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Experimenting European healthcare forward

Do institutional differences condition networked governance?

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Abstract

Despite increasing interdependencies, national decision-makers have been reluctant to delegate healthcare competences to the supranational level in the European Union (EU). To overcome this impasse, EU institutions and member states have agreed on middle ground compromises by means of experimentalist governance. In this paper, we examine a tool of experimentalist governance in the making, i.e., the network formed by the cross-border healthcare expert group (CBHC) in the Patient Rights Directive. We ask whether interaction by means of transitive relations carrying trust, takes place and the extent to which domestic institutions, i.e., healthcare models, condition such interaction and thus learning. To examine network interactions, we use social network analysis on the basis of collected survey data on the exchange of information, advice and best practices within the CBHC network. We develop an Exponential Random Graph Model of the network to test the extent to which domestic institutions condition such interactions. For this, we conduct a cluster analysis and build a healthcare typology of EU27 plus the UK, Norway and Iceland, identifying five distinct healthcare types. We find that this type of networked governance brings EU healthcare cooperation forward, while domestic institutions greatly condition who interacts with and learns from whom.

Keywords: European Union; Experimentalist governance; Social Network Analysis; Crossborder healthcare; Healthcare typology; Interaction, Trust, Learning

1 Introduction

Healthcare governance in the European Union (EU) has to experiment its way forward. Despite increasing interdependencies, national decision-makers have been reluctant to delegate competences to the supranational level. To break this deadlock, EU institutions and member states have agreed on middle ground compromises taking the form of experimentalist governance (Greer, 2011). Experimentalist governance occurs when member states and EU institutions decide on joint actions but only formulate provisional or open-ended goals and means (De Búrca, 2010; Newman, 2010; Sabel & Zeitlin, 2008). How to pursue such goals is left to lower-level units to decide, on the basis of sometimes loosely defined mandates and underspecified tools.

Often, committees or networks become important tools for experimentalist governance. Within these networks, commissioned members meet regularly and deliberate about how to attain framework goals. They report on their own goal performance and evaluate the performance of their peers. A key assumption in experimentalist governance is that as a result of interaction and deliberation, member states will learn from diversity (Sabel and Zeitlin 2008). However, the assumption of experimentalist governance as a vector of deliberation and learning so far has not received much empirical scrutiny.

In this paper, we examine networked governance with key experimentalist features as it is currently developing in the administrative network of the EU cross-border healthcare (CBHC) expert group, adopted as part of the Patients' Rights Directive (PRD)¹. We ask whether interaction by means of transitive² relations carrying trust, takes place and the extent to which domestic institutions, i.e., healthcare models, condition interaction and thus learning.

¹ Directive 2011/24/EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in cross-border healthcare.

² In network theory, the concept of transitivity operationalizes social trust as: If A chooses B and B chooses C, A tends to choose C also.

The existing literature provides mixed expectations regarding this question. Experimentalist scholars present that despite the absence of an overarching sovereign and limited political will to set common goals, bringing peers together to discuss how to achieve common ends can further European integration (De Búrca et al., 2014; Sabel and Zeitlin 2008; Zeitlin & Overdevest, 2019). However, on a more critical note trust has been identified as key for interaction among officials (Fossum, 2012). In addition, more recent work on network interaction points to how domestic institutional factors condition supranational network interaction, information sharing and partner selection (Efrat & Newman, 2018; Vantaggiato, 2019).

As a basis for our network analysis, we survey interaction patterns between network members in the EU27 plus the UK, Iceland and Norway. Specifically, we asked about three main types of resources that are likely to flow in networks and create learning: exchange of information, exchange of best practice and provision of advice. We pose three hypotheses on interaction patterns. First, we expect that interaction takes place across the network in transitive relations, i.e., relations that integrate network actors in bonding ties carrying trust, with one another. Second, we expect that network members are more likely to interact with homogeneous network partners, i.e., representatives from similar healthcare systems. Third, we expect that the institutional fit between a particular healthcare system and the free movement logic underpinning the PRD influences which peers are more central in the network.

To test our hypotheses, we conduct a cluster analysis of healthcare systems in the EU27 plus the UK, Norway and Iceland based on indicators of financing, expenditure, provision of and access to healthcare. In doing so, our paper also contributes to the literature on healthcare typologies, where existing research merely covers a selected set of OECD countries or the EU15 (Bambra, 2005; Blank et al, 2017; Giaimo and Manow, 1999; Kautto, 2005; Moran, 2000; Wendt, 2009).

We find that while interactions occur across the board, institutional differences indeed condition patterns of interaction to a large degree. Information, best practices and advice concerning cross-border healthcare flow mostly among actors that come from similar healthcare systems. In addition, we find that institutional fit matters, particularly in regard

to who is central for the exchange of best practices. Healthcare systems that have institutionalized free choice bode better for the idea of cross-border healthcare.

The paper is structured as follows. Below, we briefly present the PRD. We then present our theoretical framework and hypotheses. The subsequent sections set out the methodology and data collection and the results section presents our cluster analysis and the social network analysis. Finally, we conclude.

2 The Patient Rights Directive

The PRD was adopted by the European Parliament and the Council of Ministers in March 2011 after a long and contentious policy process, first initiated by the Court of Justice of the European Union (CJEU) and then responded to by EU legislative politics (Greer, 2011; Hatzopoulos & Hervey, 2013; Martinsen, 2015; Obermaier, 2009; Vollaard, 2016). The CJEU laid down that internal market principles apply to the field of healthcare and that patients shall – under certain conditions - be allowed to consume healthcare goods and services in another member state. Judicial integration was criticized by most member states for having applied internal market principles too far into the healthcare domain, and the Commission was called to present a legislative proposal that would re-establish legal certainty (Martinsen 2015; Vollaard 2016). However, the directive that was ultimately adopted did not manage to solve the legal complexity as intended. On the one hand, the directive aims to facilitate ‘access to safe and high-quality cross-border healthcare in the Union’.³ On the other hand, the directive emphasizes ‘full respect of national competences in organizing and delivering healthcare’.⁴

The compromise became that in principle, patients can go for treatment in another member state with the costs of care subsequently reimbursed by the member state of healthcare affiliation. However, for ‘hospital care’, ‘highly specialized’ and ‘cost-intensive’ care, member states are entitled to establish a system of prior authorization, where costs are only reimbursed if the patient has been authorized beforehand to have cross-border treatment. In doing so, the member state of affiliation can apply the same conditions, criteria of eligibility

³ See article 1, section 1 of the directive.

⁴ Ibidem

and administrative formalities it would impose if the treatment were provided in its own territory (article 7.7 of the directive). Only when a patient fulfils such national conditions and when the treatment in question cannot be provided on its territory within a medically justifiable time limit is the member state of affiliation obliged to authorize the treatment (article 8.5 of the directive). However, member states themselves define what constitutes ‘hospital care’, ‘non-hospital care’, ‘highly specialized’ and ‘cost-intensive’ care. In sum, the directive contains many conditions that have to be fulfilled, is somewhat contradictory in its purposes, and leaves much discretion to the member states on how to fulfil the stated ends.

The regulatory text envisions three types of networks to assist the Commission in fostering cross-border cooperation and in relation to implementation of the directive. First, the directive adopts more specialized European reference networks, consisting of healthcare providers and representatives from centres of expertise that are to cooperate on rare diseases (Greer, 2011; Héon-Klin, 2017).⁵ Second, the directive sets up a voluntary health technology assessment network, connecting national authorities or bodies responsible for health technology assessment.⁶ Third, the directive puts in place a cross-border healthcare expert group.⁷ This network consists of civil servant representatives from each member state. It is inserted in the directive as part of its implementation and final provisions ‘to assist the Commission’ (article 16.1 of the directive). There is no further task description in the directive, and the subsequently adopted rules of procedure do not make much further specification either, except for stating that the “purpose of the group is to provide DG SANTE with advice and expertise, and furthermore to provide Member States with a forum of exchange of experiences on the operation of the Directive 2011/24/EU”.⁸ In this paper, we investigate the cross-border healthcare expert group as an instrument of experimentalist governance in the making.

⁵ See article 12 of the directive.

⁶ See article 15 of the directive.

⁷ See article 16 of the directive.

⁸ See ‘Rules of Procedure of the Cross-Border Healthcare Expert Group’, Ref. Ares (2017) 414436 - 26/01/2017.

3 Theoretical framework

3.1 Learning through deliberation and socialization

Experimentalist governance denotes the situation where governments and – in our case – EU institutions decide on joint actions and share a problem definition but are unable to formulate a comprehensive set of ends and means (De Búrca et al., 2014). Experimentalist governance results from a rise in complexity as well as multilevel distribution of power, which exhausts the capacity to govern through more conventional hierarchical management and ‘command and control’ regulation (Newman, 2010). When decision-makers cannot agree on or do not know how to solve shared problems, the formulation of goals and/or means becomes more open-ended and contestable (Sabel & Zeitlin, 2008). This allows for interpretation by the actors who are to cooperate on and execute the adopted rules. The methods, tools, metrics, and values to achieve open-ended goals must be developed through subsequent experimental processes of rule interpretation and implementation. Rule-making occurs out of these recursive processes in which goals and means are revisable and corrigible (De Búrca, 2010).

An experimentalist governance process typically involves four elements or reiterated steps (De Búrca et al., 2014; Zeitlin & Overdevest, 2019). First, on the basis of the identification of a shared set of problems or challenges, provisional or open-ended goals are adopted by some combination of “central” actors (here EU institutions) and “lower-level” actors (here member states). In our case, these goals are adopted by means of legislation, and although vaguely formulated, they still bind member states. Second, the lower-level actors are assigned considerable discretion to pursue the goals as they see fit in their specific local and institutional contexts. Third, in return for discretion, the actors must regularly report on their performance, which is then compared to that of their peers. If some actors are lagging behind others, the former are expected to make the necessary amendments to catch up. Fourth, goals and rules are revised in light of experiences to better address the problems originally identified. In this way, the process repeats (De Búrca et al., 2014; Zeitlin & Overdevest, 2019). In our case of the relatively young CBHC network, it is still too early to tell if rules will be revised in light of experiences. However, as experiences and learning add up, it is likely that the fourth stage of experimentalist governance will also apply.

In the EU, experimentalist governance takes a variety of organizational forms, including the open method of coordination, networked agencies and national regulators acting together in councils or committees, i.e., in networks (Sabel & Zeitlin, 2012). The actors who are assigned a role in these forms of governance become rule-makers as they go. Often, they advance by experimentation in networks. In these networks, a reciprocal redefinition of ends and means takes place, through which provisionally set goals are revised and specified (Sabel & Zeitlin, 2012). The members of the networks are given substantial discretion to advance these provisional goals and adapt them to local contexts. However, they must also report regularly on their performance and compare their results with their counterparts in the networks, coming from other constituencies and bringing in different experiences and institutional legacies (Zeitlin, 2016). Learning by means of deliberation and socialization between peers from different national or local contexts is a key dynamic of experimentalism (Sabel & Zeitlin, 2008).

Experimentalist governance is thus based on the assumption that deliberative interactions and socialization lead to mutual learning. In his more critical engagement with experimentalist theory, Fossum notes that key for interaction among officials is that officials develop interpersonal and “systemic” trust to delimit their behaviour and course of action (Fossum, 2012, p. 395). In the literature on social networks, this type of trust, termed social trust, is best operationalized by the concept of transitivity (Carpenter, Esterling, & Lazer, 2004) . Transitivity is the network’s structural tendency of actors to close triads, which is a common social pattern of being more open to interactions with others that are already known indirectly through others (Goodreau, Kitts, & Morris, 2009) Transitivity entails that if actor A interacts with actor B and actor B also interacts with actor C, it is likely that A will also interact with actor C. Trust does not only exist between actor A and B, but actor B can also broker trust between actor A and C. As such, transitive relations are assumed to be bonding ties carrying trust because they are solidified through multiple indirect relations (Burt, 2017). Common partners increase trust and can reduce the uncertainty of the quality of a contact (Berardo & Scholz, 2010). Trust is regarded as a lubricator for interactions facilitating the development of rules, compliance, monitoring and conflict resolution (Ostrom, 2009). Transitive relations can thus facilitate that learning in experimentalist governance settings does not only take place on an individual or bilateral level, but that knowledge and know-how circulate across the network. Members of networks with high transitivity learn not only

directly from their immediate exchange partner but experiences and expertise also transfer indirectly through other relations. This means that interaction does not occur in dyads but in triads: peers learn from peers that also interact with one another. Accordingly, transitive interactions carrying trust need to develop among peers across diverse institutional contexts for experimentalist governance to work. We hypothesize the following:

H1: Civil servants in the cross-border healthcare expert group network interact in transitive triads.

3.2 Learning across institutional differences?

In the theory of experimentalist governance, lower-level representatives cooperate and deliberate to fulfil rather open-ended goals. In doing so, they come to learn from the differences brought into the process by their counterparts (Sabel & Zeitlin, 2008). However, as is the case for many other EU policies, institutional differences are considerable, as healthcare is provided according to deeply institutionalized national models. The question therefore becomes to what extent do national institutional differences condition actual interactions in networked governance with key experimentalist features and thus, ultimately, learning (Nedergaard, 2006; Sabato & Vanhercke, 2012).

Public healthcare systems are likely to structure interactions, as they constitute distinct institutional legacies. They have been set up at different points in time to provide protection during illness (Blank, Burau, & Kuhlmann, 2017; Wendt, 2009). Healthcare is a core part of the social services provided by the state, and the modes through which healthcare services are financed and organized constitute a core element of the overall welfare system (Moran, 2000; Toth, 2010). Together with pensions, the financing of healthcare takes up the largest part of the welfare budget in the European Union (see Eurostat, ‘social protection expenditures’ for recent data). The financing, expenditures, content and organization of healthcare, however, differ across EU member states. Despite the many differences, characteristics are also shared across individual states, which has allowed scholars to identify a set of healthcare typologies or models. The use of typologies helps simplify the multifaceted characteristics of healthcare and to capture its institutional context (Blank et al., 2017).

However, the existing studies making cross-country comparisons have not gone beyond the EU-15 or a limited number of OECD countries (Bambra, 2005; Blank et al., 2017; Kautto, 2002; Wendt, 2009). To examine whether healthcare models condition interaction in the cross-border healthcare network, we therefore conduct our own healthcare cluster analysis for the EU-27 plus the UK, Norway and Iceland to classify the different healthcare systems network members represent, using similar indicators as previous studies.

Research identifying healthcare typologies focuses on different dimensions. Moran (2000) compared the funding, provision and governance of healthcare. Bambra (2005) developed a health de-commodification index, i.e., the extent to which individual access to healthcare is reliant on market position (Bambra 2005; p. 201). The index compares the proportion of privatized healthcare as part of the healthcare system, and the inclusiveness of the public healthcare system is compared across 18 OECD countries (Bambra, 2005). As a further refinement, the healthcare cluster analysis of Wendt combined the dimensions of ‘financing’, ‘service provision’ and ‘regulation’ with the level of involvement by the state, non-governmental actors and the market in the provision of healthcare (Wendt, 2009). In Wendt’s cluster analysis, total healthcare expenditure is taken into account and divided into preventive, outpatient and inpatient expenditures. In addition, the share of public funding and the level of private out-of-pocket funding as measurements of the degree of privatization are compared. Furthermore, Wendt (2009) constructs inpatient and outpatient care indexes comparing the numbers of professionals and hospitals across countries. Modes of entitlement are taken into account, i.e., whether entitlement to healthcare is granted on the basis of citizenship, social insurance or private insurance. Furthermore, how access to healthcare treatment is regulated is part of Wendt’s cluster analysis. His analysis divides the EU-15 into three clusters, leaving the Netherlands and Greece uncategorized: 1) a ‘health service provision-oriented type’, including Austria, Germany, Luxembourg, Belgium and France; 2) a ‘universal coverage – controlled access type’, including Denmark, United Kingdom, Ireland, Italy and Sweden; and 3) a ‘low-budget – restricted access type’, including Finland, Portugal and Spain.

Below in section 5.1, we conduct our own cluster analysis and expand it to the 30 healthcare systems coming together in the CBHC expert group. Our cluster analysis is conducted on the basis of comparative data on financing, expenditure, provision and access to healthcare (see table 1 below). First, we look at the *financing* of healthcare (Giaimo & Manow, 1999; Moran,

2000; Wendt, 2009). Healthcare may be financed publicly or through compulsory social or private insurance. Related to this is the degree to which healthcare is de-commodified is taken into account (Bambra, 2005). Indicative of de-commodification is the proportion of out-of-pocket payments as part of total healthcare expenditures that patients need to contribute privately to receive healthcare (Wendt, 2009).

Table 1. Healthcare system indicators for cluster analysis

Financing of healthcare	Expenditure on healthcare	Provision of healthcare	Access to healthcare
Government scheme	Inpatient care	Inpatient care	GP remuneration
Social insurance	Outpatient care	Outpatient care	GP registration
Private insurance	Preventive care	Hospital beds	Access to specialist
Out-of-Pocket			

Second, building on Wendt’s (2009) typology, we look at healthcare *expenditure*. We differentiate expenditures directed at either inpatient, outpatient or preventative care, which provides insights into how much healthcare systems invest in primary (outpatient), specialist (inpatient) or preventative healthcare.

Third, the *provision* of care, namely, the staff and resources actually made available for different care processes, relates to the extent to which healthcare is provided through primary (general practitioners and pharmacists) or specialist healthcare (doctors and nursing professionals and available hospital beds) (Wendt, 2009).

Fourth, we compare *access* to healthcare. First, access to healthcare can be regulated by requiring patients to register with one general practitioner or family doctor. Next, access to specialists can be constrained either by creating a gate-keeper function for general practitioners to refer to or by allowing patients to “skip and pay” to get direct access to specialists by skipping the referral system through an additional co-payment (Wendt, 2009). Finally, the amount of services may be regulated by creating a reward mechanism based on the services provided and remuneration per patient treated. While these remuneration

methods for general practitioners may enhance the extent of services provided, a fixed salary may instead place general practitioners under more state control (Moran, 2000).

We hypothesize that these healthcare system indicators condition the relational structure of our examined network. The logic behind the hypothesis is that when civil servants interact in networks, they do so because they find it worthwhile. Moreover, they are unlikely to interact equally with all their peers but are more likely to develop closer ties with a subset of peers and reach out to others less often (Vantaggiato, 2019). While there may be great potential in learning from differences, policy transfer is still most successful among similar types of countries (Sabato & Vanhercke, 2012) and there is an overall tendency to learn from those that are perceived to have a similar political and institutional background (Nedergaard, 2006). Rather than turning to peers coming from systems different from their own, they are more likely to look to their peers who have similar institutional experiences and share similar problems and with whom they can identify more easily (Lazega, Quintane, & Casenaz, 2017). When exchanging information, best practices and advice on cross-border healthcare, civil servants are more likely to do so with other network members who represent a similar institutional context. We hypothesize the following:

H2: Civil servants in the cross-border healthcare expert group network interact more with civil servants coming from similar healthcare systems.

Finally, we expect that member states with healthcare types that are more compatible with the free movement logic of cross-border healthcare in the PRD are more central in network interaction than others. The ‘universal coverage – controlled access type’ is likely to be the poorest fit for the PRD’s free movement logic. This system is mostly tax-financed and does not directly ensure that patients have also contributed to the financing of treatment by means of contribution. In addition, the general practitioner (GP) or family doctor is the gatekeeper for further treatment. The GP authorizes patients’ specialist treatment and hospitalization. This type of healthcare system is not expected to align well with the cross-border logic that is central to the PRD, that the network should develop further (Martinsen & Mayoral Diaz-Asensio, 2016). More control implies more conditions that inhibit free choice, also in a cross-border situation.

In addition, national systems of lower quality and less effectiveness may be more challenged by cross-border healthcare. With more free choice, patients will be more likely to seek

treatment in systems characterized by better quality, higher expenditures and better healthcare provision.

The EU freer choice logic reflected in the patients' right directive is instead more in line with healthcare systems geared towards healthcare service provision, in which patients are free to choose their primary care provider and have direct access to specialized care. Our cluster analysis below identifies this type of healthcare organization as the 'elaborate social insurance system'. Here, state control over healthcare provision is more limited, and costs are contained by introducing remuneration based on the number of patients treated or the amount of services rendered (Wendt, 2009). We hypothesize the following:

H3: Civil servants representing the elaborate social insurance system are most central to the network interaction in the cross-border healthcare expert group.

4 Methodology and data collection

4.1 Social network analysis and exponential random graph models

To study what structures the interaction between peers in experimentalist governance on cross-border healthcare, we employ social network analysis. Treating the bilateral interactions among the members of the European administrative network as our unit of analysis allows us to put the relational character of the network governance front and centre. Social network analysis enables us to study the interplay of both individual agency and structural interdependencies simultaneously and determine what drives network interactions.

As networks are inherently relational, they violate the assumption of independence that most standard statistical models, such as linear regression, are based on. To test our hypotheses explaining interaction patterns, we develop exponential random graph models (ERGMs) (see Handcock, Hunter, Butts, Goodreau, and Morris (2008) for more information on such models). These models assume that networks self-organize through continuous processes of tie formation over time. Moreover, ERGMs are appropriate for testing the effect of individual actor attributes on network interactions while taking into account network dependency structures. As such, we can estimate the significance of institutional similarity and

institutional fit on bilateral interactions while controlling for patient flows, organizational capacity and network structural tendencies.

4.2 Data collection

4.2.1 Dependent variables

We collected our data on network interactions through an online survey distributed among all national representatives of the CBHC expert group in 2019. In the survey, we asked respondents which other national representatives they were most frequently in contact with to 1) exchange information, 2) exchange best practices and 3) seek advice in relation to cross-border healthcare. They were free to list as few or as many as they saw fit. The survey had an 87% response rate⁹, which is more than sufficient to accurately model the network as if it were complete (Borgatti, 2006). While network studies regularly rely on surveys of self-reported ties among network members, there is a risk that respondents over-estimate their own role in the network. To circumvent this, we limit our analysis to bilateral ties confirmed by others.

We collected our data in three distinct adjacency matrices for each type of bilateral interaction. These matrices represent three different networks in which different kinds of resources are exchanged and are each used as separate dependent variables in our models.

4.2.2. Independent variables

To test whether the network interactions are *transitive*, we include a geometrically weighted edgewise shared partners (GWESP) statistic in our model (Snijders, Pattison, Robins, & Handcock, 2006). This is a commonly used measure of transitivity in advanced social network models and takes shared partners into account.

Furthermore, to test whether network interaction is driven by the institutional similarity of healthcare systems, we group all 27 EU member states, plus the UK, Iceland and Norway, according to the key indicators of healthcare systems discussed in section 3.2. We gathered data on the expenditures (by *financing scheme*, *function* and *provision*) of healthcare for all

⁹ Croatia, Iceland, Spain and the United Kingdom are missing.

countries from Eurostat for the year 2016¹⁰. To take into account the difference in living standards across countries, we express the financing and expenditures of healthcare by the purchasing power per inhabitant (PPS). The exception to this is *out-of-pocket payments*, which we measure as a percentage of the total healthcare expenditures. The provision of healthcare is measured per 100,000 inhabitants. Data on the regulatory aspect of healthcare, namely, access to specialists, GP registration and GP remuneration, are taken from the MISSOC Comparative Tables (MISSOC, 2019). *Access to specialists* is operationalized as follows: upon referral of the GP (1), “skip and pay” (paying an additional co-payment to skip the referral system) (2) or direct access (3). *GP registration* is coded as either free choice of doctor (0) or requirement to register with a GP (1). Furthermore, we coded *GP remuneration* as salaried (0), capitation payment¹¹ (1), mix of capitation and fee-for-service (1.5) and fee-for-service (2). All data for the healthcare indicators are listed for the individual countries in table 1 in the online appendix.

To establish distinct healthcare clusters, we ran a Ward’s hierarchical cluster analysis (Murtagh & Legendre, 2014), grouping countries according to similarity on these indicators. This algorithm recursively groups countries together based on how similarly they score on our set of healthcare indicators, trying to minimize the variance within the clusters. In our model, institutional similarity is treated as a dyadic attribute, which takes into account whether two network members belong to the same healthcare cluster. We operationalize institutional fit as an actor attribute based on the classification of the cluster analysis.

Next, we control for dependency structures related to the functionality of the network. As the CBHC expert group is tasked with dealing with implementation problems related to patients taking up healthcare in another EEA/EU member state, interactions may be influenced by interdependencies created due to patient flows. We take into account the effect of *patient flows* on the network interaction by capturing both the number of patients residing in one member state and receiving healthcare in another member state *with prior* and *without prior* authorization separately. The data on patient flows are taken from the most recent report by

¹⁰ The year 2016 provides the most complete and up-to-date data for each member state. The following Eurostat tables were used: hlth_sha11;_hf; teprs_sp310; hlth_sha11_hc; hlth_staff; hlth_facil.

¹¹ A GP is paid a fixed amount for every patient registered with him or her.

the European Commission (2019) on patient mobility over the year 2017¹². As the data on number of patients are skewed, we transform the variable by taking the square root of patient flows, in both cases with and without prior authorization.

Finally, we control for organizational capacity available for members that may influence their ability to participate in the network. Organizational resources, such as the availability of staff, are reported to have an effect on network participation. This can either be positive, due to the transaction costs involved in maintaining relations, or negative, as network capital may be used to complement lacking capacity (Vantaggiato, 2018). We operationalized organizational capacity as the *staff level* of the national administrative unit involved in the network one way or the other. The data on staff levels were collected through our survey and were categorized as less than 1, one to two, two to three, or at least four fulltime (or equivalent) employees (FTEs).

5 Results

5.1 Cluster analysis

Before testing our hypotheses, we start with the results of our cluster analysis. Based on our indicators of healthcare financing, expenditures, provision and access, we find five distinctive clusters of countries. While the scores on each indicator vary within each cluster, countries belonging to the same cluster are found to be more similar than countries across clusters. The heatmap in Figure 1 displays the standardized country scores on the relevant healthcare indicators (the raw data can be found in the online appendix). The coloured bar on the left indicates which countries display similar patterns and belong to the same cluster.

First, similar to Wendt (2009), we find a cluster of *elaborate social insurance healthcare systems*, including Germany, Austria, Belgium, France and Luxembourg. What sets them apart from other healthcare systems is the combination of healthcare financing through social insurance schemes and high healthcare expenditures in terms of purchasing power per

¹² While the data as collected by the Commission do not give a complete overview of patient mobility and Germany, Cyprus, Netherlands, Sweden and Iceland were not able to report any data on patient flows, this is the best possible source of data we could find.

inhabitant. Luxembourg falls into this cluster, although its healthcare is government financed, because its healthcare governance resembles the typical pattern of the elaborate social insurance cluster. This elaborate social insurance healthcare system is mainly governed by the use of remuneration systems that include incentives to take on more patients (capitation mechanism) and perform more services (fee-for-service). These countries maintain a gatekeeper system for specialists but offer a flexible choice of general practitioners.

The second cluster of healthcare systems is financed mainly through social insurance as well, but their healthcare expenditures as a percentage of the country's GDP are more limited. Here, out-of-pocket payments are an important part of people's healthcare financing. This cluster of *limited social insurance healthcare systems* consists of the Czech Republic, Lithuania, Hungary, Slovakia, Croatia, Bulgaria, Latvia, Greece, Slovenia, Estonia, Poland and Romania. These countries were previously largely unmapped with regard to healthcare. Wendt (2009) did include Greece in his analysis but failed to categorize it in any cluster. While Greece, Slovakia, Slovenia and Latvia rely on a government scheme for financing healthcare, they nevertheless fall into this cluster due to their considerable out-of-pocket payments and their governance of healthcare, with considerable control of access to healthcare. This cluster of healthcare systems demonstrates rather mixed forms of governance. Overall, there is limited reward management, with remuneration being mostly based on monthly salary. Most countries in this cluster require registration with a general practitioner and allow access to specialists only upon referral.

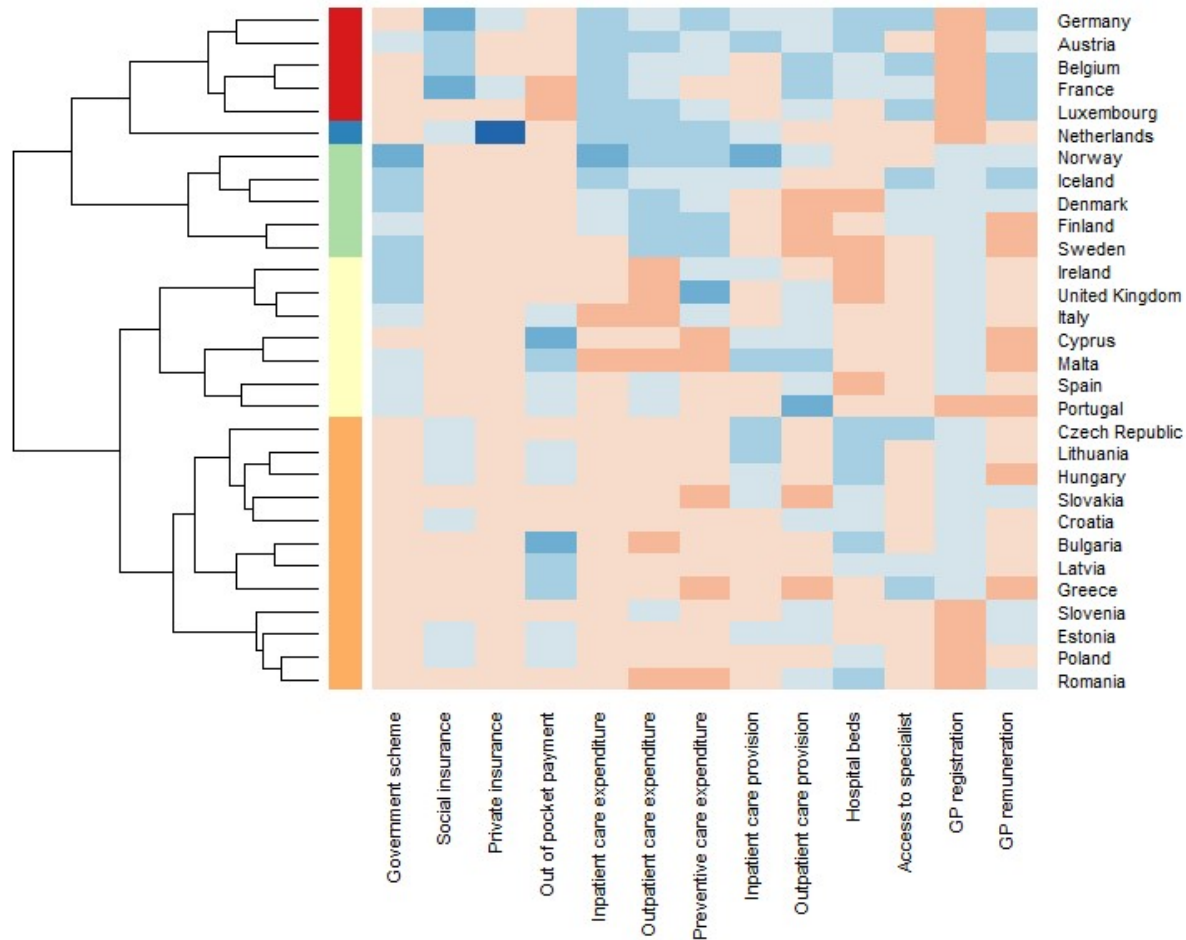


Figure 1. Heatmap of healthcare indicators for each cluster of EU/EEA member states
Note: blue = high value, red = low value

The third cluster of healthcare systems also demonstrates more limited healthcare expenditures as part of their countries' GDP, while their healthcare financing is arranged through government schemes. Ireland, the United Kingdom, Italy, Cyprus, Malta, Spain and Portugal all belong to this cluster of *limited public healthcare systems*. Concerning the governance of this type of healthcare system, we see that GPs receive a fixed salary and are not remunerated based on the number of patients treated or services performed. Access to healthcare is constrained by a system where patients need to register with a (at least temporarily) fixed GP or family doctor, while direct access to specialists is possible. Unlike Wendt (2009), which categorized the United Kingdom, Ireland and Italy together with the Nordic countries, we find that due to their considerably lower spending on the main

healthcare functions (inpatient care, outpatient care and preventive care), these countries are better matched with the low-budget healthcare types.

We find that there is a separate cluster of Nordic countries. Although they also finance the healthcare system publicly, they differ from the fourth healthcare cluster mainly because a larger part of their GDP is attributed to healthcare expenditures, particularly regarding outpatient care. This *elaborate public healthcare systems* cluster consists of Norway, Iceland, Denmark, Finland and Sweden. Their healthcare system is characterized by a strong gatekeeping system and limited choice of GP. With regard to remuneration, the cluster is rather mixed, as Denmark, Norway and Iceland developed more of a reward system than Sweden and Finland.

Finally, the *Netherlands* forms its own distinctive cluster, with its rather unique healthcare system primarily financed through compulsory private health insurance. We define this cluster as the *elaborate hybrid healthcare cluster* because it shows similarities to both the *elaborate public healthcare systems* cluster and the *elaborate social insurance healthcare systems* cluster. With regard to the former, it scores similarly on healthcare provision and expenditures. Moreover, it presents similar governance choices in regard to restricted access to specialists, which can only be accessed upon referral of the general practitioner. However, similar to the latter cluster, the hybrid healthcare system of the Netherlands allows free choice of general practitioner without a fixed registration period.

5.2 Social network analysis of experimentalist healthcare governance

We visualize the network of the CBHC expert group based on interactions for the purpose of exchanging information, best practices and advice to look at the patterns of interaction. First, Figure 2 shows that interactions are dense and transitive. Many network members are both directly and indirectly linked to one another. Second, while a large proportion of the network is closely connected, the cluster of Nordic countries is more remote from the exchange of resources in the rest of the network. While information, best practices and advice can reach these countries through their interactions with the Baltic states, the Nordic cluster is not as integrated into the network. The largest distance between any two network members is 11, meaning that for members in the most remote parts of the network, resources need to travel

across 11 other members to reach across the network. On average, however, the average path length is 3.41, indicating that overall, the network is rather densely connected. Third, we see a clear pattern of clustered interactions among similar types of healthcare systems. This is particularly strong for peers belonging to the cluster of *elaborate public healthcare systems* as well as for part of the cluster of *elaborate social insurance systems*. In addition, we can see that the *elaborate healthcare systems* cluster contains some of the most commonly named network actors, Germany and France.

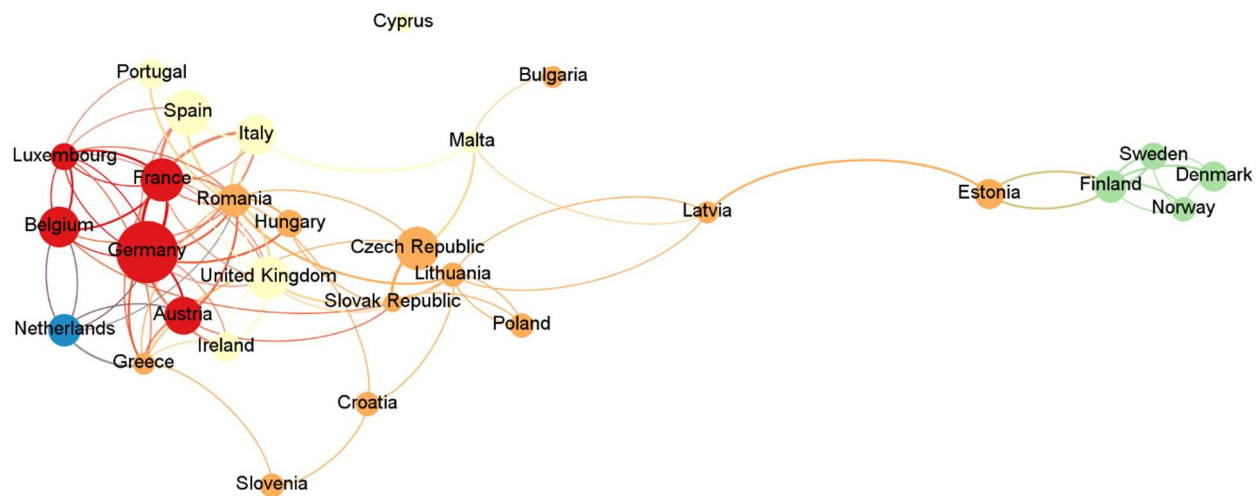


Figure 2. Network graph of interactions based on advice, best practices and information in the CBHC expert group

Note: Red = Elaborate social insurance systems; Orange = Limited social insurance systems; Green = Elaborate public healthcare systems; Yellow = Limited public healthcare systems; Blue = Elaborate hybrid healthcare systems.

Next, ranking degree centrality scores and differentiating between the types of interaction tells us more about which peer is commonly involved in which type of exchange. Figure 3 shows that Germany is not only the most named network actor in general; it is also by far the go-to peer for advice. In addition to Germany, peers often name Spain, Italy, the Czech Republic and the Netherlands as providing them with advice. Overall, peers mostly share information in the network, followed by best practices and then advice.

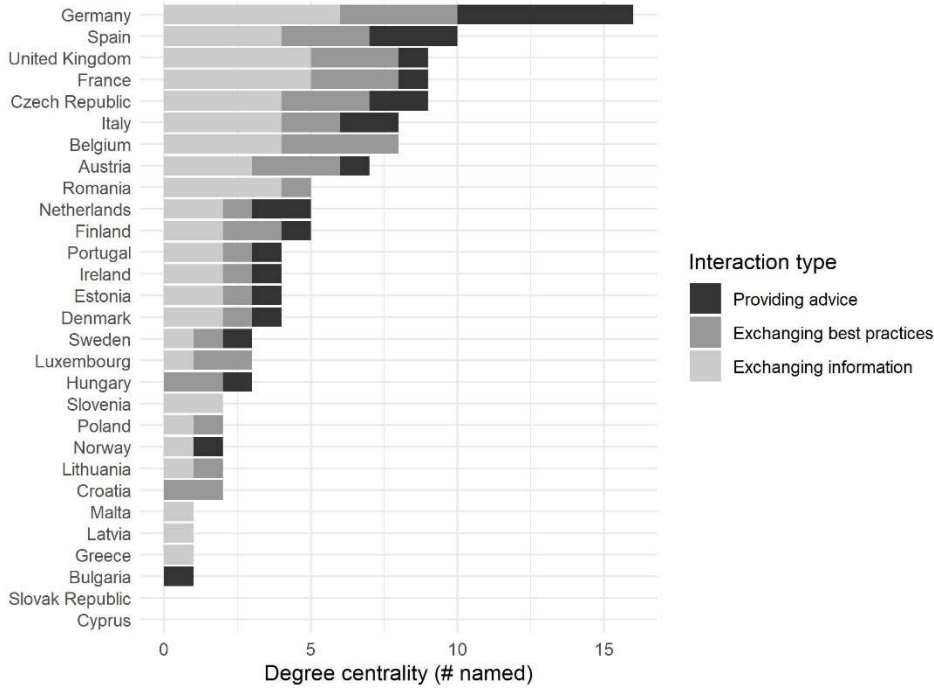


Figure 3. Degree centrality per CBHC expert group member based on different interaction types as named by others (i.e., indegree¹³).

First, we find that in accordance with hypothesis 1, experimentalist governance regarding cross-border healthcare demonstrates transitive relations in regard to the provision of advice ($p < 0.001$) and the exchange of both best practices ($p < 0.001$) and information ($p < 0.001$). This means that interactions with shared partners are very likely and that interactions go beyond immediate relations and occur in triads, instead of dyads. For example, if a member exchanges best practices with certain peers, the peers are likely to exchange best practices with each other as well.

To test whether institutional similarity (hypothesis 2) and institutional fit (hypothesis 3) of healthcare systems drive experimentalist healthcare governance, we use exponential random graph models for each type of interaction (see Table 2; goodness-of-fit diagnostics can be found in the online appendix).

¹³ In networks analysis, ‘indegree’ refers to those who named a particular member, while ‘outdegree’ refers to those named by the member.

Table 2. Exponential random graph models

	Dependent variable		
	Providing advice	Exchanging best practices	Exchanging information
Density	-4.586*** (0.504)	-4.577*** (0.431)	-4.061*** (0.353)
Transitivity (GWESP $\alpha=0.3$)	1.259*** (0.279)	1.123*** (0.229)	0.943*** (0.182)
Same healthcare cluster	0.846*** (0.252)	1.165*** (0.295)	0.994*** (0.241)
Elaborate social insurance system (# named)	0.360 (0.358)	0.670* (0.293)	0.358 (0.266)
√ Patient flows (no-prior)	0.019*** (0.006)	0.022*** (0.006)	0.015** (0.005)
√ Patient flows (prior)	0.098† (0.059)	0.032 (0.062)	0.359*** (0.095)
Staff (# named)	0.157 (0.186)	0.157 (0.159)	0.084 (0.133)
Akaike Inf. Crit.	219.976	278.371	360.586
Bayesian Inf. Crit.	252.873	311.268	393.482

Note: † $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Moreover, beyond this general tendency for transitive interaction, we find that the exchange of resources in this form of experimentalist governance is significantly more likely among peers belonging to a similar healthcare cluster (hypothesis 2). This effect is particularly strong for the exchange of best practices: peers belonging to the same healthcare cluster are more than three times as likely to exchange best practices with one another than with peers belonging to a different healthcare cluster (odds ratio=3.20, $p < 0.001$). Furthermore, information exchange is close to three times as likely (odds ratio=2.70, $p < 0.001$), while advice sharing is more than twice as likely (odds ratio=2.33, $p < 0.001$) within the same healthcare cluster.

Regarding the institutional fit of healthcare systems and the tasks of the CBHC expert group (hypothesis 3), we find that network members indeed significantly more often name their peers from an elaborate social insurance system in regard to the exchange of best practices. All else being equal, members from this healthcare cluster are almost twice as likely to exchange best practices with peers from the same cluster than with peers from another cluster (odds ratio = 1.95, $p < 0.001$). However, hypothesis 3 does not hold for other types of interactions, such as providing advice and exchanging information. However, the findings indicate that representatives from the elaborate social insurance system are more central than other network members in regard to defining best practices.

Furthermore, by means of our control variables, we accounted for functional interdependencies related to cross-border healthcare. In particular, patient flows without prior authorization positively affect the likelihood of interactions in the CBHC expert group. In regard to healthcare without prior authorization, the more patients from one state seek healthcare in another, the more likely it is that these member states share advice ($p < 0.001$) and exchange best practices ($p < 0.001$) or information ($p < 0.01$). Interdependencies related to patients seeking cross-border healthcare with prior authorization translate to network interactions, particularly in regard to information exchange ($p < 0.001$). However, in regard to advice, the effect is barely significant ($p < 0.1$), and we see no effect for best practices.

Interestingly, all else being equal, we find no effect of the level of staff available for tasks related to the CBHC expert group on the likelihood of any type of resource exchange. This could indicate that this type of networked governance is not very dependent on the organizational capacity of the units involved but can be used as a resource to complement lacking organizational resources instead (cf. Vantaggiato, 2018).

6 Conclusion

EU member states have turned to networked governance with key experimentalist features as the middle ground to move joint healthcare actions forward. In contrast to the impasse in more traditional, hierarchical “command-control” EU regulation, this type of governance has gained political support. While there is ample research pointing to the importance of these mechanisms of experimentalist governance (Sabel and Zeitlin 2008; Zeitlin and Overdevest

2019;), we still know relatively little about what structures interactions between peers in this type of governance. In line with more recent scholarship examining how domestic institutional factors condition supranational network interaction (Vantaggiato 2019, Efrat and Newman 2018), we examined the driving forces and agency within this type of networked governance.

In our paper, we applied network analysis to study the specific network of cross-border healthcare while adding the institutional component to explain patterns of interactions. By bringing in the institutional component, the paper furthermore contributes to the study of healthcare typologies by presenting an updated typology of the EU-27 plus the UK, Norway and Iceland.

Civil servants from the five identified healthcare clusters are brought together in the CBHC expert group to interact, deliberate and ultimately learn from the differences they bring into the network and against this background forward experimentalist governance. We found that these interactions indeed take place in transitive relations carrying trust. This is an important overall finding because it tells us that despite the differences among peers, learning occurs across the network by exchange relations. That members exchange information in transitive relations is even more important because network theory assumes transitive relations to be bonding ties that carry trust (Burt, 2017) and thus facilitate the development of rules, help resolve conflicts and improve compliance (Ostrom, 2009). Our finding of transitivity thus indicates that there is sufficient interpersonal and systemic trust in the network for it to address and eventually clarify the open-ended character of ends and means (Fossum, 2012). This confirms earlier findings on the importance of social trust effects in inter-organizational relations, demonstrating that transitivity can boost cooperation in policy networks (Berardo & Scholz, 2010).

However, our findings also bring important qualifiers to this overall conclusion. We show that the network is highly clustered. Member states from the *elaborate public healthcare systems*, i.e., the Nordic network members, have their own sub-cluster in the network, which is only bridged to the rest through their Baltic counterparts. Thus, the Nordic representatives do not take much information, best practices or advice from different healthcare systems. In addition, we show that civil servants from the *elaborate public healthcare systems* form the core of the network, with Germany as the lead actor.

In addition, we show that institutional differences condition who engage with whom in this type of experimentalist governance in the making. While studies by Nedergaard (2006) and Sabato and Vanhercke (2012) on experimentalist governance in the Open Method of Coordination discuss the great potential of learning from differences, we find that in the CBHC expert group information, best practices and advice mostly flow among peers from countries with a similar institutional healthcare setup. This is not to say that peers are unable to learn across institutional differences, however, learning does mostly occur in separate clusters of like-minded actors. Furthermore, institutional differences can be understood to significantly condition the relational structure of networked interaction (Efrat & Newman, 2018). Our findings add empirical evidence to the literature that identified institutional homophily as a driving force of transnational networking (Lazega et al., 2017; Vantaggiato, 2019).

Finally, we found that some actors are better able to navigate the network than others due to institutional fit (Martinsen & Mayoral Diaz-Asensio, 2016). Members belonging to generous healthcare systems that rely on the social insurance of patients and have institutionalized free choice of treatment are most commonly consulted for the exchange of best practices concerning cross-border healthcare. This demonstrates that institutional fit matters for the position members hold in governance networks. Moreover, this position provides central network members with more opportunity to set or shape the agenda (Vantaggiato, Kassim, & Wright, 2020) and put a stamp on how policy is experimented forward.

On the whole, our case of networked governance does ensure the exchange of key resources between healthcare experts, but who relates with and learns from whom is highly conditioned by the domestic institutions from which one travels into Brussels to deliberate.

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Online appendix

Supplemental data for this article can be accessed at <https://www.tandfonline.com/doi/suppl/10.1080/13501763.2020.1804436?scroll=top>

Replication materials

Supporting data and materials for this article can be accessed at <https://www.tandfonline.com/doi/suppl/10.1080/13501763.2020.1804436?scroll=top>

References

- Bambra, C. (2005). Cash versus services: 'worlds of welfare' and the de-commodification of cash benefits and health care services. *Journal of Social Policy, 34*(2), 195-213.
- Berardo, R., & Scholz, J. T. (2010). Self-Organizing Policy Networks: Risk, Partner Selection, and Cooperation in Estuaries. *American Journal of Political Science, 54*(3), 632-649. doi:10.1111/j.1540-5907.2010.00451.x
- Blank, R., Burau, V., & Kuhlmann, E. (2017). *Comparative health policy*: Macmillan International Higher Education.
- Borgatti, S. P. (2006). Identifying sets of key players in a social network. *Computational and Mathematical Organization Theory, 12*(1), 21-34. doi:10.1007/s10588-006-7084-x
- Burt, R. S. (2017). Structural holes versus network closure as social capital. In *Social capital* (pp. 31-56): Routledge.
- Carpenter, D. P., Esterling, K. M., & Lazer, D. M. J. (2004). Friends, Brokers, and Transitivity: Who Informs Whom in Washington Politics? , *66*(1), 224-246. doi:10.1046/j.1468-2508.2004.00149.x
- De Búrca, G. (2010). Stumbling into Experimentalism: The EU Anti-Discrimination Regime. In C. F. Sabel & J. Zeitlin (Eds.), *Experimentalist Governance in the European Union. Towards a New Architecture* (pp. 215-237). Oxford: Oxford University Press.
- De Búrca, G., Keohane, R. O., & Sabel, C. (2014). Global experimentalist governance. *British Journal of Political Science, 44*(3), 477-486.
- Efrat, A., & Newman, A. L. (2018). Divulging data: Domestic determinants of international information sharing. *The Review of International Organizations, 13*(3), 395-419.
- European Commission (2019). *Member State data on cross-border patient healthcare following Directive 2011/24/EU*. Retrieved from https://ec.europa.eu/health/sites/health/files/cross_border_care/docs/2017_msdata_en.pdf
- Fossum, J. E. (2012). Reflections on experimentalist governance. *Regulation & Governance, 6*(3), 394-400. doi:10.1111/j.1748-5991.2012.01158.x
- Gaiimo, S., & Manow, P. (1999). Adapting the welfare state: the case of health care reform in Britain, Germany, and the United States. *Comparative Political Studies, 32*(8), 967-1000.

- Goodreau, S. M., Kitts, J. A., & Morris, M. (2009). Birds of a feather, or friend of a friend? Using exponential random graph models to investigate adolescent social networks. *Demography*, *46*(1), 103-125.
- Greer, S. (2011). The weakness of strong policies and the strength of weak policies: Law, experimentalist governance, and supporting coalitions in European Union health care policy. *Regulation and Governance*, *5*(2), 187-203.
- Handcock, M. S., Hunter, D. R., Butts, C. T., Goodreau, S. M., & Morris, M. (2008). statnet: Software tools for the representation, visualization, analysis and simulation of network data. *Journal of statistical software*, *24*(1), 1548.
- Hatzopoulos, V., & Hervey, T. (2013). Coming into line: the EU's Court softens on cross-border health care. *Health Economics, Policy and Law*, *8*(01), 1-5.
- Héon-Klin, V. (2017). European Reference networks for rare diseases: what is the conceptual framework? *Orphanet Journal for Rare Diseases*, *12*(1), 1-9.
- Kautto, M. (2002). Investing in services in West European welfare states. *Journal of European Social Policy*, *12*(1), 53-65.
- Lazega, E., Quintane, E., & Casenaz, S. (2017). Collegial oligarchy and networks of normative alignments in transnational institution building. *Social Networks*, *48*, 10-22. doi:10.1016/j.socnet.2016.08.002
- Martinsen, D. S. (2015). *An Ever More Powerful Court? The Political Constraints of Legal Integration in the European Union*. Oxford: Oxford University Press.
- Martinsen, D. S., & Mayoral Diaz-Asensio, J. (2016). A Judicialisation of Healthcare Policies in Denmark and Spain? The Universalist Healthcare Model Meets the European Union *Comparative European Politics*.
- MISSOC. (2019). *Comparative tables*. Retrieved from: <https://www.missoc.org/missoc-database/comparative-tables/>
- Moran, M. (2000). Understanding the welfare state: the case of health care. *The British Journal of Politics and International Relations*, *2*(2), 135-160.
- Murtagh, F., & Legendre, P. (2014). Ward's hierarchical agglomerative clustering method: which algorithms implement Ward's criterion? *Journal of classification*, *31*(3), 274-295.
- Nedergaard, P. (2006). Which Countries Learn from Which? *Cooperation and Conflict*, *41*(4), 422-442. doi:10.1177/0010836706069870
- Newman, A. (2010). Innovating European data Privacy Regulation: Unintended Pathways to Experimentalist Governance. In C. F. Sabel & J. Zeitlin (Eds.), *Experimentalist Governance in the European Union. Towards a New Architecture* (pp. 29-43). Oxford: Oxford University Press.
- Obermaier, A. (2009). The End of Territoriality? The Impact of ECJ Rulings on British, German and French Social Policy. In Surrey: Ashgate.
- Ostrom, E. (2009). *Understanding institutional diversity*: Princeton university press.
- Sabato, S., & Vanhercke, B. (2012). *Analysis and Follow-up of Mutual Learning in the Context of Peer Review in the Social Protection and Social Inclusion Programme* (Executive Summary). Retrieved from http://www.ose.be/files/publication/2012/PeerReviewAssessment_2012_ExecSum_EN_0512_AEC.pdf
- Sabel, C. F., & Zeitlin, J. (2008). Learning from difference: The new architecture of experimentalist governance in the EU. *14*(3), 271-327.
- Sabel, C. F., & Zeitlin, J. (2012). Experimentalist governance. In D. Levi-Faur (Ed.), *The Oxford Handbook of Governance* (pp. 169-187).

- Snijders, T. A., Pattison, P. E., Robins, G. L., & Handcock, M. S. (2006). New specifications for exponential random graph models. *Sociological Methodology*, 36(1), 99-153.
- Toth, F. (2010). Is there a southern European healthcare model? *West European Politics*, 33(2), 325-343.
- Vantaggiato, F. P. (2018). Networking for resources: how regulators use networks to compensate for lower staff levels. *Journal of European Public Policy*, 1-20. doi:10.1080/13501763.2018.1535611
- Vantaggiato, F. P. (2019). The drivers of regulatory networking: policy learning between homophily and convergence. *Journal of Public Policy*, 39(3), 443-464.
- Vantaggiato, F. P., Kassim, H., & Wright, K. (2020). Internal network structures as opportunity structures: control and effectiveness in the European competition network. *Journal of European Public Policy*, 1-20. doi:10.1080/13501763.2020.1737183
- Vollaard, H. (2016). Changing territoriality in the EU healthcare union. *Comparative European Politics*.
- Wendt, C. (2009). Mapping European healthcare systems: a comparative analysis of financing, service provision and access to healthcare. *Journal of European Social Policy*, 19(5), 432-445.
- Zeitlin, J. (2016). EU experimentalist governance in times of crisis. *West European Politics*, 39(5), 1073-1094.
- Zeitlin, J., & Overdevest, C. (2019). Experimentalist Interactions: FLEGT and the Transnational Timber legality Regime. *Amsterdam Centre for European Studies Research Paper*, 4.