International Relations at the End: A Sociological Autopsy

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Abstract

Recent interventions suggest that the discipline of International Relations has moved beyond grand theories and debates towards mid-range theorizing and quantitative hypothesis testing. Whether as a result of great debates or of their end, scholars identify a pervasive fragmentation into insular camps. This article subjects these claims to a sociology of science analysis. It applies network analytical methods to dissect the structure and dividing lines of the discipline: its dominant camps, the relationship among them, and their relative role in the discipline. It identifies several citation camps, primarily delineated by theory, but also methods and subfields. The realist, liberal institutionalist and constructivist camps occupy a central role. All three 'isms' are identifiable as separate communities. But are also more closely intertwined and cross-contaminated than the fragmentation argument suggest. At the margins of the three isms, connecting via constructivism, we find three theoretical camps of post-structuralism, English School and neo-Marxist critical theory. Separate from the theoretical region are two camps of formal modeling, methods, and quantitative studies of inter- and intra-state conflict. Both grand theories and quantitative hypothesis-testing are among the most cited works in the discipline, but it is still the theoretical camps, the three isms in particular, that give International Relations its distinctive sociological structure.

Beginning at the End

The International Relations discipline seems to be in crisis.[1] Recent diagnoses suggest that if the discipline has not already come to an "end" (Sylvester 2007, 551; 2013, 609; Dunne, Hansen, and Wight 2013, 405), it has experienced three fundamental changes: First, the grand theories or 'isms'[2] that once constituted its intellectual core are in decline; Second, simplistic, methods-driven hypothesis testing has overtaken the discipline. To the extent the field still produces theory, it does so in the form of more eclectic, middle-range theorizing; Third, the discipline-wide 'great debates' that historically structured the field have waned, if not ended. Most recent surveys agree with these three trends, and that the discipline is experiencing growing fragmentation, but disagree on whether this is a result of the grand theories and debates or their waning.

Some argue that theory has always been the "lodestone" of the discipline. They therefore lament the lack of new grand theories, "big ideas" and "big questions." They complain of a focus on

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[2] The concept of 'isms' is used in various ways, but typically to refer to the three mainstream International Relations theories of realism, liberalism and constructivism.

quantitative hypothesis testing and mathematic modeling where technical prowess trumps theory (Cohen 2010, 888; Keohane 2008, 715; Mearsheimer and Walt 2013, 428; Nau 2011, 489; Rosenberg 2016, 127). They argue that the great debates between these theories actually integrated the field by giving it a history, identity and structure. The debates, conceived as a structured rivalry, resulted in a "polycentric oligarchy" that was more coherent than the cacophony of the current "fragmented adhocracy" (Oren 2016, 571; Wæver 2016, 311). From this perspective, the *end* of the great debates era structured by a few major isms, combined with the recent proliferation of minor theories and 'turns,' explains the current fragmentation into inward-looking theoretical "camps" that do not engage with each other (Sylvester 2007, 552; 2013, 610; Dunne, Hansen, and Wight 2013).

Critics claim that the grand 'isms' were always too esoteric, sectarian, non-cumulative, and stifling to intellectual progress and policy influence. They find more to like in the great 'beyond' and celebrate the turn towards mid-range theorizing focused on 'real-world' problems (Lake 2013, 573; Bennett 2013, 460-462) or at least a more conciliatory and eclectic pluralism among the isms (Sil and Katzenstein 2010, 2; 2011, 481; Ferguson 2015, 10). The see the great debates as pathological trench wars whose self-affirming sects simplified and reified opponents (Lake 2011, 467-470). Their diagnosis is that the discipline fragmented into insular camps *due* to the great debates and grand theories, not their waning.

The debate over the 'End of International Relations theory', camps, and fragmentation has been conducted mostly by senior scholars based on personal experience (for some reactions, see Berenskoetter 2012; Jackson and Nexon 2012; Kristensen 2016; Colgan 2016). I take a different approach. I use sociology of science theory and scientometric data to study the sociological anatomy of International Relations 'at the end': Have grand theories and isms loosened their grip on the structure of the discipline? What is the relative balance between theories and quantitative hypothesis testing work? Is International Relations segregated into distinct camps and, if so, how are they delineated (for example by empirical topic, methodology, epistemology, mid-range or grand theoretical standpoint)? To what extent are these inward-looking camps that do not engage each other, or do we see pathways between the different campfires? Is potential fragmentation driven by the isms/debates or by quantitative hypothesis testing? I subject these questions to a co-citation analysis that visualizes communicative networks in the discipline. I present data on what type of work gets highly cited—for example, theory-building or quantitative hypothesis testing work—but also their respective role in the disciplinary network; for instance, is one type of work more central to the structure of the discipline and/or do we see camp formation around either?

The article proceeds in four sections. The first introduces citation analysis as a method to study 'End of International Relations' arguments and presents the data and network visualization. The second section presents a theoretical framework to interpret citation practices. The third analyzes the disciplinary citation network with a focus on the three main 'End of International Relations' themes: the end of theory, the rise of quantitative hypothesis testing and the wider fragmentation thesis. The final section discusses the implications for sociological, professional, and evaluative uses of citation analysis.

Method

How can we subject claims in the 'End of International Relations theory' debate to empirical and sociological analysis? The sociology of the discipline employs various methods to study structures and divides, but three main strands stand out. The first studies the 'taught discipline' through syllabi and textbooks (Holsti 1985; Hagmann and Biersteker 2014; Matthews and Callaway 2015; Colgan 2016). This is a useful way to examine what is assigned (presumably read) and thus disciplines

students. It is less suitable for the present purpose, namely, to study the sociological role of grand theories and debates in *research*. A second uses surveys to study the subjective self-perceptions of scholars (notably the TRIP survey, Maliniak, Peterson, and Tierney 2012; Hamati-Ataya 2011). This yields important insights into the role of isms and theoretical divides, but nonetheless hinges on what scholars (that participate in the survey) *say* they do. The third and most prevalent method has been bibliometric studies of journal publications (Goldmann 1995; Wæver 1998; Aydinli and Mathews 2000; Breuning, Bredehoft, and Walton 2005; Kristensen 2015; Turton 2016; Maliniak, Oakes, Peterson, and Tierney 2011 and the TRIP journal project).

The justification for studying the published, rather than taught or perceived, discipline is often that journals publications provide a better and more direct indicator of disciplinarity because they sanction what counts as 'real' International Relations and gets circulated in the wider disciplinary network (Wæver 1998, 697; Goldmann 1995, 247). Furthermore, journal publication increasingly affects material payoffs, promotions and even careers in the political economy of modern science. This is not to say that International Relations is only what makes it into journals. Books, policy reports, rejected/unsubmitted papers are important products too, as are practices other than writing, such as teaching, supervision, field-working, conferencing, policy advice and so on. But journals do provide a useful entry point to examine the arguments about changes in the way *research* in the discipline is structured—the relative role of grand theory and quantitative hypothesis testing, the decline in great debates, fragmentation, and camp formation—that are at stake in the 'End of International Relations' debate.

The bibliometric sociology of the discipline has recently turned to citation analysis. Several studies examine the biases of citation practice: do citations go to the best articles or is citation affected by factors not related to quality, such as author characteristics (especially gender), journal outlet or institutional base (Mathews and Andersen 2001; Maliniak, Powers, and Walter 2013; Mitchell, Lange and Brus 2013; Østby, Strand, Nordås and Gleditsh 2013). More relevant to the 'End of International Relations' debate is the line of research that uses citation network analysis to study the communication patterns, intellectual divides and subfield formation (Soreanu and Hudson 2008; Russett and Arnold 2010; Sillanpää and Koivula 2010; Kristensen 2012). Following the latter, this article argues that citation analysis (the 'endnotes of International Relations') can provide insights into the sociological structures of integration and fragmentation in the discipline (the so-called 'End of International Relations'). Citation network analysis not only allows us to study what the main camps are, but also their relational position in the discipline.

Specifically, this article dissects the sociological structure of International Relations using *author co-citation analysis*: the frequencies with which the most cited authors co-occur in bibliographies. Author co-citation analysis provides a method for "visualizing a discipline" through its intellectual subfields and groupings, usually known as specialties, and the relationship and possible balkanization among them (White and McCain 1998, 327). Author co-citation analysis takes *cited authors* as its unit of analysis based on the assumption that a discipline can be mapped sociologically through its most cited individual scholars (as opposed to journals or works). It provides insights into the broader structure of disciplines by examining how these most cited authors are cited together (or not) in a large number of articles. It acknowledges, of course, that authors can be co-cited for various reasons in the individual citing paper. Perhaps they are cited in entirely different contexts and parts of the paper. But the assumption is that when different scholars repeatedly co-cite two authors, we have reason to believe that these two authors have some association and proximity (White 2004, 93). Author co-citation analysis allows us to study the 'End of International Relations' arguments as it examines both *what* kinds of authors are most highly cited (for example, theorists or quantitative hypothesis testers) and *how* they are cited in relation to each other (notably whether they cluster in camps). The latter provides a novel way to study the

camp thesis because it allows the analyst to examine both camp formation (what authors are often cited together), divides (what authors are rarely cited together) and pathways among camps (what authors are highly cited in-between communities).

Data

The author citation data is derived from the bibliographies of research articles published in 106 journals in the Web of Science 'International Relations' subject category from 2011 to 2015. This yields a dataset of 712,406 citations to 245,636 different authors. The data operations are discussed below in terms of temporal, disciplinary and geographical-linguistic delineations, source limitations and author-level operations.

Temporal delineations: I use a five-year interval to neutralize potential fluctuations, for example, from special issues. The specific interval (2011-2015) aims to give a recent picture of the discipline that covers the period in which several authors have identified substantial changes—with the 'End of International Relations' debate culminating around 2012-2013. If we consider the time lag of publication, the interval arguably captures research articles authored 2009-2013. The analysis is thus oriented towards the recent past and obviously does not capture future directions of the discipline.

Disciplinary delineations: The Web of Science provides high quality, easily retrievable citation data, but also has limitations. One concerns the disciplinary delineation of its 'International Relations' category. The composition of journals and criteria for inclusion are not transparent. The database generally covers fewer and more 'mainstream' journals than other databases. This is methodologically problematic if mainstream citation practice differs markedly from non-mainstream citation practice. There are no such indications in the existing literature, although this may be the case for non-mainstream journals like the *Journal of Narrative Politics* that promote a different style of writing and thus citing. Conversely, others may view the database as too inclusive as it includes interdisciplinary journals from area studies, international law and international economics. Any selection of journals will be contestable and the solution here is fairly pragmatic: As I only study the most cited authors within these 106 journals, what some would see as important dissidence at the margins of the discipline and others as extra-disciplinary noise will often be excluded or placed at the margins of the network. The result will, by definition, be a study of mainstream International Relations.

Geographical-linguistic delineations: Its journals are mainly Anglophone and Euro-American based (notwithstanding recent additions like *Chinese Journal of International Politics* and *Revista Brasileira de Politica Internacional*). This not only perpetuates Western hegemony in the discipline—the assumption that 'Western International Relations' *is* 'International Relations' is certainly problematic enough in itself—but may also affect results insofar as 'Western' writing and citation style differs from that practiced elsewhere. Whether this is actually the case is also a separate question that requires treatment on its own. For now, suffice to say that whenever I refer to 'International Relations' or 'the discipline', I actually mean 'the citation practice in the 106, mostly Western, mainstream journals indexed in the Web of Science' but I am trying to save some words.

Citation sources: Another limitation is that citation databases are asymmetrical in terms of citing and cited sources. They index citations *from* journals to a variety of other sources, including books, but exclude citations *from* books (Donovan 2009, 75). This is an important limitation because books are highly cited, especially in International Relations, and remain a central mode of communication despite a publish-or-perish culture that incentivizes journal publication (Samuels 2013, 785; Sharman and Weaver 2013, 125). Again, this potentially affects results *if* book citation practice differs markedly from journal citation practice. There is no direct evidence of this either,

but studies do show that books more often than articles present qualitative, theory-building or policy-oriented work (cf. Samuels 2011, 784; Sharman and Weaver 2013, 124). So it is plausible that books also cite those types of research more. The use of only journal-based citations thus risks *downplaying* the role this type of research plays in the discipline.

Author-level Operations: Author co-citation analysis assumes the communicative-sociological structures of a discipline can be visualized through aggregated relationships among its *most cited* authors. Needless to say, to look only at most cited authors is to exclude hundreds of thousands of less-cited authors who publish creative and quality research.[3] Almost a quarter million authors are cited in this dataset, however, so it is necessary to set a threshold for inclusion both for computational reasons and to produce a parsimonious, readable network. Another reason why I operate with a threshold is that the author data requires time-consuming manual standardization: I have disaggregated *homonyms* (when different authors appear under the same name) to avoid overstating their citation count and combined *allonyms* (when one author appears under several names) to avoid understating it (White 2004, 102), but only for authors that meet or are close to meeting the threshold. Specifically, authors that attract more than 0.02% of all citations (368 authors). Author co-citation analysis conglomerates *all the works* of these most cited authors into a singular cited author-point. Following classic author co-citation, the analysis defines these authors' oeuvres as their *first-authored* documents. This methodological choice, both a result of tradition and data availability as the database codes only the first-authors of cited references, has less impact in disciplines with relatively low levels of co-authorship (Zhao and Strotmann 2008, 230). It does, however, introduce a bias towards single-authored types of work (arguably theorizing), even in disciplines with low co-authorship like the social sciences, and an alphabetical bias in disciplines that list co-authorship alphabetically. Read the network and its camps keeping in mind that authors appear and are positioned based on citations to first-authored work only.

In order to interpret the position of authors, the analysis below also looks at the individual works for which they are cited. Authors cited primarily for one or several works marked by a consistent empirical focus, research question, methodology and theoretical perspective will have a fairly stable position in the network. Whereas authors cited for a diverse oeuvre or whose work is used for positioning by several camps may shift camps depending on the specific threshold values (more on this below). Reading the entire oeuvre of 368 authors would take the better part of an academic career and therefore I restrict the analysis to the most cited works.

Network Visualization

In the network visualization below, these most cited first-authors appear as nodes and their co-citations as the links that tie them together (or not). Next step is therefore to construct a co-citation matrix among these 368 authors based on their co-occurrences in bibliographies. The co-citation links between any two cited authors in the matrix are *undirected*. That is, unlike normal citations, which have a direction (from a citing author to a cited author), co-citation links have no direction but are the result of two cited authors often co-occurring in the bibliographies of a number of International Relations articles. Arendt and Morgenthau or Schmitt and Agamben are therefore connected because the authors of International Relations articles frequently co-cite them, not because they cite each other. I use the freeware program BibAuth to construct the matrix and normalize co-citation links using the cosine as a similarity measure (Leydesdorff 2017).

Given that most of these authors co-occur in at least one bibliography in the dataset (their co-citation score is almost never zero), the resulting network consists of a total of 47810 co-citation

[3] Note also that I exclude institutional authors (IOs, NGOs, government agencies and political leaders) because they are not comparable to individual academic authors and only loosely connected in the network.

links among the 368 authors. This is virtually impossible to read and it is therefore necessary to set a threshold for the strength of co-citation links. The visualization below removes the weakest of these links to reduce network density, emphasize strong co-citation links, and make substructures more visible. I set the threshold value (cosine > 0.15) pragmatically, so as to emphasize strong links but also avoid that too many weakly connected nodes detach from the network. At this threshold, 36 nodes disconnect from the main network because they only have weak connections to its authors.[4]

To test the camp thesis, I use a community detection algorithm. Community detection algorithms are useful for analyzing the topology of a network, namely the degree to which it can be partitioned into distinct communities or modules—its modularity. The global modularity value (-1 to 1) measures how 'campified' a network is; networks with a high modularity contain tightly knit and separated communities, while networks with low modularity contain weakly connected and more overlapping communities, if communities are identifiable at all. Community detection algorithms work by optimizing these structures of locally dense (high density of internal links) but globally separate clusters (few external links to other clusters). This allows us to inductively study the camp thesis: whether there are groups of authors that are often cited with other authors around their own campfire, but rarely cited with authors from other campfires. What these camps then signify—what unifies them within and separates them from others—depends on how we interpret their connections. And more broadly, how we interpret citations (more in the following section).

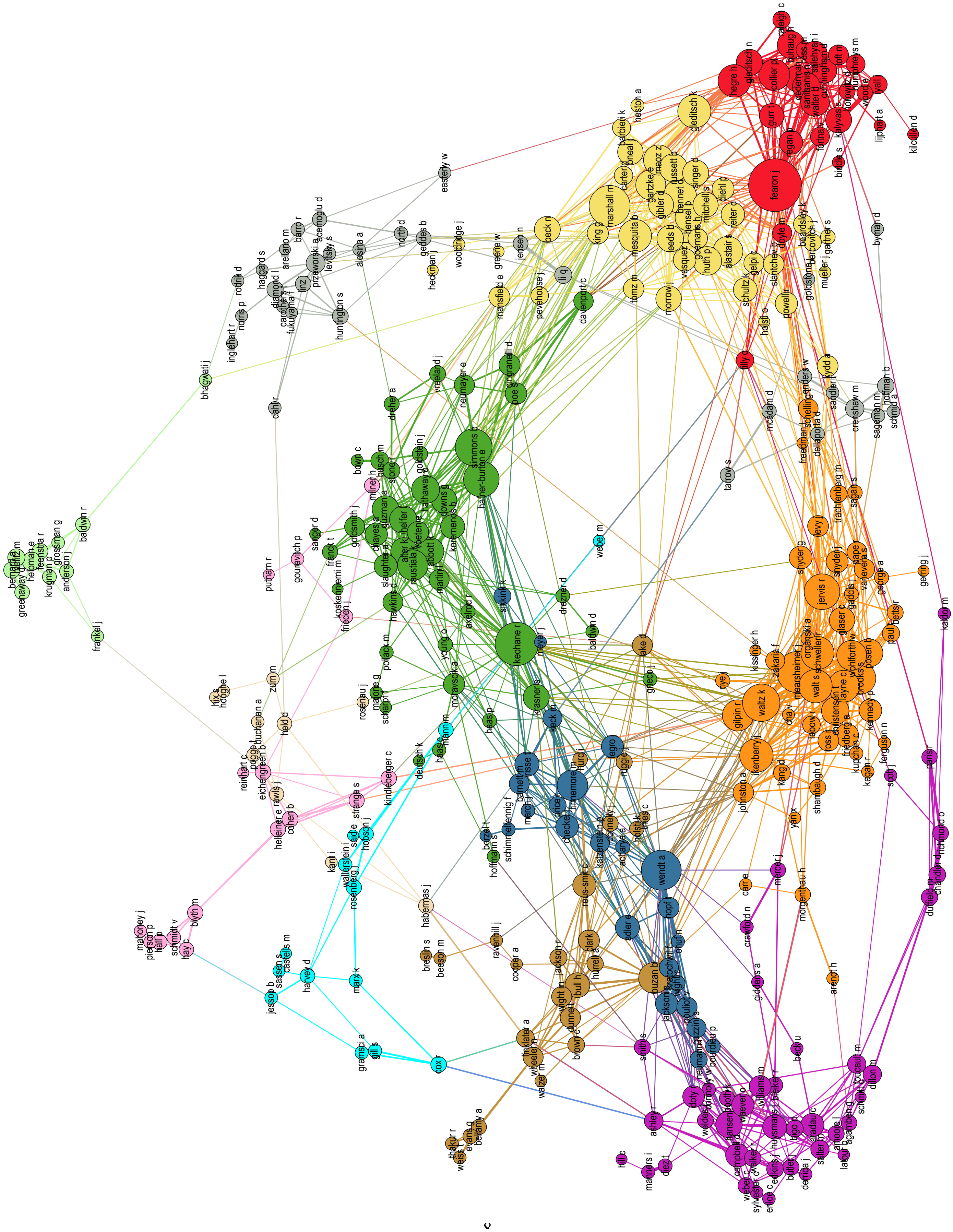
The problem of optimal partitioning of large networks into sub-communities is computationally intractable and scholars have proposed numerous methods for its solution (Blondel et al. 2008, 2). I use the Louvain algorithm, which is a time-efficient way to detect high modularity communities in large networks. It is standard software in most network analytical programs and one of the most widely used modularity maximization methods, for example, in a recent similar study in International Political Economy (Seabrooke and Young 2017, 305). The Louvain algorithm detects communities in two iterative phases. It starts with a partition where every node is its own community. For each node *i* and its neighbor *j,* the algorithm considers the gain in modularity by placing *i* in the community of *j*. It iteratively optimizes these local communities until it cannot improve modularity further. Second, it builds a new network where the communities detected in the first phase constitute the nodes. It then applies the first phase to the new network in order to decrease the number of meta-communities. The algorithm iterates this process until there are no more changes and it reaches maximum modularity (Blondel et al. 2008, 4-5).

Given the threshold values above, the algorithm inductively detects 12 communities, indicated by different colors, ranging in size from 10 to 46 nodes. This results in a modularity value of 0.701. The clustering algorithm is sensitive to other parameter choices. At different threshold values, for example, some nodes located in-between different clusters will shift cluster (David Lake is one example) and some clusters will (dis)integrate (for example, the trade cluster will integrate with International Political Economy and the Political Theory cluster with the English School). The overall community structure is more robust, however. In the most complex network with no threshold for co-citation links, the algorithm identifies a similar clustering as below, but collapses some clusters (for example, intra-state and inter-state conflict collapse into a broad quantitative conflict cluster and constructivism, English School, post-structuralism and critical theory collapse into a broader constructivist/post-positivist cluster).

[4] A 0.2 threshold produced a too sparse network, as 97 nodes disconnect (from Kissinger and Carr to Nye and Rosenau) while a 0.1 threshold remained dense as only a marine policy cluster (Berkes, Halpern, Hilborn, Jentoft, Ostrom, Pauly, Pomery, Worm) and one additional node (Hans Kristensen) disconnect. At the 0.15 threshold the most weakly connected nodes that disconnect entirely are the 9 above and Allison, Anderson, Avant, Bates, Beck, Crook, Elster, Evans, Fama, Galtung, Hirschman, Howse, Jackson, Johnson, Jones, Kahler, Kaplan, Kaufmann, Laporta, Olson, Pauwelyn, Richard, Scholte, Sen, Stiglitz, Tsebelis, Wade.

Finally, I use the Force-Atlas layout algorithm in Gephi to position often co-cited authors close to each other and less often co-cited authors further apart in the visualization. Force-Atlas is a force-directed algorithm that causes unrelated nodes to repulse each other and related nodes to attract. It is a slower but more accurate layout algorithm with individual settings of repulsion, attraction and gravity that allow for an aesthetically pleasing visualization (Cherven 2015, 72). After the initial arrangement with Force-Atlas (using preset settings), nodes are rearranged to prevent label overlaps and the peripheral trade cluster was moved slightly to the center to fit the figure to print. There are also a number of ways to visualize the centrality of cited authors, touched upon below, but in this visualization their centrality is measured by the number of strong co-citation links to other authors in the network at the given threshold (weighted degree centrality). This results in the co-citation network visualized in figure 1.

Figure 1. A disciplinary co-citation map



The inductive detection of different communities confirms that citation practice is indeed organized into distinguishable camps that are most densely connected internally and less so to each other. Although the communities of most cited authors have some face validity, it can be difficult even for experienced scholars to interpret the network, particularly considering the ambiguity of citation practice. Citation practice can be motivated by giving credit (positive or negative), referring to operational information, alerting readers to background readings ("see also"), outlining the social consensus in the field to positioning, declaring allegiance and even rhetorical persuasion of audiences (reviewers and editors) (Brooks 1986, 35). We therefore need a more nuanced theoretical framework to interpret citation practice if we are to grasp the significance of the highly cited authors that make up the nodes, the co-citations that connect them, and the resulting co-citation camps. For this, I turn to the sociology of science.

Sociological Theories of Citation Practice

What is a citation and why do we cite? The sociology of science operates with a distinction between *normative* and *constructivist* theories of citation practice (Cozzens 1989; MacRoberts and MacRoberts 1996; Luukkonen 1997; Baldi 1998; White 2004), sometimes with a *symbolic* middle ground (Small 1978, 1998, 2004; Cozzens 1981). In their ideal-typical forms these theories interpret highly cited authors as: 1) high quality scholars rewarded for their contributions to the field (normative theory); 2) famous identity markers with high symbolic capital (symbolic theory); 3) the most useful persuasive devices in the defense of knowledge claims (constructivist theory). In the following, I develop an interpretive framework for analyzing the citation network based on these three theories.

Normative Theory: Citing as Rewarding

The normative theory associated with Robert Merton assumes that scholars cite to give due credit to relevant work they draw upon (Merton 1957, 646). Mertonian sociology of science interprets citations as part of the institutionalized reward system of science that allocates recognition to the best and most important past publications (the Newtonian aphorism of 'standing on the shoulders of giants') (Merton 1942, 275). The theoretical premise of this reward system is that, unlike other properties, scholars give away ideational property for free in scholarly publications. They do so, not out of altruism, but to claim ownership over them and receive recognition for them (Merton 1942, 273–75, 1957, 639–40; Hagstrom 1965, 13). From the citer's perspective, the citation both records one's debt and partially repays it. Citations accumulate as the discipline with its cumulative debt to previous ideas progresses. If some authors, journals, institutions and nations are more cited than others, this is because subsequent research stands on their shoulders. Mertonians expect such highly published and cited authors to publish even more articles and attract even more citations, which again amplifies stratification patterns (Merton 1968b, 58). This stratification, known as the Mathew Effect, is driven by quality, or at least importance, usefulness or interestingness.

That said, normative theorists acknowledge that factors not directly related to the quality of a paper, such as the reputation of the cited author, cited journal or cited author's institution ('halo effect'), can affect citation practice (Cole and Cole 1973, 221). They also recognize that dysfunctional citation practices can compromise the validity of using citations as indicators of quality and cognitive structure. For example, *over*-recognition through excessive self-citation or friend-citation (Kaplan 1965, 181–82), citation sprinkling where cites function mainly as post-hoc decorations, like Greek columns on Washington buildings (Price 1986, 78) and *under*-recognition resulting from "cryptomnesia" (unconscious plagiarism) or "obliteration by incorporation" (ideas

become so commonsensical that citation of the original work is deemed unnecessary) (Merton 1968a, 35; Garfield 1975, 396–98). These dysfunctionalities are exceptions to the norm, however, and normative theorists hold that only merit and quality *should* be the basis of citation. Particularistic considerations based on gender, social, national, cultural origins, cronyism, personal gain, status and reputation should be minimized, even punished.

To summarize, normative theory expects highly cited authors are those most rewarded for the intrinsic quality of their work. Following from this, it hypothesizes that such authors are often co-cited with other high-quality authors and works with whom it has a *substantive cognitive relation*: that is, that have contributed to the same area of research. Potential co-citation communities are thus interpreted as substantive-empirical subfields or specialties whose members are cognitively connected.

Symbolic Theory: Citing as Positioning

The symbolic theory occupies a middle ground. Here citing is neither pure reward to cited authors, nor pure persuasion device for citing authors, but a symbolic identity marker for position-taking. The symbolic theory, developed by bibliometrician Henry Small, is less connected to one theory in the sociology of science but benefits from a dialogue with that of Pierre Bourdieu. Although Bourdieu was not a bibliometrician, his mapping of French academia in *Homo Academicus* actually used citations in the Social Science Citation Index as one of the most "objectified of indices of symbolic capital" (Bourdieu 1988, 76). The symbolic theory thus interprets citation practice, like all other scientific practices, as a form of position-taking in the struggle for "prestige, recognition, fame" in the academic field (Bourdieu 1975, 21). If we accept that academics struggle to make names for themselves and that citations constitute an objectified form of symbolic capital, it follows that citations must go to scholars recognized *for something*: highly cited authors must symbolize certain ideas or positions.

Henry Small (1978) elaborated such a symbolic theory of citations as "concept-symbols". That is, a shorthand for a specific argument, theory, method or school (or perhaps 'ism'). Some citations are standard concept-symbols for most scholars in a field, while others are more specialized concept-symbols (Small 1978, 328–29). David Lake exemplifies some of the most standardized concept-symbols in International Relations when he notes that "citing 'Waltz 1979,' 'Keohane 1984,' or 'Wendt 1999,' for instance, carries a world of meaning to sophisticates who have learned the research traditions. These canonical works serve a useful purpose by orienting debates within the field. [But, he laments] these iconic works are themselves reified, with meanings attributed to them that the author may not have intended." (Lake 2011, 468). This is exactly the point from a symbolic perspective. Texts contain a multitude of arguments so what concept a specific text comes to symbolize is a product of social use, not intrinsic qualities. In other words, it was not evident from the intrinsic qualities of "Waltz 1979" that it would become the concept-symbol of "neorealism", a label given to the position later by critics. Or that "Wendt 1992" and "Wendt 1999" would become the main concept-symbol of "constructivism"—a term used by Onuf and Kratochwil before Wendt. Citing authors may deploy such concept-symbols positively or negatively, substantively or ritualistically when they make their argument and stake out their position in the field (Small 1998, 2004). The interesting question is not whether symbolic citations are correct or distorted interpretations of the cited text (Small 1978, 338), but how citing authors who use cited documents as concept-symbols both recognize their debt to the cited text *and* ascribe their own meaning to it (Small 2004, 76).

In sum, symbolic theory expects that highly cited authors represent a certain concept-symbol or position. As for co-citation communities, it expects that such authors are often co-cited with

other authors who represent a similar position—in a co-citation community indicating camp affiliation—but also juxtaposed to other camps/isms against which its symbolic identity is constituted. That is, some 'positional' authors will be co-cited with other authors that are very different in terms of both substantive focus or position in the discipline.

Constructivist Theory: Citing as Persuasion

The constructivist theory associated with Bruno Latour (1987) represents the starkest contrast to normative Mertonian theory (Luukkonen 1997). Unlike normative theorists whose concern is mainly with the character of the *cited text*, constructivists focus on the persuasiveness of the *citing* text and expect that you "Do whatever you need to the former literature to render it as helpful as possible for the claims you are going to make." (Latour 1987, 37–38). Constructivists analyze citation practice through a *realpolitik* lens. Citers are academic combatants searching for political advantage, alliances and defensive shields to protect their knowledge claims from attack: "The rules are simple enough: weaken your enemies, paralyse those you cannot weaken, help your allies if they are attacked, ensure safe communications with those who supply you with indisputable instruments, oblige your enemies to fight one another; if you are not sure of winning, be humble and understated." (Latour 1987, 37–38). One important way to enroll allies for your argument is to cite an "argument from authority" (respected authors, journals, institutions).

The constructivist theory was originally formulated by Gilbert (1977, 115-118) as the "referencing as persuasion" hypothesis. It expects that scholars cite papers and authors their audience finds persuasive, not necessarily that they reward the best, most relevant work. Authors may even cite famous texts and authors to "shine in their reflected glory even if they do not seem closely related to the substantive content" (Gilbert 1977, 116). Citations also serve to demonstrate novelty and up-to-dateness (Gilbert 1977, 116). For example, in literature reviews that "(re)construct the *prior stage* and *direction* of an exchange in which it inserts itself" (Knorr-Cetina 1981, 111–12) and re-contextualize the cited literature so as to open up 'gaps' that legitimize the contribution of the citing text: "Nowhere has anyone attempted…In this article I aim to do just that" (Harwood 2005, 1207).

Citation and co-citation tells us little about substantive, qualitative or cognitive relations as texts may be cited for reasons different than intended, for opposite arguments than intended, for irrelevant details, without being read, out of courtesy and so on (Edge 1979, 111–12). As Latour puts it, "many references may be misquoted or wrong; second, many of the articles alluded to might have no bearing whatsoever on the claim and might be there just for display; third, other citations might be present but only because they are always present in the author's articles, whatever his claim, to mark affiliation and show with which group of scientists he identifies – these citations are called perfunctory." (Latour 1987, 33–34). Constructivist theorists therefore expect, and have found empirically, that persuasive citation is biased towards big names while contributions of ordinary scholars often go unrecognized, that papers regularly fail to cite their influences, consciously ignore obvious references but *do* cite, miscite and misrepresent texts that were neither read nor influential on the paper, and that persuasion dominates over other citer motivations (Brooks 1986; MacRoberts and MacRoberts 1986; 1996).

Overall, constructivist citation theory expects that highly cited authors are those who are most persuasive due to high social status, rank, institutional prominence and general academic fame. In terms of co-citation, it expects that such authors are often co-cited along with other high status authors, some of whom may be irrelevant 'big names' without any obvious cognitive connection to the paper, and rarely co-cited with works by low-profile authors based at lesser-known institutions whose work may be substantively more relevant. Co-citation communities are interpreted as 'co-

persuasiveness' communities: clusters of 'big name' references that are persuasive when co-cited. The specific names will differ depending on which camp (journal, readers, reviewers and editors) you aim to persuade.

Dissecting International Relations

As we return to the citation network and its camps, keep in mind that these three theories present different, but not always mutually exclusive, interpretations of why certain authors are highly cited and why they cluster in co-citation communities. Different citing papers may cite the same author or community of authors according to all three theories. Indeed, the same paper may engage in all three types of citation practice. The problem is not only that negative or perfunctory citation practices exist alongside rewarding citation practice, but that it is ultimately very difficult to pigeonhole whether the authorial intention of a given citation is one or the other (Cozzens 1981, 20; Luukkonen 1997, 32; Baldi 1998, 833; White 2004, 97; Riviera 2015, 1179). The indeterminacy of citation practice makes it difficult to adjudicate which one theory best explains a certain co-citation community. However, the fact International Relations scholars may cite authors and works both normatively, constructively and symbolically does not prevent us from treating citation practice analytically. In the following, the three theories therefore function as heuristic devices that present distinct interpretations of the citation network and its camps. The aim is not to test the theories against each other but to arrive at a more theoretically informed analysis of International Relations and its citation camps.

First, I use the normative theory to emphasize substantive-cognitive connections. Particularly in the right and upper part of the network, it interprets camps formations as specific empirical subfields: two large camps focused on intra-state (red) and inter-state war (yellow) and smaller or more peripheral subfield clusters on development and terrorism (grey), international political economy (pink), trade (lime), and normative/political theory (beige). Moving towards the left, we find camps focused mostly on international organization and law (green) and international security (orange but also purple).

Second, I use the symbolic theory to read the camps in the network as organized around concept-symbols used for scholarly position-taking and ism affiliation, both within and between camps. Some scholars may intuitively recognize the theoretical or paradigmatic positions on the left-hand side as the three major American 'isms' realism (orange), liberalism (green), constructivism (blue) in the center, connecting to the English School (brown), post-structuralism and critical security studies (purple), and neo-Marxism (cyan) in the left-most periphery. Ism affiliation often overlaps with substantive, empirical division of labor (for example, security, norms, institutions, order, non-traditional security threats) and is thus compatible with normative interpretations. So if two realists have made important contributions to the study of alliance behavior, their recurrent co-citation can be a product of both their ism affiliation (symbolic) and empirical substance (normative). Note also that the theoretical camps are not always internally homogenous. Within each, the trained eye can identify more camp specific concept-symbols such as 'power transition theory' or 'Paris School'.

Third, I use constructivist theory to stress that clustering may neither be a product of substantive intellectual connections or conscious sociological position-taking, but simply due to perfunctory referencing of the same socially prominent authors, mostly white men at prominent Euro-American institutions, we sprinkle over our articles. Only the 'big names' differ depending on whether you aim to persuade the reviewers, editors and readers of *International Security, Journal of Peace Research* or *Millennium*, which explains the clustering from a constructivist perspective. The constructivist interpretations below therefore look more deeply into the citing side, analyzing

whether some clusters and authors are more persuasive to specific audiences and journals.

My aim, as mentioned above, is not to adjudicate between the three theories or to determine whether some camps are more symbolic, normative or constructivist than others, but to use them to examine the network in the context of the main diagnoses in the 'End of International Relations' debate: (1) grand theories and isms have lost their influence; (2) quantitative hypothesis testing has overtaken the discipline; (3) the great debates have ended and the discipline has fragmented (whether as a result of the debates or their end). I therefore structure the analysis in three corresponding sections: The first guides the reader briefly through the theoretically oriented camps. The second looks at the more quantitative and method-oriented camps. The third zooms out to look at overall divides and debate lines. Readers interested in a more detailed discussion of the camps, specific authors and more citation data can consult the online appendix.

The End of Grand Theories and Isms?

Our first cut into the 'end of grand theory' debacle reveals that we are performing a vivisection, not an autopsy.[5] The grand theoretical isms are still alive. They dominate the network and structure much of its camp formation. From the perspective of symbolic citation theory, not only are major concept-symbols of the three 'isms' from the paradigm wars (realism, liberalism and constructivism) present, they are even identifiable as distinct co-citation clusters. Together, the three camps occupy a theoretical center structured both by the tripartite relational-oppositional structure between isms, as well as distinct sub-positions within them. Mainstream American International Relations theory indeed constitutes the "lodestone" of the field (Mearsheimer and Walt 2013, 428). This American theoretical center connects to more European theory towards the left-hand side: the English School, normative/political theory, neo-Marxist critical theory, and post-structuralism and critical security theory. More substantively defined research specialties like international political economy, security, EU, institutions, or peace building do overlap with some theoretical clusters, but are also divided and found within several theoretical clusters. We find security studies, for instance, divided both into traditional-realist (orange cluster) and critical security studies (pink cluster). Similarly, we find authors associated with International Political Economy both in a separate International Political Economy cluster as well as in realist, liberal and neo-Marxist camps. We find EU studies in both the liberal institutionalist, constructivist and governance clusters, and so on.

All this supports the argument that *theory* structures the discipline. At least when we look at consumption rather than production. The current evidence cannot decisively determine whether International Relations scholars cite authors in the theoretical camps primarily because they subject them to hypothesis testing or because innovative theory within each camp is being generated. But there are indications pointing towards the latter: the fact that theoretical camps are separate from the right-most camps—which contain what some have derisively dubbed 'simplistic hypothesis testing' driven by quantitative data and methods—points towards the existence of a relatively 'pure' theoretical discourse. Furthermore, the fact that sub-positions within each theoretical camp are highly co-cited indicates dynamism within. The following sections look briefly into each theory camp from the perspective of the three citation theories.

Realism

'Realism' is the largest camp in terms of authors and citations. The normative interpretation of this

[5] I thank Cullen Hendrix for the alternative metaphor.

clustering is that most of these authors share broad ontological assumptions (for example, a focus on power politics among rational states under anarchy) and a relatively unified empirical focus on security and conflict: moving from great power politics, rising powers, polarity and balancing behavior in the left towards military strategy, coercive diplomacy, and deterrence in right. Further supporting a normative interpretation is the group of authors in the left with a substantive focus on Asian geopolitics and rising powers, particularly China. However, the cluster is far from unified when it comes to methodological, meta-theoretical and even theoretical stance: it ranges from classical realists stressing judgment and statesmanship in the left through neorealists using mostly qualitative case studies towards non-cooperative game theory. The latter connects to more mathematized formal models in bordering clusters. Moreover, the realist camp is not the only cluster committed to security and conflict studies. Quantitative and formal studies of inter/intra-state war as well as critical security studies do so too. So the normative theory alone cannot explain the camp formation.

The symbolic theory provides a plausible interpretation: citers often use these authors together as they stake out their general position and 'ism' affiliation. There are two dimensions of this positioning: camp-external and -internal. Externally, some of the most cited realist authors such as Waltz, Mearsheimer, Gilpin and Morgenthau are also those most often co-cited with other theory clusters such as liberalism and constructivism. Unlike the normative theory, which takes this as an indication that they are substantively more 'like' liberalism or constructivism, the symbolic theory takes it to imply they are more useful for external positioning against 'liberals' and 'constructivists'. More so than other less cited 'realists' like, say, Paul, Van Evera and Organski who have no strong connections to other camps and are more strongly embedded within a specific neighborhood (higher clustering coefficient).[6] We also find realist-constructivist or realist-liberal hybrids, and even critics of realism, in the area near liberalism and constructivism (Nye, Ikenberry and Johnston are among the most cited 'realists'). This also suggests that these are used for *inter*-paradigmatic position-taking. As for internal position-taking, realist authors are also cited together because they represent different intra-realist positions useful for relational position-taking within the camp. Many of these authors are concept-symbols of 'sub-realisms' ranging from discipline-wide ones like "classical realism" (Morgenthau), "neorealism" (Waltz), "offensive realism" (Mearsheimer) and "balance of threat" theory (Walt) that are connected to other camps, to more camp-specific ones like "power transition theory" (Organski), "soft balancing" (Paul) and "offense-defense balance" (Van Evera).

Finally, from a citation-constructivist perspective, note that the realist community is dominated by male American scholars, mostly based in the Northeast United States. Generally, this area of the network will be useful for persuading reviewers and readers of journals like *International Security* and *Security Studies*, the two journals that cite these authors the most, as well as a broad range of security and strategic studies journals.

Liberalism

'Liberalism' constitutes the second largest camp. From a normative perspective, a broad rationalist theoretical commitment and substantive empirical focus on cooperation, integration and institutionalization unifies this camp. There is an overall empirical division of labor running from institutions regulating inter-state relations in the left (trade, monetary, security, environment) towards institutions regulating domestic affairs in the right (human rights, democracy, governance). Like realism, there is a methodological divide between 'grand' liberal theoretical statements in the left towards more empirical-quantitative tests of liberal hypotheses on human rights, cooperation,

[6] Clustering coefficient measures how complete the neighborhood of a node is. If node x has a high coefficient this indicates that many of its neighbors are also connected to each other.

economic development, political institutions, inter/intra-state conflict in the right.

The symbolic theory again emphasizes internal and external positionality. Externally, this camp connects to realism primarily via the highly cited concept-symbol of 'neoliberal institutionalism' (Keohane) and other 'regime theorists' that theorize cooperation under anarchy (Krasner, Drezner and Young are among the most cited). This makes sense symbolically as these are positions in-between realism and liberalism, but also normatively due to their focus on the impact of powerful states and different distributions of power on cooperation and institutionalization. Further into the dense core of the cluster, away from the other isms, citers position institutionalists focusing on the rational design of formal international organizations, the dynamics of regime complexity and shifting, and a more cluster-specific debate on commitment and compliance problems in international law. Cited authors in this area tend to have few connections to other camps and a higher clustering coefficient, indicating that they are more specialized. Citers also position a specialized EU studies discourse in the upper-left periphery, which points to a sub-subfield-like empirical division of labor along the lines of normative citation practice. But from a symbolic perspective, note that these authors are concept-symbols of *different* positions—from "liberal intergovernmentalism" (Moravcsik), "neofunctionalism" (Haas), "transactionalism" (Deutsch) to "intergovernmentalism" (Hoffmann)—that are useful for position-taking in EU studies discourse.

From a citation-constructivist perspective, the cited authors in the liberal camp are also mostly US-based, but there are more women than in realism. They receive most citations in journals like *International Organization* and *International Studies Quarterly*, and will also be persuasive 'big names' in EU and international law journals.

Constructivism

The constructivist camp is smaller, more dispersed and inter-connected than the two other isms. From a normative perspective, there is little substantive-empirical homogeneity. The closest is arguably norms constructivism on the right-hand side, which often focuses on liberal-progressive norms within human rights, environment, and laws of war. Even theoretically and epistemologically, this cluster is quite diverse and constitutes a 'middle ground' position in International Relations theory.

In the symbolic interpretation, constructivism centers on its most cited concept-symbol, Wendt, but is also highly connected to other positions such as neoliberal institutionalism, realism, English school and post-structuralism. Constructivism provides a middle ground position between rationalism/positivism and reflectivism/post-positivism and is therefore more dispersed, even split in two on each side of Wendt. Citers generally position mainstream ('modernist', 'liberal', 'thin', 'conventional') constructivism towards the right, closest to neoliberal-rational institutionalism with which it shares a positivist epistemology but diverges ontologically by theorizing the causal power of ideas and norms. We therefore find constructivist works drawing on sociological institutionalism closely co-cited with neoliberal institutionalism and regime theory. This makes sense symbolically as the 'logics of appropriateness' and 'arguing' are different from the rationalist 'logic of consequences', and hence useful for positioning against it. Surrounding Wendt, the focus is more state-centric on processes of interaction, socialization, learning and especially structure-agency problems. Left of Wendt, citers position more critical ('reflexive', 'thick') constructivism that stresses not only the social construction of reality (ontology) but also knowledge (epistemology). This part overlaps with the 'practice turn' focusing on the unreflexive, skillful, habitual, logic of practicality (rather than appropriateness). Although these authors often directly challenge the epistemological assumptions of positivism-scientism, citers rarely cite and thus position them

directly against authors associated with positivism (except Wendt). Rather than constitute inter-paradigmatic symbolic positions, as Wendt does, this part of constructivism plays a more important role in connecting to post-structuralism.

From a citation-constructivist perspective, the internal divide corresponds somewhat to European- versus American-based constructivists, although the data generally indicates that citers mostly use this cluster's authors for persuasion in European journals like *Review of International Studies*, *European Journal of International Relations,* and *Millennium.*

Post-structuralism

The camp at the far left consists largely of authors associated with post-structuralism and post-positivism. From a normative perspective, there is also little *empirical* unity in this camp. It is mostly focused on security, but spanning from 'traditional' topics like foreign policy, war and national interests to 'non-traditional' security threats. If pressed, a normative theorist might point to a common epistemological focus on the politics of representation, language and knowledge: from authors associated with meta-theoretical and epistemological interventions in the positivist/post-positivist debate to authors associated with more 'applied' post-structuralist discourse analyses that explore the role of language in the discursive construction of subjectivities and threats.

Apart from these general commonalities, the symbolic reading emphasizes that these authors represent *different* positions within the post-structuralist camp. A major within-camp divide is that between different positions in critical European security studies that explore the concept of security/securitization, notably the Copenhagen, Aberystwyth, and Paris schools, and their critics.. These schools constitute positions useful for positioning in debates on whether security should be defined objectively or intersubjectively, the role of normative ideals, textuality versus visuality and materiality, security versus risk, exceptionalism and speech acts versus routine techno-bureaucratic practices, governmentality and resilience. Like the sub-realisms above, these authors may not be concept-symbols for discipline-wide positioning like those from the 'great debates' but they are important for within-camp positioning. In the lower-left part of the camp, most disconnected from the main(stream) network, citers place a number of feminists and post-structuralist philosophers. The latter points to the existence of so-called 'turns' (material, linguistic, aesthetic, affective, cultural, visual) often imported from the humanities. Lastly, observe how the camp ends in critiques, mostly Foucaultian, of liberal peacebuilding that make a rare connection all the way to the civil war cluster.

From a constructivist perspective, this camp consists mostly of prominent European scholars that make up the battlefield constellations of critical, primarily European, journals like *Millennium, Security Dialogue* or *International Political Sociology.*

English School

Citers place a cluster of authors *predominantly* associated with the English School right above constructivism. However, a number of authors in its periphery are put into other clusters, including constructivism, at different thresholds.[7] The normative theory has more interpretive power in this cluster. It roughly encompasses works on (the historical evolution of) the norms and institutions of international society—not all English School works *per se*. Substantively, the cluster comprises works focusing on the fundamental institutions that order and legitimate inter-state relations in international societies, including war, diplomacy, hierarchy and sovereignty closest to the center of

[7] At a 0.14 threshold, for example, Lake and Hurd are put into liberalism and Ruggie, Breslin, Beeson and Cooper in constructivism.

the network. Meanwhile, we find works on human rights, humanitarian intervention and the responsibility-to-protect in its periphery. From a symbolic perspective, however, the cluster core does comprise authors associated with the English School. From concept-symbols of "pluralism" that stress order and rules of coexistence closest to the network center (Bull, Wight, Jackson) to concept-symbols of "solidarism" that stress justice and individual rights in the part connecting to responsibility-to-protect (Wheeler, Dunne)—all highly co-cited. Finally, a citation-constructivist would note the overwhelming presence of male scholars at top *Anglo*-institutions (including Australia), useful for persuading readers of many of the European journals mentioned above including *Review of International Studies* or *International Politics*.

Neo-Marxist Critical Theory and International Political Economy

Citers place neo-Marxist critical theory more detached from the mainstream network. From a normative-Mertonian standpoint, there is some substantive unity in its focus on international political economy—the relationship between modes of production, state formation, and hegemonic world orders, particularly neoliberalism, imperialism and the globalization of power and resistance. There are other clusters dedicated to International Political Economy, however, so what really characterizes this one is its critical-emancipatory—as opposed to 'problem-solving'—position. Further supporting a symbolic interpretation, the camp also consists of distinct sub-positions like neo-Gramscian critical theory, Marxism and historical materialism, world systems theory, neo-Trotskyist theory of uneven and combined development and international historical sociology (the latter connects it to the intra-state conflict cluster via Tilly). Connected to neo-Marxism, citers place an even more separate and dispersed International Political Economy camp. It stretches from constructivist-discursive institutionalism theorizing the power of economic ideas and discourse, which connects to historical institutionalism and the varieties of capitalism literature, towards a gradually more state-centric and realist International Political Economy mostly focused on finance. Overall, the arc from Cox to Strange could be seen as 'British School' International Political Economy (useful for persuasion in *New Political Economy* or *Globalizations*) and further to the right and below we move into the 'American School', which connects to authors in the realist and liberal clusters (*Review of International Political Economy*).

To summarize, this first section confirms the presence of theoretical camps and indicates some of the ways citers use and order International Relations theories. The grand theories remain the 'lodestone' of the discipline. When we move towards the periphery, however, we find clusters not strictly defined by 'isms'. As elaborated in the appendix, there is also a detached mainstream international economics cluster focused on trade, mainly a product of the inclusion of international trade and world economics journals, and a more mixed cluster stretching from political/normative theory to governance.

Has Quantitative Hypothesis Testing Overtaken the Discipline?

More important in the context of the 'End of International Relations theory' is the more general divide between theory camps and the two quantitative-modeling camps on the right-hand side. This study cannot confirm whether 'quantitative hypothesis testing' has encroached on the terrain of the 'isms' over time. But it can verify that the two exist in separate parts of the network and that if any part dominates it is still the theoretical one. This overall divide becomes clearer when I set a higher modularity resolution limit and the community detection algorithm identifies only two main communities: theory and quantitative-modeling. The divide is not clear-cut, of course. The 'ism' camps are not purely theoretical, but gradually become more statistical and mathematical towards

the right-hand side. Also, formal theory is still theory, even if not an 'ism'. And quantitative hypothesis testing need not be a-theoretical either. Nevertheless, the common denominator of the two right-most camps is not theoretical, but methodological and empirical: quantitative methods and formal models applied to inter-state and intra-state conflict. This largely supports a normative interpretation.

Methodologically, the clusters consist almost exclusively of statistical studies and formal models. A high number of authors in both clusters receive most of their citations for a specific dataset, variable or methodology. Citers are arguably more likely to cite authors representing a specific formal model, quantitative methodology or dataset in a normative manner (that is, because they are used for operational information), compared to when they cite authors in the theory cluster. This is certainly the case for inter-camp positioning. Scholars in other camps are unlikely to cite, say, Beck, Katz and Tucker's article on Time-Series-Cross-Section Analysis with a Binary Dependent Variable symbolically in order to position themselves in relation (opposition) to it. That said, datasets and methodologies can be used symbolically for intra-camp positioning ('with our improved methodology, new variable or extended dataset your results are no longer robust'). In that sense, even "Beck, Katz and Tucker 1998" is a concept-symbol. But it is a more camp specific one ('TSCS') than when a realist uses Keohane's *After Hegemony* as a concept-symbol of "neoliberal institutionalism".

Empirically, these clusters are also more homogenous than other large clusters in their focus on the causes of the absence and outbreak of conflict among and within states. Yet, there are some patterns of divergence (explored further in the appendix) that can be interpreted as camp-internal positions and provide some support for a symbolic-positioning interpretation. In the inter-state conflict camp, we can identify 'liberal' and 'realist' strands. The upper part contains quantitative tests of the liberal peace thesis: the relationship between regime type, economic interdependence, and inter-state war. Closest to liberalism, we find work exploring the relationship between domestic regime type and trade, cooperation, institutional commitment, and economic growth. This part also connects to an entire economic and political development cluster (more in the appendix). Below the liberal peace, citers place quantitative studies that use more 'realist' variables to explain inter-state conflict, that is, capability ratios, alliances, rivalries, and contentious issues like territory. Below these mostly statistical-inductive conflict studies, citers place more deductive formal theorizations of war, coercive diplomacy and bargaining that model the interplay between leadership, domestic politics and conflict. This part connects to realism via rational deterrence theory. The cluster on the other side of Fearon, who is highly co-cited with authors in both, generally focuses on the causes, evolution, duration, and outcomes of *intra-state* conflict. There is an internal empirical divide in the intra-state cluster too. In the upper part, citers place authors associated with the study of structural conditions such as regime type, economics, demography, climate, geography and natural resources. In the lower part, we find authors that emphasize grievances over identity, ethnicity, religion, history, territory and self-determination. This largely overlaps with the greed-versus-grievances debate. The divide can thus be interpreted as a result of symbolic positioning. The fact that these authors all have a high co-citation score suggests that citers often test—and thus position—them against each other in statistical studies.

From a constructivist perspective, persuasive citation practice in these 'quantitative hypothesis testing' clusters tends to rely on authors from a different set of prominent institutions (for example, PRIO, Yale, NYU, Stanford), more on (newer) articles than books, and more on comparativists, methodologists and economists than International Relations scholars. These authors are useful for persuading the gatekeepers of *Journal of Conflict Resolution*, *Journal of Peace Research, Conflict Management and Peace Science*, *International Interactions* and *International Studies Quarterly,* the journals that account for more than half the citations to these clusters. This

makes them the most specialized of the main clusters; another indication that quantitative hypothesis testing does not dominate 'the discipline' but a specific part of it.

Fragmentation at the End of Great Debates?

The presence of distinct citation clusters in itself confirms that International Relations is organized into camps that are more focused on internal debates than discipline-wide debate and dialogue. This leads us to the general fragmentation thesis, which pertains to the relative connectivity *between* camps, or rather lack thereof, at the 'End of the Great Debates'. The End of Great Debates argument takes at least two forms: the end of 'paradigm wars' between the three isms and/or the end of any major structuring divide in the wider discipline, like the 'great debate' between rationalism/reflectivism and positivism/post-positivism. There is relative consensus that the discipline is more fragmented after the debates because the camps have become more insular, but not whether the debates or their waning are the cause for this fragmentation and insularity.

There are a number of ways to study the insularity of camps. The External-Internal index that measures camp-external relative to camp-internal ties (ranging from +1 when all ties are external to -1 when all are internal) provides a way to study how inward-looking camps are. All camps are mostly internally focused at this threshold, with the trade cluster being the most insular (-0.85). Among the theory clusters, the realist (-0.55), poststructuralist (-0.55) and neo-Marxist (-0.63) are most insular while the constructivist (-0.15) and English School (-0.26) are most integrated into the network. Liberalism falls in-between (-0.45). In the case of constructivism, this attests to its relative centrality for tying the network together. Constructivist authors also have the highest average betweenness centrality of all clusters (that is, they are often the shortest path *between* other authors in the network) and thus have an important function in connecting the network. The quantitative inter- and intra-state conflict clusters also fall in-between (-0.34 and -0.31), but mostly because they are highly connected to each other. If collapsed into a single quantitative-modeling conflict camp, it would be the second-most insular (-0.72). Nodes in the realist and quantitative clusters are generally more tightly connected when measured on a range of other indicators (see appendix).

So far all this points to insularity and balkanization. But the camps of International Relations are not (only) self-affirming sects engaged in camp-internal disagreements (cf. Lake 2011). After all, the discipline hangs together. While some camps are indeed separated by rough terrain, even an abyss, other camps are connected by accessible, well-trodden pathways of engagement, relational positionality and dialogue. In the former case, a significant *lack* of co-citation will characterize inter-camp relations. That is, camps are so divided and distant that can they almost only be bridged by crossing through others camps (for example, from post-structuralism to quantitative civil war studies). In the latter case, of camps more closely connected through inter-camp co-citation, we can interprets this either as debate and relational position-taking or as 'fractal' distinctions.

Starting with links that suggest debate and relational position-taking: Within the theoretical region, the analysis points to significant co-citation between the three 'isms' in the paradigm wars. These connections primarily go via major concept-symbols like Keohane, Krasner, Gilpin, Waltz, Mearsheimer and Wendt. These authors have a much lower than average clustering coefficient and a higher betweenness centrality (they are often the shortest path) and closeness centrality (they are maximally close to all nodes in the network). This is unlike most other nodes that are embedded in a dense local neighborhood and have a high clustering coefficient; an indication that they have a more camp-specific and specialized rather than discipline-wide use. By contrast, the main concept-symbols of the isms are often cited along with authors from all three isms; an indication that they are useful for positioning in the inter-paradigmatic map. We find further evidence that the concept-symbols for neorealism, neoliberal institutionalism and constructivism are embedded in a co-

citation network with a wide range of other disciplinary positions when we zoom in on the co-citation network of individual works like Waltz' (1979) *Theory of International Politics*, Keohane's (1984) *After Hegemony* and Wendt's (1999) *Social Theory of International Politics*. The co-citation network of 'Keohane 1984', for example, looks a lot like the general disciplinary network, including co-citation camps of realism, liberalism and constructivism. This is less so for other works in the isms, not to speak of works in the quantitative clusters. Even a widely cited work like Walt's (1987) *The Origins of Alliances* is more co-cited with realist alliance literature. That is, more as a camp-specific concept-symbol for 'balance of threat' than as a 'grand' discipline-wide symbol of realism. Whether used or abused, rewarded or distorted, the grand theoretical statements of Keohane, Waltz and Wendt play an important role in tying the discipline together. Put in Actor-Network terminology, they are obligatory points of passage when we navigate between camps. The isms and especially their main concept-symbols are a force of integration, not fragmentation as critics of the 'isms' and paradigm wars claim. Without them, the network would disintegrate even further into *isolated* camps focusing on intra-realist or intra-institutionalist debates. Much of the triangular inter-paradigmatic structure that now characterizes its core would dissolve.

Apart from the grand theoretical statements that connect several camps, we also find inter-camp engagement connecting only two camps. At the intersection of neorealism and neoliberal institutionalism, for example, citers place other figures in the so-called neo-neo debate on whether states cooperating under anarchy seek relative or absolute gains, can learn to trust each other or not, whether institutions mitigate the effects of anarchy, have an independent effect on state behavior or are epiphenomenal of the balance of power (Grieco, Baldwin, but also Axelrod, Keohane, Krasner, Waltz, Mearsheimer and others). Or between neoliberal institutionalism and mainstream constructivism, which are so highly co-cited that they actually merge into one institutionalist community at higher thresholds. A symbolic explanation is that citers use them for debate and relational position-taking along the divide between rational versus sociological institutionalism, regulative versus constitutive norms, logics of consequences versus appropriateness: whether states abide to norms and rules out of rational calculated self-interest or because they believe in the norms and principles they represent. A more normative interpretation would emphasize their commonalities: the focus on rules, norms and institutions, and more substantively international law, trade and organizations.

An alternative interpretation is that the nodes at the intersection are hybrid forms of institutionalism (liberal-constructivist) that build upon each other. Rather than clear-cut isms, we can read the fuzzy border between the two as 'fractal' positions on a liberal/constructivist, positivist/post-positivist continuum where you can always be relatively more constructivist or post-positivist than your neighbor (Abbott 2001, 10-15). We can identify similar fractals between constructivism and post-structuralism: Onuf as 'more constructivist' than Finnemore but 'less constructivist' than Weldes. In this sense, position-taking along disciplinary divides, such as rationalism/reflectivism or positivism/post-positivism takes place mostly *within* the theory region and even within the isms. The emergent network structure may look like great debate divides but is a product of fractal 'micro-positioning' within isms rather than conscious positioning against the radical other (in which case there should be a stronger link from, say, Cox, Ashley and Walker directly to Keohane and Waltz or even Fearon). Fractal position-taking on the liberal-realist or constructivist-realist continuum also help explain the 'surprising' locations of some authors. For example, liberals or constructivists like Nye, Ikenberry, Lebow and Johnston in the periphery of the realist camp.

Finally, some authors function as inter-camp connectors, not because they are concept-symbols of an ism or engaged in inter-ism debate, but due to a diverse oeuvre. As a result, citers use different works in different camps. For example, citers connect the diverse works of Buzan to both

critical security studies, English School and realism and those of Lake to more clusters than any other scholar: all three isms, the English School, International Political Economy, inter-state and intra-state conflict (no wonder he thinks "isms are evil" and advocates for a Rosetta stone).

Lastly, let us turn to more general discipline-wide debates. It is tempting to read the horizontal divide stretching across the entire network as indicative of a wider disciplinary debate between rationalist/reflectivist meta-theories and positivist/post-positivist epistemologies. Authors at each end of the network certainly represent very different positions—ranging from the most quantitative, rationalist, mathematical and positivist to the most reflectivist and post-positivist—but they are rarely used explicitly for position-taking. If they were, we should see stronger co-citation linkages. Rather, the relationship between what Hoffmann (1977, 54) called the 'literates' and 'numerates' is more a divide than a debate; it is a long way from text to test, social to formal theory, Foucault to Fearon or Derrida to De Mesquita. Each 'end' of International Relations, what Wæver (2016, 315) provocatively calls the boundaries of "negativity" and "boredom", constitute the limits of the mainstream discipline: from humanists, post-structuralist philosophers and social theorists to econometricians, methodologists, and comparativists. But it is no debate. Citers rarely use authors in the quantitative-mathematical camp symbolically for *discipline-wide* positioning vis-à-vis other camps, but mostly within their own cluster. The inter-camp links that do tie the quantitative-mathematical cluster to the rest of the network are better seen as a gradual mathematization and quantification of realism and liberalism than as position-taking against them. The network analysis thus confirms recent diagnoses of an overall divide between theory-driven and quantitative-modeling research, but not necessarily that the latter is overtaking the discipline. This would require a longitudinal analysis, a possible extension for future research.

Conclusions and Implications

What wider implications follow from this dissection of the disciplinary citation network? In conclusion, I will address the professional, evaluative and sociological implications of citation analysis.

Professional Implications

Citation is a habitual academic practice that we rarely reflect upon, except when we are confronted by the technicalities of citation style (in-text, footnote, endnote). But as the three theories presented in this article demonstrate, citation is not as straightforward as it seems. Unlike paradigmatic or methodological choices, we may implicitly subscribe to a theory of citation without ever having made a conscious choice. I do not intend to advocate any one of the three, but merely encourage scholars to reflect more on citation practices. This applies to young scholars, who are probably not introduced to citation practice apart from what is in basic research ethics courses, and senior scholars who may not consciously reflect on citation practice in their writing but may benefit from doing so.

Moreover, a citation mapping like the above may help individual scholars become more reflexive about positions and positioning practices, including their own, in the discipline. Perhaps even how it looks from other positions. The most cynical citation-constructivists might even encourage scholars to use it to identify high-citation environments as well as gaps in-between camps into which they can insert themselves. My dissection of International Relations is not a call for "cynical" citation strategizing, but rather a more "clinical" intervention aiming for more reflexivity about citation practice (Hamati-Ataya 2012, 625).

Another professional implication concerns gatekeepers, such as editors and reviewers. Some

consideration has gone into gender-biased citation practices, both in the sociology of the discipline and broader editorial practices. But dysfunctionalities go way beyond this. They involve class, race, nationality and so on. I should emphasize that sociological studies on how 'irrelevant' characteristics such as gender affect the judgment of research are located firmly in the normative, Mertonian tradition: they assume we can distinguish between intra-scientific quality indicators and extra-scientific bias; define productivity as number of publications and quality/impact as number of citations; and sometimes devise normative strategies for removing particularistic biases (Maliniak, Powers, and Walter 2013; Mitchell, Lange and Brus 2013; Østby, Strand, Nordås and Gleditsh 2013). From a citation-constructivist perspective, however, it makes little sense to device prescriptions for how to remove particularistic biases in citation practice. Rather, the Latourian challenge to well-intended Mertonian attempts to correct national and gender biases is to ask: what if—notwithstanding any 'quality' differences—it is simply more persuasive to cite an article authored by a white male scholar at an Ivy League institution? Scholars of all genders and nationalities might know that this violates the norm of universality but nonetheless find it useful when making arguments. It is difficult to break the cycle of credibility, not least for scholars at the margin.

Evaluative Implications

Apart from generating insights for the profession, citation analysis is increasingly used to evaluate and manage it. Some scholars, for example, use citation analysis to assess and rank scholars, departments, and publication outlets (for example, Hix 2004; Giles and Garand 2007; Masuoka, Grofman, and Feld 2007, 400). This trend remains controversial and some critics have suggested a Training Influence Score as an alternative to citation counts (Colgan 2016, 489; see also critiques by Donovan 2009; Hagmann and Biersteker 2014; Sabaratnam 2014). Advocates legitimate the use of citation indexes for research evaluation purposes via a quasi-Mertonian argument that citations provide objective indicators of impact and quality as rewarded by peers. But in fact Merton himself, and later Mertonian theorists, criticized the use of citation analysis for this purpose; they saw it primarily as providing sociological insights to academia (Small 2004, 75). The symbolic and constructivist theories also point to obvious limitations to the use of citations as indicator of quality given their emphasis on how citers use and abuse cited works for their own positioning and persuasion purposes. These more critical perspectives emphasize that we should be aware of the entanglement of citation indexes in "classification struggles" over what capital types shall count as power resources in the academic field (citations versus policy influence, for example) and in the wider political economy of science (Bourdieu 1988, 17–18). Citation databases represent not just 'unobtrusive' empirical sources for sociologists of science, but mechanisms of control: both through the institutional control over science where publications and citations play a growing role in the allocation of material rewards and because these regimes of evaluation lead scholars to self-regulate their behavior due to a sense, whether true or not, of constant surveillance of our H-indexes.

It is not difficult to see why evaluators have embraced citation metrics. They seem to provide a cheaper and less time-consuming indicator of research quality than qualitative peer assessment. Yet one still indirectly legitimated by cumulated (journal) peer-review. Put differently, citation metrics appear to render the qualitative quantitative, and thus manageable, to the non-expert who lacks peer knowledge (Gläser and Laudel 2007). Evaluators have no time for the heterogeneities and modalities of citation practice. The entire evaluation regime rests on the assumption that citations are a standardized metric that offers comparability across individuals, departments, disciplines, universities, countries and time. This is what makes it congruent with a management paradigm that encourages market competition over resources. Any citation is worth the same,

regardless of where it comes from, whether it is negative or positive, or cited for rewarding, persuasion, or positioning purposes. However, this very indeterminacy makes citation analysis problematic for research evaluation purposes.

Sociological Implications

The sociological structure that emerges from our aggregate citation practice is quite familiar. One might even object that the International Relations network looks too familiar and textbook-like to justify this inquiry. But recent stocktakings identify a much higher degree of flux and disorder. Grand theories, isms and paradigms have not gone away or been supplanted by quantitative hypothesis testing and formal modeling. What emerges from our collective citation practice, rather, is a structure dominated by theoretical camps—with the three 'isms' as the core that gives International Relations its distinctive structure. Its distinctiveness becomes even clearer in a preliminary comparison with the Political Science network, which consists of subfields such as International Relations, Comparative Politics, Political Economy, Political Institutions, Political Behavior, (Historical) Political Sociology and so on. Comparing this to the structure of the International Relations network, reports of the end of grand theories and isms seem greatly exaggerated—even with the caveat that theory consumption is not equivalent to theory production.

The method employed here looks specifically for separate and insular camps. It identifies such a sociological structure, but also finds the camps neither as clear-cut nor as self-enclosed as some of the End of International Relations literature suggests. We find more engagements and fractal positions between them than this literature suggests. The 'isms' still stimulate positioning and brokering across divides. The main concept-symbols of the 'isms' are co-cited with a wider and more diverse range of other works than quantitative hypothesis testing works in the disciplinary periphery are. So while grand-theoretical and quantitative-modeling work both count among the most cited, they exhibit different co-citation patterns and play different roles for the discipline. The theoretical camps, including inter-paradigmatic position-taking and debates among them, still make International Relations hang together. They integrate, rather than divide, the discipline.

I should note that I found a prevalence of theorists and isms by examining the network among the *most* cited authors in the discipline. It remains possible, however, that mid-range theories or quantitative hypothesis testing would take a more prominent role had the network included more (less-cited) authors. In other words, while theorists dominate the *top* of the discipline, quantitative hypothesis testing may dominate what most scholars do in the larger discipline. Conversely, looking only at journals, and not books, may exaggerate the size of quantitative hypothesis testing and downplay that of theory clusters. With all the necessary methodological caveats in mind, the findings nonetheless matter for how we reproduce the discipline in teaching and state-of-the-art exercises like the 'End of International Relations' literature. Even if many scholars feel the grip of isms loosening in recent years, our aggregate citation practice in those same years reproduces the very disciplinary structure of isms. This also holds for the emergent American/European, quantitative/qualitative, and positivist/post-positivist divides that run through the citation network. These divides signify a lack of engagement, rather than conscious positioning and engaged debate, but nonetheless form part of the emergent structure of International Relations. So it is no misrepresentation to teach introductions to International Relations in terms of a discipline structured by 'grand' theoretical isms and 'great' epistemological and methodological debates. This also suggests commonalities between sociologies of the discipline studying publication and those studying teaching patterns (cf. Colgan 2016).

This raises a more general question about the epistemic status of scientometric studies versus expert judgments and other methodologies: should we give citation maps preference over the

stocktakings of senior scholars? Different citation theories divide on this question. Mertonian theorists tend to view citation analysis as more objective, reliable, and inductive than subjective, personal judgments. From this perspective, citation analysis provides an *unobtrusive* way to map International Relations, showing merely what citers themselves produce, as opposed to qualitative approaches, surveys, and even quantitative approaches that require human coding of content. Furthermore, citation maps are replicable and publicly accessible to students and young scholars—who may not have the same personal grasp of the overall structure and niches in the discipline as senior scholars (White and McCain 1998, 329).

Constructivist and symbolic theorists, by contrast, criticize the idea that citation analysis provides an unobtrusive and objective method that simply lays bare the 'real' structure of the discipline (MacRoberts and MacRoberts 1986; Luukkonen 1997). In order to present themselves as 'objective' and 'unobtrusive', citation analyses must ignore that bibliometric indexes are the product of indexers (not just scientists themselves). This entails human coding errors, suffers from the problem that indexed journals constitute only a fraction of all journals, and ignores the degree to which methodological choices make an imprint on the network. Quantitative citation methodologies accumulate and average to present themselves as more 'objective', but in so doing often ignore the *content* of science; reduce citations to uniform, countable items; and hide the diverse modalities and ambiguities of citation practice (Bourdieu 2004, 14). As stressed throughout the article, the formal structures produced by algorithms and network analytics do not speak for themselves. They require interpretations that engage the content of the cited work and explore the complexities of citation practice. Finally, citation analysis visualizes the discipline based on the final and most formal products of science—publications—rather than the 'science in action' of everyday practices such as writing, teaching, presenting, advising, reviewing and so on (Latour 1987). The discipline would likely look different if studied through other practices than citation. Thus, the point is not to measure them up against each other, to find out which trumps the other. When it comes to studies of syllabi and how we teach the discipline, for example, there will often be good pedagogical, intellectual, institutional, and historical reasons not to introduce students only to the reified, mainstreamed, and largely Euro-American form represented here. Rather, my citation map should be read as one possible way, among many others, of representing International Relations.

Supplemental Information

Appendix and network files are available at the *International Studies Quarterly* data archive and http://polsci.ku.dk/ansatte/vip/?pure=da/persons/279322.

References

ABBOTT, ANDREW. 2001. *Chaos of Disciplines*. Chicago, IL: University of Chicago Press.

AYDINLI, ERSEL, and JULIE MATHEWS. 2000. "Are the Core and Periphery Irreconcilable?" *International Studies Perspectives* 1(3): 289–303.

BALDI, STEPHANE. 1998. "Normative versus Social Constructivist Processes in the Allocation of Citations." *American Sociological Review* 63(6): 829.

BENNETT, ANDREW. 2013. "The Mother of All Isms." *European Journal of International Relations* 19(3): 459–81.

BERENSKOETTER, FELIX. 2012. "The End Of IR Theory As We Know It...." *The Disorder of Things*. Accessed August 7, 2017, http://thedisorderofthings.com/tag/felix-berenskoetter/.

BLONDEL, VINCENT, JEAN-LOUP GUILLAUME, RENAUD LAMBIOTTE, ETIENNE LEFEBVRE. 2008. "Fast unfolding of communities in large networks." *Journal of Statistical Mechanics* (2008): P10008.

BOURDIEU, PIERRE. 2004. *Science of Science and Reflexivity*. Cambridge, U.K.: Polity.

BOURDIEU, PIERRE. 1988. *Homo Academicus*. Stanford, CA: Stanford University Press.

BOURDIEU, PIERRE. 1975. "The Specificity of the Scientific Field and the Social Conditions of the Progress of Reason." *Social Science Information* 14(6): 19–47.

BREUNING, MARIJKE, JOSEPH BREDEHOFT, and EUGENE WALTON. 2005. "Promise and Performance." *International Studies Perspectives* 6(4): 447–61.

BROOKS, TERRENCE. 1986. "Evidence of Complex Citer Motivations." *Journal of the American Society for Information Science* 37(1): 34–36.

CHERVEN, KEN. 2015. *Mastering Gephi Network Visualization*. Birmingham, U.K.: Packt.

COHEN, BENJAMIN. 2010. "Are IPE Journals Becoming Boring?" *International Studies Quarterly* 54(3): 887–91.

COLE, JONATHAN, and STEPHEN COLE. 1973. *Social Stratification in Science*. Chicago, IL: University of Chicago Press.

COLGAN, JEFF. 2016. "Where Is International Relations Going?" *International Studies Quarterly* 60(3): 486–98.

COZZENS, SUSAN. 1981. "Taking the Measure of Science." *International Society for the Sociology of Science Newsletter* 7(1&2): 16–21.

COZZENS, SUSAN. 1989. "What Do Citations Count? The Rhetoric-First Model." *Scientometrics* 15(5): 437–47.

DONOVAN, CLAIRE. 2009. "Gradgrinding the Social Sciences." *Political Studies Review* 7(1): 73–83.

DUNNE, TIM, LENE HANSEN, and COLIN WIGHT. 2013. "The End of International Relations Theory?" *European Journal of International Relations* 19(3): 405–425.

EDGE, DAVID. 1979. "Quantitative Measures of Communication in Science." *History of science* 17(2): 102–34.

FERGUSON, YALE. 2015. "Diversity in IR Theory." *International Studies Perspectives* 16(1): 3–12.

GARFIELD, EUGENE. 1975. "The "Obliteration Phenomenon" in Science--and the Advantage of Being Obliterated!" *Current Contents* 51/52: 396–98.

GILBERT, NIGEL. 1977. "Referencing as Persuasion." *Social Studies of Science* 7(1): 113–22.

GILES, MICHEAL, and JAMES GARAND. 2007. "Ranking Political Science Journals." *PS: Political Science and Politics* 40(4): 741–51.

GLÄSER, JOCHEN, and GRIT LAUDEL. 2007. "The Social Construction of Bibliometric Evaluations." In *The Changing Governance of the Sciences*, edited by Richard Whitley and Jochen Gläser, 101-23. Dordrecht, NL: Springer.

GOLDMANN, KJELL. 1995. "Im Westen Nichts Neues." *European Journal of International Relations* 1(2): 245–58.

HAGMANN, JONAS, and THOMAS BIERSTEKER. 2014. "Beyond the Published Discipline." *European Journal of International Relations* 20(2): 291–315.

HAGSTROM, WARREN. 1965. *The Scientific Community*. New York, NY: Basic Books.

HAMATI-ATAYA, INANNA. 2011. "Contemporary "Dissidence" in American IR: The New Structure of Anti-Mainstream Scholarship?" *International Studies Perspectives* 12(4): 362–398.

HAMATI-ATAYA, INANNA. 2012. "IR Theory as International Practice/Agency." *Millennium* 40: 625-46.

HARWOOD, NIGEL. 2005. ""Nowhere Has Anyone Attempted… In This Article I Aim to Do Just That." *Journal of Pragmatics* 37(8): 1207–1231.

HIX, SIMON. 2004. "A Global Ranking of Political Science Departments." *Political Studies Review* 2(3): 293–313.

HOFFMANN, STANLEY. 1977. "An American Social Science: International Relations." *Daedalus* 106(3): 41–60.

HOLSTI, KALEVI. 1985. *The Dividing Discipline*. Boston, MA: Allen & Unwin.

JACKSON, PATRICK, and DANIEL NEXON. 2012. "I Can Has IR Theory?" *Duck of Minerva Working Paper*. Available at: http://duckofminerva.com/2013/01/new-duck-of-minerva-working-paper-i-can-has-ir-theory.html.

KAPLAN, NORMAN. 1965. "The Norms of Citation Behavior." *American Documentation* 16(3): 179–84.

KEOHANE, ROBERT. 2008. "Big Questions in the Study of World Politics." In *The Oxford Handbook of International Relations*, edited by Christian Reus-Smit and Duncan Snidal, 708-16. Oxford, U.K.: Oxford University Press.

KNORR-CETINA, KARIN. 1981. *The Manufacture of Knowledge*. Oxford, U.K. and New York, NY: Pergamon Press.

KRISTENSEN, PETER MARCUS. 2016. "Discipline Admonished." *European Journal of International Relations* 22(2): 243–67.

KRISTENSEN, PETER MARCUS. 2015. "Revisiting the "American Social Science"." *International Studies Perspectives* 16(3): 246–69.

KRISTENSEN, PETER MARCUS. 2012. "Dividing Discipline." *International Studies Review* 14(1): 32–50.

LAKE, DAVID. 2013. "Theory Is Dead, Long Live Theory." *European Journal of International Relations* 19(3): 567–87.

LAKE, DAVID. 2011. "Why "isms" Are Evil." *International Studies Quarterly* 55(2): 465–80.

LATOUR, BRUNO. 1987. *Science in Action*. Cambridge, MA: Harvard University Press.

LEYDESDORFF, LOET. 2017. "BibAuth.exe for Cocitation Analysis of Author Names in References." Accessed August 7, 2017, http://www.leydesdorff.net/software/bibauth/.

LUUKKONEN, TERTTU. 1997. "Why Has Latour's Theory of Citations Been Ignored by the Bibliometric Community?" *Scientometrics* 38(1): 27–37.

MACROBERTS, MICHAEL, and BARBARA MACROBERTS. 1996. "Problems of Citation Analysis." *Scientometrics* 36(3): 435–44.

MACROBERTS, MICHAEL, and BARBARA MACROBERTS. 1986. "Quantitative Measures of Communication in Science." *Social Studies of Science* 16(1): 151–72.

MALINIAK, DANIEL, AMY OAKES, SUSAN PETERSON, and MICHAEL TIERNEY. 2011. "International Relations in the US Academy." *International Studies Quarterly* 55(2): 437–64.

MALINIAK, DANIEL, SUSAN PETERSON, and MICHAEL TIERNEY. 2012. *TRIP Around the World*. College of William and Mary, Williamsburg, Virginia.

MALINIAK, DANIEL, RYAN POWERS, and BARBARA WALTER. 2013. "The Gender Citation Gap in International Relations." *International Organization* 67(4): 889-922.

MASUOKA, NATALIE, BERNARD GROFMAN, and SCOTT FELD. 2007. "The Political Science 400." *PS: Political Science & Politics* 40(1): 133-45.

MATHEWS, A. LANETHEA, and KRISTI ANDERSEN. 2001. "A Gender Gap in Publishing?" *PS: Political Science & Politics* 34(1): 143–47.

MATTHEWS, ELIZABETH AND RHONDA CALLAWAY. 2015. "Where Have All the Theories Gone? Teaching Theory in Introductory Courses in International Relations", *International Studies*

Perspectives 16(2): 190–209.

MEARSHEIMER, JOHN, and STEPHEN WALT. 2013. "Leaving Theory behind: Why Simplistic Hypothesis Testing Is Bad for International Relations." *European Journal of International Relations* 19(3): 427–57.

MERTON, ROBERT. 1957. "Priorities in Scientific Discovery." *American Sociological Review* 22(6): 635–59.

MERTON, ROBERT. 1942. "Science and Technology in a Democractic Order." Reprinted in *The Sociology of Science*, Chicago, IL and London, U.K.: University of Chicago Press.

MERTON, ROBERT. 1968a. *Social Theory and Social Structure*. New York, NY: Simon and Schuster.

MERTON, ROBERT. 1968b. "The Matthew Effect in Science." *Science* 159(3810): 56–63.

MITCHELL, SARA MCLAUGHLIN, SAMANTHA LANGE, and HOLLY BRUS. 2013. "Gendered Citation Patterns in International Relations Journals." *International Studies Perspectives* 14(4): 485-492.

NAU, HENRY. 2011. "No Alternative to "Isms"." *International Studies Quarterly* 55(2): 487–491.

OREN, IDO. 2016. "A Sociological Analysis of the Decline of American IR Theory." International Studies Review 18(4): 571-96.

PRICE, DEREK DE SOLLA. 1986. *Little Science, Big Science...and beyond*. New York, NY: Columbia University Press.

RIVIERA, EMANUELA. 2015. "Testing the Strength of the Normative Approach in Citation Theory through Relational Bibliometrics." *Journal of the Association for Information Science and Technology* 66(6): 1178–1188.

ROSENBERG, JUSTIN. 2016. "International Relations in the Prison of Political Science." *International Relations* 30(2): 127–53.

RUSSETT, BRUCE, and TAYLOR ARNOLD. 2010. "Who Talks, and Who's Listening? Networks of International Security Studies." *Security Dialogue* 41(6): 589–98.

SABARATNAM, MEERA. 2014. "Why Metrics Cannot Measure Research Quality", Accessed December 3, 2017 https://thedisorderofthings.com/2014/06/16/why-metrics-cannot-measure-research-quality-a-response-to-the-hefce-consultation/

SAMUELS, DAVID. 2013. "Book Citations Count." *PS: Political Science & Politics* 46(4): 785–90.

SAMUELS, DAVID. 2011. "The Modal Number of Citations to Political Science Articles Is Greater than Zero." *PS: Political Science & Politics* 44(4): 783–92.

SEABROOKE, LEONARD, and KEVIN YOUNG. 2017. "The Networks and Niches of International

Political Economy." *Review of International Political Economy* 24(2): 288–331.

SHARMAN, JASON, and CATHERINE WEAVER. 2013. "Between the Covers." *PS: Political Science & Politics* 46(1): 124–28.

SIL, RUDRA, and PETER KATZENSTEIN. 2010. *Beyond Paradigms*. New York, NY: Palgrave Macmillan.

SIL, RUDRA, and PETER KATZENSTEIN. 2011. "De-Centering, Not Discarding, the "Isms"." *International Studies Quarterly* 55(2): 481–85.

SILLANPÄÄ, ANTTI, and TOMMI KOIVULA. 2010. "Mapping Conflict Research. *International Studies Perspectives* 11(2): 148–71.

SMALL, HENRY. 1998. "Citations and Consilience in Science." *Scientometrics* 43(1): 143–48.

SMALL, HENRY. 1978. "Cited Documents as Concept Symbols." *Social Studies of Science* 8(3): 327–40.

SMALL, HENRY. 2004. "On the Shoulders of Robert Merton." *Scientometrics* 60(1): 71–79.

SOREANU, RALUCA, and DAVID HUDSON. 2008. "Feminist Scholarship in International Relations and the Politics of Disciplinary Emotion." *Millennium* 37(1): 123–51.

SYLVESTER, CHRISTINE. 2013. "Experiencing the End and Afterlives of International Relations/Theory." *European Journal of International Relations* 19(3): 609–26.

SYLVESTER, CHRISTINE. 2007. "Whither the International at the End of IR." *Millennium* 35(3): 551–73.

TURTON, HELEN. 2016. *International Relations and American Dominance.* Abingdon, Oxon and New York, NY: Routledge

WÆVER, OLE. 2016. "Still a Discipline After All These Debates?" In *International Relations Theories*, edited by Tim Dunne, Milja Kurki, and Steve Smith, 306-328. Oxford, U.K.: Oxford University Press.

WÆVER, OLE. 1998. "The Sociology of a Not So International Discipline." *International Organization* 52(4): 687–727.

WHITE, HOWARD. 2004. "Citation Analysis and Discourse Analysis Revisited." *Applied linguistics* 25(1): 89–116.

WHITE, HOWARD. 2004. "Reward, Persuasion, and the Sokal Hoax." *Scientometrics* 60(1): 93–120.

WHITE, HOWARD, and KATHERINE MCCAIN. 1998. "Visualizing a Discipline." *Journal of the American Society for Information Science* 49(4): 327–55.

ZHAO, DANGZHI, and ANDREAS STROTMANN. 2008. "Comparing All-Author and First-Author Co-Citation Analyses of Information Science." *Journal of Informetrics* 2(3): 229–39.

ØSTBY, GUDRUN, HÅVARD STRAND, RAGNHILD NORDÅS, and NILS PETTER GLEDITSCH. 2013. "Gender Gap or Gender Bias in Peace Research?", *International Studies Perspectives* 14(4): 493-506.