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Interdisciplinary Futures: Beyond Claims, Conjectures & Contradictions

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Outline

Introduction

- Re-reading *Open the Social Sciences*
- An abbreviated history of collaboration between disciplines
- The missing links

Background & Context of *Open the Social Sciences*

- Contributions of academic and non-academic institutions
- Inclusive or Insular social sciences

Common Misconceptions

- Recent contributions: claims, conjectures & contradictions
- 3 persistent misconceptions

Outlook & Prospects

- 3 main issues proposed in *Open the Social Sciences*
- Interdisciplinary Futures: Other Issues

Synthesis & Conclusion

Introduction

Re-reading *Open the Social Sciences*

- How are disciplines related to each other and society ?
Crossing boundaries, or removing boundaries ?

- Organization of disciplines in universities & research institutes:
Administrative & physical structures.

Epistemological structures : specialization, cementation and subdivision vs. «the filiation of ideas» (Piaget, 1970).

Fragmentation of the social sciences: Foundation of new disciplines or collaboration between exiting disciplines.

- Weak contribution of social sciences to global change research.

(Source: R. Lawrence, *Interdisciplinary Futures: Beyond Claims, Conjectures and Contradictions*.
(draft conference paper).

Introduction

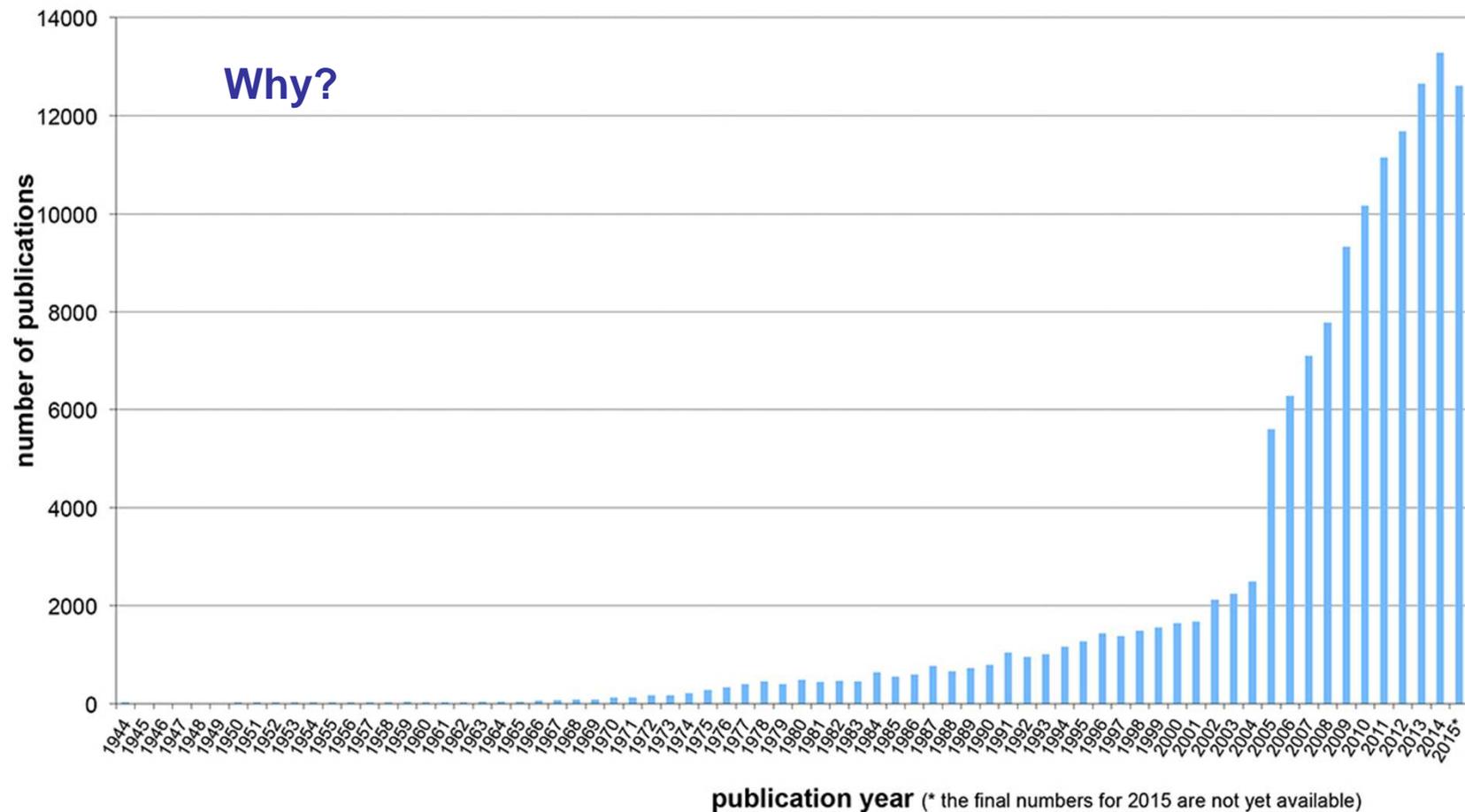
Re-reading *Open the Social Sciences*

An short history of collaboration between disciplines : 2 periods

- The missing links:
 - Fundamental role of the Social Sciences in disciplinary collaboration in the 20th century
 - Institutional concern (SSRCouncil, 1920s)
 - Private funders concern (Rockefeller Foundation, 1930s)
 - Implementation in Universities (Chicago, Sociology, 1920s)
 - Individual and private initiatives.
- Ambiguity of the prefix *inter-*
Missing definitions of multi- and inter- disciplinarity:
transdisciplinarity & other types of knowledge production since 1980s.

(Source: R. Lawrence, Interdisciplinary Futures: Beyond Claims, Conjectures and Contradictions, (draft conference paper).

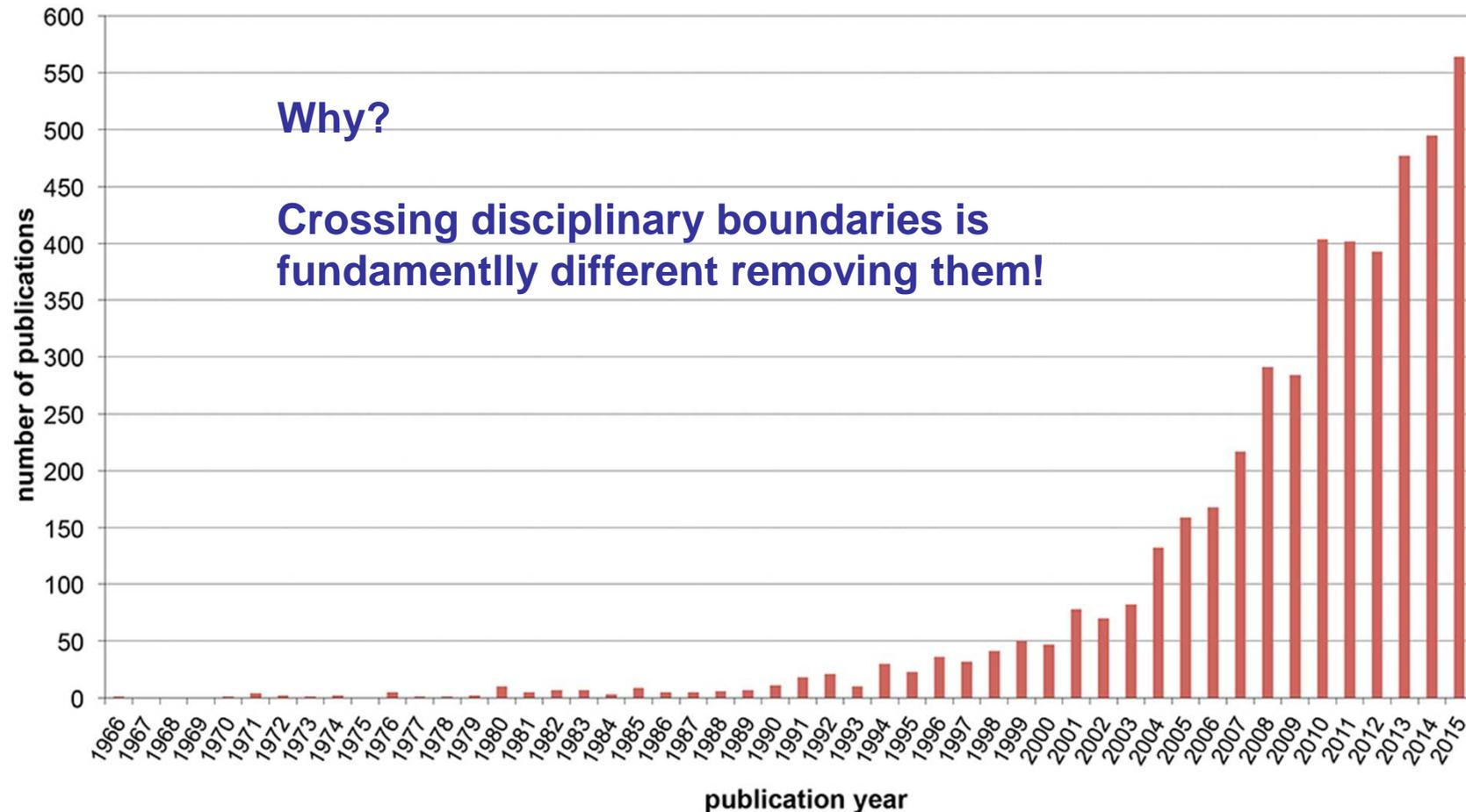
Publications on Interdisciplinarity



Source: td-net

Number of publications per year that include "**interdisciplinary**" or "**interdisciplinarity**" in the topic. (search performed through Web of Science, 14th April 2016).

Publications on Transdisciplinarity



Source: td-net

Number of publications per year that include "**interdisciplinary**" or "**interdisciplinarity**" in the topic. (search performed through Web of Science, April 14 2016).

Background & Context

Re-reading *Open the Social Sciences*

Fundamental contributions of non-academic institutions in the 1960s, 1970s

- Contribution of UNESCO (1965-1970):

Main trends of research in the human and social sciences

Chapter 7

Jean Piaget, *General problems of interdisciplinary research and common mechanisms.*

Chapter 8

Raymond Boudon, *Mathematical models and methods.*

(Source: UNESCO. (1970). *Main trends of research in the social and human sciences*. Paris, Mouton/UNESCO).

Background & Context

Re-reading *Open the Social Sciences*

Fundamental contributions of non-academic institutions in the 1960s, 1970s

- Contribution of OECD (1970-1972):
Interdisciplinarity: *Problems of teaching and research in universities*

Dealing with real-world problems

Distinction between multi-, inter-, and trans- disciplinarity

Different modes of collaboration between disciplines (Piaget)

NB: University consortiums are late-comers to the movement

(Source: Apostel et al., (1972). Interdisciplinarity: problems of teaching and research in universities. Paris, OECD).

Common Misconceptions

1. Disciplinary capabilities vs. Interdisciplinary inquiry

Claim 1: Substitution of Disciplinary competences by Interdisciplinary contributions.

Claim 2: Disciplinary skills are specialized & mutually exclusive

Contradiction:

Mutual interaction using disciplinary skills in interdisciplinary projects

Examples: Convergence. Team science. Mode 2 knowledge production.

Contribution of mathematics to social sciences.

References: Calhoun & Rhoten 2010; US National Research Council 2014.

Common Misconceptions

2. Interdisciplinarity: 'Jack of all trades and master of none' !

Claim 1: Disciplines ignore complexity

Claim 2: Generalization replaces specialization in interdisciplinarity

Contradiction: Collaboration between disciplines is based on discipline-based capabilities and skills plus inter-personal dialogue and creative thinking.

References: Frickel et al.,2016; Repko 2008; Repko & Szostak 2017.

Common Misconceptions

3. Prerequisite of integration in interdisciplinary research

Claim 1: Integration is a prerequisite & outcome of interdisciplinarity

Claim 2: Mega-disciplines can deal with complexity
(e.g. Planetary Health Alliance)

Contradiction:

Piaget (1970) showed that integration is only one of several modes of collaboration between disciplines : 3 kinds of collaboration

Uses of Nomad concepts (e.g. resilience).

References: Bammer 2005; Piaget 1970; Roco et al., 2013; Wilson 1998.

Conceptual Clarification

1. Beyond dichotomies to symbiosis

Cartesian thinking in the Social Sciences –

disciplinary vs. Interdisciplinary: basic vs. applied science

A ‘poor relative’ of the natural sciences and the humanities

Unique contribution: Human agency and the ecologic crisis.

2. Accepting differences, diversity and pluralism

Requesting the average, the norm and lawful relations

Understanding differences & diversity

Multi-directional, variable and dynamic relations between disciplines

3. Conceptual clarification, shared understanding & creative thinking

Ethnographies of achievements between disciplines.

(Source: R. Lawrence, Interdisciplinary Futures: Beyond Claims, Conjectures and Contradictions, (draft conference paper).

Outlook & Prospects

Contributions of the Social Sciences to real-world challenges
(e.g. the ecologic crisis)

Q1: Have the social sciences been excluded ?

Q2: Have the social sciences abdicated their role & responsibility ?

Q3: Who decides which disciplines are invited to participate?

Innovative movements: The environmental humanities since 1990s.
Andrew Mellon Humanities for the Environment, Observatory of the
New Human Condition.

(Source: R. Lawrence, Interdisciplinary Futures: Beyond Claims, Conjectures and Contradictions,
(draft conference paper).

Outlook & Prospects

Wanted:

- steady increase in inter- & trans- disciplinary research
- many calls for interdisciplinary research by funding agencies
- but
- interdisciplinary research is poorly rewarded by funders &
- contributions are not valued for career advancement.

Lack of Enablers & Incentives:

- lack of explicit definitions in calls for interdisciplinary research
- lack of additional funding of time for collaborative research
- evaluation often done by disciplinary-based reviewers
- contributions cannot guarantee societal impact

(e.g. weak institutional or political support)

but

- many peer reviewed journals now call for ID papers.

Synthesis & Conclusion

Rethinking the Contribution of the Social Sciences

- An incomplete review in *Open the Social Sciences*
- Achievements & Missed opportunities.

Drivers of More Collaboration between Disciplines

- Personal initiatives and funding agencies
- University consortiums (e.g. LERU) are late-comers &
- Internal drivers for more collaboration remain rare
- Reforms of universities are necessary but not sufficient
- Influence of the Open Science Movement.

Debate focused on Knowledge of Real-World Issues

- Strengths & limitations of disciplinary knowledge
- Pertinence of disciplinary collaboration & interdisciplinarity

Interdisciplinarity: What are we talking about?

- Urgent need for conceptual clarification & epistemological advances.

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