General Articles

Mapping Europe's Cosmopolitan Legal Order: A Network Analysis of the European Court of Human Rights, the Court of Justice of the European Union, and High National Courts

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While some scholars, such as Stone Sweet and Ryan, describe Europe's multi-level system of courts as an emerging 'cosmopolitan legal order', few have attempted to study the case citations representing the defining features of the order, namely the interdependence of courts at each level, and the embeddedness of international law in national court decisions. To this end, we have constructed an original database of case citations based on judgments of the European Court of Human Rights (ECtHR), the Court of Justice of the European Union (CJEU), and high national courts made available by CODICES, and apply network analysis and text-as-data methods to assess the dynamic interactions among these courts. Our work makes several empirical contributions to the literature on the Europeanization of law and courts: that Europe's 'cosmopolitan legal order' operates more as an interconnected, heterarchical network and less like a hierarchical legal system; that the ECtHR's status today as the 'ultimate supranational arbiter of human rights in Europe' in the words of Kelemen is assured by the propensity of national courts to cite its case law; and that high national courts use their case citations strategically to signal to domestic and international audiences their commitment to the values of the 'cosmopolitan legal order'. After identifying the forces that give the network its unique shape, we discuss the implications of the governance architecture for the effective promotion of the values that inspired the legal order.

Keywords: European courts, cosmopolitan legal order, network analysis, judicial dialogue, strategic citation

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I. Introduction

In their recent book, Alec Stone Sweet and Clare Ryan argue that Europe's multi-level legal system has emerged as a 'cosmopolitan legal order' (CLO) based on the European Convention on Human Rights. They define a CLO as

> a multi-level, transnational legal system in which (i) justiciable rights are held by individuals; (ii) all public officials bear the obligation to fulfill the

> fundamental rights of every person within their jurisdiction [...]; and (iii) both domestic and transnational judges supervise how officials do so.[1]

In this article, we examine the distinguishing features of a CLO, namely the interdependence of courts at each level, and the embeddedness of international law in national court decisions, using the tools of network analysis and text-as-data analysis. Our objectives are twofold: (1) to provide empirical evidence of the inter-court dialogues over time by mapping the case citation networks of the European Court of Human Rights (ECtHR), the Court of Justice of the European Union (CJEU), and high national courts, including both the constitutional tribunals and supreme courts of the Member States of the European Union (EU); and (2) to explain the causes and consequences of the distinct patterns of interactions among these key actors. Our analyses and findings answer longstanding questions about the structure of Europe's CLO, the degree to which European Convention of Human Rights (ECHR) and EU law principles are embedded in high national court decisions, and the case citation behavior of courts at each level of this legal order.

Our findings also provide support for the theory of 'bounded strategic space' previously developed by the international law scholar David Caron.[2] This theory posits that the key actors in international law regimes 'contend with one another, or against the space itself, so as to fulfill the logic of their positions'.[3] The logic or principal objective of the ECtHR and CJEU is to get other key actors to accept their legitimacy as authoritative decisionmakers. Case citations by national courts to the judgments of these courts are a measure of this legitimacy. The ECtHR and CJEU need the cooperation of the other actors. Thus their decisions and interactions with national courts can best be understood in light of Caron's vision of the international legal system: 'one where international courts and tribunals, and national legal systems — each in appropriate spheres and each with appropriate roles —

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1 Alec Stone Sweet and Clare Ryan, *A Cosmopolitan Legal Order: Kant, Constitutional Justice, and the European Convention on Human Rights* (Oxford University Press 2018) 1.

2 David D Caron, 'Towards a Political Theory of International Courts and Tribunals' (2006) 24 Berkeley Journal of International Law 401.

3 Ibid 402.

operate together to bring about the measure of coordinated governance necessary to address [the prevailing problems of the day]'.[4] In the context of Europe's CLO, it is natural to expect that the ECtHR and CJEU strive to increase their institutional reputations and promote compliance with their decisions. As for national courts, we expect them to 'fulfill the logic of their positions' by showing compliance with the decisions of the international courts and the values of the treaty systems their countries have agreed to enforce.[5] The position of national courts in this 'bounded strategic space' means that they are communicating with multiple audiences. Under this institutional lens, we hypothesize that high national courts strategically employ citations to ECtHR and CJEU judgments in order to maximize the persuasive authority of their decisions to domestic audiences (national legislatures, executives, NGOs) and to signal to international audiences (EU, Council of Europe, World Bank) their commitment to the values of the CLO.

We construct case citation networks from an original dataset and use them to map the interactions between the ECtHR, the CJEU, and the high national courts of the Member States that are subject to the jurisdiction of both the ECHR and the EU treaties. Our data capture the text and citation of opinions and judgments of high national courts along with the ECtHR and CJEU between 1990 and 2018. This is the first empirical study to rely on the CODICES database. CODICES is a publication of the Venice Commission (COE) and serves as a database for over 10,000 decisions by constitutional, supreme and international courts. In the words of EU law scholar Paul Craig,

> CODICES make data available from countries whose constitutional decisions would not otherwise be readily available. This facilitates research and offers a resource to constitutional courts as to how endemic problems have been dealt with elsewhere, thereby fostering trans-constitutional exchange of ideas'.[6]

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4 David D Caron, 'International Courts and Tribunals: Their Roles Amidst a World of Courts' (2011) 26 ICSID Review — Foreign Investment Law Journal 3.

5 Caron (n 2) 402.

6 Paul Craig, 'Transnational Constitution-Making: The Contribution of the Venice Commission on Law and Democracy' (2017) 2 UC Irvine Journal of International, Transnational, and Comparative Law 57, 62-63. The database is

The United Kingdom is included in this study since their decision to leave the EU in 2016 did not become effective until 31 January 2020.

Authority and hub scores (influence measures) are computed to determine which court — the ECtHR or the CJEU — is the most influential in terms of rendering decisions that are frequently used to support decisions by other courts. Various network analysis methods, such as hierarchical cluster analysis, are employed to reveal communities of high national courts based on their citation behavior towards ECtHR and CJEU judgments. Altogether, these citation networks provide insight into the shape or structure of Europe's CLO, the degree to which international law is embedded in national court decisions, and the case citation behavior of courts at each level of the multi-level system. Further, we employ text-as-data methodologies to demonstrate how citations patterns vary by issue area.

Several scholars and legal actors have attempted to describe the shape of Europe's CLO. Alec Stone Sweet has written that 'Europe possesses an overarching "constitutional" structure [...}. No single organ possesses the 'final word' when it comes to a conflict between conflicting interpretations of rights; instead, the system develops through inter-court dialogue, both cooperative and competitive'.[7] Justice Andreas Voßkuhle, President of the German Federal Constitutional Court, has described the configuration of European courts 'not as a pyramid, but as a mobile'.[8] Voßkuhle, like Stone Sweet, attributes the shape of the system to judicial dialogue or the legal doctrines and procedures which make national courts, the ECtHR, and the CJEU partners in the implementation of ECHR and EU values.[9] Our analyses provide empirical evidence of the nature of inter-court dialogues within

available at <http://www.venice.coe.int> accessed 27 July 2021. While CODICES is a COE project, there does not appear to be any bias towards hosting decisions whose opinions cite ECtHR decisions.

7 Alec Stone Sweet, 'A Cosmopolitan Legal Order: Constitutional Pluralism and Rights Adjudication in Europe' (2012) 1 Global Constitutionalism 55.

8 Andreas Voßkuhle, 'Pyramid or Mobile? – Human Rights Protection by the European Constitutional Courts' in *Dialogue between Judges 2014--Implementation of the Judgments of the European Court of Human Rights: A Shared Responsibility? (*Council of Europe 2014) 40.

9 Amrei Müller, *Judicial Dialogue and Human Rights* (Cambridge University Press 2017).

Europe's CLO. Our empirical analyses also allow us to ask and answer the following questions: do the case citation networks reveal a strategic nature of inter-court dialogues within Europe's CLO? Which court, the ECtHR or CJEU, has been the most successful over time in getting high national courts to take account of its decisions and evolving case law principles? What are the causes and consequences of the observed case citation patterns of high national courts within the ECtHR and CJEU legal regimes?

Moreover, our methodology provides insight into which court, in the words of political scientist Daniel Kelemen, is 'the ultimate supranational arbiter of human rights in Europe'.[10] He has indicated this question is likely to hold a prominent place in discussions about the CJEU in the twenty-first century. We also highlight how Europe's overlapping systems of rights protection present some challenges for Member States of the EU that are also contracting parties to the ECHR and the Council of Europe (COE). Specifically, we note that one of the challenges is the on-going confusion over how the same right is interpreted in ECtHR and CJEU decisions.[11]

In the next section, we describe the overlapping system of courts and the bounded strategic space of Europe's CLO. Next, we introduce the original dataset we constructed based on the case citations included in the judgments and opinions of the CJEU, ECtHR, and high national courts reported in CODICES. We then explain the network analysis and text-as-data methodologies we used and report our findings and results. We conclude by

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10 R Daniel Kelemen, 'The Court of Justice of the European Union in the Twenty-first Century' (2016) 79 Law and Contemporary Problems 117, 126–127.

11 One example is the CJEU's judgment in *Samira v. G4S Solutions* C-157/15 EU:C:2017:203, dealing with the prohibition on wearing an Islamic headscarf in the workplace. The CJEU ruled that so long as the restrictions on religious garments are applied to all employees of all faiths, employers are allowed to ban workers from wearing headscarves. This decision is difficult to reconcile with a decision of the ECtHR four years before that allowed crosses to be worn at work. In *Eweida v. UK* [2013] ECHR 37, the ECtHR ruled that wearing religious symbols while on the job is protected as an individual's right to manifest freedom of religion (ECHR, Article 9). While the CJEU focused on whether the employer's ban was an impermissible form of direct discrimination, that is, freedom from discrimination, the ECtHR focused on freedom of religion, that is, the employee's right to manifest religion.

discussing the forces that give the network its unique shape and the consequences of the governance architecture for the effective promotion of the values that inspired the formation of these legal regimes in the first place.

II. Courts, Networks, and the Theory of Bounded Strategic Space

The role of the CJEU in deepening both legal and political integration in the Community and later the EU has been well studied over the past several decades.[12] Scholars examining the ECtHR have explained the post-WWII success of the ECHR in enhancing the domestic enforcement of rights in the signatory states and how the European approach became a model for the world's other two regional systems of human rights protection — the American Convention on Human Rights (1967) and the African Charter on Human and Peoples' Rights (1981).[13] Today, scholars are examining new questions about the dynamic interplay between national, supranational, and international courts in Europe's CLO. For example, what are the legal implications of the Charter of Fundamental Rights (CFR), which became legally binding and a source of primary law in the EU in 2009? How might accession of the EU to the ECHR, which was required by Article 6(2) of the Treaty on European Union and is now stalled following the CJEU's 2014 decision which held that that aspects of the Draft Accession Agreement are incompatible with EU law, affect the way these two legal regimes interact?[14]

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[12] Kelemen (n 10); Alec Stone Sweet, *The Judicial Construction of Europe* (Oxford University Press 2004); Michael Tolley, 'Fundamental Rights, the European Court of Justice, and European Integration' in Donald Jackson, Michael Tolley and Mary Volcansek (eds), *Globalizing Justice: Critical Perspectives on Transnational Law and the Cross-Border Migration of Legal Norms* (SUNY Press 2011); Karen Alter, *Establishing the Supremacy of European Law: The Making of an International Rule of Law in Europe* (Oxford University Press 2001).

[13] Donald Jackson, *The United Kingdom Confronts the European Convention on Human Rights* (University of Florida Press 1997); Donald Jackson, Michael Tolley and Mary Volcansek (eds), *Globalizing Justice: Critical Perspectives on Transnational Law and the Cross-Border Migration of Legal Norms* (SUNY Press 2011); Stone Sweet and Ryan (n 1).

[14] Opinion 2/13 EU:C:2014:2454 (on the accession of the European Union to the European Convention for the Protection of Human Rights and Fundamental Freedoms).

In this article, we gather new empirical evidence of the patterns of transjudicial communication among European courts and use this data to provide insight into these and other questions about the operation of Europe's CLO.

These new problems require new tools of analysis. Here, network analysis is employed to uncover the dynamic interrelations among the key actors in Europe's CLO. Network analysis is a constantly developing field that allows scholars to explore the nature and structure of complex social, political, legal, and economic organizations.[15] Several scholars have demonstrated how network analysis can answer questions about European courts.[16] The key assumption underlying network methodology is that structure and relationships within a network affect observed outcomes. For example, if the supreme and constitutional courts of Member States of the EU and COE are lower courts in a hierarchical structure with the CJEU and ECtHR, they may enjoy less autonomy over their caselaw. Whereas, if high national courts find themselves in a non-hierarchical structural relationship with the ECtHR and CJEU, then they may exert more autonomy over their caselaw and be treated deferentially, rather than delegatory, by the ECtHR and CJEU. Notably, a non-hierarchical structural relationship may also foster greater mutual trust and cooperation among the key actors or nodes because in a system of relative equals there will likely be greater willingness to listen to and adopt good legal

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[15] David Lazer, 'Networks in Political Science: Back to the Future' (2011) 44 PS: Political Science & Politics 61; Mark Newman, Albert-László Barabási, and Duncan Watts, *The Structure and Dynamics of Networks* (Princeton University Press 2006); Alain Barrat, Marc Barthelemy and Alessandro Vespignani, *Dynamical Processes on Complex Networks* (Cambridge University Press 2008).

[16] Yonatan Lupu and Erik Voeten, 'Precedent on International Courts: A Network Analysis of Case Citations by the European Court of Human Rights' (2011) 42 British Journal of Political Science 413; Maartje de Visser and Monica Claes, 'Courts United? On European Judicial Networks' in Antoine Vauchez and Bruno de Witte (eds), *Lawyering Europe: European Law as a Transnational Social Field* (Hart Publishing 2013); Simone Benvenuti, 'National Supreme Courts and the EU Legal Order: Building a European Judicial Community through Networking' (2014) 6 Perspectives on Federalism 1; Mattias Derlén and Johan Lindholm, 'Goodbye *van Gend en Loos*, Hello *Bosman*? Using Network Analysis to Measure the Importance of Individual CJEU Judgments' (2014) 20 European Law Journal 667.

reasoning regardless of whether they originated in a *lower* high national court or *higher* court like the ECtHR or CJEU. As such, this article relies on network analysis and various text-as-data approaches to map the inter-court dialogues which have emerged in the 'bounded strategic space' of Europe's CLO.

Caron's theory of bounded strategic space helps us to understand the behavior of courts in Europe's emerging CLO. In 'Toward a Theory of International Courts and Tribunals', Caron explains how courts in international law regimes work and seek to be effective.[17] Courts are not there to make legal pronouncements *in abstracto*. They are created to make a difference, that is, to 'fulfill the logic of their position' to use Caron's words.[18] We rely on Caron's prediction that the behavior of the key actors and institutions in Europe's CLO is motivated by the competition for influence. Courts at each level compete for influence and seek to be recognized as fulfilling the political objectives of legitimacy and effectiveness. Evidence of this behavior is left behind in the case citations appearing in the judgments and opinions of each court within the fixed system, that is, within the bounded strategic space.

This article also contributes to the literature on citation behavior by courts in multi-layered systems. Network science scholars James Fowler and Sangick Jeon first advanced network analysis as a tool for exploring citation networks in law and aided in the development of 'strategic citations'.[19] If judges were merely following the law and decisions in previous cases, we should expect to observe the same judgments being cited in similar cases. Instead, considerable variation suggests there is some form of strategic behavior underlying citation decisions. Within the context of the United States, for instance, political scientist Rachael Hinkle argues that appellate court judges strategically choose to cite certain cases over others when crafting their legal opinions in order to reduce the probability their decision

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[17] Caron (n 2).

[18] Ibid 402.

[19] James Fowler and Sangick Jeon, 'The Authority of Supreme Court Precedent' (2008) 30 Social Networks 16.

will be reviewed and reversed.[20] This article advances this notion of strategic citations and argues that citations are both a mode of judicial reasoning, used to boost the authority of a court's decision, and a strategy of communication, used to signal or convey messages to wider audiences. High national courts cite ECtHR and CJEU judgments as a means of signaling to other EU Member States and international organizations, such as the EU, the COE, and the World Bank, a country's commitment to liberal-democratic values and the rule of law. Further, these courts may cite decisions by other courts as a means to signal their legal reasoning as legitimate. International law scholar Anne-Marie Slaughter coined the phrase 'persuasive authority' to describe how cross-border citations boost the legitimacy of decisions: 'unlike past legal borrowings across borders, judges are now engaged not in passive reception of foreign decisions, but in active and ongoing dialogue. They cite each other not as precedent but as persuasive authority'.[21] In turn, we expect high national courts to cite decisions by the ECtHR and CJEU to boost their judgment's persuasive authority.

The decision not to cite, or in other words ignore, is also a strategy of communication. Further, a mere counting of citations is not particularly insightful into a national court's ideals. As argued by Erik Voeten, '[i]f our understanding of transjudicial communication is to advance, future studies should seek to account for both the presence of explicit connections between courts rather than to simply document cross citations where they occur'.[22] In addressing Voeten's concerns, we move beyond counting the number of cross citations among courts and instead examine the decision by high national courts to cite international court judgments with high and low authority scores. In the following section, we theorize that a better, more empirically-based understanding of the nature and structure of Europe's CLO emerges when we distinguish the decisions by national courts to cite judgments of international courts with low authority scores (that is, the least influential

[20] Rachael Hinkle, 'Strategic Anticipation of En Banc Review in the US Courts of Appeals' (2016) 50 Law and Society Review 383.

[21] Anne-Marie Slaughter, 'A Global Community of Courts' (2003) 44 Harvard International Law Journal 191, 193.

[22] Erik Voeten, 'Borrowing and Nonborrowing among International Courts' (2010) 39 Journal of Legal Studies 547, 573.

judgments in the network) from the decisions to cite judgments of international courts with high authority scores.

III. The Architecture of Europe's Cosmopolitan Legal Order: Pyramid or Mobile?

International law theorists surmise that the shape or structure of Europe's CLO ultimately depends on the influence the ECtHR and CJEU have on national politics and legal systems. However, other international law theorists offer different explanations of this influence. In the following passage, Lisa Conant contrasts the views of 'constitutionalists', 'realists', and 'liberal-pluralists':

> Constitutionalists contend that the impact of ICs [international courts] deepens as interactions between domestic and ICs increase. Realists counter that any apparent impact stems from either the coercion of weak States or a coincidence of interests, with national judges taking their cue from the national executive rather than ICs. In contrast to these accounts, liberal and pluralist theories predict ICs will have a variable impact on domestic politics due to varying patterns of interaction between ICs and domestic actors that are rooted in differences in domestic institutions.[23]

Those who view the structure as a vertically integrated system of international and national courts, such as EU law professors Joseph Weiler and Gráinne de Búrca, are constitutionalists.[24] In contrast, those who maintain that the influence of international courts on national legal systems depends on domestic political factors and that variation among national legal systems makes Europe's multi-layered system less hierarchical are the realists, liberals, and pluralists, to use Conant's terms. The actual influence of international courts is thus an empirical question, and we seek to use case citations to measure influence and, in turn, describe the structure of Europe's CLO based on this analysis.

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[23] Lisa Conant, 'Missing in Action? The Rare Voice of International Courts in Domestic Politics' in Marlene Wind (ed), *International Courts and Domestic Politics* (Cambridge University Press 2018) 14-15 (*citations omitted*).

[24] Joseph HH Weiler, 'The Transformation of Europe' (1991) 100 Yale Law Journal 2403; Gráinne de Búrca, 'The European Court of Justice and the International Legal Order after Kadi' (2010) 51 Harvard International Law Journal 1.

The principal institutional actors, or nodes, in Europe's CLO include the ECtHR, the CJEU, and the high national courts of the Member States of the EU. The connections, or edges, in this network are the case citations in each court's judgments. The factors influencing citation behavior and the forces shaping Europe's CLO are explained below.

We argue that high national courts strategically choose which judgments by the ECtHR and CJEU they cite.[25] As such, some high national courts include multiple citations to these decisions, and other courts rarely issue citations. Our theory and results contribute to prior research that argues that legal citations can serve a number of signaling purposes.[26] Here, the affirmative action of citing the ECtHR or CJEU is considered meaningful, and the absence of citations is meaningful in another away. We build upon previous policy research that has demonstrated that the date when a country joined the EU makes a difference and that variation between older and newer Member States when it came to decision making in the Council of the European Union can be explained in these terms.[27]

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[25] We do not incorporate a measure of valence for each citation in this study. The process of coding the valence of each citation would require a great deal of hand-coding and potentially introduce human error. However, we recognize, as some scholars who have undertaken the arduous task of reading and coding high national court citations have found, that citations to international courts are not always positive or approving of that court's decision. See, for example, Marlene Wind, 'The Nordic, the EU and the Reluctance Towards Supranational Judicial Review' (2010) 48 Journal of Common Market Studies 1039. For our purposes, even a citation with a negative valence is considered relevant because it signifies that the national court took the opportunity to issue a citation towards the judgment, which signals that it may disagree with the decision, but nonetheless accept the legitimacy of the ECtHR's or CJEU's judgments.

[26] James Fowler, Timothy Johnson, James Spriggs, Sangick Jeon, and Paul Wahlbeck, 'Network Analysis and the Law: Measuring the Legal Importance of Precedents at the U.S. Supreme Court' (2007) 15 Political Analysis 324; Fowler and Jeon (n 19); William Landes and Richard Posner, 'Legal Precedent: A Theoretical and Empirical Analysis' (1976) 19 Journal of Law and Economics 249; Hinkle (n 19); Thomas G Hansford and James F Spriggs, *The Politics of Precedent on the US Supreme Court* (Princeton University Press 2006).

[27] Teemu Makkonen and Timo Mitze, 'Scientific Collaboration between "Old" and "New" Member States: Did Joining the European Union Make a Difference?'

We expect high national courts in the thirteen countries admitted to the EU in and after the major enlargement in 2004 (Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia, then Bulgaria and Romania in 2007, and Croatia in 2013) to be more likely to cite judgments by the ECtHR and CJEU than courts in the six founding countries (Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany in 1957) and in the countries that joined before the symbolic unification of Western and Eastern Europe (Denmark, Ireland, and the United Kingdom in 1973; Greece in 1981; Portugal in 1986; Austria, Finland, and Sweden in 1995). We use the shorthand 'old' EU-15 and 'new' EU-13 in our hypothesis concerning citation practices of the high national courts of countries that are now both members of the EU and COE. We assume that high national courts in the new EU-13 countries, which are mostly former Eastern-bloc countries, are primarily interested in consolidating their democracies and in demonstrating this to domestic and international audiences.[28] Also, we surmise that these courts, lacking long domestic legal traditions from which to extract the authorities needed to boost their reasoning, often will need to turn to the judgments of international courts. Though we expect to find EU-13 courts issuing more citations to judgments by the ECtHR and CJEU, and more citations to high authority judgments by the ECtHR and CJEU, we acknowledge that prior research has suggested a number of possible mediating factors, including whether the high national court is a constitutional court or a supreme court, and the extensiveness of the norm of judicial review.[29]

(2016) 106 Scientometrics 1193 and Dimiter Toshkov, 'The Impact of the Eastern Enlargement on the Decision-making Capacity of the European Union' (2017) 24 Journal of European Public Policy 177.

[28] See, for example, Johanna Kalb, 'The Judicial Role in New Democracies: A Strategic Account of Comparative Citation' (2013) 38 Yale Journal of International Law 423.

[29] Wind (n 25); Marlene Wind, 'Laggards or Pioneers? When Scandinavian Avant-garde Judges Do Not Cite International Case Law: A Methodological Framework' in Marlene Wind (ed), *International Courts and Domestic Politics* (Cambridge University Press 2018).

1. The ECtHR and High National Court Edges

Countries that have ratified the ECHR have demonstrated a commitment to upholding the rights set out in the Convention at the national level. When individuals are dissatisfied, following the exhaustion of their domestic remedies, they may exercise their right to individual petition under Article 34 of the ECHR and present the matter to the ECtHR. Since 1998, the ECtHR has sat as a full-time court composed of judges from each of the contracting state parties to the Convention. If the ECtHR agrees with the national court and rules against the petitioner, then the challenged action will have been judged to comport with the ECHR commitments of the contracting state. On the other hand, if the ECtHR rules in favor of the petitioner, then the contracting state is obligated to change the offending laws or policies.

On the basis of Article 46 ECHR, the authority of ECtHR judgments is limited because, strictly speaking, they only have *inter partes*, not *erga omnes* effect.[30] However, in practice, national positions on whether Strasbourg judgments have an *erga omnes* effect, recognizing as compulsory 'the jurisdiction of the Court in all matters concerning the interpretation and application of the present Convention' (Article 46 ECHR), vary from the clear obligation expressed by statute such as Section 2(1)(a) of the Human Rights Act (United Kingdom)[31] to the declaration of such an obligation by judicial decision.[32] The mode of incorporating the ECHR ultimately matters. Whether the ratified Convention is transformed into domestic law automatically as in the monist tradition or whether it is transformed by statute in the dualist tradition will likely affect high national court citations

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[30] That said, recent research has demonstrated that, in practice, the ECtHR can have *erga omnes* effects. See Laurence Helfer and Erik Voeten, 'International Courts as Agents of Legal Change: Evidence from LGBT Rights in Europe' (2014) 68 International Organization 77.

[31] 'A court or tribunal determining a question which has arisen in connection with a Convention right must take into account any – (a) judgment, decision, declaration or advisory opinion of the European Court of Human Rights [...].' HRA 1998, Section 2(1)(a).

[32] Stephanie Bourgeois, 'The Implementation of the European Convention on Human Rights at the Domestic Level' in Alessia Cozzi and others, *Comparative Studies on the Implementation of the ECHR at the National Level* (Council of Europe 2016) 8-9.

of ECtHR judgments.[33] In *A Europe of Rights: The Impact of the ECHR on National Legal Systems*, Keller and Stone Sweet find and report that the ECHR's impact has been broad and persuasive in some states, less so in others.[34]

National courts and the ECtHR are clearly partners in the implementation of ECHR values. But, unlike the CJEU, the ECtHR does not hold a formal place in the judicial hierarchies of contracting states. The Strasbourg Court cannot by itself nullify offending national actions or measures. The process is essentially dialogical: the contracting states must take the actions needed to give effect to ECtHR decisions. National courts begin with the assumption that ECHR rights establish a floor and domestic law may not fall below that level unless there is a good reason, and then measure domestic policy and action against this standard. The 'margin of appreciation' doctrine allows countries some leeway in satisfying their international commitments and helps to determine if the departures from the ECHR norm are within an acceptable range.[35] Whether this floor is also a ceiling is a matter of some debate and controversy. Some high national courts, depending upon which rights are at issue, view ECHR rights as only the starting point for expanding the right to be protected in domestic law, while others merely attempt to 'keep pace with Strasbourg rulings', no more and no less.[36]

The ECtHR employs a fairly deferential standard of review of high national court treatment of Convention rights that some commentators call the

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[33] Athanassia Sykiotou, 'The Relation of Greek Courts with the European Convention on Human Rights and the European Court of Human Rights Case-Law' in Alessia Cozzi and others, *Comparative Studies on the Implementation of the ECHR at the National Level* (Council of Europe 2016) 51.

[34] Helen Keller and Alec Stone Sweet, *A Europe of Rights: The Impact of the ECHR on National Legal Systems* (Oxford University Press 2009) 678.

[35] Steven Greer, *The Margin of Appreciation: Interpretation and Discretion Under the European Convention on Human Rights* (Council of Europe 2000).

[36] Michael Tolley, 'Judicialization of Politics in Europe: Keeping Pace with Strasbourg' (2012) 11 Journal of Human Rights 66.

'responsible court doctrine'.[37] In Von Hannover v. Germany (No. 2) (2012),[38] this approach can be detected in the ECtHR's review of the fundamental rights decision of Germany's Constitutional Court. The 'responsible court doctrine' means that the ECtHR will leave undisturbed decisions by national courts that fully considered fundamental rights issues in light of ECHR values and ECtHR case law principles.[39] In finding that Germany's Constitutional Court had 'undertaken a detailed analysis of the Court's case-law in response to the applicants' complaints', the ECtHR allowed the balance struck by the national court to stand.[40] By promoting judicial dialogue, the 'responsible court doctrine' may flatten the relationship between high national courts and the ECtHR.

2. The CJEU and High National Court Edges

Unlike ECtHR judgments, the authority of CJEU judgments is not restricted to the parties to the case. Once the CJEU clarifies a legal matter, the ruling has direct effect throughout the EU. The doctrines of direct effect and supremacy, along with the preliminary reference procedure, established the CJEU's influence in Europe's CLO. Given the *erga omnes* effect of CJEU rulings, we expect high national courts to cite and take into full account the Court's rulings and doctrines.

Since the CJEU's decision in *Srl CILFIT and Lanificio di Gavardo SpA v Ministry of Health* (1982),[41] high national courts ('against whose decisions

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[37] Başak Çali, 'From Flexible to Variable Standards of Judicial Review: The Responsible Domestic Courts Doctrine at the European Court of Human Rights' in Oddny Mjöll Arnardóttir and Antoine Buyse (eds), *Shifting Centres of Gravity in Human Rights Protection: Rethinking Relations between the ECHR, EU and National Legal Orders* (Routledge 2016).

[38] (2012) 55 EHRR 15.

[39] The ECtHR explained its approach in the following way: '[i]n exercising its supervisory function, the Court's task is not to take the place of the national courts, but rather to review, in the light of the case as a whole, whether the decisions they have taken pursuant to their power of appreciation are compatible with the provisions of the Convention relied on'. *Von Hannover v. Germany* (No. 2) (2012) 55 EHRR 15, para 105.

[40] Ibid para 125.

[41] Case 283/81 *Srl CILFIT and Lanificio di Gavardo SpA v Ministry of Health* EU:C:1982:335.

there is no judicial remedy under national law'[42]) have been required to refer all questions of EU law for a preliminary ruling unless the answer to the question is clear or so obvious that there can be no reasonable doubt how EU law is to be applied. For example, the CJEU brought some clarity to the old 'acte clair' doctrine in the joined cases of *X and van Dijk* (2015).[43] In one of the two cases, a lower court in the Netherlands made a preliminary reference to the CJEU for clarification on how to apply EU law on this matter. In the other case, the Dutch Supreme Court thought the answer to the question of how to apply EU law was plain, but initiated a preliminary reference with the question of whether the lower court's referral meant that the matter required clarification.

In *X and van Dijk* (2015), the CJEU ruled that the Dutch Supreme Court did not have to wait. When the answer to the EU law question is obvious, national courts are to be trusted to resolve questions of EU law without the assistance of the CJEU.[44] The CJEU explained that if the national courts are wrong, there are two mechanisms available for relief. The Commission could bring an infringement action against the Member State or, as the CJEU recognized in *Köbler v. Republik Österreich* (2003), individuals could hold a Member State liable for breaches of EU law.[45]

In *International Court Authority*, Alter, Helfer and Madsen reinforce the view that European legal integration turned on the 'constructive relationship' the CJEU developed with national courts.[46] The EU legal system is built upon mutual trust and requires the cooperation of national courts in giving direct effect to EU measures. The hierarchical relationship between national courts and the CJEU may be flattened as a result when the latter allows national courts to decide which questions of EU law they could resolve by themselves and which would need to be referred for a preliminary ruling.

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[42] Ibid para 21.

[43] Joined Cases C-72/14 (*X v Inspecteur van Rijksbelastingdienst*) and C-197/14 (*T.A. van Dijk v Staatssecretaris van Financien*) EU:C:2015:564.

[44] Ibid.

[45] Case C-224/01 *Köbler v. Republik Österreich* EU:C:2003:513.

[46] Karen Alter, Laurence Helfer and Mikael Rask Madsen (eds), *International Court Authority* (Oxford University Press 2018) 236.

3. The CJEU and ECtHR Edge

Preserving balance and avoiding conflicts among the courts in Europe's overlapping legal regimes require, in the words of Justice Voßkuhle, 'the parts of the system...[to] go about their task with sensitivity {...}'.[47] The 'equivalence doctrine' is meant to promote this sensitivity of one court for the other.

In *Bosphorus v. Ireland* (2005), the ECtHR ruled that international organizations, such as the EU, are still liable under the ECHR for 'all acts and omissions of its organs regardless of whether the act or omission in question was a consequence {...} of the necessity to comply with international legal obligations'.[48] It also noted 'the growing importance of international cooperation and the consequent need to secure the proper functioning of international organizations'.[49] To reconcile these two positions, the ECtHR introduced what came to be known as the '*Bosphorus* presumption' or the presumption of equivalent protection of Convention rights by the EU, even though the EU is not party to the ECHR.

In *Kadi v. Commission* (2010), the CJEU signaled a more independent or autonomous approach that would characterize its treatment of fundamental rights after 2009.[50] Here, the CJEU ruled that European Community (EC) regulation implementing UN Security Council resolutions violated general European principles of human rights, reasoning that even principles of international law embodied in the UN Charter could not be given effect by EU institutions over principles of fundamental rights in EU law. This view casts some doubt on the reciprocal nature of the equivalence doctrine. If giving the same meaning and scope to corresponding rights in the ECHR, as interpreted by the ECtHR, violates principles of fundamental rights in EU law, then the CJEU must reject the equivalence doctrine and provide more extensive protection.

Inter-court dialogue is an integral part of Europe's CLO. Left behind in their judgments is evidence of the connections among the courts at the various

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47 Voßkuhle (n 8).

48 *Bosphorus v. Ireland* (2006) 42 EHRR 1, para 153.

49 Ibid para 150.

50 Case T-85/09 *Kadi v. Commission* EU:T:2010:418.

levels. One way to understand how courts at each level interact is to examine the network's links through case citations.

IV. Data and Methodology

Citation networks can reveal many aspects of the relationships between courts. We conceptualize the structure of Europe's CLO as a network of legal ties connecting the CJEU, the ECtHR, and the high national courts of Member States of the EU. High national courts include constitutional courts and/or the equivalent institutions (constitutional councils, supreme courts, courts of cassation) who are committed to the ECHR and the COE.[51] Figure 1 below represents such a system, where each connecting edge represents a citation.

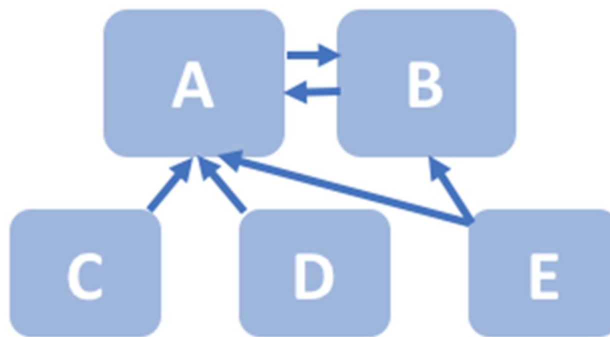

Figure 1: Example of a Citation Network

Courts A and B represent international courts and Courts C, D, and E represent three high national courts. The arrows, the edges in the network, indicate which court cites judgments by another court in the network and which courts receive citations from other courts. Each national court in this

[51] EU Member States with Constitutional Courts: Austria, Bulgaria, Belgium, Croatia, Czech Republic, France, Germany, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, Spain. EU Member States with Supreme Courts or institutions with similar jurisdiction: Cyprus, Denmark, Estonia, Finland, Greece, Ireland, Netherlands, Sweden, United Kingdom. See Jan Komárek, 'National Constitutional Courts in the European Constitutional Democracy' (2014) 12 International Journal of Constitutional Law 525.

figure cites decisions by Court A, and Court E is the only national court that cites decisions by Court B. Court A cites decisions by Court B and vice versa.

This sample network has many implications. First, it suggests Court A has more influence than Court B because the high national courts cite decisions by Court A more frequently when forming their own legal judgments. Likewise, we can discern which national courts (C, D, or E) are most similar to each other based on their citation behavior. In this example, courts C and D are most similar. The remainder of this section describes how we studied the network relationships in Europe's multi-level system of courts.

First, a web-scraping program was developed and unleashed on the CODICES database. Our program downloaded all decisions by the ECtHR, CJEU, and high national courts. The collected data include the following countries with years of coverage in parentheses: Austria (1993-2017); Belgium (1991-2017); Bulgaria (1994-2000); Croatia (1997-2014); Cyprus (2014); Czech Republic (1996, 2013, and 2016); Denmark (1980-2017); Estonia (1993-2014); Finland (2005); France (2007-2017); Germany (2000-2016); Greece (2012); Hungary (1997, 1998, and 2014); Ireland (1996-2017); Italy (2006-2007); Latvia (1997-2016); Lithuania (1993-2016); Luxembourg (1998-2016); Malta (2005); the Netherlands (1993-2015); Poland (1993-2016); Portugal (2013-2014); Romania (1999-2017); Slovakia (1994-2016); Slovenia (1992-2017); Spain (1999-2016); Sweden (2000-2017); United Kingdom (2001-2017).[52] We then employed a parsing program over each decision, extracting the following information: name of the court issuing the decision, case citation, case name, and all citations within the decision. Only citations to ECtHR and CJEU decisions were collected from the parsed decisions. There were many instances where courts outside the scope of this study, such as the US Supreme Court, were cited. We omitted these citations from our analysis. Altogether, we constructed a citation dataset where each unit of analysis was a citation within a high national court's decision to a decision by the ECtHR or CJEU. This process yielded a dataset containing 10,152 citations.

The data collection process allows us to observe the citation network of national courts citing decisions by the ECtHR and/or the CJEU, the network

[52] The scope of judgments available for the high national courts varied in completeness over time.

of citations by the ECtHR to its own decisions, the network of citations by the CJEU citing its own decisions, and instances where the ECtHR cites the CJEU and vice versa. In CJEU judgments, the most frequently cited ECtHR decision is *Gillow v. United Kingdom* (1986),[53] and the most frequently cited CJEU decision is *Francovich and Bonifaci and others v. Italian Republic* (1991).[54] In ECtHR judgments, the most frequently cited CJEU decision is *Google Spain v. AEPD and Mario Costeja González* (2014),[55] and the most frequently cited ECtHR decision is *Ireland v. United Kingdom* (1978).[56] Prior research has concluded that the ECtHR rarely cites other courts in its judgments, but ECtHR judges do so regularly in separate opinions.[57] Our study confirms this finding. We also found that the CJEU, like the ECtHR, prefers to cite itself rather than other courts.

For the most part, decisions by high national courts included in our data span from the mid-1990s to 2018. Some countries were omitted from some of our analyses because they had not yet joined the EU or judgments from their high court were not available in CODICES. The data are truncated for these reasons. Besides the fact that some countries entered the EU at different times, there does not appear to be a discernible pattern related to missing data in CODICES. We acknowledge that the lack of temporal consistency across the citation data could create several issues for our analysis. Because data for some courts are missing or underrepresented for specific periods, the citation data may fail to capture the evolutive nature of legal questions. For example, a case that concerns data privacy in 1999 will differ from a case that concerns data privacy in 2018. We discuss the method for mitigating these concerns in the following section.

1. Measures of Influence

We cannot merely plot the network structure across multiple national courts and expect to discern meaningful trends. Comparing a court that rarely uses

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53 *Gillow v UK* (1989) 11 EHRR 335.

54 Joined Cases C-6/90 and C-9/90 *Francovich and Bonifaci and others v Italian Republic* EU:C:1991:428.

55 Case C-131/12 *Google Spain v AEPD and Mario Costeja González* EU:C:2014:317.

56 *Ireland v UK* (1979-80) 2 EHRR 25.

57 Voeten (n 22) 549.

citations to a court that frequently uses them mistakenly assumes the observed citations are equal. Second, since each high national court has its own unique docket, we should not expect the same decisions to be cited equally across courts. Finally, ECtHR or CJEU judgments may have varying levels of influence. For these reasons, we develop a method that weights judgments by the ECtHR and CJEU and accounts for each high national court's tendency to cite ECtHR and CJEU judgments. This approach allows us to compare the citation behavior of multiple national courts and uncover the structural relationship between these courts and the ECtHR and CJEU.

Our approach is similar to previous work by network science scholars.[58] Fowler et al. argued that decisions by the US Supreme Court had varying levels of subsequent influence over future decisions.[59] They developed a measure of influence and demonstrated that some US Supreme Court decisions are very influential over future decisions and others less so. In this article, we implement a hypertext-induced topic search (HITS) algorithm to identify influential ECtHR and CJEU judgments. This network measure was first developed by Kleinberg and allows us to assess each cited decision's degree of authority.[60]

We performed the HITS algorithm separately over ECtHR and CJEU judgments. This process first measured the network of ECtHR citations to previous ECtHR judgments and then measured the network of CJEU citations to previous CJEU judgments. Within each citation network, each judgment is assigned an authority score and a hub score.[61] Authority scores are forward-facing and capture how a decision becomes influential within the

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58 Fowler and others (n 26); Lupu and Voeten (n 16).

59 Fowler and others (n 26).

60 Jon Kleinberg, 'Authoritative Sources in a Hyperlinked Environment' (1999) 46 Journal of the Association for Computing Machinery 604.

61 The HITS algorithm defines authority and hub scores through a mutual recursion whereby a decision's authority score is computed as the sum of the scaled hub values that cite that decision and a decision's hub value is the sum of the scaled authority values of the decisions that it cites. In practice, the algorithm performs a series of iterations which update the authority and hub scores for each decision in the network. The algorithm will update each decision's authority score to be equal to the sum of the hub scores of each decision that cites to it as it is applied across the network.

network after it is established. Hub scores are backward-facing and capture the contextualization of the decision's establishment. More simply, hub scores capture which previous decisions were relied upon to create a given decision. Kleinberg denoted a node as a 'good hub' if it pointed to many other nodes and identified a node as a 'good authority' if multiple nodes pointed to it.[62] Hub scores and authority scores are positively correlated in the CJEU and ECtHR networks.

Following others, we converted the estimated authority scores to percentiles.[63] This transformation allows the degree of influence a decision has within its network to be interpreted more easily. Without this transformation, the raw authority scores would be interpreted as logarithmic values. Further, percentiles best capture the intuition that a judgment's influence is perceived in relation to the influence of other judgments.[64]

2. *Text-as-Data Methodology*

Next, we examine how national court citation behavior varies across different issue areas by applying a Structural Topic Model (STM), a relatively new methodological development whose goal is to identify topics within text across large numbers of documents.[65] This method allows us to observe how influential the ECtHR and CJEU are over different national courts based on the legal issues involved.

Like other text-as-data methodologies, STM requires a number of preprocessing steps. First, the words in each document are transformed to lower case. Next, stopwords, including words such as 'the' that are common in written documents, are removed. The text of each document then undergoes stemming. Stemming involves truncating words in order to form consistency. For example, 'developing' and 'developed' are stemmed into 'develop'. We transformed each judgment by the ECtHR and CJEU into a document-term-matrix, where the frequency of each word in each document

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62 Kleinberg (n 60).

63 Ibid; Lupu and Voeten (n 16).

64 Fowler and Jeon (n 19).

65 Margaret Roberts, Brandon Stewart and Edoardo Airoldi, 'A Model of Text for Experimentation in the Social Science' (2016) 111 Journal of the American Statistical Association 988.

is counted. The document-term-matrix does not account for the order in which words appear in a document, leading many to describe this approach as a 'bag of words'.[66] The last preprocessing step before the textual data is ready for STM analysis is removing words from the document-term-matrix that appear only once.

One of the drawbacks of estimating a STM is that the number of topics must be set by the researcher. A range of possible topics is identified and then subjected to a series of diagnostic properties including exclusivity, semantic coherence, held-out likelihood, and residual dispersion.[67] Appendix 2 demonstrates how we selected sixteen topics.[68]

V. RESULTS

We performed three separate network analyses, each exploring a different facet of the structural relationship between courts through citations. A text-as-data approach is also employed to uncover the substantive legal issues in ECtHR and CJEU judgments and to show how the influence of these decisions on high national courts differs across issue areas. The findings of each methodological approach are presented below.

1. Measures of Influence

The results of the HITS algorithm and transformation identified the judgments in Table 1 as the five most influential in their respective courts.

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66 Ibid; see also Peter Grajzl and Peter Murrell, 'Toward Understanding 17th Century English Literature: A Structural Topic Model of Francis Bacon's Ideas' (2019) 47 Journal of Comparative Economics 111, 113.

67 Roberts, Stewart and Airoldi (n 65).

68 It is also important to note that the 'name' of each topic is subjectively selected by the researcher. We selected topics based on the most common terms within a given issue area.

	ECtHR	CJEU
1)	Von Hannover v. Germany (2004)	Google Spain SL, Google Inc. v. Agencia Espanolade Proteccion de Datos (2014)
2)	Labita v. Italy (2000)	International Air Transport Association v. Department for Transport (2006)
3)	Loizidou v. Turkey (1995)	European Parliament v. Council (2006)
4)	Marckx v. Belgium (1997)	Kadi v. Commission (2008)
5)	Golder v. United Kingdom (1975)	ERT AE v. Pliroforissis and Kouvelas (1991)

Table 1: Most Influential Judgments

As suspected, ECtHR and CJEU judgments do not have uniform levels of influence over future decisions. Figure 2 presents the average authority percentile of CJEU and ECtHR judgments for each year. For example, judgments by the CJEU that were established in the late 1990s to the early 2000s appear to have relatively stable authority. In contrast, the average authority of judgments by the ECtHR fluctuates over time. In the last few years of the data examined here (2014-2017), the authority scores of judgments by both courts appears low; however, this may be an incidental suppression from the measurement procedure as the authority of a judgment is measured by how many future cases cite the decision.

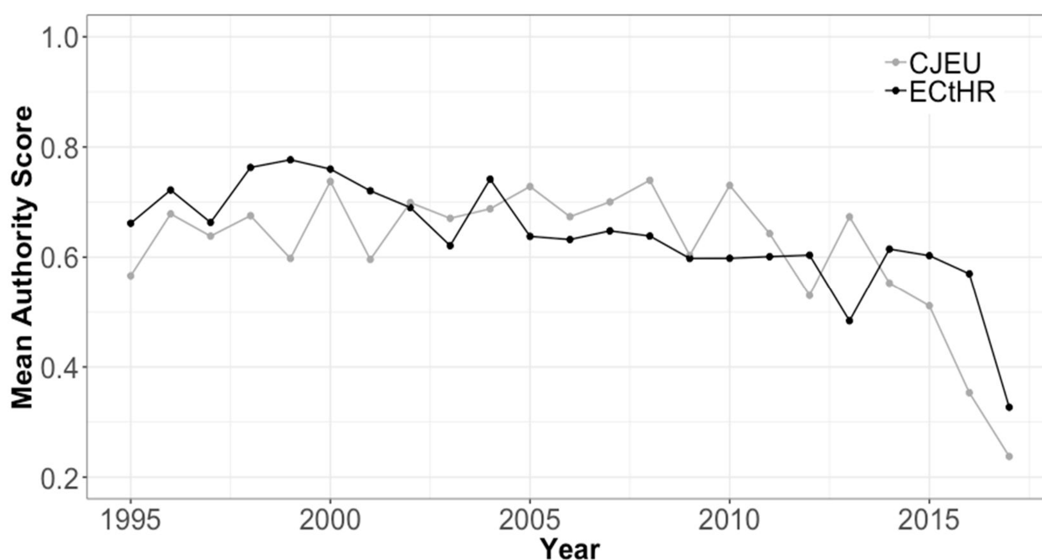

Figure 2: Average Influence Scores

One of the main benefits of generating authority scores is that it allows us to compare how high national courts view and cite the leading CJEU and ECtHR cases. While national courts cite different CJEU and ECtHR

judgments, our approach determines whether these courts are citing decisions with similar authority scores or not.

If, for example, Court X tended to cite judgments by the ECtHR that had high authority scores and Court Y tended to cite judgments by the ECtHR that averaged low authority scores, it implies that the two courts are treating decisions by the ECtHR differently. This scenario suggests, among other things, that Court X regards judgments by the ECtHR more highly and feels the weight of those decisions in ways that Court Y does not. Instead of relying on highly influential judgments by the ECtHR, Court Y relies more on its own domestic decisions than it does the international cases. To the limited extent Court Y cites international cases, they tend not to be the cases that other national courts have deemed to be highly influential. Even though these courts are not citing the exact same judgments by the ECtHR and CJEU, we can still observe meaningful citation patterns. We identify citation behaviors such as a tendency to cite cases with high authority scores, low authority scores, and a tendency to cite a mix of low and high authority decisions.

We predicted one of the best indicators of citation behavior would be when a country entered the EU. For this reason, we compare the citation behavior of the new EU-13 and old EU-15 high national courts. The first set of histograms in Figure 3 compares the distribution of authority scores of cited CJEU judgments by high national courts in old and new Member States. While we observe that both types of Member States cite CJEU judgments with high authority scores similarly, high national courts in the older Member States appear to cite judgments by the CJEU with low authority scores more frequently than courts in new Member States. A similar pattern is detected in the second set of histograms concerning citations towards ECtHR judgments. We also found courts in the older Member States to be more inclined to cite ECtHR judgments with low and moderate authority scores and the courts in the newer Member States prefer to cite judgments with high authority scores.

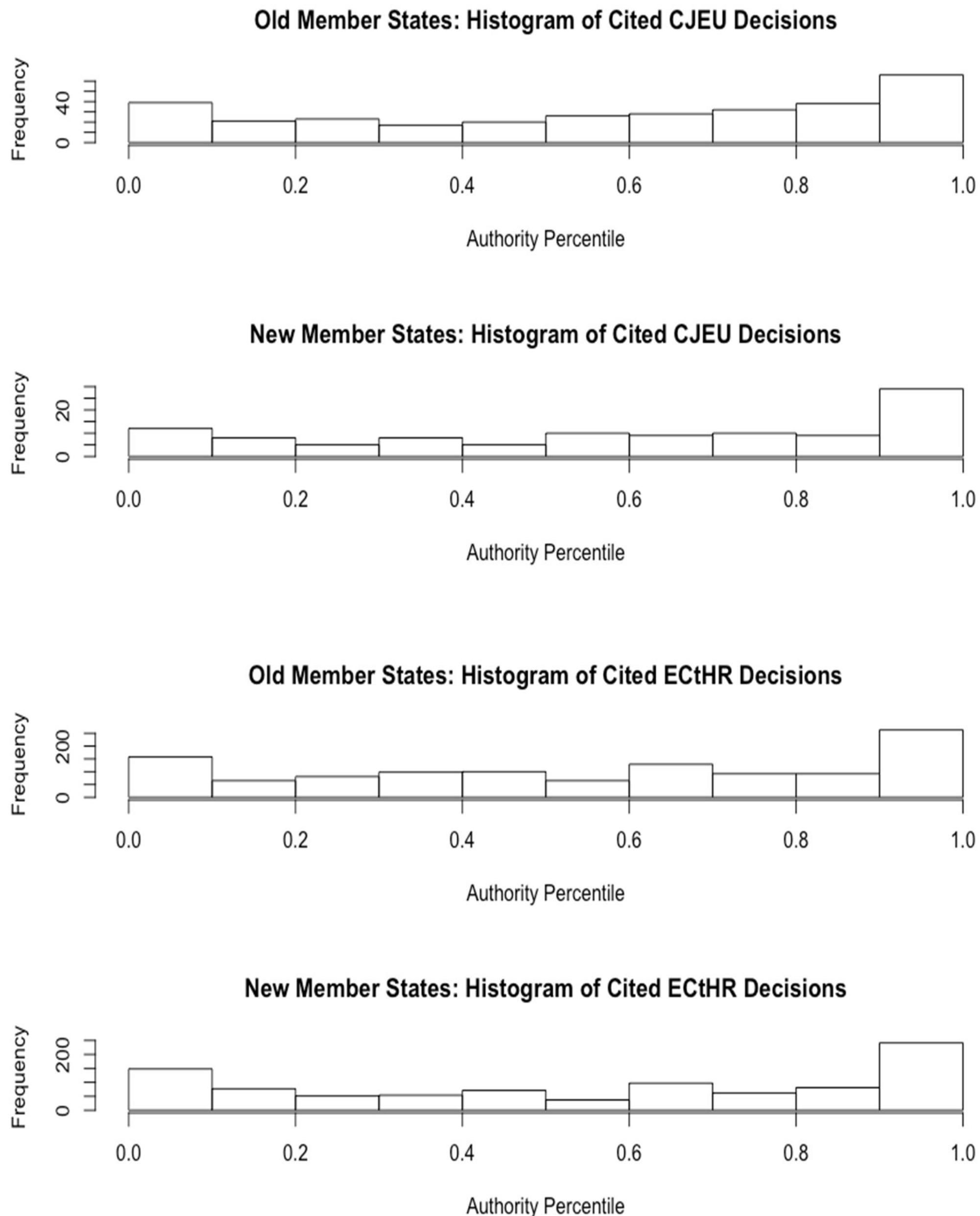

Figure 3: Citation Behavior — New and Old Member States

The authority scores reveal that ECtHR and CJEU judgments vary in their level of influence and that there is variation in the citation behavior across high national courts. Both sets of histograms provide initial support for our main empirical expectations: high national courts in new and old Member States engage in different citation behaviors and the courts in newer Member States tend to cite important and authoritative judgments by international

courts more frequently than courts in Member States which have been part of the EU the longest.

2. Community Measures

Next, we employ community detection measures over the high national courts based on their citation behavior. This hierarchical clustering method allows us to detect which courts are most similar and most different to other courts over time and how these relationships differ based on citations to judgments by the ECtHR and CJEU. Further, this set of analyses can determine which court, the ECtHR or CJEU, is the most influential across all of the national courts in the network and whether the structure of the relationship between courts is hierarchical or not.

If the relationship between courts at the international, supranational, and national levels is hierarchical, then the hierarchical cluster algorithm will *not* detect distinctive communities among the national courts based on their citation behavior towards CJEU or ECtHR decisions. In this institutional scenario, an international court, such as the CJEU, sits at the top of a hierarchical pyramid and can command compliance from all of the courts at the national level. A hierarchical court system will be maintained over time by lower court compliance with the decisions by the higher court and the ability of the higher court to direct and persuade lower courts to adopt its decisions. Without this relationship between higher and lower courts, the foundation of the pyramid collapses and flattens the hierarchical shape. If all (or almost all) of the high national courts in this study employed similar citation behavior towards decisions by the ECtHR and CJEU, it would suggest the relationship is hierarchical. However, if national courts vary greatly in their citations of ECtHR and CJEU judgments, it would suggest the system is flat, that is, less hierarchical.

We must first address the issue of truncation in order to perform the hierarchical cluster analyses. To accomplish this, we limited our analyses of national courts whose collected judgments cover three or more consecutive years within the period of 1996 to 2017.[69] Next, we estimated two average

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69 This process led to several national courts not being represented in the remaining set of analyses. The following countries are not represented in the remaining

authority scores. The first represents the average authority score of cited ECtHR judgments by a given national court in a single year. The second represents the average authority score of cited CJEU judgments by a given national court in a single year. These scores allowed us to compare the citation behavior of courts even if they vary in the number of citations employed in their judgments and vary in the number of judgments they produce.

We ran each hierarchical cluster analysis based on the average authority score of cited judgments. Since we are examining *national* courts, the unit of analysis is at the country-year level. Initially, we assigned each country to its own cluster and the algorithm proceeds iteratively, at each stage joining the two most similar clusters, continuing until there is just a single cluster.[70] The first hierarchical cluster analysis estimates communities among national courts based on citations to CJEU judgments and the second analysis estimates communities among national courts based on citations to ECtHR judgments.

The hierarchical clustering algorithm detected four distinct communities among the countries (See Appendix 1-A). Within each community, country-year dyads that are closer to each other share more similar citation behaviors than country-year dyads that are further apart. There appears to be a temporal effect underlying the formation of each community. The largest community captures high national courts that issued citations to CJEU judgments between 2012 and 2017, and the smallest community contains high national courts that issued citations to CJEU judgments between 2009 and 2011. As the hierarchical clustering algorithm detected more than one community among national courts, the results suggest that the authority or weight of the CJEU judgments has not been uniform across the countries and

network and text-as-data analyses: Bulgaria, Cyprus, Czech Republic, Finland, France Germany, Greece, Ireland, Lithuania, Luxembourg, Malta and Portugal. While it is unfortunate that data for some countries are missing, it is less of a problem since the countries with missing data represent both EU-13 and EU-15 countries which are used in our analyses.

[70] At each stage, distances between clusters are recomputed by the Lance–Williams dissimilarity updating formula. See Michael R Anderberg, 'Cluster Analysis for Applications' (1978) (No. OAS-TR-73-9) Office of the Assistant for Study Support Kirtland AFB N MEX.

that the citation behavior of high national courts has varied over time. Moreover, within each community, we observe clustering among the courts at the national level based on when those nations became Member States of the EU.

The hierarchical clustering algorithm also detected four distinct communities among national courts based on citations to ECtHR judgments (See Appendix 1-B). As in the previous estimation, there appears to be a temporal impact underlying the formation of these communities. The citation behavior of the high national courts for the years 2012 through 2017 is distinctly different from the citation behavior of these same courts in previous years. Based on the revealed communities, we conclude that the influence of ECtHR judgments has not been uniform across national legal systems in this study. The variation over time in the tendency of national courts to cite ECtHR judgments suggests the citation network is a structure that is both dynamic and heterarchical. We also find support for our predicted difference in citation behavior by EU-15 and EU-13 national courts. Within the four communities, we consistently found that high national courts in older Member States clustered together as did the high national courts in the newer Member States.

There are several implications in the estimated communities. Some high national courts appear to cluster based on country-specific political and cultural histories. For example, the clustering of Slovakia, Poland, Estonia, and Slovenia suggests that their shared connection with the Eastern bloc is a common denominator. Similarly, 2004, the year these former communist countries joined the EU, may help explain the various clusters. A similar pattern can be detected in citations to ECtHR judgments. The clustering of the high national courts of Lithuania, Slovakia, Latvia, and Slovenia, which were part of the post-Cold War major enlargement in 2004, imply that a common political and cultural history may account for the way these courts approach and cite judgments by the ECtHR. The detection of unique communities provides support for our expectation that the way national courts in Europe's CLO cite decisions by, and form network connections with, the CJEU and ECtHR varies on at least one variable — when the nation joined the EU.

Another conclusion that can be drawn from these estimations is that over time, the influence of ECtHR and CJEU judgments has shifted across national courts. It is unlikely this temporal variation is driven by changes within the national legal systems since the period when the detected communities begin and end is consistent across all the Member States. Rather, this temporal variation is likely driven by the actual decisions of the ECtHR and CJEU on the wide variety of issues that happen to come before these courts. We found that each detected community has a distinct pattern of citing ECtHR or CJEU judgments and this suggests that the case citation network in Europe's CLO is dynamic and heterarchical rather than static and hierarchical.[71]

3. Dual Citations

As previously demonstrated, there is considerable variation in how national courts cite ECtHR and CJEU judgments. Some high national courts appear to favor judgments by the CJEU and others prefer judgments by the ECtHR. High national courts in Member States that have been in the EU longer appear to favor ECtHR over CJEU judgments. For example, in Italy, Spain, and the United Kingdom, roughly 80 percent of cross-border citations are to ECtHR judgments. In contrast, citations are split roughly evenly between CJEU and ECtHR judgments by courts in the newer Member States of the EU, such as Slovakia and Estonia. As we discuss later, this may be evidence of the newer Member States signaling their commitment to the values represented by these two legal regimes.

Some high national courts consistently cite one international court over another. For example, the Supreme Court of Ireland and the Constitutional Court of Lithuania eschew citing CJEU judgments, turning instead to the ECtHR. More typically, however, we observe national courts engaging in dual-citation behavior, where they cite both ECtHR and CJEU judgments. And, as we show below, national courts in the newer EU countries have been

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[71] At the moment, network science does not offer a method to detect heterarchical structures as this process would require a top-down analysis as well as a node-to-node analysis.

more likely than courts in the older EU countries to engage in this dual-citation behavior.

Dual-citation patterns take various forms cross-nationally. To demonstrate this variation, we plot the citation behavior of courts in new and old Member States in Figure 4. The estimated percentages are time-independent and were calculated after aggregating all decisions by a court in a given country.[72] The axes in Figure 4 are percentages and for each national court, where the value a country receives on the x-axis and the value it receives on the y-axis will sum to 100. The value of the x-axis is estimated by counting the number of times a court cites an ECtHR judgment divided by the number of citations. The value of the y-axis is calculated by counting the number of times a court cites a CJEU judgment divided by the number of citations.

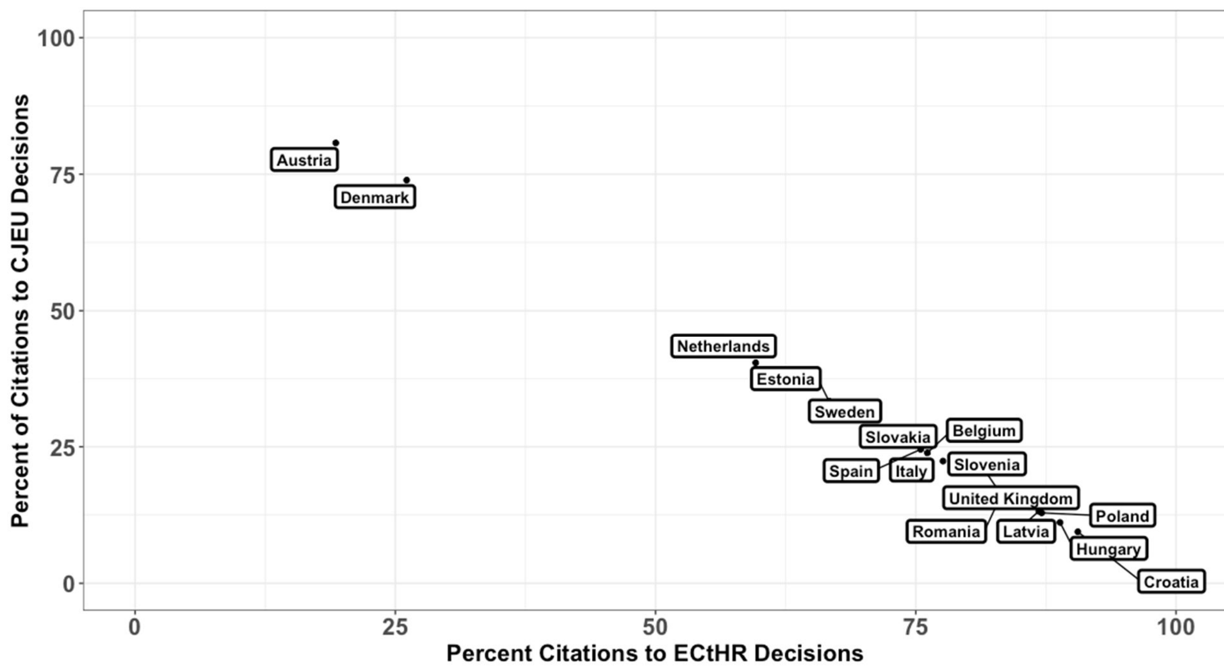

Figure 4: Dual Citation by National Courts

The pattern portrayed in Figure 4 suggests that most high national courts prefer to cite judgments by the ECtHR. There are two distinct countries in Figure 4, Austria and Denmark, whose courts appear to favor citing CJEU judgments over the ECtHR. Our findings for Denmark confirm the results of Wind's study in 2010 which documented the reluctance of the Danish and

72 As mentioned previously, our concerns about missing data led us to remove some countries when the published decisions collected in CODICES did not cover three or more consecutive years from 1996 to 2017.

Swedish Supreme Courts, when compared with the Norwegian Supreme Court, to cite international courts.[73]

4. The Role of Issue Areas in the Citation Networks

Table 2 below demonstrates the results of the STM model. As noted above, we applied the STM model over all ECtHR and CJEU decisions. This approach allows us to compare ECtHR and CJEU decisions that fall within the same topic and explore how the citation behavior of national courts is distributed across topics. The most frequently cited CJEU judgments involve the Immigration, Environment, and Employment Rights topics. In contrast, the most frequently cited ECtHR judgments involve the Judicial Procedure, Family Rights, and Criminal/Juvenile topics.

Topic	Name	Frequent Terms
1	Politics/Governance	election, candidate, politics, parliament
2	Judicial Procedure	case, application, judgement, procedure
3	Economics	cartel, market, competition, price, benefit
4	Family Rights	child, sex, marriage, parent, birth
5	Criminal Rights	trail, self-incrimination, charged, evidence
6	Genocide	genocide, confiscate, Armenian, attribution
7	Immigration	asylum, migrant, refuge, alien, deport
8	Democratic Procedure	access, vote, register, legality
9	Criminal Punishment	penalty, sentence, offense, prison
10	Criminal/Juvenile	child, violence, prison, severe
11	Natural Resources	minerals, fish, laden, council
12	Employment Rights	profession, disclosure, appeal, ombudsman
13	Religion	church, religion, monastery, school
14	Environment	climate, environment, agreement, envisage
15	Reproductive Rights	abort, embryo, biology, IVF
16	Privacy	data, requirement, journalist, concern

Table 2: Structural Topic Model Results

STM relies on a matrix of terms for each document and calculates the proportion of each document that falls into each topic. In *Airey v. Ireland* (1979),[74] for example, the petitioner claimed that the right to a fair trial also guaranteed a right to legal aid; the STM model found that 71.4 percent of the judgment falls under the judicial procedure topic and the remainder is distributed across other topics. In *Google Spain v. AEPD and Mario Costeja*

73 Wind (n 25); Wind (n 29).

74 *Airey v Ireland* (1979) 2 EHRR 305.

Gonzalez (2014),[75] for example, the CJEU decided that internet search engines must respect an individual's right to privacy and a right to data privacy. In this case, the model found that 67.2 percent of this judgment falls into the privacy topic.

There are other citation patterns within topics. For example, within the Criminal Punishment topic, we find that the Supreme Court of Estonia prefers to cite Criminal Punishment judgments from the CJEU; the high national courts in Belgium, United Kingdom, Lithuania, Poland, Slovakia, Slovenia, and Sweden prefer Criminal Punishment judgments from the ECtHR; and Croatia's court cites the Criminal Punishment judgments of the CJEU and ECtHR evenly. The Family Rights topic also appears to have a polarizing effect. Austria's court stands alone in its preference to citing Family Rights judgments by the CJEU, while the high national courts in Croatia, Spain, Hungary, Latvia, Lithuania, the Netherlands, Poland, and Slovakia generally cite Family Rights judgments by the ECtHR. The topic of Religion, on the other hand, does not have a polarizing effect as national courts frequently cite CJEU and ECtHR judgments.

VI. Discussion and Implications

Our analyses suggest that Europe's CLO has evolved over time largely in response to legal and political changes and this evolution has impacted the authority of the ECtHR and CJEU. The rise of specific issues, such as those related to immigration, may affect how national courts recognize and enforce ECHR and EU principles in domestic law. More general changes in the 'bounded strategic space', such as the accession of new Member States in the EU or changes in the principal treaties, may also account for the variation. Before 2009, the year the Lisbon Treaty and the CFR went into effect, the most important and influential human rights court in Europe was the ECtHR. Afterwards, the number of preliminary references concerning fundamental rights increased significantly and, in turn, has raised the profile of the CJEU as a 'human rights adjudicator'.[76] Nevertheless, to the extent

[75] *Google Spain* (n 55).

[76] Gráinne de Búrca, 'After the EU Charter of Fundamental Rights: The Court of Justice as a Human Rights Adjudicator?' (2013) 20 Maastricht Journal of European and Comparative Law 168.

that citations to ECtHR judgments are a measure of the court's influence and prominence, the ECtHR's influence has increased even as the CJEU expanded its rights jurisdiction.

In our analyses of the case citations of the ECtHR and CJEU, we found, not surprisingly, that they prefer to cite their own judgments. However, there were many instances where each court cited the other court's judgments. This finding confirms Voeten's conclusion: 'contrary to its transnationalist reputation, the ECtHR rarely cites other courts in majority judgments, although ECtHR judges do so regularly in separate opinions'.[77] In the network of Europe's multi-level system of courts, we consistently found the ECtHR to be more influential than the CJEU. Our conclusion that the ECtHR is now and over the time span of this study 'the ultimate supranational arbiter of human rights in Europe' is based on evidence related to the number of citations, the preference of the ECtHR over the CJEU in dual citations by national courts, and the overall greater influence of ECtHR judgments across issue areas.[78]

Our results should not be construed to mean that the ECtHR's status in Europe's multi-node legal system will not change in the future. The CFR clearly has influenced the CJEU's work on behalf of rights. Its effect could be seen even before the CFR went into force. Between 2000 and 2009, references to the rights catalogued in the CFR frequently appeared in the judgments of the CJEU alongside references to the rights in the ECHR. The first reference to the CFR in the CJEU was in *Technische Glaswerke Ilmenau GmbH v. Commission* (2002).[79] After 2009, there was a clear change in the citation pattern. First, the number of CJEU judgments with references to the CFR increased five-fold at roughly the same time (comparing the number of cites from 2000 to 2009 with the number from 2010 to 2017). Around the time the CJEU started citing the newly ratified and legally binding CFR with greater frequency, its references to decisions by the ECtHR and the corresponding rights in the ECHR have decreased. The CJEU appears to be giving CFR rights meaning separate and independent from the meaning conferred by the ECtHR. Rather than frequent comparative references to

77 Voeten (n 22) 549.

78 Kelemen (n 10).

79 Case T-198/01 *Technische Glaswerke Ilmenau GmbH v. Commission* EU:T:2002:90.

decisions by the ECtHR and developing the human rights principles as background or context to the same rights in the CFR, the CJEU has started to develop distinctive CFR principles and approaches.

Further, we theorized and found empirical evidence that the national courts of the newest members of the EU, representing mostly countries of Eastern and Central Europe, cite ECtHR and CJEU judgments more often than the national courts of the old EU-15. The citation behavior of EU-13 national courts, which joined the EU in 2004 and thereafter, formed communities distinct from the national courts of the older Member States in the European judicial network. This finding supports our theory of strategic citation behavior and aligns with prior research in the comparative courts literature that found that courts within new democracies cite international court decisions strategically as a means of signaling legitimacy in their decision-making.

Finally, with regard to governance structure, the results of our influence and community detection measures suggest that Europe's emerging CLO is organized less like a pyramid and more like a flat, multi-node, interconnected network. Our findings support the intuitions of Voßkuhle, Stone Sweet and others who attributed the system's shape to the legal environment created by ECtHR and CJEU decisions promoting dialogue and allowing high national courts greater decisional authority. This finding of less hierarchy in Europe's CLO also lends support to the theory of strategic citation where national courts choose whether to cite or not cite ECtHR and CJEU judgments. International law scholars have identified several factors that mediate the impact of international law on national legal systems.[80] Here, we confirm that the national courts of newer democracies are more likely to cite and incorporate the case law principles of the ECtHR and CJEU. This citation behavior suggests that they are signaling to domestic and international audiences their commitments to liberal-democratic values and fundamental rights. Our conclusion that Europe's emerging CLO is today more heterarchy than hierarchy because the citation behavior of the older EU-15 national courts substantiates Tommaso Pavone's work on Italy which found variation in the willingness of national courts to engage in dialogue with the CJEU: '[...]

[80] Wind (n 29); Conant (n 23).

while judges who sought to empower themselves via dialogue with the ECJ do exist, they were and remain the exception rather than the rule'.[81]

An additional consideration for future work is how the specific constitutional arrangements of the high national courts (supreme court or constitutional court) and the political system's commitment to judicial review (less of a commitment in majoritarian democracies than in constitutional democracies) affect willingness to engage in judicial dialogue with the ECtHR and CJEU. This research question would expand upon prior research by Wind, who studied the supreme courts of Denmark, Sweden and Norway.[82] While the decisions of lower national courts are beyond the scope of decisions hosted by CODICES, it would be interesting to know if their interactions with international court judgments are the same as the high national courts' interactions. Such a finding would provide additional support for our conclusion that high national courts in some countries are more likely to incorporate international law principles into their judgments than others. Others too may profitably consider expanding the scope of our study to include contracting states of the COE which are not a part of the EU and test to see if the newer democracies in this subset exhibit the same strategic citation behavior we found in the high national courts of the new EU-13 Member States.

Our findings also emphasize the dynamic nature of law in society and the functions of courts. Law is a dynamic process based on social norms and formal rules. Both law and politics likely drive the ebb and flow of the influence enjoyed by ECtHR or CJEU judgments over high national courts at various times. With the passage of time and the changing, in some instances diminishing, commitments of Member States to the core European values of respect for human dignity and human rights, freedom, democracy, equality, and the rule of law, we envisage the citation behaviors highlighted here may differ in the future.

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81 Tommaso Pavone, 'Revisiting Judicial Empowerment in the European Union: Limits of Empowerment, Logics of Resistance' (2018) 6 Journal of Law and Courts 303, 326.

82 Wind (n 25).

VII. CONCLUSIONS

This research illuminated important questions about the dynamic relationship between courts in Europe. The results indicate that Europe's multi-level system of courts is structured more as a flat, heterarchical legal system than as a hierarchical pyramid. As explained, the ECtHR and CJEU have been successful in getting national courts to take into account its decisions, but the propensity for introducing international law principles in domestic law varies among national courts. We also found that specific issue areas may influence national courts' embrace of the decisions of the ECtHR and CJEU. These findings may open doors for future research into how political, economic, legal, and other factors may influence the reception or embedding of international law norms in domestic law. By detecting interdependence among courts and the embeddedness of international law in national court decisions, our network and text-as-data analyses provided empirical evidence of the emergence of a CLO in Europe. Going forward, more work will need to be done to determine if our findings on the way these European courts are configured will remain as they are today or become more hierarchical in the future.

By mapping the case citation networks of courts at the national, supranational, and international levels, we provide new empirical evidence of the way Europe's CLO has emerged. Employing network analysis and text-as-data methodologies to the courts included in the Venice Commission's CODICES database, we reveal the evolving and varied nature of the interactions between the main nodes in this multi-level judicial system. Further, we found that the causes and consequences of this distinctive structure is the result of these courts 'contend[ing] with one another […] to fulfill the logic of their position' as predicted by the theory of bounded strategic space.[83]

[83] Caron (n 2).

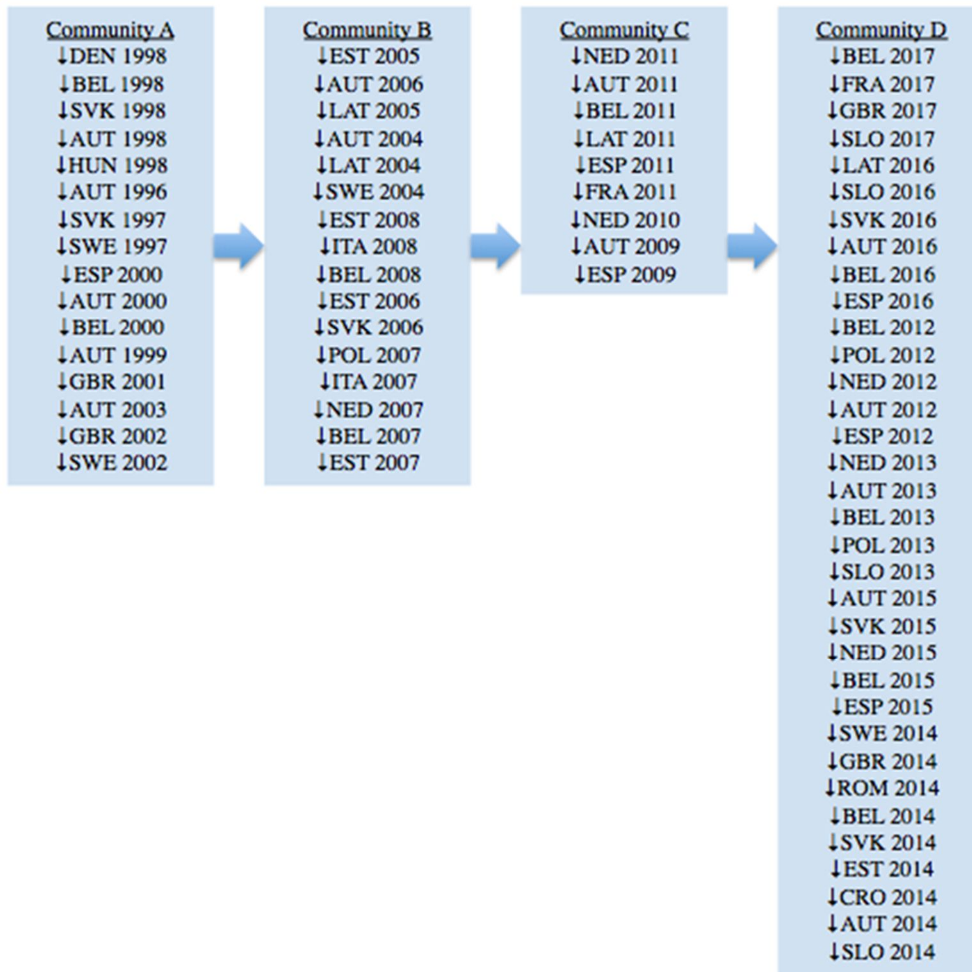
Appendices

1. Hierarchical Models

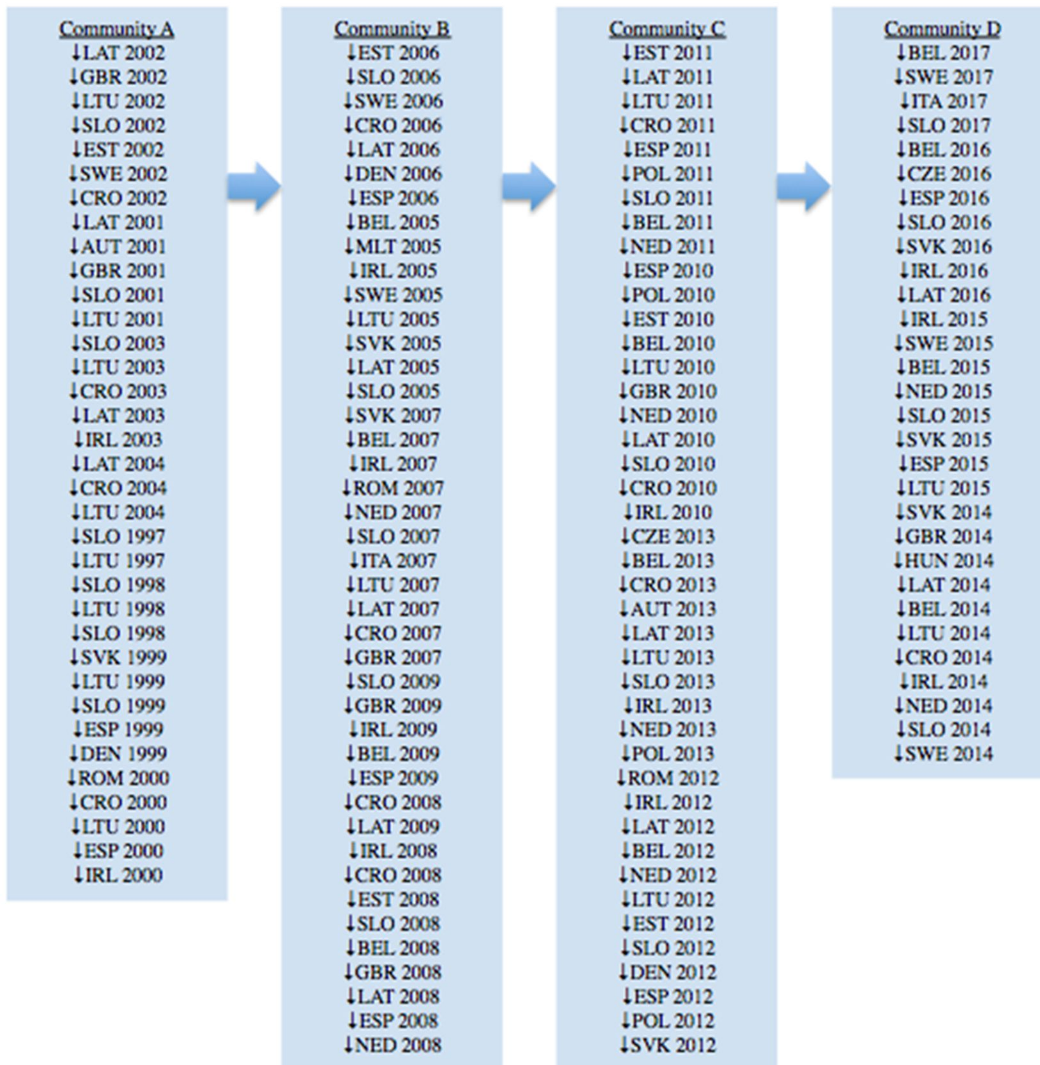
Each community is identified with a label and how it connects to other communities. Within each community we present the order in which country-year dyads from the citation network are clustered together. The closer two country-year dyads are within a community, the more similar their citation behavior.

Focus first on the detected communities for citations to CJEU decisions. There we notice that while some countries over time are consistently clustered with the same countries, others are not. Belgium, for example, is clustered with Denmark and Slovakia in Community A, the earliest community. Over time, we see Belgium clustering with Italy and Estonia and then with Austria and Latvia. At the end of our analysis, Belgium is clustered with France because it was found to have the most similar citation behavior. This pattern suggests Belgium's high national court has cited CJEU judgments more over time. In comparison, Slovenia, within Community D, the more recent community (2014-2017), consistently finds itself clustered with Austria, the United Kingdom, Slovakia, and Latvia. This result indicates that in recent years these national courts have approached CJEU judgments similarly.

A. CJEU and Member States: Detected Member State Communities (CJEU Decisions)



B. ECtHR and Member States: Detected Member State Communities (ECtHR Decisions)



2. STM Topic Selection

We estimated the diagnostic properties of seven to sixteen topics. As the number of topics increases, the probability of observing residuals decreases and semantic coherence within topics increases. These diagnostics give us confidence in selecting sixteen topics. Concerns related to labeling lead us to cap the number of topics at sixteen.