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Patterns of Publishing in Political Science Journals – An Overview of our Profession Using Bibliographic Data and a Co-Authorship Network

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Abstract: We construct a co-authorship network of the global political science community. Two scientists are connected, if they have co-authored a paper. We draw on over 67,000 papers published 1990–2013 in one of today's 96 core journals. The network comprises over 40,000 authors located worldwide. We find that the community forms a single, interconnected component plus a large number of unconnected authors. While some are highly productive in terms of publications, the majority published just a single paper, suggesting a large amount of turnover in the community. Using information on the papers (e.g. title, journal, abstract), we trace out how different sub-communities organize and interconnect, how journals reach into the community and how individual scientists cooperate. We also investigate how the network has evolved during the last two decades. Our analysis is supplemented with a bibliographic analysis that traces out major changes in publication patterns.

Introduction

We analyze publication patterns in 96 leading political science journals between 1990 and 2013 and extract a co-author network capturing the social structure of the international political science community. Apart from outlining how the way political scientists publish has changed during nearly a quarter of a century, this is the first time someone maps out how the individuals that make up our profession actually collaborate to achieve scientific progress. Of course, two notes of modesty must be given right away: One is that monographs and chapters in edited volumes serve as important outlets for research as well, yet we have chosen to devote our attention to journals, first, because they are regularly regarded as the discipline's "gold standard" and, second (and much more mundane), because comprehensive information on chapters (a bit less so on monographs) is still unavailable in digital form. Another limitation is that, since focusing on leading journals means focusing on English speaking journals, the role of scientists predominantly publishing in other languages or of specific national communities is certainly undervalued in our work. Yet, the fact remains that the higher impact of English publications implies that our picture will most likely still capture the core of our discipline.

Several bibliometric analyses have looked at publication patterns in political science (Brush 1996; Keeler 2005) or in subgroups such as female researchers (Williams et al. 2015), national communities (Plümper and Radaelli 2004), or university departments (Forrester 1996). Other studies have found collaboration on the increase, particularly in quantitative work and American Politics (but not in political theory) and between female and male researchers (and less among women: Fisher et al. 1998; McDermott and Hatemi 2010). Yet, network approaches are still scarce, focus regularly on IR alone and mostly link publications via common cited sources

(Kristensen 2012; Russett and Arnold 2010) portraying the interrelation of ideas but not of the individuals that carry them. So far, only three studies have analyzed co-authorships (Arzheimer and Schoen 2009; Metz and Jäckle 2013; Leifeld and Ingold 2015) but they have only looked at political science communities in Germany, Switzerland, Austria, and the UK – much in contrast to the natural sciences where this type of analysis is both more common and more global (Barabási et al. 2002; M. E. J. Newman 2004).

The Dataset

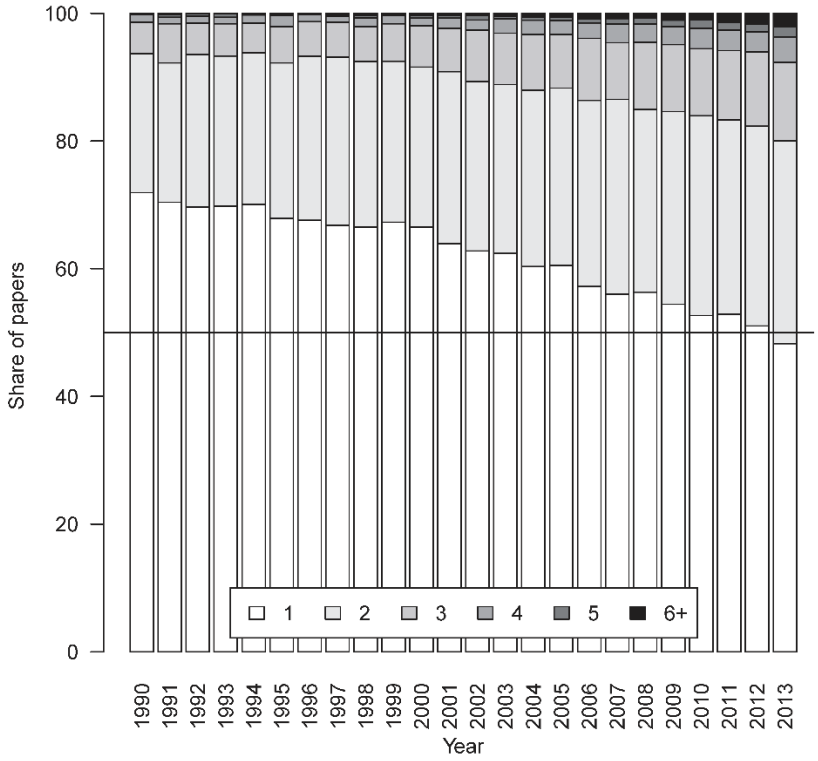
Our dataset consists of 67,414 articles published 1990–2013 in 96 journals classified as "political science" in the SSCI that in 2011 had either a 1-year or a 5-year-impact factor of 1.0 or greater.[1] Author names were cleaned and normalized to ensure a consistent dataset and an accurate network.[2] To get an impression of what substantial matters a researcher works on, we also surveyed the journals' aims and scopes and coded from these how much the journals subscribed to the fields of (1) comparative or domestic politics (CP), (2) political theory and philosophy (PT), and (3) international relations, regional and European studies (IR)[3] Additionally, we ranked journals according to whether their authors were mainly political scientists or whether political scientists were only one group among others publishing there.[4] Assigning a color to each subfield (CP = red, PT = green, IR = blue) then allowed us to treat each of an author's papers as a specific contribution whose mixture made up an author's overall "color" (i.e. subfield association). For example, authors only publishing in Comparative Politics would be colored red while those working exclusively in IR would become blue; writers contributing to both fields equally get purple instead. Those at home in all fields and/or publishing in general purpose (GP) journals

with no clear subfield association would be colored white (i.e. in an equal mixture of red, green, and blue).

Bibliometric analysis

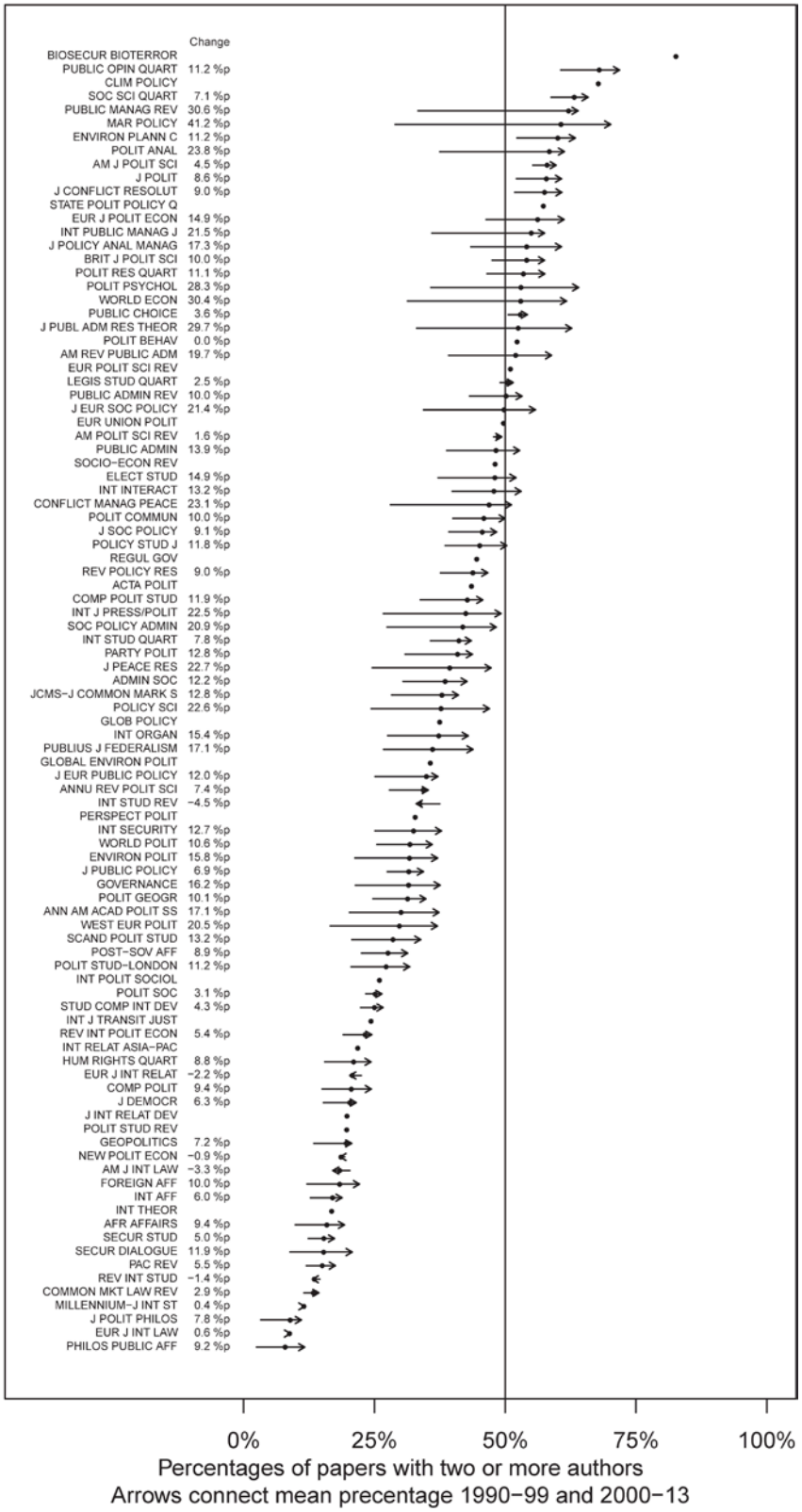
Of all papers in our database, 60.5 per cent are written by a single author (27.6 by two, 8.3 by three and 2.2 by four authors). The largest paper had 55 authors and appeared as “Medical Planning and Response for a Nuclear Detonation: A Practical Guide” in *Biosecurity and Bioterrorism*. Yet, these aggregate figures mask a strong trend towards interconnection (see figure 1): While in 1990, the average number of names on a paper still lay at 1.36, it has since then steadily risen to 1.93 authors for 2013, the first year in which papers published in co-authorship became the modal category.

Figure 1: Number of Authors Per Paper, 1990–2013



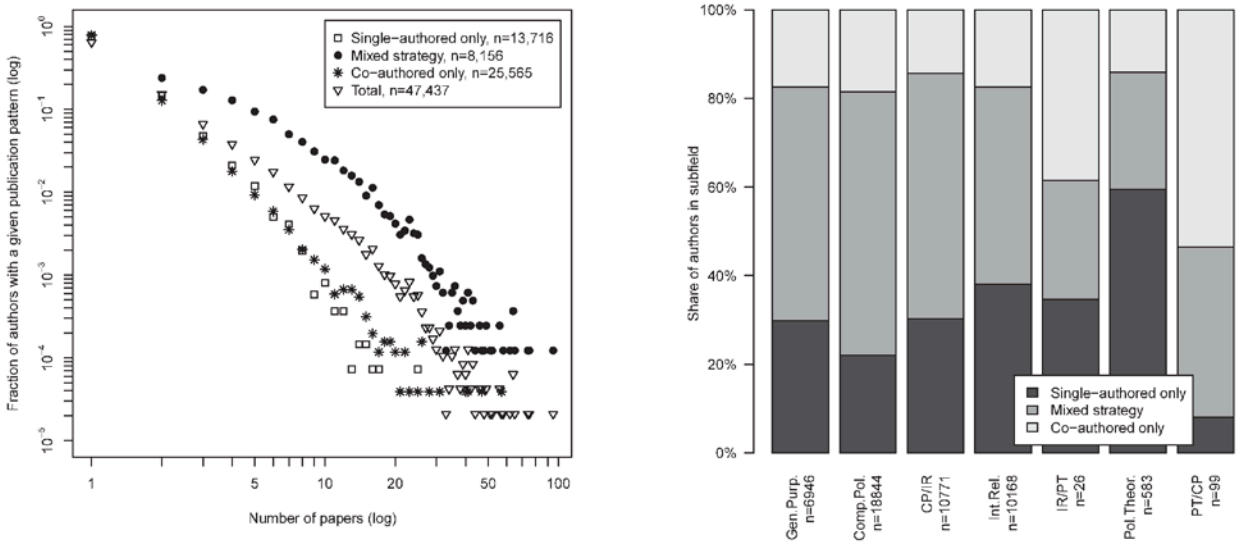
Across the journals, there is a large variation in co-authorship. While only 7.9 per cent of papers published in *Philosophy and Public Affairs* were written by multiple authors, the corresponding figure is 82.6 per cent for *Biosecurity and Bioterrorism*. Yet, a trend towards multiple authors is visible in all journals (see figure 2). In all but five cases, co-authorship has increased, yet the pace is very different across the spectrum. The trend is most strongly advanced in empirically and/or economically oriented publications, but as well in GP journals and in periodicals also frequented by natural scientists. While the norms of authorship have already been quite diverse across political science to begin with, it seems they are increasingly diverging. Yet, although increased quality of research is often considered as a reason for collaboration (McDermott and Hatemi 2010, 50), we could not relate it to co-authorship: Correlating the number of authors on a paper with the journal's impact shows that it is not easier for research teams to publish in higher ranked journals ($r = 0.04$ for 1-year-impact, 0.09 for 5-year-impact). Applying the Gini-index to the number of different authors in a journal indicates a considerable variation with respect to the concentration of a journal's author base (from 0.06 for *Annual Review of Political Science* to 0.34 for Electoral Studies).

Figure 2: Development of the Share of Co-Authored Papers (By Journal)



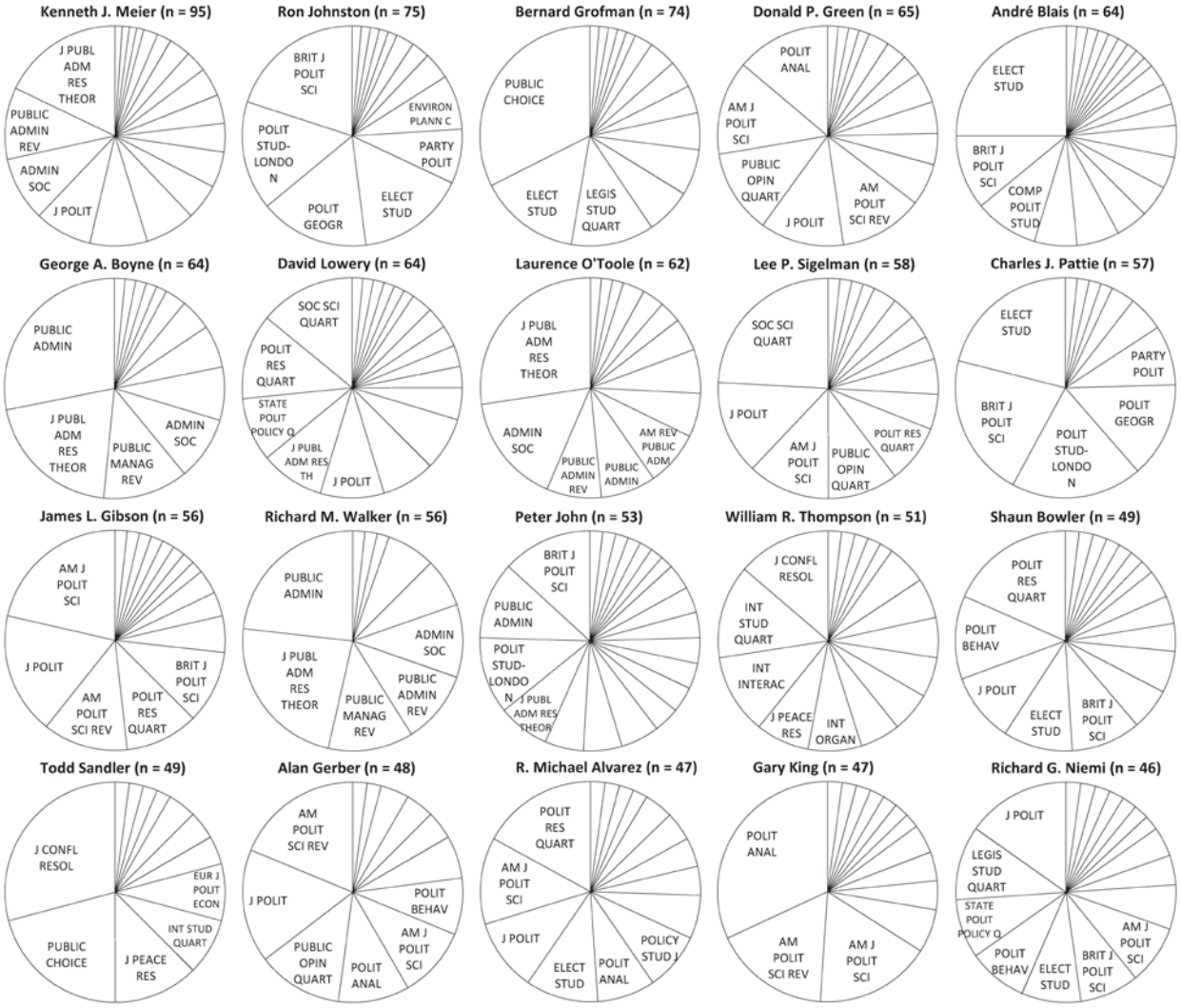
Our dataset contains 47,437 individual authors which on average had their name on 2.26 papers (the mean number of papers published alone is 0.86, for papers written together with others, it is 1.40). The distribution of output across authors is highly skewed. While 64.3 per cent have only published a single paper during our observation time, 15.2 per cent have written two, and 6.6 per cent have issued three. Splitting the distribution for authors that have only published alone, only published with others and those that have done both (figure 3) reveals that the skew is rather similar across subgroups and that authors following the mixed strategy are clearly the most productive ones while there is no big difference in the output of the other two groups. We can only guess why publication activity within political science is so highly transient with most authors only appearing once before leaving the dataset again – potentially these could be graduate and/or PhD-students publishing parts of their work before leaving for other professions or it could reflect difficulties to get established in academia. When we subdivide the three different styles of publication across the different subfields (as derived from the journal scopes), it becomes clear that co-publication is particular popular within comparative politics.

Figure 3: Productivity by Publication Mode (Left) and Publication Mode by Subfield (Right)



Across all authors, the most productive individuals are Kenneth J. Meier (95 papers), Ron Johnson (75), and Bernard Grofman (74), all three of which have written together with others. Among those working always alone, the numbers are lower but still highly impressive. Here the most productive researcher is Kurt Weyland (25 articles). Figure 4 shows how the 20 most productive authors distribute their publications across journals. Most use a mixture of specialization (to a smaller set of core journals in their field) and generalization (by delivering work to a large variety of different periodicals as well).

Figure 4: Publication Strategies of 20 Most Productive Authors



Network analysis

To derive the network of collaborations, we connected two authors whenever they had written a paper together. This yields a network of 47,437 nodes (authors) linked by 57,916 edges (collaborations). 28.9 per cent of authors have never written a paper together with anyone, which makes them isolate nodes. For the remaining nodes, the distribution of the number of co-authors is very skew: 27.2 per cent of all nodes are connected to just one other scientist (in network

parlance, they have a degree of one), another 16.7 per cent have two neighbors and 8.9 per cent have three; 2,235 individuals have ten or more co-authors. On average, individuals are connected to 2.44 others (3.44 for those never working alone). Also, the network is rather weakly connected: Of all edges, 89.4 per cent stem from a single co-publication (in network terms they have a weight of one). Another 7.1 per cent come from two publications written together, and 1.9 per cent from three. Yet, some edges stem from many dozen papers, signaling that some researchers form very stable teams. Table 1 lists those authors with the most connections and shows the heaviest edges in the network (only nodes with ten or more publications included). Authors with a high degree predominantly write their papers together with others. Only occasionally do we find authors like Peter Jones, who has written the majority of his papers alone but still has a large number of co-authors. Concerning edges, the cooperation between Charles Pattie and Ron Johnson is the most stable one by far, having led to 51 joint publications. Also, we find that edges do not just denote “scientific couples” but also outline stable research teams such as the triangle between André Blais, Elisabeth Gidengil, and Neil Nevitte. For PT degrees and weights are substantially smaller than for the two other sub-disciplines.

Table 1: Authors with Most Co-Authors and Most Productive Edges

Name	Co-authors	Papers	Papers with co-author	Edge	Weight
Eric Toner	86	20	20	Charles Pattie – Ron Johnston	51
Jon Krosnick	70	35	33	Virginia Gray – David Lowery	40
Andre Blais	62	64	62	Kenneth J. Meier – Laurence J. O'Toole	36
Donald P. Green	62	65	62	Richard A. Walker – George Boyne	31
Thomas V. Inglesby	62	25	25	Alan Gerber – Donald P. Green	25
Rickard Knutsson	59	11	11	Rhys Andrews – George Boyne	23
Peter Jones	58	27	10	Marianne C. Stewart – Harold D. Clarke	23
Tara O'Toole	54	21	21	Shaun Bowler – Todd Donovan	22
Richard G. Niemi	53	46	45	Tara O'Toole – Thomas V. Inglesby	21
Peter John	52	52	45	Elisabeth Gidengil – Andre Blais	18
Bernard Grofman	50	74	65	Jeffrey Karp – Susan Banducci	17
Sean Pascoe	48	11	11	Rhys Andrews – Richard A. Walker	17
R. Michael Alvarez	47	47	47	Michael Thrasher – Colin Rallings	17
Mick P. Couper	47	24	21	Neil Nevitte – Andre Blais	16
Gary King	45	47	40	Neil Nevitte – Elisabeth Gidengil	16
Lee Sigelman	45	58	47	Jerry Polinard – Robert Wrinkle	16
Kenneth J. Meier	44	95	88	Gary Marks – Liesbet Hooghe	15
Andrew Jordan	43	43	31	Thomas L. Brunell – Bernard Grofman	15
Richard C. Feiock	42	39	37		
Claes DeVreese	41	43	38		

Figure 5 visualizes a section of the network, the inset in the upper right shows the structure in its entirety.[5] Nodes are drawn in three sizes (1-5, 6-20, and 21 or more papers) and edge width is proportional to weight. The dense structure in the middle of the inset is the metaphorical "heart" of the community – a giant component in which all scientists are connected (through their co-authors, their co-authors' co-authors and so on) to each other. It consists of 17,118 researchers (36.1 per cent of authors; the second-largest component is just 36 persons) and contains mainly scholars with a foothold in CP (depicted as squares, e.g. Erik-Hans Klijn, labeled D), IR (triangles, e.g. Tim Gray, labeled C) or scholars at home in all three subfields (circles, e.g. Peter Jones, labeled C). There are only few and widely interspersed authors from PT (black diamonds; e.g. Tommie Shelby, labeled G). Many of the nodes are connected to the giant component's central region through long tendril-like structures indicating that many elements of the component are themselves not very strongly intertwined with the remaining authors. While there is a general tendency for more productive authors to gravitate to the center of the component, several big nodes also come to rest more peripherally (e.g. Peter Taylor-Gooby, labeled A). The large circle around the giant component contains mostly single authors but also groups stemming from larger one-shot collaborations (such as a 24-person publication in Marine Policy, labeled F) and components, consisting of several smaller nodes and a larger one, connecting them (e.g. Charles Goodsell, labeled E).

Figure 5: Section of the Co-Authorship Network (Inset: Entire Network)

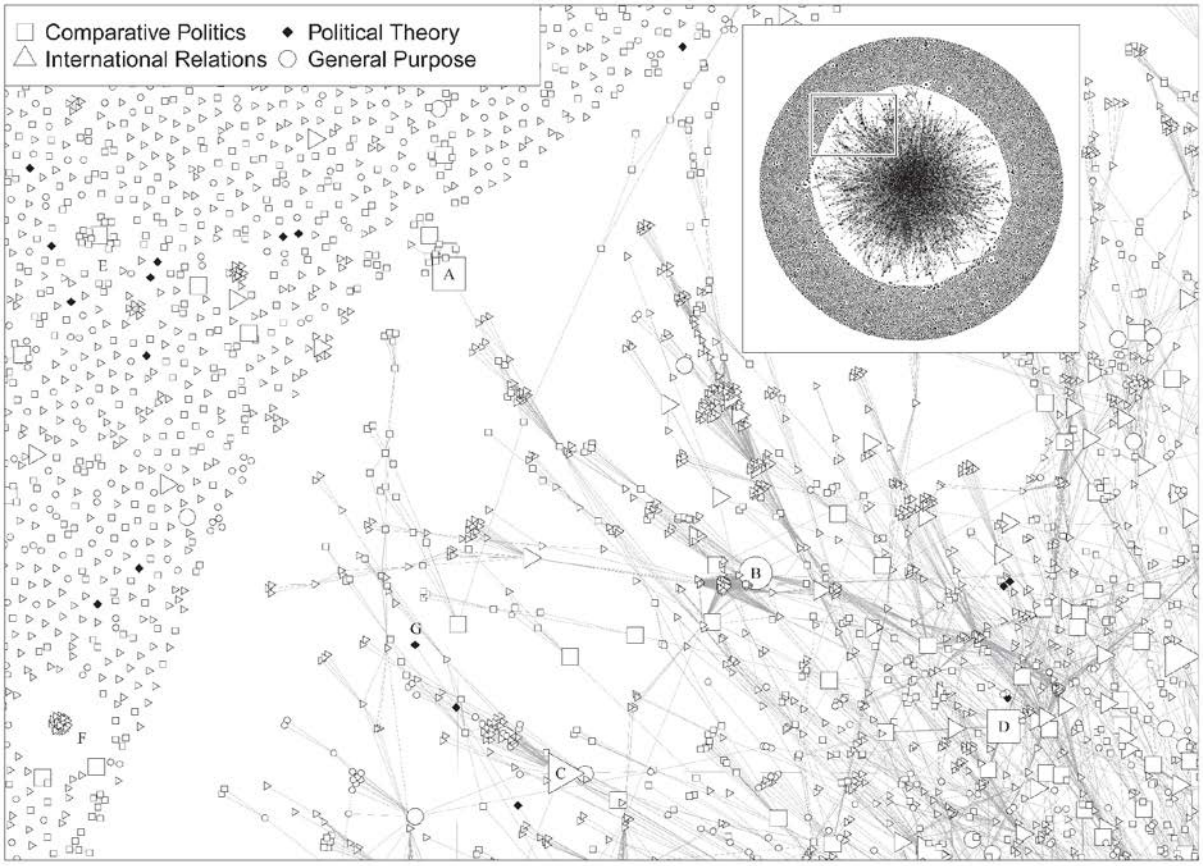
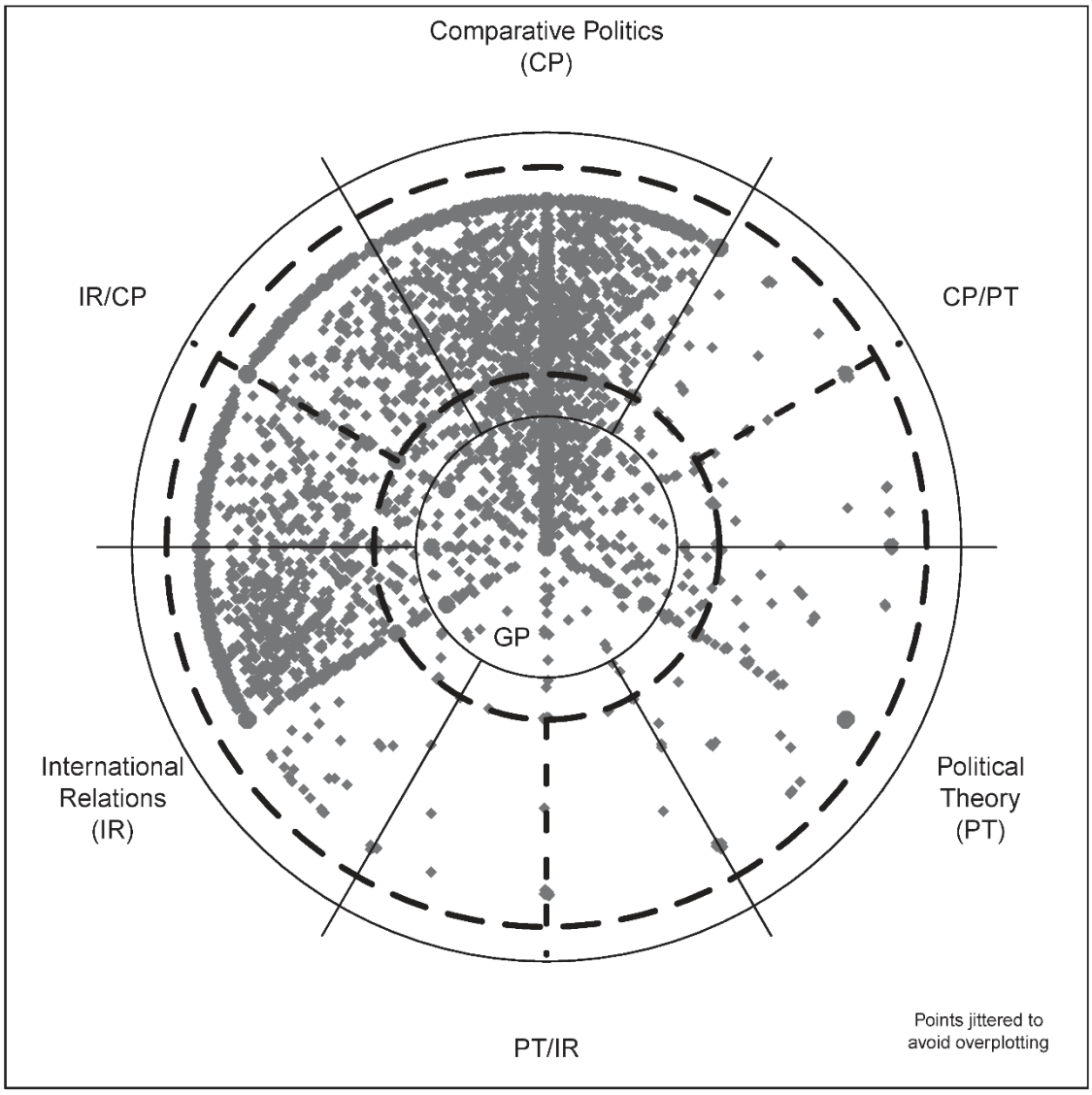


Figure 6 presents the distribution of authors across subfields as assigned from the journals' scope. For an easier interpretation, see also the color version in the online appendix O4. We have mapped the subfield color to an angle capturing the hue of a color and a distance from the origin that contains saturation. The closer authors fall to the circle's center, the more they publish in GP journals or equally in all three subfields; those at the outer end specialize in one of the three subfields or their respective overlaps. The figure includes both a broad four-types-classification into CP, IR, PT and GP (dashed lines), as well as a more detailed seven-types-classification considering additionally the overlaps of IR/CP, PT/IR, and CP/PT (solid lines). Again we see the

strong representation of IR and CP (and IR/CP). For those located close to the center of the circle, we additionally find several authors sitting in the area between CP and PT. The area between PT and IR, however, is only sparsely populated, and the absence of authors close to the GP-circle in this slice indicates that the field is mostly tilled by highly specialized individuals.

Figure 6: Distribution of Authors across Subfields



One question at the network level is whether nodes with a given attribute prefer to connect to others with the same attribute, a property measured with the assortativity coefficient which ranges from from 1 (when only like nodes connect) to -1 (when like nodes avoid each other). Regarding the number of co-authors, our network shows a strong positive degree assortativity of r=0.678 indicating that well-connected "big shots" tend to cooperate with each other while less connected researchers stay among themselves. This number is all the more impressive if we consider that assortativity by subfield (whose value is partly a function of our coding) registers in a similar range (r=0.745). The assortativity coefficient for the number of papers written is clearly lower (r=0.205), yet it is still noticeable and positive, indicating that authors who publish many papers have at least a certain tendency to cooperate with each other. Another interesting point is that our network has a global clustering coefficient ("transitivity" in network parlance) of C=0.626 (the value may range from 0 to a maximum of 1 and captures the tendency that two of a given scientist's co-authors are connected by a common publication themselves). This value is well in excess of anything expected by chance[6] and it is also considerably higher than for other sciences (see Newman 2004: table 1). Just as we all introduce out friends to each other, political scientists, it seems, establish contact between their co-authors as well.

Another question most likely preying on the readers' minds is: Who are the most central scientists in the network? Table 2 lists them according to two different definitions: Closeness centrality takes a given author and calculates the shortest paths (hops along edges) to all other authors in the network. The shorter the average shortest path to all other authors, the higher the closeness score. Thus, authors scoring high on this index are central in the sense of being "in the

middle of the network". Betweenness centrality determines for a given author how many of the shortest paths between all other authors run across the given author. Thus, authors scoring high on this index are central in the sense that they may broker information if nodes communicate along the edges. Both measures take the strength of edges into account and are normalized to the range [0;1] to eliminate the coefficients' dependency on network size.

Table 2: Most central authors in the network

Name	Closeness	Name	Betweenness
Peter John	0.256	Andrew Jordan	0.048
George Boyne	0.252	Bernard Grofman	0.045
Kenneth J. Meier	0.251	Richard G. Niemi	0.037
Richard A. Walker	0.251	Christoffer Green-Pedersen	0.035
Laurence J. O'Toole	0.250	Christopher Wlezien	0.033
Will Jennings	0.250	Jon Krosnick	0.031
Rhys Andrews	0.249	Marco Steenbergen	0.031
Kevin Smith	0.248	Donald P. Green	0.027
Donald P. Green	0.247	B. Dan Wood	0.026
Oliver James	0.247	Stuart Soroka	0.025
Richard G. Niemi	0.247	Peter John	0.025
Alan Gerber	0.247	Michael Traugott	0.025
Keith Dowding	0.246	Claudio Radaelli	0.024
John R. Hibbing	0.246	Robert O. Keohane	0.023
Christopher Wlezien	0.245	Bradford Jones	0.023
Hugh Ward	0.245	Matthew Paterson	0.022
Jennifer Law	0.245	James E. Anderson	0.022
Nicolai Petrovsky	0.245	Lee Sigelman	0.021
Robert Wrinkle	0.245	Kenneth J. Meier	0.021
Shaun Bevan	0.244	Harriet Bulkeley	0.021

There are some differences among the highest-ranked nodes depending on the definition of centrality with Peter John coming in first with respect to being situated near to all others while Andrew Jordan is sitting on most potential communication paths between researchers. Yet, several authors like Donald P. Green or Richard G. Niemi appear on both lists quite high up, indicating that they are among the most central in the social network underneath political science, irrespective of the definition. To investigate the evolution of the network over time we singled out journals that appeared during the whole observation span and constructed from these three different networks for the periods 1990-1997, 1998-2005 and 2006-2013, respectively. Table 3 shows that the network has grown strongly during the last period not just in terms of authors and size of the giant component, but also in the average number of coauthors and network density. Together, this indicates that political science as academic discipline has substantially expanded and grown more interconnected, yet the unchanging edge weight signals that collaborations have not become more stable or lasting in the sense that two co-authors nowadays were more likely to go on with publishing further papers together than in the 1990s.

Table 3: Network development over time

Slice	Nodes	Edges	Density	Mean degree	Mean edge weight	Size of GC (nodes)
1990-1997	12,321	6,740	0.000089	1.09	1.16	11.1 % (1372)
1998-2005	15,136	10,388	0.000091	1.37	1.16	14.5 % (2189)
2005-2013	22,027	26,095	0.00011	2.37	1.12	26.7 % (5888)

Example of different sub-communities in the network

Based on the papers' abstracts we can also identify specific sub-communities within political science and look at their structure in a rather fine-grained manner. As an example, we extracted the network of authors working on elections and voting behavior by searching for papers which had either of the lemmata "elect", "vot(e/i)", "turnout", "turn out", and "ballot" in the title or abstract. This community of election researchers contains 8,185 nodes connected by just 7,798 edges and 2,087 isolate nodes working always alone. Just as in the full network, this community also features a giant component that takes up 2,823 individuals (34.5 per cent; the next-largest component consists of just 25 people. André Blais and R. Michael Alvarez are the two authors with the highest number of connections (52 and 38 co-authors, respectively). Yet, while the network of election researchers is also quite sparse in absolute terms, it is denser than the whole network – its giant component has a density 4.7 times higher than that of the full one, which fits the impression of a relatively well-integrated community. The component also consists of productive researchers: On average, an election researcher registers 4.60 publications (vs. 3.55 for authors in the giant component of the full network). To assess how strongly the community organizes around its leading journal, we derived another network that contains all papers published in *Electoral Studies*. This network has a size of 1,179 nodes and 1,130 of its members lie within the electoral research community as identified by us. This means that, during our observation time, *Electoral Studies* covered about 13.8 per cent of the community. The authors of *Electoral Studies* contribute 662 nodes (23.5 per cent) to the giant component of the electoral network, indicating that the journal's position is even better at the highly interconnected core of the field. However, the largest component in the *Electoral Studies* network has just 237 nodes,

meaning that many of the links among the 662 do not stem from work disseminated through the journal.

Summary and Conclusion

Based on an original dataset consisting of 67,414 articles published 1990–2013 in 96 high impact political science journals, we have analyzed publication patterns in the international political science community. While publishing alone was much more common during the 1990s, by now the standard for many journals is to publish the work of teams. This trend is especially visible for general purpose journals and for those that are empirically (and/or economically) oriented, or feature a substantial share of publications from natural scientists. By contrast, in political theory single authorship remains the norm. Productivity is highly skewed with few authors producing a tremendous number of papers while many authors just write one or two before disappearing from the dataset again. From this angle, the political science community seems to be in a considerable state of flux. In terms of publications, CP and IR are the two biggest (and often also mixed) areas, whereas PT is a rather small sub-community that is less strongly intertwined with the other two.

Constructing a co-author network revealed a large number of unconnected individuals plus a giant component which forms the heart of the discipline. Compared to all authors, within this component authors from CP and researchers without a clear association are over-represented suggesting that the tendency to collaborate is more relevant here. The virtual absence of philosophically oriented colleagues, in line with their rare appearance in the journals surveyed, fits the notion that here, other forms of publication (books and edited volumes) probably play a larger role as outlets for research. In more general terms, our results raise the question, whether

the differences found with regard to the mode of publication and thus the working patterns within political science even enhance the already existing divides that we are struggling with (quantitative vs. qualitative, and political theory vs. empirical studies).

Our study has so far only scratched the surface of our dataset. Among the many possibilities the information can be put to further use is to reverse the bipartite mapping, deriving a network of texts that are connected by a common author and explore whether and how such a network might help to contribute to the field so far tilled with the help of citation studies. Also, we have barely explored how the community actually meshes up. Future studies could therefore investigate more closely certain subfields, show to what extent the scholarly discussion in these sub-communities is focused in specific journals and which types of scientists connect different fields. In this regard it may also make sense to apply a more fine grained classification than the four types (IR, CP, PT and GP) that we used. Another interesting option would be to investigate non-US authors in more detail. For example, political scientists identified to be part of other national co-authorship networks (e.g. the German one mentioned above) could be searched in our database, illustrating to what extent they make it to the English-speaking, international political science community and whether cross-border collaboration is of avail to them. Given the widely found gender differences in co-authoring behavior, a question that immediately leaps to mind is how these differences appear in the social structure of the community. Checking whether national, theoretical or methodological camps shine up in the organization of the network as well appears a worthwhile question, too. The dataset could also be used to test, to what extent cooperation among political scientists is driven by collaborative grants across institutions and thus it could help to evaluate the effectiveness of these research grants. Connecting our results and our network approach to the broader research tradition on the development of academic disciplines

could help to understand political science better, both compared to closer disciplines such as sociology, but also to disciplines that are in many regards different from political science such as biology or physics.

Endnotes

[1] See table O1 in the online appendix for an overview of the coverage.
[2] See online appendix O2 for a description of these steps.
[3] Our coding aimed at capturing the relative proportions of the different fields, normalized to the range 0 to 1. To avoid arbitrariness, we only awarded scores of 0 (no content), 0.5 (some content) and 1 (important element of the scope). For example, if a journal scope mainly advocated comparative politics but also mentioned IR publications, the journal would be awarded the scores 1-0-0.5; a journals having an explicit generalist scope would receive 1-1-1.
[4] Here, we only awarded scores of 1 and 0.5, assuming that our selection from the SSCI had already eliminated irrelevant journals. For example, a publication clearly central to the political science community (e.g. American Journal of Political Science) receives a score of one while a journal like Marine Policy which also features a substantial amount of work from other disciplines such as fisheries receives 0.5. See table O3 in the online appendix for a list of the Journal ratings.
[5] For our plot we used the Fruchterman-Reingold-algorithm which assumes a repulsive force among all nodes that is countered by an attractive force among nodes connected by an edge. Thus, isolate nodes and small components get pushed away from the bigger components. A full color high resolution and searchable version of the complete network including names for all nodes larger than five publications can be found in the online appendix O5.
[6] According to Newman (2010, 2004) we would expect C=0.000051 for a network like ours in terms of size and average degree.

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Patterns of Publishing in Political Science Journals – An overview of our profession using bibliographic data and a co-authorship network Online Appendix

O1: Number of papers collected per journal and year

O2: Steps for cleaning up the dataset

O3: Journals by subfield association and salience of political science articles

O4: Distribution of authors by subfield association

O5: Full color version of the complete network (searchable by author name)

O1: Number of papers collected per journal and year

Journal	1-Year Impact	5-Year Impact	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Sum
Acta Politica	0.361	1.088														16	19	26	25	23	19	19	20	18	20	20	225
Administration and Society	0.468	1.091	25	24	22	23	23	24	18	31	36	30	26	27	30	33	29	32	30	39	38	37	44	39	48	42	750
African Affairs	1.474	1.657	21	25	20	23	20	17	18	19	17	22	22	24	22	22	26	24	26	29	25	24	24	28	31	31	560
American Journal of International Law	0.977	1.074	42	32	32	23	35	42	35	35	58	55	42	51	53	48	40	47	37	34	35	35	36	30	33	42	952
American Journal of Political Science	2.811	3.960	48	46	49	50	49	46	57	65	59	52	56	58	57	50	54	60	64	62	59	60	59	63	65	65	1353
American Political Science Review	3.933	4.516	51	56	54	55	47	49	45	46	46	47	40	51	35	41	44	43	57	52	34	37	43	46	44	49	1112
American Review of Public Administration	0.781	1.257	16	18	19	22	24	20	24	19	18	19	22	20	20	20	21	23	24	21	24	34	36	37	35	35	571
Annals o.t. Am. Acad. of Pol. and Soc. Science	0.856	1.440	75	78	81	75	76	76	83	80	78	73	79	62	74	63	68	66	92	68	78	103	75	71	80	70	1824
Annual Review of Political Science	1.884	4.009									20	23	21	17	16	22	21	17	22	17	25	26	25	17	22	21	332
Biosecurity and Bioterrorism	1.682	1.615														23	27	29	31	27	28	36	27	36	35	52	351
British Journal of Political Science	1.477	2.284	23	23	23	20	27	27	26	30	29	31	32	29	28	34	41	35	36	35	34	37	46	40	40	39	765
Climate Policy	1.536	1.679												26	16	45	25	30	50	37	48	42	44	39	52	52	506
Common Market Law Review	3.000	2.074	36	39	53	52	52	52	51	48	49	54	52	52	53	52	63	61	56	54	63	72	61	64	62	83	1334
Comparative Political Studies	1.673	2.460	18	19	19	18	21	19	30	24	26	31	40	42	46	41	41	44	46	58	56	52	55	56	53	57	912
Comparative Politics	0.750	1.167	21	21	21	20	20	20	16	22	19	20	20	20	20	20	22	20	20	20	21	22	23	22	21	24	495
Conflict Management and Peace Science	0.918	1.205	4	5	5	7	3	8	8		9	8	5	4	8	10	18	22	20	20	21	22	25	25	24	28	309
Electoral Studies	0.887	1.576	29	23	23	25	28	35	46	49	24	41	36	44	51	57	53	53	55	82	69	66	68	75	76	89	1197
Environment and Planning C – G'vt. and Policy	1.016	1.386	32	29	29	28	29	26	29	27	42	43	42	47	48	47	45	47	50	49	66	62	53	50	63	66	1049
Environmental Politics	1.467	1.814			38	34	36	40	39	39	40	49	37	38	35	40	32	37	47	43	46	52	50	49	53	56	930
European Journal of International Law	0.659	1.026	21	17	20	26	27	28	26	28	33	36	44	35	54	40	32	40	36	43	42	75	49	66	59	66	943
European Journal of International Relations	1.453	2.359						21	15	15	15	14	17	16	15	15	18	19	22	20	24	25	31	26	31	41	400
European Journal of Political Economy	1.132	NA	31	31	34	34	38	30	50	43	41	37	38	43	38	47	56	57	51	66	57	42	45	69	48	63	1089
European Political Science Review	1.275	NA																				19	21	19	19	20	98
European Union Politics	1.774	2.358											15	14	20	22	22	22	23	25	23	23	26	27	29	27	318
Foreign Affairs	2.034		52	50	59	53	70	65	62	50	66	58	66	68	73	66	68	69	71	59	61	65	68	84	74	79	1556
Geopolitics	0.744	1.038							13	24	24	21	29	26	25	33	29	40	31	31	35	37	40	41	42	50	571
Global Environmental Politics	2.630	3.082												32	23	25	25	22	24	25	27	24	26	25	31	30	339
Global Policy	1.206	1.206																					26	43	50	49	168
Governance	1.604	2.129	22	21	25	27	19	26	16	16	19	15	21	19	21	22	21	27	24	26	23	31	28	27	30	26	552
Human Rights Quarterly	0.710	1.217	30	22	21	27	26	30	33	27	29	32	28	32	29	35	34	38	32	33	34	33	38	32	32	34	741
International Affairs	1.062	1.227	29	30	27	23	19	28	32	30	35	29	29	32	32	40	37	46	50	47	53	52	58	58	59	61	936

International Interactions	1.188	0.866	24	17	18	19	20	19	13	25	12	16	12	18	15	14	17	15	18	20	17	22	20	23	33	35	462
International Journal of Press-Politics	1.396	1.670							43	44	39	35	35	35	26	26	21	23	28	30	31	23	24	25	24	25	537
International Journal of Transitional Justice	1.791	1.880																		24	20	21	21	22	26	26	160
International Organization	2.490	4.643	16	17	26	23	20	24	20	22	33	24	26	35	29	27	25	35	33	26	24	25	25	26	24	29	614
International Political Sociology	1.405	1.942																		22	20	32	25	25	26	27	177
International Public Management Journal	1.200	NA									10	15	12	9				9	18	21	21	19	19	16	21	21	211
International Relations of the Asia-Pacific	1.147	1.081												11	10	11	12	13	13	18	16	18	17	17	16	16	188
International Security	2.739	3.359	29	22	22	25	22	28	24	29	23	27	21	28	28	26	21	24	24	26	25	23	26	24	23	30	600
International Studies Quarterly	1.391	2.142	22	21	20	20	23	24	24	30	35	30	28	26	24	30	36	30	40	44	37	48	51	55	59	64	821
International Studies Review	1.063	NA					6	6	6	8	14	16	13	13	20	21	23	19	20	24	25	24	20	28	17	30	353
International Theory	1.129	1.151																				23	26	19	18	21	107
Journal of Common Market Studies	1.603	1.624	22	13	17	28	24	29	27	26	25	33	43	46	42	43	46	48	49	50	44	54	67	66	75	82	999
Journal of Conflict Resolution	1.701	2.885	31	31	29	30	31	30	29	36	37	42	42	36	36	37	40	41	44	37	39	40	36	40	43	43	880
Journal of Democracy	1.147	1.353							24	48	53	52	62	53	54	53	51	44	46	49	54	47	52	46	55	54	897
Journal of European Public Policy	1.197	1.667					19	28	34	35	35	44	41	48	50	50	52	55	75	71	69	66	71	65	78	87	1073
Journal of European Social Policy	1.644	2.042		8	13	14	14	15	14	15	14	18	16	18	16	19	21	17	21	22	22	25	31	30	31	32	446
Journal of Int. Relations and Development	0.553	1.034												15	17	17	15	11	17	17	11	26	18	26	26	22	238
Journal of Peace Research	2.191	2.526	31	28	31	26	28	29	33	31	37	39	35	39	36	39	36	37	39	37	42	42	58	50	53	47	903
Journal of Policy Analysis and Management	1.541	2.153	31	37	40	41	37	28	29	38	45	40	36	43	37	36	52	49	43	38	53	35	42	40	43	44	957
Journal of Political Philosophy	1.609	1.410				12	13	13	19	21	19	25	24	24	21	23	22	22	27	24	24	22	24	23	23	23	448
Journal of Politics	1.577	2.387	46	46	47	56	50	51	49	51	46	47	48	48	51	58	55	54	72	76	80	97	81	86	79	78	1452
Journal of Public Admin.: Research and Theory	1.757	3.193		27	28	26	29	24	31	29	25	26	31	24	28	24	29	32	28	30	29	41	53	38	35	42	709
Journal of Public Policy	1.033	NA	16	17	15	16	12	10	10	13	11	11	12	13	16	13	14	16	13	14	14	16	17	12	11	14	326
Journal of Social Policy	1.075	1.195	18	18	17	19	17	19	18	17	19	24	25	24	24	27	27	29	32	30	30	33	29	40	38	40	614
Legislative Studies Quarterly	0.976	1.063	30	30	28	23	24	26	24	25	25	22	28	27	26	20	22	25	21	24	24	22	21	21	22	21	581
Marine Policy	2.230	2.407	44	28	29	37	39	38	37	38	38	38	45	39	40	50	45	48	78	75	116	101	154	86	142	201	1586
Millennium: Journal of international studies	0.923	1.182	20	28	18	19	26	20	19	29	38	23	33	31	24	18	13	27	39	31	39	29	43	24	27	41	659
New Political Economy	1.930	1.493							27	32	32	28	22	25	20	18	29	35	30	32	32	35	30	35	36	39	537
Pacific Review	1.051	1.071	32	34	33	33	34	33	27	24	24	26	26	22	21	25	24	24	23	23	32	30	29	31	29	26	665
Party Politics	1.141	1.530						32	26	26	24	28	28	33	33	31	33	33	32	32	32	31	35	36	45	44	614
Perspectives on Politics	1.963	NA														27	38	34	30	30	35	41	50	29	33	40	387
Philosophy and Public Affairs	1.958	2.762	11	14	11	11	14	12	12	12	13	12	12	16		16	14	16	16	15	16	13	12	12	10	12	302
Policy Sciences	1.059	1.779	14	18	19	18	20	15	14	13	17	24	24	19	18	16	17	13	18	15	18	19	17	18	19	18	421
Policy Studies Journal	1.014	1.177	40	25	42	51	43	36	33	30	37	42	44	43	24	38	30	34	37	34	30	35	32	38	35	33	866
Political Analysis	2.231	3.856	9	6	9	7			9		8		22	21	23	27	24	23	24	23	26	25	25	30	28	28	397
Political Behavior	1.474	2.124	16	17	19	19	21	18	17	17	16	16	16	16	13	16	16	17	16	22	24	27	27	30	32	36	484

Political Communication	2.415	2.330	17	19	16	25	24	24	29	28	26	22	32	26	23	21	21	23	25	22	20	23	21	21	21	33	562
Political Geography	2.108	2.850			32	29	26	33	35	29	44	27	30	32	38	27	36	33	41	47	39	39	31	31	38	20	737
Political Psychology	1.418	2.152	33	34	40	36	44	36	30	33	37	32	37	37	36	36	39	42	41	30	38	40	36	45	50	49	911
Political Research Quarterly	1.044	1.281	44	51	51	47	45	43	43	43	42	36	38	44	39	43	56	55	52	55	53	62	68	69	67	65	1211
Political Studies	0.917	1.558	42	31	44	44	47	46	46	42	44	47	39	38	40	44	46	43	42	42	46	43	54	55	52	62	1079
Political Studies Review	1.286	NA														9	7	9	12	14	9	15	15	14	15	23	142
Politics and Society	1.833	2.301	21	17	22	17	26	15	21	21	19	18	20	19	17	19	22	20	19	18	20	19	24	20	22	21	477
Post-Soviet Affairs	1.310	1.014	12	15	13	17	14	17	16	14	15	18	12	14	14	13	12	15	16	16	13	15	14	15	16	19	355
Public Administration	1.062	1.583	28	28	32	33	32	33	36	38	38	42	44	42	35	38	44	43	44	48	54	51	59	88	56	59	1045
Public Adminstration Review	0.900	1.546	36	19	46	24	26	35	31	31	24	22	20	30	52	34	32	32	53	54	49	44	46	55	84	84	963
Public Choice	0.878	1.255	80	92	54	101	89	75	88	82	98	79	70	72	87	81	87	88	98	111	114	111	114	106	143	112	2232
Public Management Review	0.989	1.291										33	28	31	29	30	26	28	32	27	41	38	45	55	56	55	554
Public Opinion Quarterly	1.522	2.941	34	32	27	30	28	26	26	27	26	26	23	27	25	30	27	35	35	37	53	49	41	49	41	61	815
Publius	1.000	1.224	33	39	33	29	29	29	29	31	39	23	29	23	28	24	26	26	25	25	31	28	30	27	28	31	695
Regulation and Governance	1.625	1.779																		23	25	22	23	24	28	30	175
Review of International Political Economy	1.661	1.373					28	23	26	27	25	18	28	28	27	28	38	36	33	44	30	43	37	31	37	46	633
Review of International Studies	0.739	1.019	17	20	21	19	19	20	15	23	43	50	50	42	39	44	27	56	35	33	47	55	54	121	53	52	955
Review of Policy Research	1.113	NA	31	27	41	26	24	28			32	30	27	35	35	38	48	49	66	24	30	37	33	36	38	29	764
Scandinavian Political Studies	0.743	2.122	18	18	17	17	16	12	21	18	18	19	18	16	16	16	19	19	20	22	21	20	19	16	17	18	431
Security Dialogue	1.612	1.869	43	42	44	35	30	33	32	33	36	33	33	29	29	32	28	30	25	28	31	28	35	36	31	29	785
Security Studies	0.739	1.191		12	25	25	22	31	26	26	27	16	21	22	21	20	13	20	21	21	24	25	21	25	24	27	515
Social Policy and Administration	0.976	1.157	18	27	23	24	23	24	22	33	33	32	33	42	47	46	41	43	43	43	42	41	43	43	41	40	847
Social Science Quarterly	0.930	1.407	56	59	62	57	54	63	64	67	59	51	72	60	67	63	85	75	77	74	75	78	74	68	71	68	1599
Socio-Economic Review	2.059	NA														17	20	25	22	25	27	29	30	30	31	29	285
State Politics and Policy Quarterly	0.732	1.099												24	22	21	21	22	20	24	21	19	20	21	22	24	281
Studies in Comparative International Development	0.722	1.326	17	12	18	17	14	16	18	15	17	17	21	18	16	18	19	20	17	16	17	22	19	18	18	20	420
West European Politics	1.368	1.713	37	43	40	40	41	43	38	41	38	44	46	42	39	39	42	47	51	54	63	59	67	62	66	60	1142
World Economy	0.872	1.244	29	27	43	36	40	49	51	46	59	54	68	62	68	68	72	77	83	82	75	73	81	91	88	83	1505
World Politics	2.308	3.716	18	14	17	15	16	12	16	19	15	15	14	17	15	16	15	18	17	16	12	18	18	20	19	18	390
TOTAL																											67414

O2: Steps for cleaning up the dataset

To capture collaboration within the scientific community, we tried to remove from our dataset all items which did not pertain to research papers or to scientific activity understood as research and discussion of results. To that end, we removed all items of less than five pages length since initial inspection had turned up that these items virtually exclusively contained information irrelevant to us such as front and back matters, acknowledgements, lists of reviewers, communications, and the like. We also removed items that did not have both an author and a title. For longer items, we found that the choice became more difficult: While some texts not directly classifiable as research papers would contain only little independent information (e.g. introduction presenting short summaries of the individual papers in an issue), others could clearly be looked upon as substantial contributions nonetheless (e.g. introductions outlining research agendas, putting the papers into a wider theoretical framework, and/or discussing how the individual works contributed to it). To appropriately filter longer results, we therefore marked all items whose title or abstract matched one or more of a set of keywords[1] and manually checked these items. We removed the respective items unless they could legitimately be looked upon as contributing to the substantial discussion and development of results, as in the example above. Another example would be editorials reporting on the ongoing business of a journal versus editorials in which theoretical developments were discussed and how the community could relate to them. Similarly, we removed reviews of books (and multiple publications), but kept those that went beyond commenting on the piece(s) reviewed and e.g. substantially debated, engaged or expanded them, connected them to other work or added own ideas. By this means we were able to restrict our dataset as good as possible to research-only articles.

For the derivation of the network, it is essential that an author name is constant across the database. Since we found considerable variation in terms of some name elements, we decided to discard these.

[1] Specifically, we searched for the following words or lemmata: "acknowledg" (acknowledgements, e.g. to reviewers), "award" (reports on awards granted), "bibliogr" (bibliographies), "book" (book reviews), "cloth" (book reviews), "conclu" (conclusions), "contribut" (notes on contributers), "correspond" (correspondence), "corrigend" (corrigenda), "editor" (editorials), "errat" (errata), "foreword", "hardback" (book reviews), "isbn" (book reviews), "index" (index of volume), "introduction", "letter" (letters to the editor), "matter" (front/back matter), "memoriam" (in memoriam), "note" (notes on contributors), "obituary", "overview" (overview of special issue), "paperback" (book review), "preface", "referee" (thanks to our referees), "review" (book reviews, thanks to our reviewers), and "special issue". To become aware of more idiosyncratic text forms for a journal, we sorted the publication titles alphabetically which would cluster recurrent texts (e.g. sections on selected works from other disciplines). For these, we decided along the same lines as laid out below.

We therefore removed from authors all middle names and middle initials since they turned out to be used very inconsistently across journals. For the same reason, we removed name affixes such as “jr.”, “sr.”, or “III” but retained connecting affixes such as “van”, “de” or “von” since the latter turned out to be used very consistently. Also, some authors regularly abbreviate their first name (e.g. A. Smith) which we manually expanded to their full writing (i.e. Adam Smith) whenever possible. Additionally, we mapped all umlauts (e.g. ä, ß, ø) to their respective ASCII-transliterations (e.g. ae, ss, oe) and single character accent marks (e.g. é, ç, ñ) to their respective ASCII-letter. To avoid both potentially conflicting mappings (e.g. “ä” may be transliterated as “ae” or “a”), misspellings and/or typographical errors, we calculated for all names the Levenshtein or edit distance (which counts the number of changes, deletions, and insertions that have to be made to change one word into another) to all other names and inspected pairs with a distance of three or less.

O3: Journals by subfield association and salience of political science articles

Journal	Salience	CP	PT	IR
Acta Politica	1	1	1	1
Administration and Society	1	1	0.5	0
African Affairs	0.5	1	0	1
American Journal of International Law	0.5	0	0	1
American Journal of Political Science	1	1	1	1
American Political Science Review	1	1	1	1
American Review of Public Administration	1	1	0	0
Annals of the American Academy of Political and Social Science	1	1	1	1
Annual Review of Political Science	1	1	1	1
Biosecurity and Bioterrorism	0.5	0	0	1
British Journal of Political Science	1	1	1	1
Climate Policy	0.5	1	0	0
Common Market Law Review	0.5	1	0	1
Comparative Politics	1	1	0	0
Comparative Political Studies	1	1	0	0
Conflict Management and Peace Science	1	0	0	1
Electoral Studies	1	1	0	0
Environment and Planning C – Government and Policy	0.5	1	0	0.5
Environmental Politics	0.5	1	0	1
European Journal of International Law	0.5	0	0	1
European Journal of International Relations	1	0	0	1
European Journal of Political Economy	0.5	1	0	0
European Political Science Review	1	1	1	1
European Union Politics	1	1	0	0.5
Foreign Affairs	1	0	0	1
Geopolitics	0.5	0	0	1
Global Policy	0.5	0.5	0	1
Global Environmental Politics	0.5	1	0	1
Governance	1	1	0	0
Human Rights Quarterly	0.5	0	0	1
International Affairs	1	0	0	1
International Interactions	0.5	0	0	1
International Journal of Press-Politics	0.5	1	0	0
International Journal of Transitional Justice	0.5	1	0	1
International Organization	1	0	0	1
International Political Sociology	0.5	0	0	1
International Public Management Journal	0.5	1	0	0
International Relations of the Asia-Pacific	0.5	0	0	1
International Security	1	0	0	1
International Studies Quarterly	1	0	0	1
International Studies Review	1	0	0	1
International Theory	1	0	1	0
Journal of Conflict Resolution	1	1	0	1
Journal of Democracy	1	1	0.5	0
Journal of European Public Policy	1	1	0	0
Journal of European Social Policy	1	1	0	0
Journal of International Relations and Development	1	0	0	1
Journal of Peace Research	1	0	0	1
Journal of Policy Analysis and Management	0.5	1	0	0
Journal of Politics	1	1	1	1
Journal of Political Philosophy	1	0	1	0
Journal of Public Administration Research and Theory	0.5	1	0.5	0

Journal of Public Policy	0.5	1	0	0
Journal of Social Policy	0.5	1	0	0.5
Journal of Common Market Studies	1	1	0	1
Legislative Studies Quarterly	1	1	0	0
Marine Policy	0.5	1	0	1
Millennium-journal of international studies	1	0	0	1
New Political Economy	0.5	1	0	1
Pacific Review	0.5	1	0	1
Party Politics	1	1	0	0
Perspectives on Politics	1	1	1	1
Philosophy and Public Affairs	0.5	0	1	0
Policy Sciences	0.5	1	0.5	0
Policy Studies Journal	0.5	1	0	0
Political Analysis	1	0	1	0
Political Behavior	1	1	0	0
Political Communication	0.5	1	0	0
Political Geography	0.5	1	0	1
Political Psychology	0.5	1	0	0
Political Research Quarterly	1	1	1	1
Politics and Society	1	1	1	1
Political Studies Review	1	1	1	1
Political Studies	1	1	1	1
Post-Soviet Affairs	0.5	1	0	1
Public Administration	0.5	1	0	0
Public Adminstration Review	0.5	1	0	0
Public Choice	0.5	1	0.5	0.5
Public Management Review	0.5	1	0	0
Public Opinion Quarterly	0.5	1	0	0
Publius	1	1	0.5	0
Regulation and Governance	0.5	1	0	0
Review of International Political Economy	0.5	0.5	0	1
Review of International Studies	1	0.5	0	1
Review of Policy Research	0.5	1	0	0
Scandinavian Political Studies	1	1	1	1
Security Dialogue	0.5	1	0	1
Security Studies	0.5	0.5	0	1
Social Policy and Administration	1	1	0	0
Social Science Quarterly	0.5	1	1	1
Socio-Economic Review	0.5	1	0	0
State Politics and Policy Quarterly	1	1	0	0
Studies in Comparative International Development	0.5	1	0	0.5
West European Politics	1	1	0	0
World Economy	0.5	0	0	1
World Politics	1	1	0	1

A salience value of 1 indicates that a journal deals primarily with political science topics, a value of 0.5 indicates that political science is a just one topic among others.

O4: Distribution of authors by subfield association