

INVESTIGATING INTERDISCIPLINARY RESEARCH DISCOURSE

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Paul Thompson and Dominik Vajn

with Susan Hunston, Akira Murakami



MAIN AIM

- to achieve a fuller understanding of the distinctive features of discourse practices in interdisciplinary research and of how they differ from discourse practices in conventional disciplines

Global Environmental Change – a successful interdisciplinary journal published by Elsevier

BROAD QUESTIONS

- To what extent does the field of 'global environmental change' operate as a unified whole?
- Do authors in the field broaden their messages to a multidisciplinary audience, or do they write in the same way that they would if they were writing for a monodisciplinary audience?



DATA

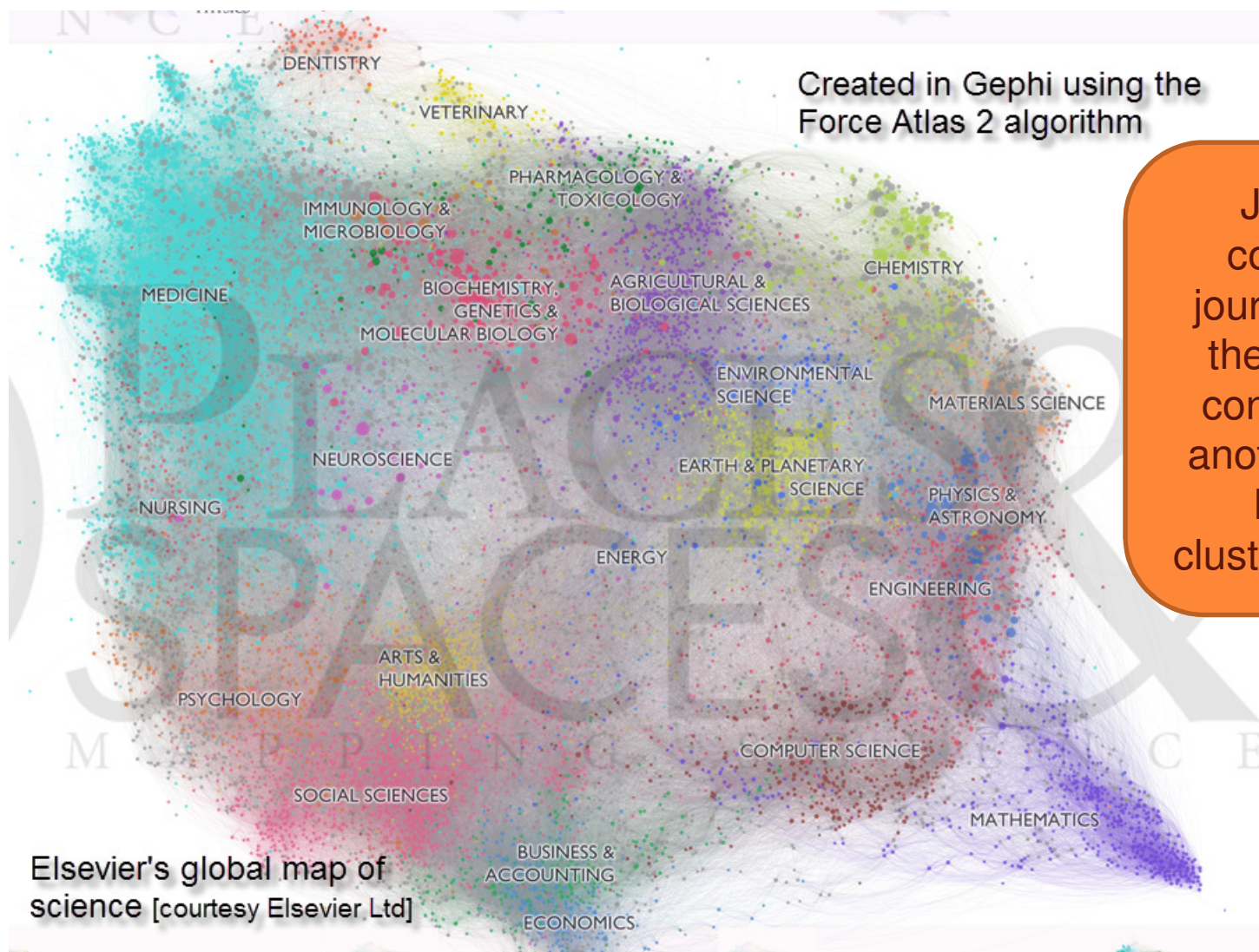
- * Full holdings of a successful IDR journal, *Global Environmental Change*, 1990-2010
 - 676 articles
- * Samples from 5 IDR journals and 5 specialist journals, 2001-2010
- Surveys, interviews with editors, board members, authors



SELECTION PROCEDURE

- Scopus (abstract and citation database of peer-reviewed literature)
- GEC is associated with:
 - Ecology;
 - Global and Planetary Change;
 - Management, Monitoring, Policy and Law;
 - Geography, Planning and Development
- Observation:
 - many articles in GEC deal with social policy and with international relations;
 - only about 20 percent of the articles have mathematical equations and other symbolic formulae in them





Journals with connections to journals which are themselves well-connected to one another are said to have a high clustering coefficient

Look for monodisciplinary journals with a **high** clustering coefficient, and multidisciplinary journals with a **low** clustering coefficient.

subject area		Full Title	Code
environmental sciences	multi	Global Environmental Change	GEC
environmental sciences		Environmental Pollution	EP
environmental sciences		Agriculture, Ecosystems & Environment	AEE
social sciences		Journal of Rural Studies	JRS
social sciences		Computers, Environment and Urban Systems	CEUS
life sciences		BioSystems	B
environmental sciences		mono	Plant Science
environmental sciences	Advances in Water Resources		AWR
economics	Resource and Energy Economics		REE
social sciences	The Journal of Strategic Information Systems		JSIS
social sciences	Transportation Research: Transport and Environment		TRTE

GEC: all articles 1990-2010
Others: all articles 2001-2010

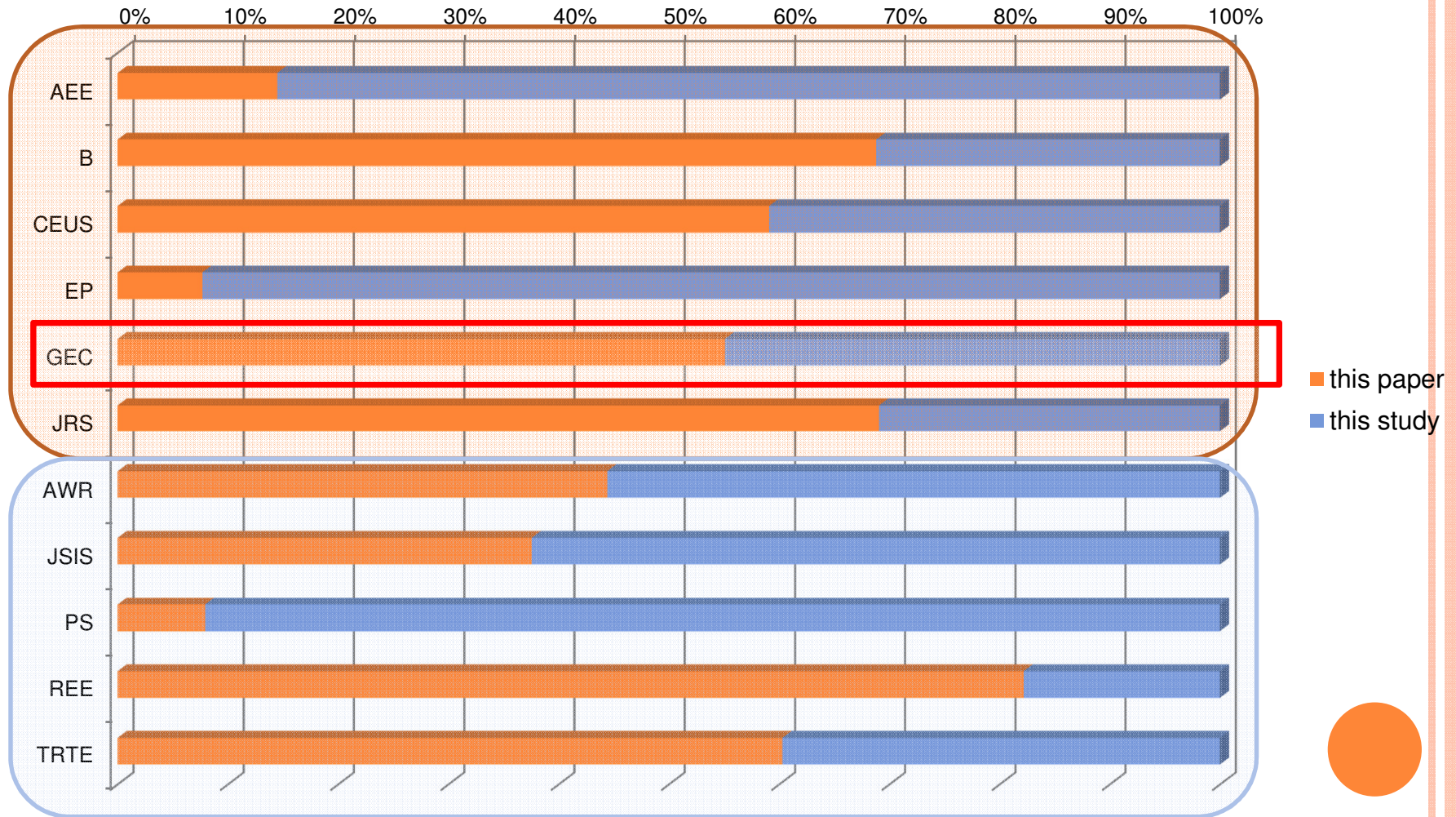
Sketch
Engine

explore
argue
discuss
outline

In this paper – a key trigram for GEC

find
confirm
reveal
indicate

THIS PAPER VS THIS STUDY



Code glosses (Vande Kopple 1985): rephrasing, explaining, elaborating, and exemplifying

<u>doc.</u>	<u>journal</u>	<u>Freq</u>	<u>Rel [%]</u>
P N	JRS	6152	246.7
P N	JSIS	2915	230.3
P N	CEUS	5800	210.9
P N	GEC	10110	198.5
P N	AWR	10972	126.5
P N	REE	1764	106.9
P N	AEE	13251	98.5
P N	B	7189	92.3
P N	TRTE	2363	87.6
P N	EP	21075	78.4
P N	PS	6567	42.6

code glosses in all journals:

"which""means""viz""this""means""that""means"
 "that""is""to""say""e.g\."
 "for""example""for""instance""such""as""eg";



Multidisciplinary journals

<u>doc.journal</u>	<u>Freq</u>	<u>Rel [%]</u>
P N JRS	6152	246.7
P N JSIS	2915	230.3
P N CEUS	5800	210.9
P N GEC	10110	198.5
P N AWR	10972	126.5
P N REE	1764	106.9
P N AEE	13251	98.5
P N B	7189	92.3
P N TRTE	2363	87.6
P N EP	21075	78.4
P N PS	6567	42.6

7K

6K

5K

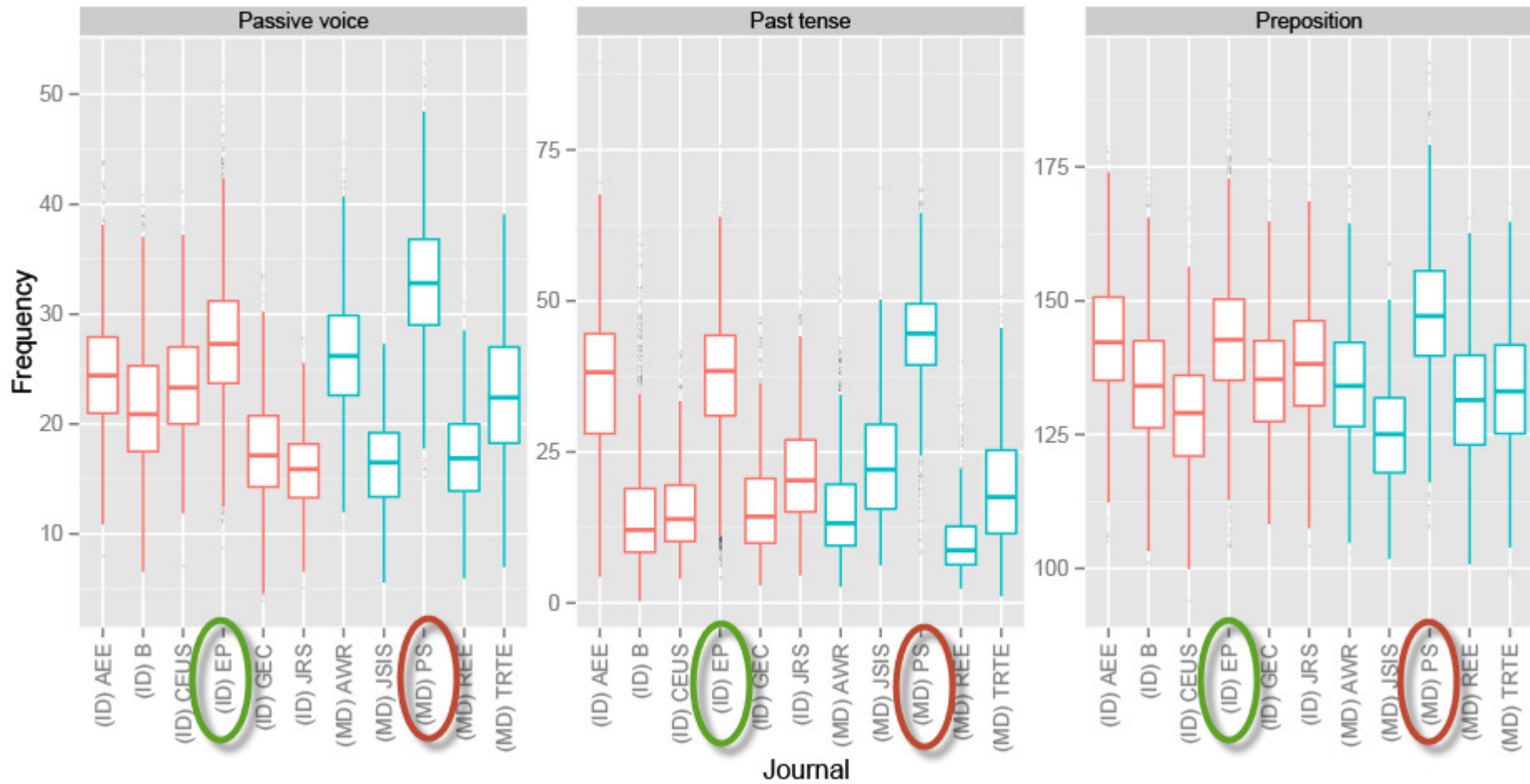
4K

code glosses in all journals:

"which""means"|"viz"|"this""means"|"that""means"
"that""is""to""say"|"e.g\."
"for""example"|"for""instance"|"such""as"|"eg";



Similarity of linguistic profile between EP and PS:
one multidisciplinary, the other monodisciplinary



<u>P</u> <u>N</u>	<u>doc.year</u>	<u>Freq</u>	<u>Rel [%]</u>
P N	1990/1991	272	75.7
P N	1992	276	65.9
P N	1993	315	100.2
P N	1994	173	57.8
P N	1995	299	60.5
P N	1996	229	72.9
P N	1997	334	111.6
P N	1998	234	74.4
P N	1999	380	84.6
P N	2000	346	96.3
P N	2001	334	89.3
P N	2002	356	95.1
P N	2003	325	86.9
P N	2004	403	70.9
P N	2005	685	127.1
P N	2006	574	100.9
P N	2007	847	134.7
P N	2008	1245	113.9
P N	2009	986	124.3
P N	2010	1490	127.6

code glosses in GEC:

"which""means"|"viz"|"this""means"|"that""means"|"

"that""is""to""say"|"e.g\."|

"for""example"|"for""instance"|"such""as"|"eg";



GLOBAL ENVIRONMENTAL CHANGE (GEC)

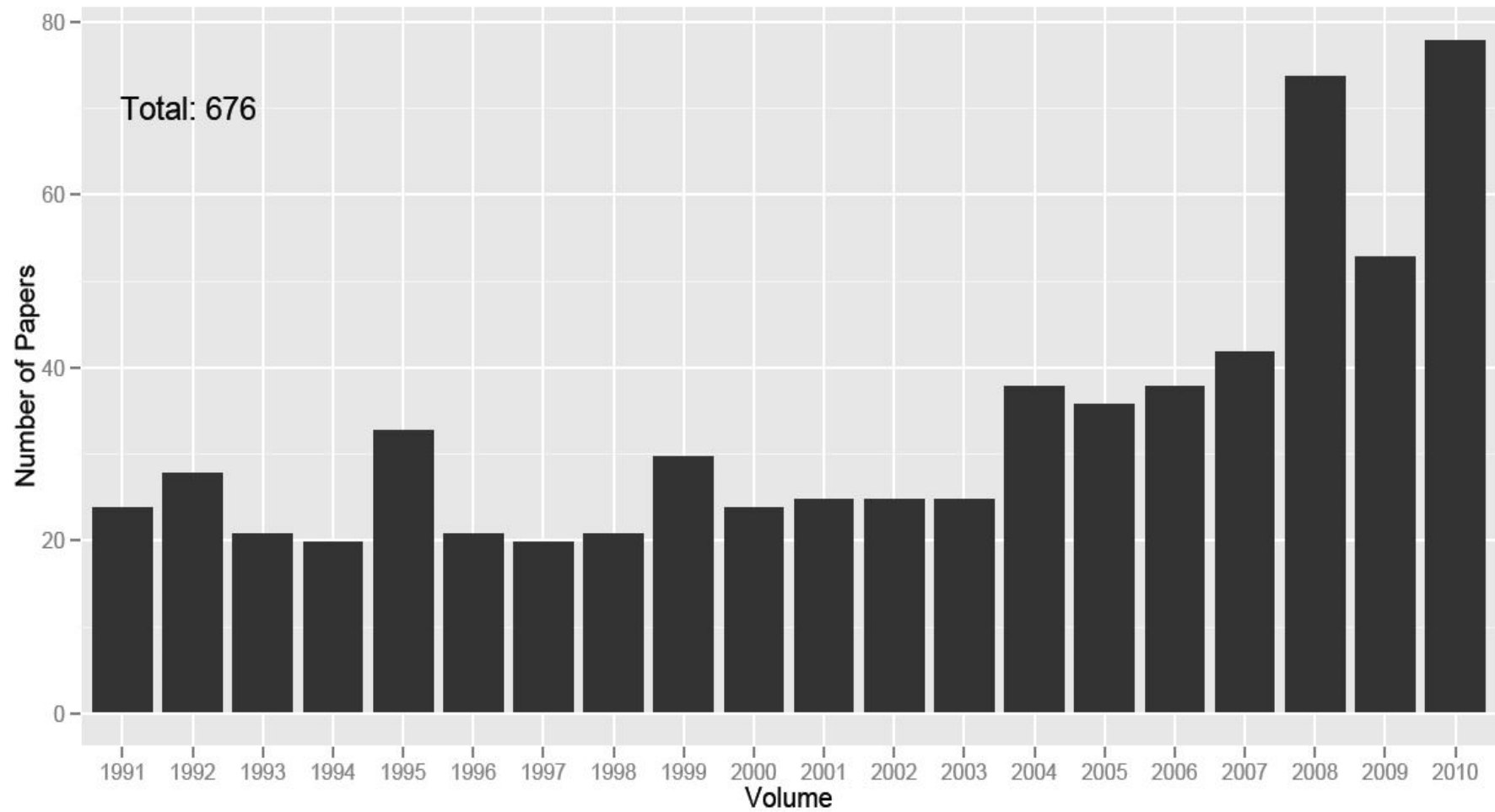


ABOUT THE JOURNAL

- Total number of papers: 676
- Range: 1990/1 - 2010
- All original research articles (Scopus)



GLOBAL ENVIRONMENTAL CHANGE

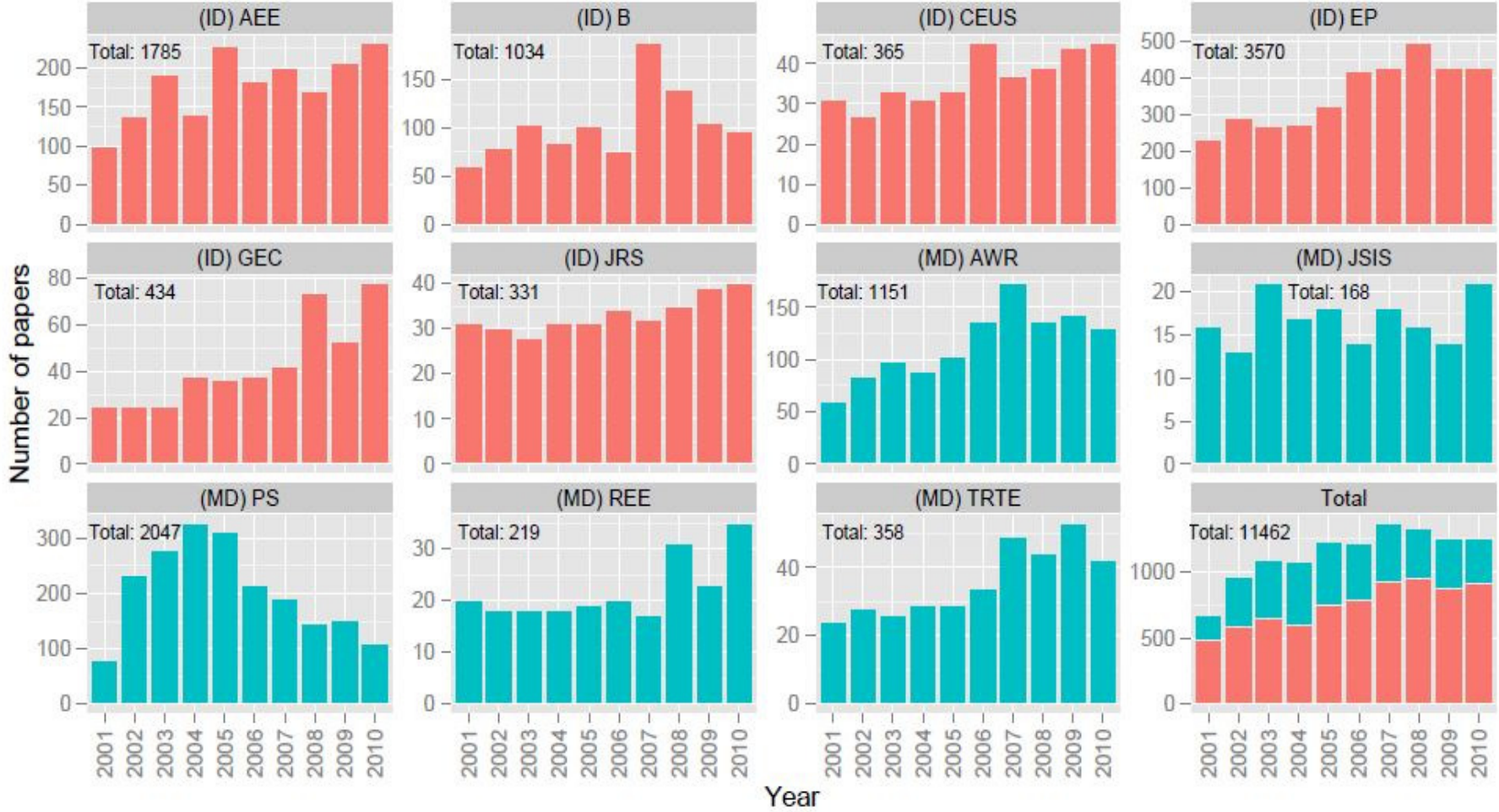


HOWEVER...

- 107 papers were non-research articles (mainly viewpoint articles)
- 569 papers used in labelling
- only 434 used in multi-dimensional analysis, as papers needed to be >2000 words



PROJECT CORPUS



INTERDISCIPLINARITY



INTERDISCIPLINARITY



INTERDISCIPLINARITY



INTERDISCIPLINARITY IN GEC

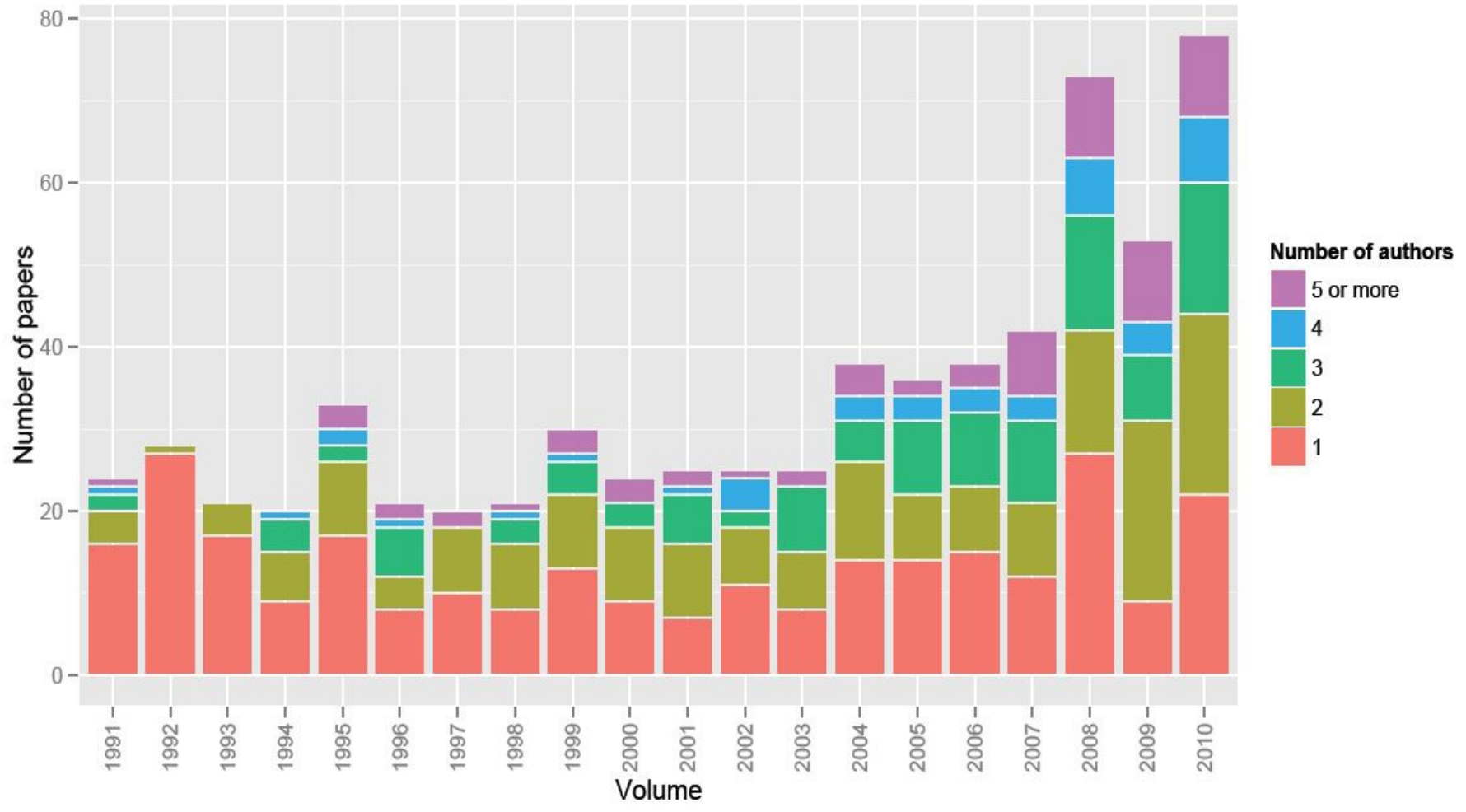


NUMBER OF AUTHORS

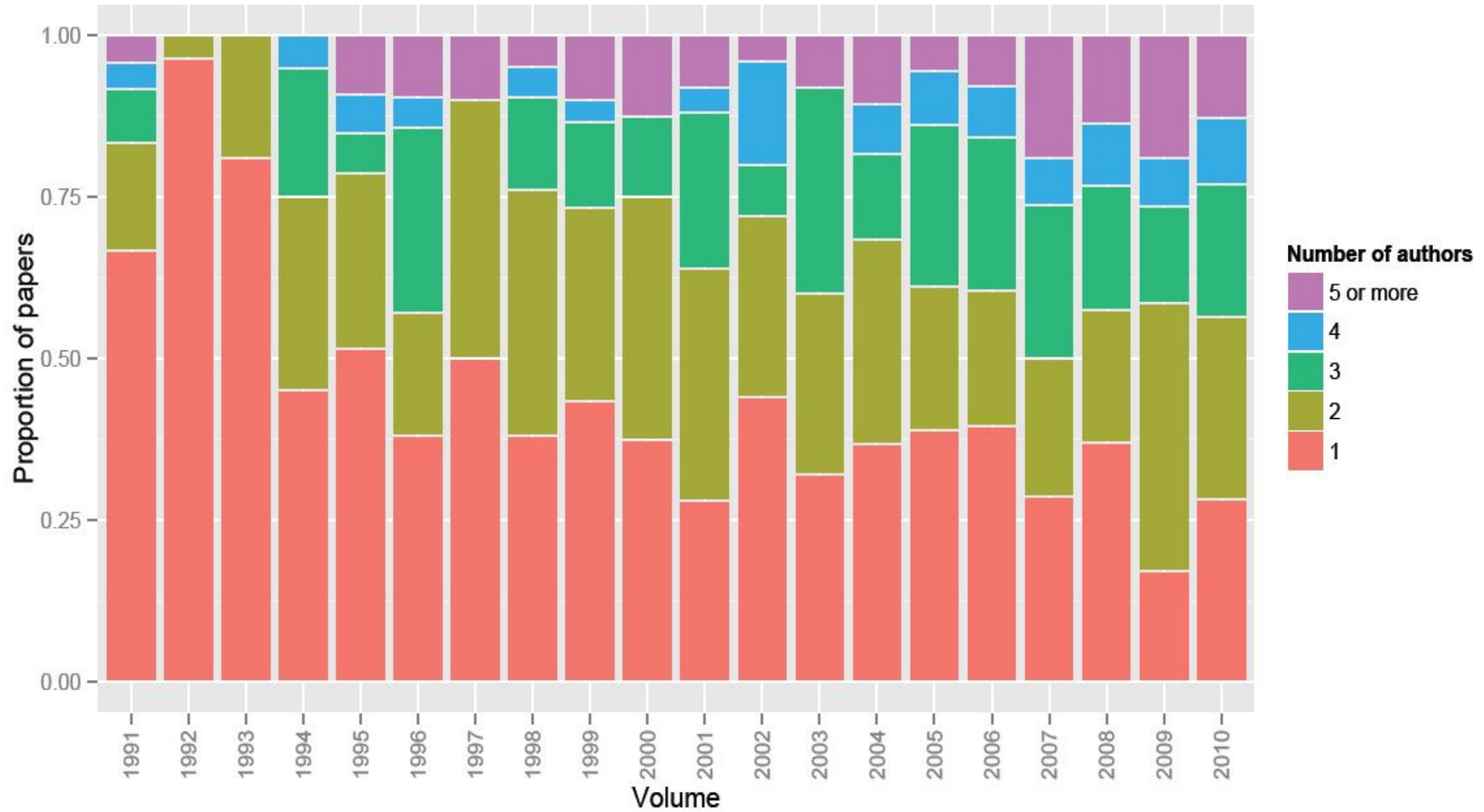
- Collaboration between disciplines implies that papers should generally be **multi-authored**
- Multinational, collaborative, cooperative, intergovernmental – all imply multiple parties



NUMBER OF AUTHORS



PROPORTION OF AUTHORS



NUMBER OF AUTHORS

- Single authorship is predominant in early years
- Increase in multiple authors is a general trend in all disciplines (Elsevier)



PAPER LABELLING

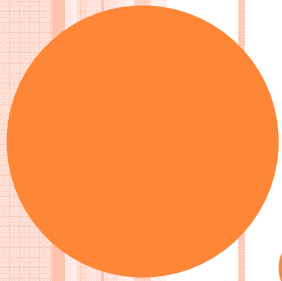


LABELLING

- Initial categories:
 - Issues
 - Policy discussion
 - Quantitative empirical study and modelling
 - Qualitative study
 - Research agenda
 - Research framework
 - Other



55% AGREEMENT

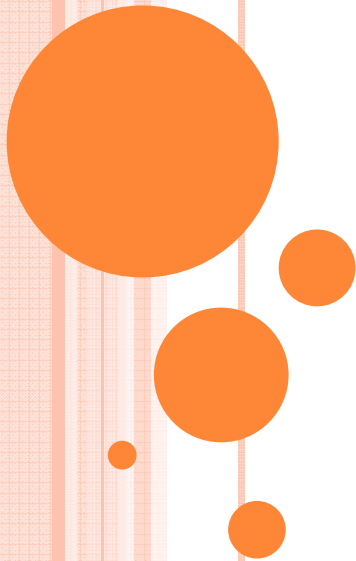


SECOND CATEGORISATION

- 4 categories:
 - Empirical
 - Research agenda and frameworks
 - Policy discussion
 - Other



66%-85% AGREEMENT

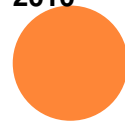
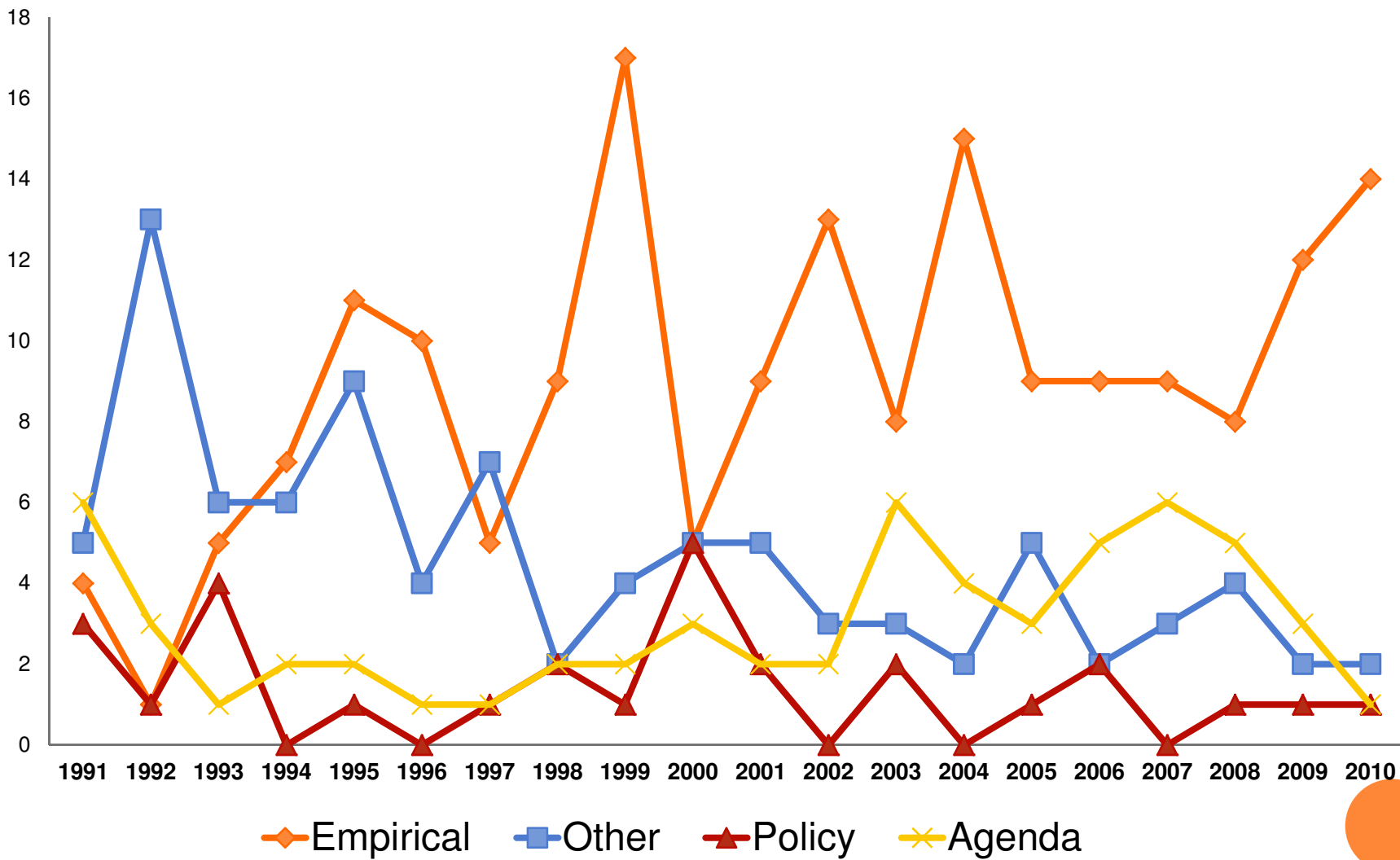


LABELLING

- Analysed 400 papers
- 169 to go
- Covering the whole 20 year period



PAPER TYPES PER YEAR



LABELLING

- Early years agenda setting
- Defining the journal's purpose and goals
- Kyoto protocol – increase in policy papers
- The notion of vulnerability – discussed in 2003 and redefined in 2007

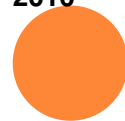
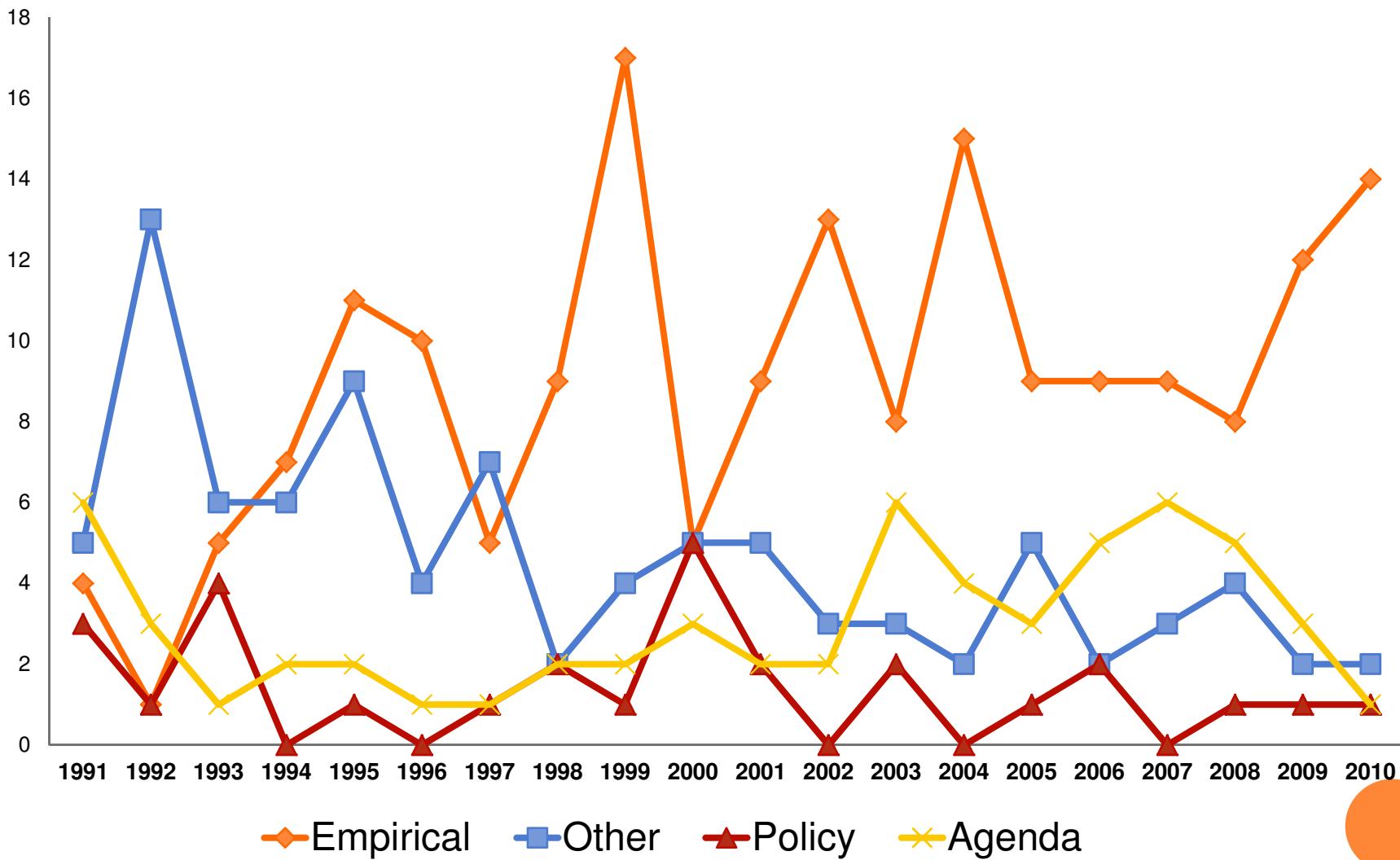


LABELLING

- The increase in agenda and policy papers is marked by a decrease in empirical papers
- However, setting out the agenda is followed by an increase in empirical papers



PAPER TYPES PER YEAR



CONCLUSION

- not labels to categorise all the types of academic papers
- rather a useful framework for our analysis
- based on the types of papers included in the GEC



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