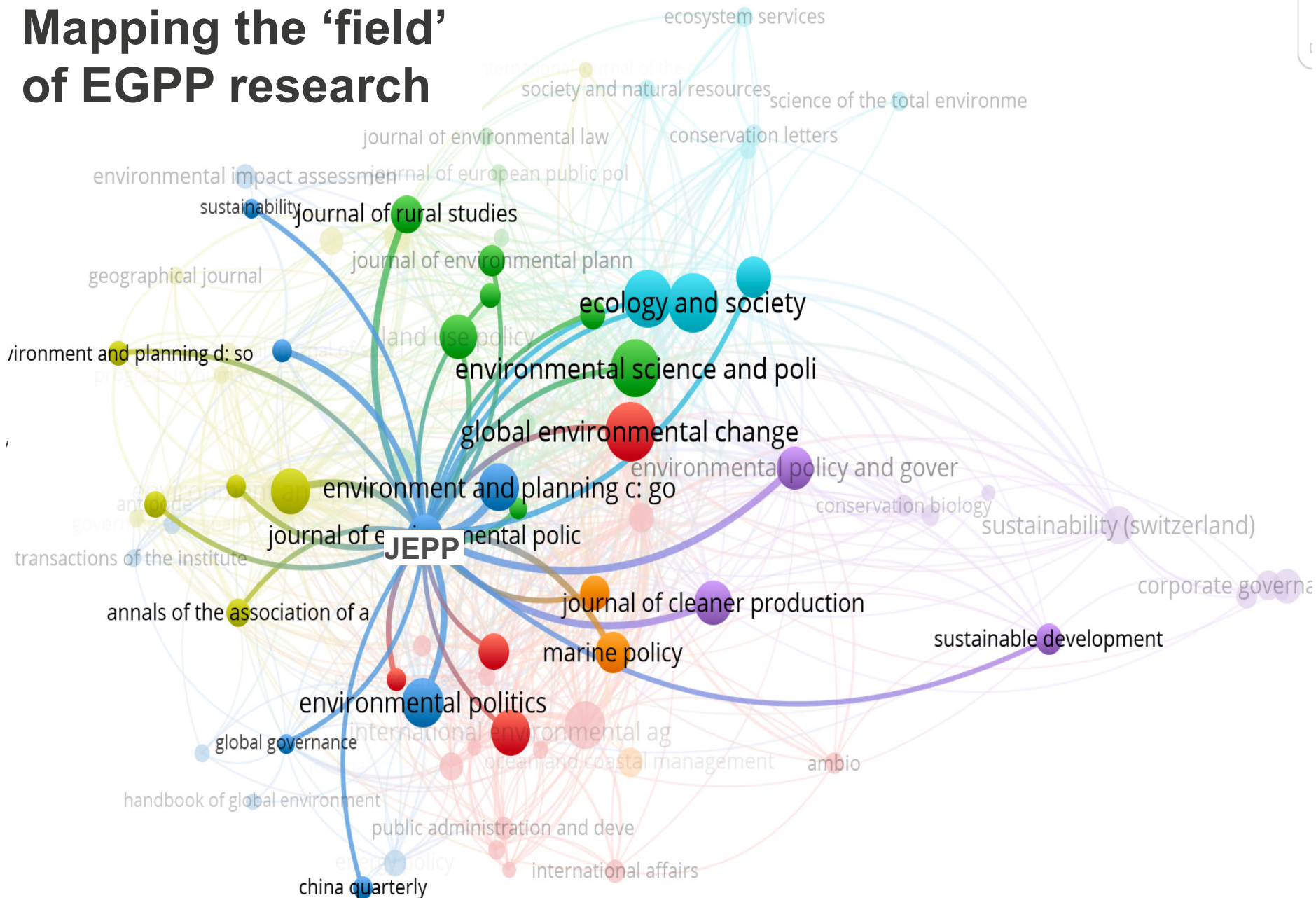
- Scientific fields such as physics, medicine and partly economics share standardized definitions, concepts, methods and scientific practices
- This enables knowledge to be aggregated and transferred into the political realm, potentially informing policies and regulatory agencies.
- The field of EGPP research, in contrast, is highly dispersed. It resembles a “fragmented adhocracy” in the sociology of science (Whitley 2006 [1984]).
- Research is rather idiosyncratic and misses strong coordinating mechanisms across research institutions to systematically link strategies and results.
- As different audiences and decentralized resources are available to the individual researchers, scholarly differences do not have to be resolved, but can be used to show their own originality.
- Goals that scientists contribute to tend to be fluid, broad, and contingent upon external pressures and local requirements.
- **We are trapped in incentive structures that lead us to produce ever more concepts and paradigms instead of providing evidence for what works under which conditions.**

Mapping the 'field' of EGPP research



Citation of articles with (environment* OR sustainab*) AND (planning* OR govern* OR poli*)
in article title, abstract or keywords in Scopus, depicted by journal. VOS Viewer.

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What is cumulation of evidence?

- Evidence is defined by the Oxford English Dictionary as “the available body of facts or information indicating whether a belief or proposition is true or valid “.
- Here in particular, we refer to the best available knowledge on either the state of an EGPP system or – more importantly – on how and under what circumstances EGPP interventions work.
- Best available knowledge means that at a given point in time, this is regarded as such by the EGPP community of scholars.
- Evidence cumulates when findings of one research build on those of older research such that the understanding of EGPP advances.
- Technically, evidence cumulation can occur by either challenging (‘falsifying’) or by ‘confirming’ – hence strengthening the validity of – existing research, or by adding nuances to existing research (e.g. by specifying context factors under which a previously studied EGPP intervention works).
- In a broader sense, knowledge cumulation refers to both cumulation of empirical evidence and of theoretical advances.

Develop common concepts, measures and research protocols

- The current incentive-structures in the field of EGPP rewards the development of novel concepts at the expense of applications of existing concepts.
- Many key concepts are vague, or are used with different meanings, e.g. transdisciplinarity, adaptive management / governance etc.
- Lack of consistent terminology is impeding the challenging of ideas and of empirical findings, and hence the cumulation of knowledge
- We argue that what is needed is an agreed canon of definitions shared within the community – while still being open to useful re-interpretations and novel concepts.
- Shared definitions of key terms could be developed e.g. through wiki platforms and then be adopted as a dictionary entry until the next edition (hardly any serious dictionaries or encyclopedias available to date)
- What are the boundaries of the field (example of 'power')?
- How far can standardization of terms go? Temporal and geographical / cultural limits?

Evidence cumulation through meta-analytical and comparative research

- In order to obtain strong evidence for science and policy, a first step is to synthesize already existent evidence which is dispersed across many case studies
 - The 'case survey method' allows to compensate for a lack of consistent terminology by developing a coding scheme through which published individual case studies with varying terminology are processed and systematically compared
- Comparative research allows to apply coherent analytical schemes to larger sets of cases
- Common databases of cases (e.g. Participedia.net) could foster both comparative research and meta studies



Mind the context: towards a multi-level framework of governance interventions

- Finding out “what works” in EGPP depends on the respective context
- Definition of ‘context’ closely linked to definition of ‘case’
- Three realms of leverage points for EGPP interventions
 - The overall institutional system (country, European Union, or international regime) → case / context
 - Major policy change (including policy mixes), typically on a national level (but also on supra- or subnational level) → case / context
 - Local EGPP processes, including implementation of higher-level policies. They determine how decisions are made, often implementing major policy decisions. → case
- How to take the ‘socio-ecological’ context (e.g. Ostrom framework) into account in meta studies, e.g. a case survey of local/regional EGPP processes?
 - Derive contextual information from published case studies themselves
 - Academic publications on the national (...) context → ‘multi-level case survey’
 - Available data bases on (country) characteristics

Concluding thoughts

- What really is the 'field'?
- What is a 'fact' or what is 'evidence' may of course be contested. But we should not up front give up on the possibility of finding relevant evidence for what works under which conditions.
- No need for EGPP to share a 'paradigm' in the Kuhnian sense
- EGPP should not become like economics!
- Our reform agenda targets:
 - Us as researchers to strive for conceptual clarity and to work on empirical and conceptual knowledge cumulation
 - The academic community to form (stronger) institutions that facilitate the creation of common terms, research protocols and databases
 - Funding agencies, universities and journals to encourage and reward knowledge cumulation rather than the creation of 'novel' concepts
- In the end, we need to strike a balance between interdisciplinary openness and professionalization of the field