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Rapporteur-shadow rapporteur networks in the European Parliament: The strength of small numbers

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Abstract. Specialisation and delegation of policy leadership within committees is the norm rather than the exception in legislatures around the world. Yet, little research has studied the sub-groups of lawmakers who serve as policy leaders on particular bills. This article uses conceptual and methodological tools from social network analysis to investigate the groups' composition and relational structure. It tests the proposition that limited human resources lead lawmakers from small parties to more frequently engage with a greater number of colleagues from other parties across a wider range of policy areas. This may have important relational benefits that have the potential to outweigh the structural disadvantages of small party size. The article examines whether small party lawmakers participate more, are more central and have greater potential for brokerage in policy-making networks, or if the constraints associated with small party size and/or particular ideological leanings prevent their realisation. Empirically, the analyses focus on working relationships between rapporteurs and shadow rapporteurs in the adoption of reports by standing committees of the 7th European Parliament, 2009–2014. Methodologically, a mixed methods approach is employed. The quantitative analyses show that small party size does not affect legislators' participation in policy-making networks, but that it increases legislators' centrality and brokerage potential. Regarding ideology, being committed to democratic participation as a good in itself has a positive association with all three outcomes, while attitudes to European integration show no effect. The qualitative data suggest that the relational benefits of belonging to a small party partially mitigate the structural disadvantages associated with it. They also indicate that policy making in the European Parliament is quite inclusive, as any systematic exclusion tends to be the result of self-marginalisation.

Keywords: European Parliament; policy-making networks; network centrality; party size; ideology

Introduction

The organisation of legislatures is characterised by specialisation and the internal division of labour. Indeed, most parliaments and assemblies have developed an elaborate system of committees, which are the locus for the detailed policy work in the legislature and are generally acknowledged to be important arenas of power and influence (Mattson & Strøm 2004). Given their near-universal prevalence, research on the composition, role and policy influence of committees has a long and rich tradition in political science (Martin 2014). However, legislative specialisation and the division of labour do not stop at this level. Within committees, the deliberation and negotiation of particular policy proposals tend to be dominated by sub-groups of policy 'entrepreneurs' (Benedetto 2005) who dedicate time, energy and resources to guiding 'their' legislation through the policy-making process. Yet, the processes through which committee members are selected into these sub-groups are usually informal and often opaque; and the groups' elusive nature makes it hard to identify their membership and systematically investigate their members' interaction. Hence,

little research exists that has examined these sub-groups of policy makers, even though specialisation and delegation of policy leadership within committees is the norm rather than the exception in legislatures around the world.

In this article, we examine policy-making sub-groups in legislative committees using methodological and conceptual tools from social network analysis. This approach not only allows us to shed light on the composition of these groups and how their members are connected, but also to empirically test the main theoretical question we pose: does small party size, which tends to constrain the effectiveness and influence of legislators, have relational benefits that their members are able to realise in legislative policy-making networks? While small parties and their members tend to be structurally and practically disadvantaged in legislative politics, limited human resources may lead lawmakers from small parties to more frequently engage with a greater number of colleagues from other parties across a wider range of policy areas than their large party colleagues. Such engagement may entail the establishment and maintenance of strong social network ties that connect co-legislators who are not themselves connected in policy-making networks, which may lead to greater interpersonal trust (Uzzi 1996), greater access to substantive and political information (Levin & Cross 2004) and the potential for brokerage (Burt 1992). We examine if policy-making networks in committee constitute opportunity structures for small party legislators to reap these relational benefits, or if the constraints associated with small party size and/or particular ideological leanings prevent their realisation.

Our empirical tests rely on data from the European Parliament (EP), which is a particularly instructive case for examining policy-making teams for two reasons. First, groups of key policy makers for particular legislation are clearly identifiable as *rapporteurs* and *shadow rapporteurs* (hereafter 'shadows'). Rapporteurs are the members of the EP (MEPs) in charge of drafting the official committee report on a particular legislative proposal and guiding it through the lawmaking process. Shadows are assigned by those party groups who do not hold the rapporteurship as their lead negotiators; they monitor and work alongside the rapporteur. Together, rapporteurs and shadows form 'negotiating teams' (Hurka et al. 2015) that can 'practically constitute informal sub-committees' (Corbett et al. 2011: 159), both inside the EP and in the EP's negotiations with the Council of Ministers. Previous research recognises the importance of these individuals (e.g., Kaeding 2004; Mamadouh & Raunio 2003; Yoshinaka et al. 2010), but has not paid attention to them as *groups* of policy makers who *jointly* guide legislative proposals through the lawmaking process. The second reason for focusing on the EP is that the rules governing participation in policy making are highly permissive: any party group may assign a shadow to any legislative proposals under consideration. This allows us to examine how constraints associated with party size and/or ideology impact legislators' membership and structural positions in policy-making networks.

Rapporteurs and shadows are the nodes in the policy-making networks we examine and are linked to each other by their joint work on particular legislative proposals. To analyse these networks, we employ a mixed-methods approach. First, we use social network analysis to identify who is part of the policy-making networks in each of the EP's 20 standing committees during its 7th term, 2009–2014, and to investigate members' structural positions in those networks – namely their *centrality* and potential for *brokerage*.

Second, we use statistical methods to examine associations between network membership and positions and a number of potential explanatory variables – particularly

party group size and MEPs' ideology. Party group size allows us to capture the ability of individual legislators to participate in policy making and reap the potential benefits of strong, bridging network ties. Countervailing forces might be constraints imposed by limited time, expertise and other resources associated with smaller party group size. Ideology allows us to get at the willingness of MEPs to engage in policy-making networks and assume structurally advantageous network positions in them, which may be affected by their views on the EU and the European integration process and their commitment (or lack thereof) to participation in democratic decision making.

Finally, to gain a better understanding of the causal mechanisms underlying our quantitative results, but also to gauge the possible effects of network position on the effectiveness and policy influence of MEPs, we complement these analyses with the qualitative analysis of data from a series of in-depth, semi-structured interviews with respondents in the EP.

We find that MEPs from small party groups are not more likely than their large-party colleagues to be members of policy-making networks, but that they are both more central and have greater potential for brokerage. These relational benefits, our interviews suggest, may somewhat mitigate the structural disadvantages associated with being a small party group, but they do not fully outweigh them. We also find that members of parties with a greater commitment to democratic participation as a good in itself are both more likely to be part of policy-making networks and have greater centrality and potential for brokerage. In contrast, pro-EU attitudes are not associated with these outcomes. Overall, we find EP policy making is quite inclusive – particularly because our interviews suggest that systematic exclusion tends to be the result of *self*-marginalisation.

Aside from shedding light on the composition of sub-groups of committee members who serve as policy leaders with regard to particular legislative proposals, and on the potential relational benefits of small party size, our results also have important normative implications. After all, specialisation and delegation in committees have the potential to impact the democratic legitimacy of legislative decision making. These implications concern, first, its 'input legitimacy', which relates to appropriate levels of representation *of* the people (Scharpf 1999), since citizens are only able to express and pursue their demands through their elected representatives if those representatives actively partake in the policy-making process. But social network analysis also allows us to identify the structural positions of lawmakers in policy-making networks, which affects their potential to shape decision-making processes and outcomes. As such, it relates to the 'throughput legitimacy' of the democratic process (Schmidt 2013), which concerns the 'black box of governance' that links input legitimacy and output legitimacy. In particular, we are able to gauge the role of small party MEPs in policy-making networks and the extent to which they are able and willing to realise the relational benefits that may come with small party size. This allows us to better evaluate the relative (dis-)advantages confronted by representatives of citizens who cast their votes for small parties and/or those with particular ideological profiles.

The article proceeds as follows: we briefly review the roles of rapporteurs and shadows before discussing the structural disadvantages and potential relational benefits of small party size. We then develop theoretical arguments and hypotheses about the effects of party group size and ideology on committee members' network membership and position, which we test in a series of analyses. The final section concludes.

Rapporteurs and shadow rapporteurs

Rapporteurs are responsible for drafting the EP's official reports on the legislative proposals that originate in the European Commission, and for shepherding the proposed legislation through the lawmaking process. This involves policy leadership both inside the EP and in inter-institutional negotiations with the Council of Ministers – especially under the 'ordinary legislative procedure', when the two institutions have to agree on an identical final text. Rapporteurs are selected in a kind of 'auction', where party groups in the responsible EP committee bid on reports using 'points' they receive according to the proportion of seats they hold. Only one group can win the rapporteurship on a given report, which potentially provides it with a disproportionate influence on the legislation. The other party groups may therefore assign one shadow each to monitor the rapporteur's work, 'to follow the progress of the relevant report and [to] find compromises within the committee on behalf of the group' (EP Rules of Procedure VIII 205.4).

While rapporteurs have received a considerable amount of scholarly attention, the role of shadows is less well understood, with some exceptions (Corbett et al. 2011; Judge & Earnshaw 2011; Settembri & Neuhold 2009). Ringe (2010), for example, identifies them as the primary negotiation partners of the rapporteur within the committee, as well as the primary sources of information for their party colleagues and shows that the final decisions in the EP concerning particular policy proposals are significantly shaped by rapporteurs and shadows. In the absence of perfect information about the content and consequences of proposed legislation, other MEPs tend to follow the lead of their colleagues in the responsible standing committee when voting on the EP floor, especially their party groups' rapporteur or shadow (Ringe 2010). Teams of rapporteurs and shadows thus have the potential to disproportionately influence the content of legislation and the decision making of the chamber as a whole (Costello & Thomson 2011; Reh et al. 2013; Settembri & Neuhold 2009).

Until recently, information on shadow rapporteurships was not made available in any systematic fashion, meaning that their function and influence in EP politics was generally highlighted in qualitative accounts of EP policy making. Only with the onset of the EP's 7th term in 2009 did the EP website start listing shadows for each legislative dossier, and these quantitative data have not yet been used extensively. The notable exception is a recent article by Hurka et al. (2015), which examines the extent to which MEPs from the countries that joined the EU in and after 2004 are under-represented as shadows.

While the assignment of rapporteurships follows clear procedures and has been the subject of previous work, little is known about the more informal procedure of selecting shadows. A key contribution of our mixed methods approach is that our qualitative data allow us to investigate this process. Our interviews (which are discussed in more detail below) show that the allocation of shadow rapporteurships is remarkably bottom-up. Every one of our respondents explained, independently of the others and consistently across party groups and committees, that party group members in the responsible committee indicate which reports they are interested in covering and receive those reports whenever no other party group colleague wants them. If more than one MEP claims a report for himself or herself, a final determination is made by the committee coordinator (the leader and main spokesperson of his or her party group in a given committee). This decision takes into

account who is already in charge of other reports (Interviews 6, 8, 10, 11); substantive expertise and competence (Interviews 3, 6, 8, 10, 11); the level of activity and engagement an MEP has demonstrated over time (Interviews 2, 3, 11); and the geographic and national makeup of the negotiating team as a whole (Interviews 4, 6, 11). Moreover, the selection of the shadow may, at least at times, be a reaction to who has been picked as rapporteur, since political groups want to 'match' a strong rapporteur with a similarly strong shadow (Interview 6). These criteria are not formal rules but conventions that reflect best practices and are at least in part subject to the committee coordinators' ways of running their political groups' affairs in the relevant committee (Interviews 2, 3, 7, 8, 9, 10). In general, however, respondents agree with the conclusion of one MEP who describes the process as generally collaborative and 'collegial' (Interview 4).

The relational power of small numbers

Small parties and their members face numerous disadvantages in legislative politics compared to parties with large numbers of members. They have lower voting weight and coalition potential, fewer human and financial resources, and their members hold fewer (if any) leadership positions. Even in the EP, a legislature with strong rules of proportionality that favour small parties relative to more majoritarian institutions, the two largest party groups only held a combined 55 per cent of seats after the 2014 election, but 65 per cent of members of the EP Bureau, 68 per cent of committee chairs and 64 per cent of committee vice-chairs were from those two party groups. Similarly, 66 per cent of rapporteurships during the 2009–2014 term were awarded to the two largest parties, who only won a combined 61 per cent of seats in 2009.

Moreover, even when a member of a small party is awarded a leadership post, she or he is unlikely to wield as much influence a member of a large party would. For example, the small party chairman of a legislative committee or a small party rapporteur are less powerful than a large party legislator would be in those positions because their influence is constrained by having few party colleagues in committee as natural allies. The formal disadvantages of being small and the advantages of being big are thus amplified in practice. Indeed, it is difficult to conceive of a way in which being from a small party offers advantages for legislators' ability to participate in and influence policy-making processes and outcomes. A social networks perspective, however, suggests that being small may yield relational benefits that have the potential to (at least partially) counteract the structural disadvantages that come with small party size.

The study of legislative networks has a long tradition (e.g., Patterson 1959; Routt 1938) and studying social ties between lawmakers helps us better understand legislative behaviour, processes and outcomes (e.g., Arnold et al. 2000; Cho & Fowler 2010; Cohen & Malloy 2014; Parigi & Bergemann 2016; Ringe et al. 2013). A social networks perspective of legislative politics suggests that there may be such a thing as a 'strength of small numbers' because, *ceteris paribus*, large parties spread their more abundant human resources across legislative proposals, while parties with fewer members are forced to cover those same proposals with a smaller number of people. In other words, large parties assign people fewer proposals each, while small parties assign them a larger number of proposals each. As a result, members of parties with fewer members are forced to engage more frequently with a greater number

of colleagues from other parties across a wider range of policy issues, which leads to the establishment and maintenance of strong social network ties that connect co-legislators that are otherwise not connected to one another.[1] This has important potential benefits emphasised in previous social networks research, which shows power to be not only a function of size (and the resources and status that come with it) but also of actors' social ties and the structural positions in the social networks of which they are part (e.g., Bonacich 1987; Fowler 2006; Friedkin 1991; Ringe & Wilson 2016).

Among the 'strengths of strong ties' (Krackhardt 1992) is that more frequent, iterative interactions facilitate the establishment of trust (Uzzi 1996), which lowers the potential for conflict and gives those engaged in legislative bargaining confidence that their counterparts will honour a deal. Hence, strong ties facilitate agreement, which is further aided by the possibility of issue linkage and horse-trading across policy proposals, where lawmakers who interact with each other on more than one legislative proposal may be able to forge agreements by making trade-offs across bills. Trust also encourages both the provision and absorption of useful and truthful information and makes knowledge transfer less costly – for example, by reducing the need to verify information (see Levin & Cross 2004: 1478).[2]

Engagement with a greater number and range of policy proposals also makes it more likely that members of small parties connect other legislators who are not otherwise tied to one another, because small party lawmakers who handle multiple legislative proposals on behalf of their parties are likely to interact with colleagues who do not themselves work together directly on a bill. As a result, small party legislators may have access to information that other lawmakers who are more isolated in the network do not have in terms of both 'political intelligence' (e.g., about the positions of key decision makers or potential policy coalitions) and substantive information about the content and expected consequences of legislation. This may facilitate agenda-setting efforts. They may also have greater control over the flow of information through the network and thus serve as brokers in the communication between others (Burt 1992).

At this point, a conceptual and methodological caveat is in order. Investigating policy-making networks and actors' structural positions in those networks quantitatively means identifying *opportunity structures* for legislators' influence; it allows for the measurement of potential influence, not actually exerted influence. However, the analysis of additional qualitative evidence from interviews with practitioners allows us to get a better idea of how these advantageous network positions come about and to what extent they matter for policy-making processes and outcomes. While qualitative evidence does not allow us to put a precise absolute figure on the benefits derived from advantageous network positions, the interview responses highlight the *types* of advantages incurred and the trade-offs involved.

Small party MEPs enjoy the relational benefits outlined above relative to their large party counterparts *in theory* and *all else equal*. Indeed, the potential relational benefits of small party size may not be realised because members of small parties may not be able or willing to maintain strong, bridging ties. Members of small parties may not be able to engage in legislative networks because their parties face resource constraints that are too severe to overcome, are hindered or prevented from participating by institutional rules, or are marginalised by large parties. They may not be willing for a variety of personal reasons, including their ideological profiles, where MEPs with particular ideological leanings may be less motivated to participate in policy making.

Our quantitative analyses allow us to assess whether and to what extent party group size and aspects of MEPs' ideology affect their inclination to participate in policy making. This sets our research design apart from previous research, which neglects the role of ideology and recognises party group size as a determinant of the allocation of rapporteurships only implicitly. For example, Hurka et al. (2015), Kaeding (2004) and Yoshinaka et al. (2010) include dummy variables to control for membership in a particular party group, but they do not elaborate on the theoretical rationale for their inclusion or discuss the interpretation of estimated effects of these variables in much detail. To investigate if the potential relational benefits of being a small party MEP are realised in EP policy-making networks, we look at membership patterns and the structural positions of MEPs in rapporteur-shadow networks. For structural network positions, we consider two closely related individual-level attributes that are important indicators of people's relational power. The first is their network centrality, which (broadly conceived) captures the 'importance' of network members and is largely a function of the number and strength of their network ties (see Wasserman & Faust 1994: Chapter 5). The second attribute is their potential for brokerage – or the ability to serve as conduits of information and mediators between others – which is a function of the extent to which they connect other members of the network (see Burt 1992). It follows from the preceding discussion of the relational 'strength of small numbers' that:

H1a: MEPs from smaller party groups are more likely to be part of policy-making networks than MEPs from larger party groups.

H1b: MEPs from smaller party groups are more central in policy-making networks and have greater potential for brokerage than MEPs from larger party groups.

These propositions do not hold trivially and warrant empirical investigation because both structural constraints associated with small party size and ideology may have no or the opposite effect on lawmakers' actual participation in policy making.[3]

With regard to ideology, the obvious starting point is previous research that describes the EP's ideological space as two-dimensional, with the classic left-right divide as the dominant dimension and a secondary dimension that 'captures government-opposition conflicts as well as national and European party positions on European integration' (Hix et al. 2006: 494). However, looking beyond the institutional confines of the EP, Marks et al. (2006: 157) argue that a 'noneconomic or cultural, new-politics dimension' has increasingly been structuring competition among political parties in Europe, which they describe in reference to the dimension's opposite poles: green/alternative/libertarian (Gal) versus traditionalism/authority/nationalism (Tan). With regard to politics at the EU level, this Gal/Tan dimension engages 'lifestyle, gender, environment, participatory decision-making and national culture'; strikingly, the authors find that 'the Gal/Tan divide is considerably more powerful than Left/Right in predicting party positioning across most policy areas' (Marks et al. 2006).

The key question with regard to the impact of ideology is whether particular ideological leanings impact legislators' motivation to participate in policy making. With regard to the left-right scale, however, there is no obvious theoretical reason to expect that legislators' general ideological views on the scale are causally related to their inclusion or their structural positions in EP policy-making networks. It is, simply put, not clear why we would expect

a lawmaker from the political right to be more or less inclined to actively participate in policy making than a leftist. And indeed, a set of analyses (reported in the Online Appendix) supports this proposition: any impact of left-right ideology is washed out by the inclusion of a Gal/Tan indicator.[4] We thus focus our attention on the expected relationships between lawmakers' positions on the pro-/anti-EU and Gal/Tan dimensions and their membership and structural positions in EP policy-making networks. Concerning the former, we expect to find a positive relationship between pro-EU sentiment and legislators' inclusion, centrality and potential for brokerage in policy-making networks. The logic behind these hypotheses is that those who are broadly in favour of the European integration process should be more likely to seek to influence policy-making processes at the EU level than Eurosceptics, who question or reject the desirability of EU lawmaking.

H2a: MEPs from national parties that are more pro-EU are more likely to be part of policy-making networks than MEPs from national parties that are more anti-EU.

H2b: MEPs from national parties that are more pro-EU are more central in EP policy-making networks and have greater potential for brokerage than MEPs from national parties that are more anti-EU.

With regard to the Gal/Tan dimension, it is of particular interest that Gal positions involve support for 'greater democratic participation' (Bakker et al. 2015). We hypothesise that, because MEPs on the Gal side of the spectrum support democratic participation as a value in and of itself, they ought to be more inclined to participate in collective policy-making processes, in general and specifically at the EU level. Hence:

H3a: MEPs from national parties that are more Gal are more likely to be part of policy-making networks than MEPs from national parties that are more Tan.

H3b: MEPs from national parties that are more Gal are more central in EP policy-making networks and have a greater potential for brokerage than MEPs from national parties that are more Tan.

Data and methods

In the empirical analysis, we examine rapporteurship networks of standing committees in the 7th EP. We collected information about rapporteurships and shadow rapporteurships for reports and opinions from MEPs' official EP webpages, along with information about committee and party group membership.[5] In total, we collected information about the involvement of all 857 MEPs in the drafting of a total of 4,021 reports and opinions. In line with our theoretical focus on substantive policy-making activities, we dropped 797 reports and opinions formulated in budgetary, discharge, inter-institutional agreement, Parliament's rules of procedure or members' immunity procedures. Furthermore, we do not consider five reports drafted by temporary committees.[6]

The focus of this study is on drafting policy documents in committees. Thus, separate networks are constructed for each standing committee. Since we are aggregating policy-making ties over the entire legislative term, any MEP who was a full or substitute member at any time a report or opinion was adopted is counted as a committee member and can

potentially form part of the network.[7] For our sample of reports and opinions, 847 of the 857 MEPs met this criterion. Furthermore, since MEPs can be full and substitute members of more than one committee, they can also form part of more than one network. As a result, the analysis is based on 2,246 MEP-by-committee observations.[8] For each committee, we first construct a so-called 'two-mode network', consisting of two different types of nodes and ties that can only link nodes of different types. In our case, MEPs and reports are the two different types of nodes, and rapporteurships are the ties or edges connecting these nodes. In our study, we are not interested in properties of individual reports. For our purposes, reports provide opportunities for interactive relationships that link rapporteurs and shadow rapporteurs. Thus, we collapse the two-mode networks of reports and MEPs into one-mode networks that indicate these working relationships between MEPs. While this transformation results in the loss of information about the identity of individual reports, information on the number of reports worked on together by MEPs enters the network in the form of weighted edges, where more reports indicate a stronger connection.

What is notable and unusual about these data is that they capture *actual* working relationships between legislators: rapporteurs and shadows meet collectively and regularly to deliberate and negotiate the legislation they are jointly charged with advancing through the legislative process. This interaction may not always mean working cooperatively or harmoniously, but it produces genuine social ties between small groups of lawmakers. While some previous research has relied on such actual working relationships to map legislative networks (e.g., Desmarais et al. (2015) treat participation in joint press events held by American Senators as social ties, while Ringe et al. (2013) used a survey and interviews to record social ties in the EP), doing so is generally quite difficult. Indeed, a key challenge in all social network analysis is the difficulty of measuring social ties directly, which is why researchers routinely rely on proxies for interpersonal relationships, such as shared membership in legislative institutions (e.g., Arnold et al. 2000; Ringe & Victor 2013), spatial proximity (Masket 2008; Rogowski & Sinclair 2012), alumni networks (Cohen & Malloy 2014), shared campaign contributions (Victor & Koger 2016), and especially co-sponsorship (e.g., Briatte 2016; Fowler 2006; Kirkland 2011). Hence, one of the general contributions of this article lies in the use of data that directly captures actual social ties between lawmakers.

The empirical analysis follows a two-step process. First, we are interested in why some committee members form part of the policy-making network and others do not. To measure network membership, we use a binary variable coded as 1 if a committee member was connected to at least one other committee member in the weighted one-mode network and coded as 0 otherwise. Network membership is the result of a selection process, and this initial analysis investigates what factors influence MEPs' selection into policy-making networks in the first place. Second, for those committee members that form part of the networks, we are interested in the determinants of members' centrality and potential for brokerage in the networks. We employ three measures of MEPs' structural positions in the networks: eigenvector centrality, betweenness centrality and network constraint. All of the measures are computed based on the weighted one-mode network.

Eigenvector centrality is based on the idea that central nodes are those that are strongly connected to many other strongly connected nodes (Bonacich 1972). In our context, eigenvector centrality measures the level of embeddedness of a committee member in each policy-making network as a whole. Committee members with high eigenvector centrality

scores are involved in writing many reports together with a large number of other committee members, who themselves write many reports with many other committee members, and so on. Betweenness centrality measures the relative number of times a node lies on the shortest paths connecting other nodes (Freeman 1977) in the network. It thus conceives of the 'importance' of a node in terms of its ability to transmit (substantive and/or strategic) information, which relates to its potential to act as a 'bridge' or 'broker' between others. Yet, it focuses on the shortest paths between any two nodes, which means that information can potentially travel through some more distant paths circumventing that particular node.

We also look at another measure to capture members' potential for brokerage – network constraint – which describes the extent to which a person's network is concentrated in redundant contacts (Burt 1992: Chapter 2), such that a *lower* network constraint score indicates that an actor connects more people who are not otherwise tied to each other. Whereas Eigenvector and betweenness centrality are global measures that take information into account from the entire network, network constraint is a local measure that is calculated based only on information from a node's direct ties to other nodes and the interconnections amongst those (Valente & Fujimoto 2010).

The main independent variables in our study are EP party group membership variables and variables measuring attributes of these groups. The party group membership variable is a categorical variable indicating MEPs' membership in one of the seven party groups during the EP's 7th term.[9] Once we have established differences in network inclusion, centrality and potential for brokerage across party groups, we investigate the reasons for these differences through a number of variables measuring the attributes of party groups and their members.

Importantly, differences in network inclusion and position might be a result of differences in party group size (*H1a* and *H1b*). In the analysis of network membership, we measure party group size by counting the number of committee members that were affiliated with a particular party group. In the analysis of network positions, we count the number of party group members that form part of the network. This approach is consistent with our assumption that the network generation process can be split into two separate phases: the first phase determines whether or not an MEP takes part in the policy-making network at all; and the second phase determines the centrality and potential for brokerage of those MEPs who take part in the network. In the latter phase, the relevant reference group for determining the network position of an MEP is not the party group delegation in the committee as whole, but the members of the party group that form part of the network. In either case, the party group size variable varies across committees for the same party group. As we expect the effect of differences in party group size to wear off with increasing size (e.g., an additional member is more likely to matter for a party group of size 3 than a party group of size 50), we log-transform the variables for the analyses.

Our remaining hypotheses relate to MEPs' ideology. For measures of ideology and policy positions, we rely on the 2010 Chapel Hill Expert Survey (CHES) (Bakker et al. 2015). Measures based on roll-call votes have the advantage of providing position estimates for each individual MEP. However, voting occurs at the end of the policy-making process and is thus endogenous to our dependent variables. Furthermore, roll-call vote analyses are only able to identify broad and basic patterns underlying voting in the EP, usually a general left-right and a pro-/anti-European integration dimension. Relying on the CHES estimates allows us to consider the relevance of more specific policy positions as well, like those

on the Gal/Tan dimension. Finally, it is important to note that the CHES provides party position estimates for national parties, not entire European party groups. Given the small size of many national party delegations in the EP, the position measures still provide a considerable amount of variation within European party groups. At the same time, they are almost guaranteed to be exogenous to MEP behaviour in the 7th EP term. The data for the survey was collected in spring 2011, less than half-way through the 7th term, and it is unlikely that the national experts who were asked to evaluate the positions of national parties based their estimates on the behaviour of MEPs.

To estimate a party's support for European integration, experts were asked: 'How would you describe the general position on European integration that the party leadership took over the course of 2010?' Answers were recorded on a 7-point scale ranging from 1 'strongly opposes' to 7 'strongly favours'. To estimate positions on the Gal/Tan dimension, they were asked:

> Parties can be classified in terms of their views on democratic freedoms and rights. 'Libertarian' or 'postmaterialist' parties favour expanded personal freedoms, for example, access to abortion, active euthanasia, same-sex marriage or greater democratic participation. 'Traditional' or 'authoritarian' parties often reject these ideas; they value order, tradition and stability, and believe that the government should be a firm moral authority on social and cultural issues.

Answers to this question were recorded on an 11-point scale ranging from 0 (libertarian/postmaterialist) to 5 (centre) to 10 (traditional/authoritarian).

In order to gain deeper insights into the practical selection of shadows, as well as the mechanisms underlying the generation of the observed networks and the associations connecting network positions to exogenous party variables, we complement our quantitative analysis with qualitative data from ten in-depth, semi-structured interviews. We also exchanged several emails with one MEP who was not available to meet us in person. Despite this relatively small number of interviews, our sample includes respondents from seven (of eight) political groups and ten member states who have been or are involved with ten (and thus half) of the EP's standing committees. Among our respondents were MEPs, MEP legislative assistants, party group advisors and members of the EP secretariat. The responses we received were highly consistent across interviews – particularly with regard to the key question we sought answers to on the selection process of shadows, the marginalisation of the Eurosceptic far right and the (dis-)advantages of being a small party group. This suggests that our qualitative data do not suffer from any apparent selection bias.

The interviews also helped us to gauge the quality of our quantitative data and expose potential limitations. In this regard, two of our interview respondents suggested that shadow rapporteurships may be underreported for the European People's Party (EPP) and the Progressive Alliance of Socialists and Democrats (S&D). They claimed that the two largest party groups always provide a shadow, which is not borne out by our data. We thus have to first determine if any potential underreporting can be treated as random measurement error or if it may bias our results. In a first step, we considered how many of those instances where no shadow was reported for the EPP (19 per cent of all observations) and S&D (24 per cent) involve legislative files where no shadows are reported for *any* party group. We found that only 5.2 and 8.7 per cent of observations relate to reports where a shadow is reported for

at least one other party group but not for EPP or S&D, respectively. In other words, most instances of possible under-reporting of shadow rapporteurships for EPP and S&D involve legislative files where no shadows are reported at all. This suggests that the main problem with the data, if there is one, would be one of general under-reporting across the board. Therefore, our descriptive results concerning the *relative* involvement of different party groups in policy-making networks and the results of our regression analyses are unlikely to be biased.[10]

Second, we systematically compared our shadow rapporteurship data, which is collected from the biographical webpages of each MEP on the EP website, to shadow rapporteurships reported in the EP's Legislative Observatory. There are small discrepancies between the two data sources (3.5 per cent of all observations in the combined dataset),[11] which at first glance may seem problematic. However, the discrepancies are of a size that we would expect from random measurement error; and the fact that there are small discrepancies between the two data sources shows that they are not functionally linked. At the same time, they provide overwhelmingly consistent information. It is unlikely that two independent sources would suffer from the same biases to provide data with such a high level of consistency.[12]

Effect of party group membership on network membership

Figure 1 shows the overall network membership rate for different party groups across all committees, with party groups on the x-axes ordered according to their ideological positions on the left-right dimension. The three smaller groups of the centre and the left – Alliance of Liberals and Democrats for Europe (ALDE), Greens/European Free Alliance (Greens/EFA) and European United Left/Nordic Green Left (GUE/NGL) – are the most strongly involved party groups. The two largest groups – the centre-left S&D and, even more so, the centre-right EPP – are considerably less involved. The moderately Eurosceptic European Conservatives and Reformist (ECR) have similar membership rates as the two largest groups. Finally, the far-right Eurosceptic EFD group has by far the lowest network membership rate of any political group. Only non-aligned MEPs have an even lower probability of being involved in the policy-making network.[13]

To investigate differences systematically across party groups and the possible reasons for these differences, we conduct a number of logistic regression analyses. The dependent variable in these regressions is a dummy indicating whether or not a committee member is part of the committee's policy-making network. All regressions include committee dummies to account for committee specific differences that affect the baseline probability of being part of the network, especially committee membership size and the 'supply' of reports. For reasons of space, the coefficients for these dummy variables are not reported. As a comparison of the committee-specific membership rates show (indicated by dashed horizontal lines in the panels of Figure A9 in the Online Appendix), this baseline probability varies considerably from committee to committee. Model 1 in Table 1 presents the regression coefficients for the categorical party group membership variable. To aid the interpretation of the party group membership effects, models 2 and 3 report the results of bivariate regressions using party group size and party policy positions as independent variables. Finally, model 5 includes all three independent variables simultaneously to control for their respective effects.[14]

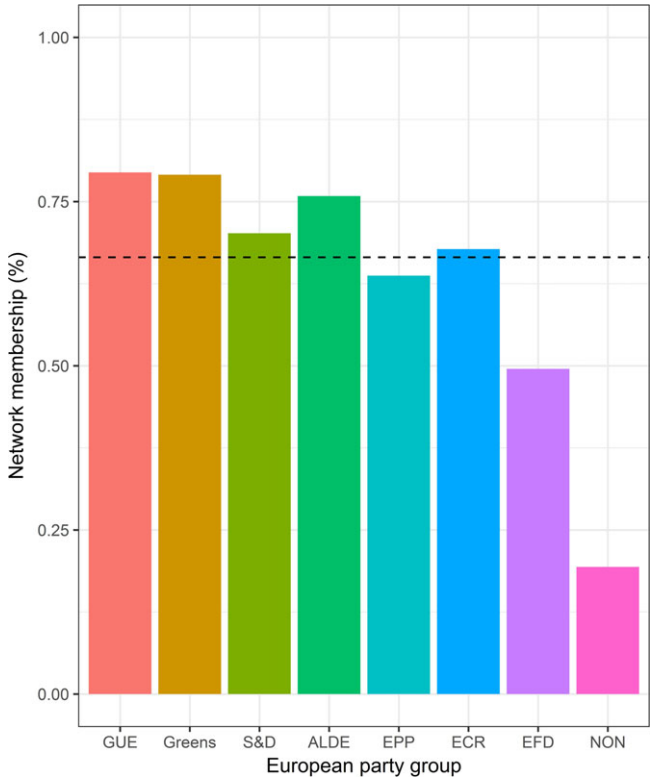

Figure 1. Network membership by party group. [Colour figure can be viewed at wileyonlinelibrary.com]
Notes: Bars indicate the percentage of party group members included in a network, based on pooled data including all MEP-by-committee observations. The dashed horizontal line indicates the mean membership percentage across members of all party groups. $N = 2{,}246$.

Model 1 examines how the probability of rapporteurship membership varies across party groups, and the remaining models examine which attributes of these party groups can account for this variation. As the categorical party group and the party group attribute variables at least partly tap the same characteristics (i.e., the categorical party group variable is essentially a multidimensional combination of a large number of party group attributes), including them simultaneously in a single model would be problematic and its results difficult to interpret.

In the analysis, we are specifically interested in identifying the effects of party group size and party ideology positions on the dependent variable, not in explaining variation in the dependent variable as fully as possible. Thus, we only need to include additional variables if they are likely confounders for one of the relationships we are focusing on. Both party group size and party positions are exogenous to the usual array of explanatory variables used in the related literature on the allocation of committee memberships and rapporteurships (Hurka et al. 2015; Kaeding 2004; Yoshinaka et al. 2010). In fact, many of these variables, like seniority, roll-call participation, voting loyalty to the European party group or the national party, leadership positions in the EP, in the committee or in the party group, are likely partly a consequence of party group membership, party group size or policy positions of national

Table 1. Logistic regression of network membership

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	0.74***	1.33***	0.44	1.45***	1.64***
	(0.27)	(0.33)	(0.28)	(0.24)	(0.34)
GUE/NGL	0.62*				
	(0.32)				
Greens/EFA	0.58**				
	(0.29)				
S&D	0.11				
	(0.21)				
ALDE	0.42*				
	(0.25)				
EPP	−0.18				
	(0.20)				
EFD	−0.80**				
	(0.33)				
Party group size (log)		−0.18**			−0.16
		(0.08)			(0.15)
European integration			0.36		0.27
			(0.25)		(0.46)
Gal/Tan				−1.42***	−1.23***
				(0.27)	(0.39)
AIC	2577.18	2607.84	2464.83	2428.74	2430.51
BIC	2724.72	2727.01	2582.78	2546.69	2559.69
Log likelihood	−1262.59	−1282.92	−1211.41	−1193.37	−1192.25
Deviance	2525.18	2565.84	2422.83	2386.74	2384.51
Number of observations	2,153	2,153	2,032	2,032	2,032

Notes: ***p < 0.01; **p < 0.05; *p < 0.1. The dependent variable is a dummy variable indicating membership in a committee's policy-making network. Robust standard errors, clustered by MEP, are in parentheses. Committee dummies included as control variables in all models. The baseline category for the committee variable is the Economic and Monetary Affairs Committee and the baseline category for the party group variable is the ECR group. As baseline categories, we chose categories with membership rates closest to the overall sample membership rate.

parties. If these variables are indeed partially intervening variables, their inclusion in the analysis is not only unnecessary, but would likely lead to underestimating the coefficients for the more remote causes that are of primary interest here (Ray 2003).

The results of model 1 in Table 1 reproduce the patterns in Figure 1. The regression coefficients of party groups in model 1 provide the deviations in effect sizes in reference to the party group closest to the sample mean – the ECR. But models 2–5 allow us to determine what drives the differences in network membership patterns between party groups. Model 5 provides support for *H3a*, in that the coefficient for members' stance on the Gal/Tan dimension is negative and significant. In contrast, the coefficients for support for European integration and party group size either show no statistically significant relationship with

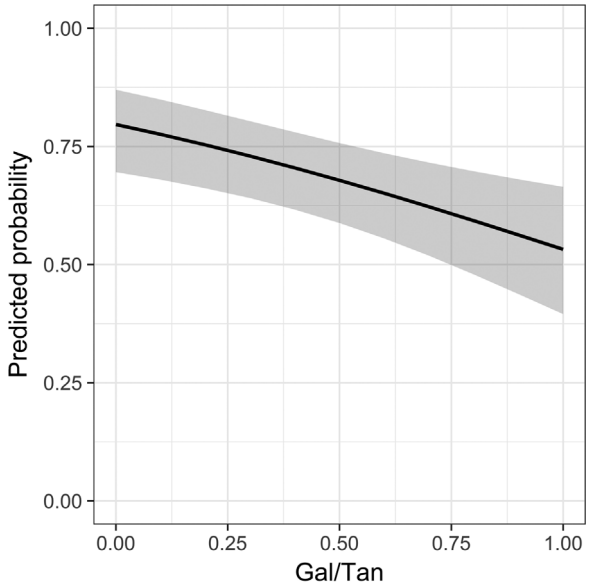

Figure 2. Predicted probability of network membership.
Notes: The figure displays predicted probabilities for different values of Gal/Tan based on model 5 in Table 1 for a member of the Economic and Monetary Affairs Committee, keeping party group size and support for European integration constant at their means. The shaded area indicates a 95 per cent confidence interval.

network membership (in the case of EU attitudes, see models 3 and 5), or that relationship loses statistical significance once we control for Gal/Tan (in the case of party group size, compare models 2 and 5). This contradicts both *H1a* and *H2a*.

Figure 2 illustrates the change in the predicted probability of network membership as a result of different values of Gal/Tan for a member of the Economic and Monetary Affairs Committee, holding support for European integration and party group size constant at their mean. A change from the Gal to the Tan end of the dimension is associated with a substantial decrease in the probability of network membership of more than 26 percentage points.

We also relied on our qualitative interview data to investigate in more detail the finding that MEPs with more Tan views, especially members of the EFD, have a lower probability of being part of the policy-making network. We were particularly interested in whether this marginalisation of the radical Eurosceptic far right was self-imposed or the result of exclusion from the policy-making process by the other groups. Across the board (including our two Eurosceptic right-wing respondents), our interviews suggest that it is a lot of the former and some of the latter. In general, there is agreement that the far-right only has a handful of members who are active and present in legislative affairs and that most of its members only rarely seek to influence legislation (Interviews 1, 2, 3, 4, 6, 7, 8, 10, 11). As one respondent puts it, 'They just have no intention of playing the game. … All they're interested in is standing up in plenary when all the cameras are on and making populist speeches. It's not about trying to improve the legislation' (Interview 7). Another respondent states bluntly that 'they exclude themselves' (Interview 6).

However, some recognise that the exclusion of the far right may stem at least in part from human resource scarcities – not only at the level of MEPs and their offices, but also

in the secretariats of those political groups (Interview 2) – and the difficulty of assuming specific policy positions in political groups that are ideologically incoherent (Interviews 2, 8, 9). Nonetheless, marginalisation is also self-imposed and quite purposeful, as one MEP of the United Kingdom Independence Party (UKIP) readily acknowledged when he explained that:

> As a UKIP MEP I am not fully involved with the law making process. … [We] make it clear when we stand for election that we will not assist the EU lawmaking process. We are the opposition. In practice this means that we are never rapporteurs, we do not seek chairmanships of committees and we do not get involved in trilogues. We attend committees, we speak in committees, we are coordinators in committees where the opportunity arises, as this gives us an insight into what is coming up. We will vote in favor of certain amendments on a 'least bad' basis, but will almost always vote against the legislative report as a whole. (Interview 5)

But this is not true for all MEPs of the Eurosceptic right: those who take a constructive approach and seek to join the deliberation process can and do engage in policy making (Interviews 4, 9, 10, 11). And, all else equal, other political groups prefer not to deal with members of the Eurosceptic far right, given divergent values and preferences over political outcomes (Interviews 3, 4, 7). While they cannot be barred from official proceedings, including rapporteur-shadow meetings in those instances where the far right has chosen to appoint a shadow (Interviews 1, 7), it does happen that the more mainstream party groups decide to principally engage with each other in less formal settings and negotiations (Interviews 7, 8, 9, 11). There is, in other words, some sidelining of Eurosceptic far-right legislators by other party groups.[15]

Effect of party group membership on network centrality and potential for brokerage

Having looked at the determinants of network membership, we now examine variation across party groups in the centrality and potential for brokerage of MEPs that form part of the policy-making networks. Figure 3 shows the Eigenvector centrality of MEPs from different party groups.[16] The figure seems to suggest that members of the smaller groups indeed tend to be more central in the networks, while pro- and anti-Europeans show up as both central (Greens/EFA, ALDE versus GUE, ECR) and not central (S&D, EPP versus EFD). Finally, there may be a relationship between Gal values and network centrality, but the pattern is less clear-cut in Figure 3 than in Figure 1.

To examine the distribution of centrality and network constraint values across party groups more systematically and to identify party group member attributes that are related to these differences, we conduct a number of linear regression analyses. Since our dependent variables are social network measures, we cannot assume that our observations are independent of one another (Cranmer et al. 2017). To address this problem, we rely on a node-level regression approach that computes standard Ordinary Least Square (OLS) estimates of the regression coefficients. Probability values for significance tests are then computed by randomly permuting the elements of the dependent variable vector and re-computing the regression – a step that is repeated a large number of times (10,000 iterations, in our case). Tests of statistical significance are then conducted on the basis of

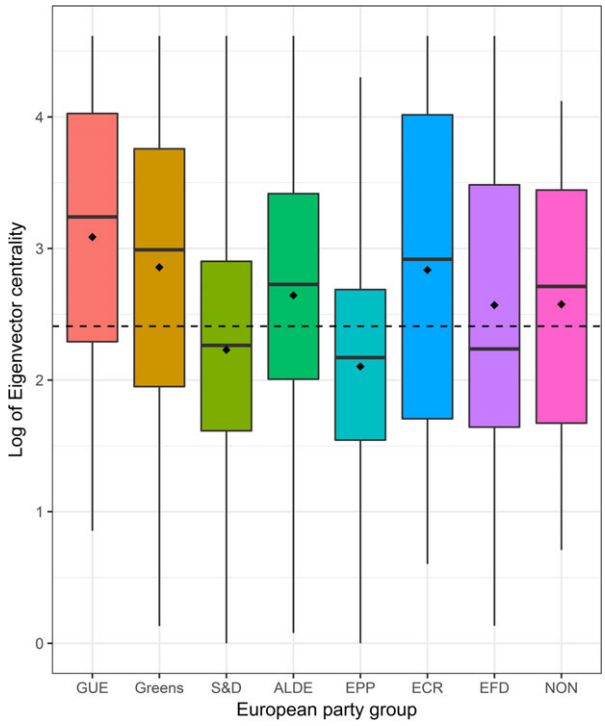

Figure 3. Eigenvector centrality of MEPs, by party group. [Colour figure can be viewed at wileyonlinelibrary.com]
Notes: The bar charts show the median, upper and lower quartile (horizontal lines) as well as the mean (diamond-shaped point) of the distribution of centrality scores for each party group. The dashed horizontal line indicates the mean centrality score across members of all party groups. $N = 1{,}494$.

these simulations.[17] We use the same specifications of independent variables as above, except that the (again log-transformed) independent variable 'party group size' now refers to the number of party group members in the networks, rather than the committee as a whole. The results of the analyses are reported in Table 2.

Not surprisingly, the ranking of coefficient values of the categorical party group variable in models 1, 5 and 9 correspond closely to the ranking of means of party groups on different dependent variables shown in Figure 3 and Figures A4 and A5 in the Online Appendix. Note that these coefficients do not estimate the mean centrality scores for party groups as a collective, but the mean centrality scores for their individual members.[18] As expected (*H1b* and *H3b*), party group size and Gal/Tan position have a statistically significant negative effect on Eigenvector centrality and betweenness centrality, and a positive effect on network constraint (models 4, 8 and 12). Support for European integration shows the same pattern of relationships in models that do not account for party group size, but controlling for party group size demonstrates that these relationships are spurious (compare models 3 and 4, 7 and 8, as well as 11 and 12). *H2b* is thus not confirmed. Regarding substantive effect sizes, holding all other variables constant, a 1 per cent increase in party group size decreases Eigenvector centrality by about 0.46 per cent and betweenness centrality by about 0.32 per cent. Network constraint is increased by about 0.18 per cent. Moving from the theoretical

Table 2. Linear regression of network position measures (with permutation tests of statistical significance)

	Eigenvector centrality				Betweenness centrality				Network constraint			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Intercept	2.62***	3.35***	3.73***	3.57***	1.23***	1.82***	2.04***	1.93***	3.55***	3.25***	3.11***	3.17***
	(0.20)	(0.17)	(0.20)	(0.19)	(0.12)	(0.10)	(0.12)	(0.11)	(0.08)	(0.07)	(0.08)	(0.08)
ECR	0.25				0.30***				−0.13**			
	(0.05)				(0.001)				(0.037)			
GUE/NGL	0.51***				0.43***				−0.21***			
	(0.002)				(0.001)				(0.006)			
Greens/EFA	0.29*				0.27***				−0.13**			
	(0.024)				(0.002)				(0.031)			
S&D	−0.33**				−0.16**				0.13**			
	(0.006)				(0.025)				(0.025)			
ALDE	0.07				0.17**				−0.07			
	(0.282)				(0.021)				(0.123)			
EPP	−0.46***				−0.26***				0.17***			
	(0.001)				(0.001)				(0.006)			
Party group size (log)		−0.46***		−0.46***		−0.33***		−0.32***		0.18***		0.18***
		(0.001)		(0.001)		(0.001)		(0.001)		(0.001)		(0.001)
European integration			−1.09***	−0.01			−0.72***	0.05			0.42***	0.00
			(0.001)	(0.49)			(0.001)	(0.66)			(0.001)	(0.486)
Gal-tan			−0.91***	−0.37***			−0.68***	−0.30***			0.38***	0.17**
			(0.001)	(0.009)			(0.001)	(0.001)			(0.001)	(0.011)
R^2	0.19	0.18	0.16	0.20	0.24	0.22	0.18	0.23	0.43	0.42	0.42	0.44
Adjusted R^2	0.18	0.17	0.15	0.18	0.23	0.21	0.17	0.22	0.42	0.41	0.41	0.43
Number of observations	1,476	1,476	1,391	1,391	1,476	1,476	1,391	1,391	1,476	1,476	1,391	1,391

Notes: ***p < 0.01; **p < 0.05; *p < 0.1. The dependent variable is the log-transformed value of the respective network centrality measure. p-values are in parentheses. Committee dummies are included as control variables in all models. The baseline category for the committee variable is the Constitutional Affairs Committee and the baseline category for the party group variable is the EFD group. As baseline categories, we chose those with category mean scores closest to the overall sample mean score of the dependent variable.

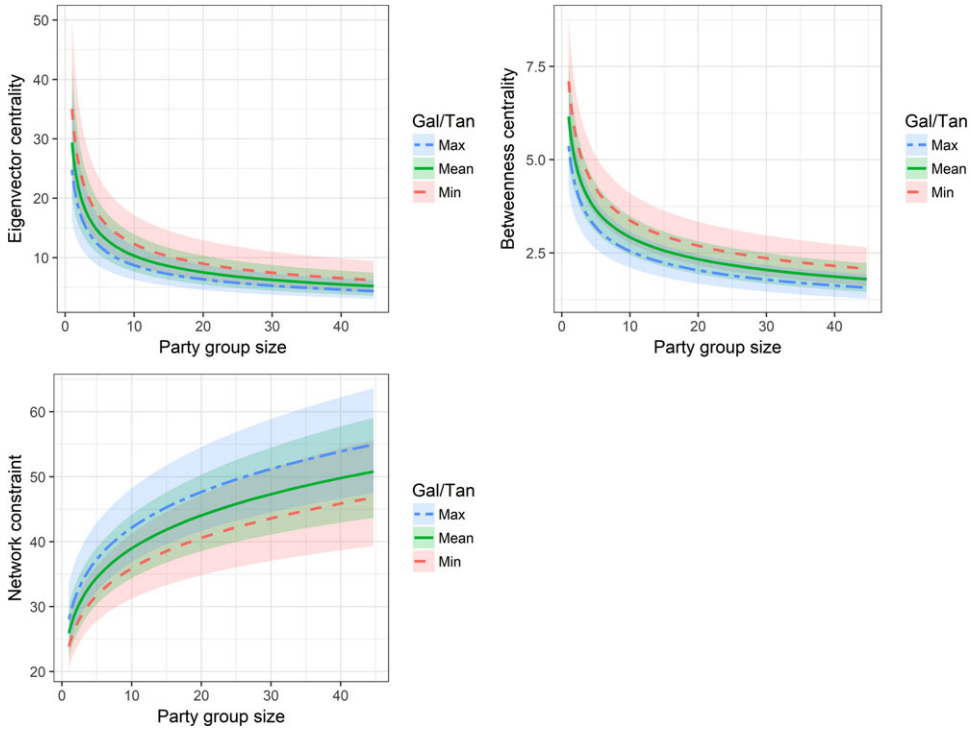

Figure 4. Predicted values of network position measures. [Colour figure can be viewed at wileyonlinelibrary.com]
Notes: The figure displays predicted values based on models 4, 8 and 12 in Table 2 for a member of the Constitutional Affairs Committee, keeping the support for European integration variable constant at its mean and varying the Gal/Tan and party group size variables. Confidence intervals are based on the t-distribution, not simulated distributions.

minimum (0) to the maximum (1) of the Gal/Tan scale decreases Eigenvector centrality by 37 per cent, decreases betweenness centrality by 30 per cent and increases network constraint by 17 per cent.

The effects of Gal/Tan and party group size on the predicted values of the centrality and network constraint measures on their original scales are further illustrated in Figure 4. The effect of party group size is generally stronger than the effect of Gal/Tan, and the latter varies considerably across different dependent variables. It is weakest in the case of Eigenvector centrality and strongest in the case of network constraint. Still, taking the difference in predicted values from the minimum to the maximum of the respective variable as a yardstick, both effect sizes cover a substantial proportion of the value ranges of the dependent variables.

The findings that MEPs from small party groups are more central in the policy-making networks and connect more colleagues who are not otherwise tied to one another are notable from a social networks perspective because they may have distinct relational and informational benefits (e.g., Burt 1992; Krackhardt 1992; Ringe & Victor 2013). Whether this proposition holds water in the perceptions of EP insiders was another topic in the interviews we conducted, and there was some recognition of relational benefits of being a small group.

For example, one respondent (Interview 8) from a smaller political group explained that he may walk into the second or third meeting of the day having already interacted with the representatives of some of the other small groups in earlier meetings, while the person from the EPP is 'new' to the group. Another respondent agreed that it can matter that you know and have worked with people before, especially because MEPs from the large groups may only show up to meetings when 'their' files are being dealt with; it can also be an advantage to be familiar with an array of different topics (Interview 4).

Respondents were also quite clear about the costs of having comparatively little manpower, which may entail having to do more work less thoroughly (Interviews 4, 9). A respondent from one of the large groups believes that these realities come at the expense of policy expertise, efficiency and effectiveness, which in her mind clearly outweighs the benefit of being more connected (Interview 11). And, in the end, small groups naturally have more difficulty filling all necessary shadow slots (Interviews 1, 4), and their representatives may be forced to miss some meetings when they conflict with responsibilities on another file (Interview 6).

Conclusion

Policy making in legislatures is subject to a substantial degree of specialisation and delegation, which comes with many practical advantages, including the efficient use of scarce resources and the reliance on higher levels of expertise, which may result in better-quality policy outcomes. Within a legislature, the formulation of policy is often delegated to different committees; within committees, a subset of members is either nominated or self-selects into taking the lead on drafting and negotiating particular pieces of legislation. But while committees have received significant attention in the study of legislative politics, the common practice of delegation of policy leadership within committees has not been the subject of much previous research. We thus know little about the sub-groups of legislators that, in practice, drive policy making in many legislatures around the world.

This article examined the composition of these sub-groups by studying the membership and structural position of MEPs in policy-making networks composed of rapporteurs and shadows who are linked through their joint work on legislative proposals in the EP's 7th term, 2009–2014. It thus took seriously the relational aspects of politics and policy making that are too often overlooked in legislative studies. Our theoretical focus was on whether members of small parties enjoy particular relational advantages that are driven, counterintuitively, by a scarcity of human resources: the members of small parties have to handle a greater number of legislative proposals than their large party colleagues, which leads to the creation of strong, bridging ties in policy-making networks. These kinds of ties entail a series of potential benefits in terms of trust, information and brokerage. We investigated empirically if these benefits are realised in EP rapporteur-shadow networks, or if the structural constraints associated with small party size and/or particular ideological profiles in fact depress the capacity or willingness of small party lawmakers to realise the relational benefits of small numbers.

With respect to party group size, our results indicate that small party groups are not as sidelined in the policy-making process as one might expect from a viewpoint that ignores the relational sources of political influence. Smaller party groups surely face important structural

disadvantages and they have to be able to cover a broader range of policy proposals and may therefore be less able to specialise and focus narrowly on only specific policy issues. However, our quantitative analyses show that members of smaller groups are just as likely to be members of policy-making networks as their colleagues from larger ones and that they even tend to occupy more prominent positions than members of larger ones. The need to assign the same actors a greater number of reports thus entails that members of small party groups hold potentially advantageous positions in *relational* (or social network) terms: they are more central and connect a greater number of colleagues who are not otherwise tied to one another. Again, it is worth noting that this finding is far from trivial, as smaller party groups could choose to focus their scarce resources on a small number of reports that are of particular interest to them instead of spreading their resources more thinly across a large number of reports. But small party groups not only use their minority rights to assume the role of the political opposition against their large counterparts (Thierse 2015), they take active part in policy-making processes and may use their roles as brokers and transmitters of information between other members of the network and across policy proposals in efforts to advance their policy objectives. Overall, our interview data suggest that these benefits do not outweigh the structural downsides of being small, but they do alleviate them. We should thus be careful not to be too dismissive of the role of small parties in legislative decision making, because even perceived weaknesses can turn out to be advantageous.

With respect to ideological views, we find that members of Gal parties are more involved, more central and they connect more of their colleagues in policy-making networks than those of Tan parties. In other words, legislators whose ideological outlook includes a commitment to democratic participation drive policy making in the legislature. In contrast, those MEPs who see their role in obstructing policy making, and who reject certain democratic values and processes, *choose* to stay out of the lawmaking process. In terms of EU politics, this means that especially the most Tan party group, the EFD, remains sidelined when it comes to policy creation, despite the support its constituent national parties have enjoyed in recent elections. And while the EFD is popularly known as Eurosceptic far right party, it is the party group's Tan leanings that differentiate it from the other groups. Indeed, it is quite notable that not all Eurosceptics are marginalised: the 'soft' Eurosceptics on left and right actively participate in policy making. In other words, marginalisation is a choice, and there appears to be a difference between being 'anti-system' but devoted to changing the system 'from within', and rejecting democratic participation outright in favour of obstructionism.

In terms of scope and generalisability of our findings, there is no apparent reason to believe that they are the results of the unique features of the EP or the EU as a whole. Sub-groups of committee members taking the lead on drafting and negotiating particular policy proposals are a regular feature of legislative assemblies and parliaments around the globe, and ideology or group size are not confined to the EP context as relevant explanatory variables. At the same time, the results of our study are more likely to apply to legislative institutions that share some of the core features of the EP as a legislature and the EU as a political system. Chief among them are the strong powers and elevated positions of committees within the legislature, the separation of power between the legislature and the executive, and the existence of a multiparty system. In legislatures with weak committees, the locus of policy making might reside in other arenas. Similarly, two-party systems lack small

parties, so our results about party size do obviously not apply. However, our results about ideology should travel there as ideological views are an attribute of individual legislators, not parties. Finally, unlike in the separation of power system of the EU, in parliamentary systems with a strong government-opposition divide in the legislature, the effect of party group size might be conditional on whether or not a party belongs to the government coalition. Smaller parties in the opposition might be more likely to be marginalised than government parties.

Our empirical findings have important normative implications as the potential relational benefits of small party status and the higher involvement of lawmakers from Gal parties speak directly to questions of democratic legitimacy and thus have implications for the longstanding and ongoing debate about the EU's 'democratic deficit'. While the delegation of policy leadership to a small subset of legislative actors may raise concerns about a possible lack of transparency and accountability, and about restrictions on the descriptive and effective representation of the variety of views included in the legislature, we find EP policy making to be remarkably inclusive: lawmakers from small parties are not systematically sidelined in the legislative process, and the marginalisation we do observe is largely self-imposed. This is an important observation with regard to the 'input legitimacy' of policy making (Scharpf 1999). However, being able to participate is not a sufficient criterion for evaluating the legitimacy of democratic decision making, according to Schmidt (2013). She maintains that, to judge if citizens are indeed able to express and pursue their ideas and demands through the active participation in policy making of the representatives they elect, one must also consider the 'throughput legitimacy' of policy making by examining the collaborative and deliberative interrelationships and interactions among policy makers.

Investigating legislative politics through a social networks lens enables the identification and analysis of informal opportunity structures created and maintained by legislators who seek to influence deliberations and negotiations. Here, it is notable indeed that small parties may be able to partially counteract the structural disadvantages they face by exploiting the relational benefits associated with strong, bridging ties, which may partially level a playing field that tends to favour large parties. As a result, it is more likely that even small parties with ideological profiles outside the mainstream are able to articulate and pursue their policy objectives, as long as they choose to take part in policy making, which in turn gives voice to those citizens who voted for them. This does not mean that small parties and their members necessarily or regularly achieve the policy *outcomes* they prefer – in fact, they most likely do not, given majority rule – but they can represent their views, participate and try to influence policy making.

Acknowledgements

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

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Table A6 Linear regression of Eigenvector centrality (with variable indicating Left/Right ideology)
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Figure A9 Network membership across party groups and committees
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Figure A11 Betweenness centrality across party groups and committees
Figure A12 Network constraint across party groups and committees

Notes

1. Previous social networks research has found that it is weak, not strong ties, that tend to be bridging (e.g., Friedkin 1980). This is a tendency, however, and strong ties can of course also be bridging.
2. We do not directly investigate the impact of strong ties on such outcomes in the case at hand, but the idea that strong ties benefit information exchange, knowledge transfer, learning and innovation has found support in an extensive body of multidisciplinary research (e.g., Abrahamson & Rosenkopf 1997; Centola & Macy 2007; Fleming et al. 2007; Granovetter 2005; Morgan & Sorensen 1999).
3. Indeed, the results of our analysis below actually reject one of these expectations.
4. Tables A4 and A6–A8 in the Online Appendix replicate these regression analyses but include a left-right ideology variable. Table A3 presents pairwise correlations of the three party position variables.

5. The relevant information was downloaded from the EP website on 21 July 2015 using a Python script. See the Online Appendix for more information.
6. See Table A1 in the Online Appendix for a breakdown by type of parliamentary procedure.
7. Tables A5 and A9 in the Online Appendix replicate the following analyses but control for type of committee membership (i.e., substitute or full).
8. There is variation across committees in the number of members and their involvement as rapporteurs and shadows (see Table A2 in the Online Appendix for more details). We therefore include fixed effects for committee. Note that some committee members are not part of our networks because they served as rapporteurs but were not shadowed by anybody else.
9. Non-aligned members are included as a separate category in the descriptive graphs but not in the regression analyses. Since these MEPs are not members of a party group, no meaningful value for the party group size variable, which is the other main explanatory variable in the regression models, can be assigned to them.
10. Our discussion focuses on the EPP and the S&D because for these party groups, the interview statements provide a clear yardstick for probing the nature and extend of potential underreporting: they suggest that shadows were provided in all cases (i.e., 100 per cent). Respondents from other party groups acknowledge that their shadow rapporteurship rate is lower than 100 per cent but do not provide a precise quantitative figure to which we could compare to our data. Our findings regarding the effect of party group size on network centrality could in principle be driven by differential under-reporting among smaller and larger party groups. From a data-generation point of view, however, there is little reason to expect such differences in reporting, and our interview evidence does not suggest them either.
11. This figure of 3.5 per cent concerns discrepancies that are *unexplained*. The remaining differences between the two data sources concern shadow rapporteurships for opinions, which are not recorded in the Legislative Observatory. Given our focus on social ties between legislators, it is important not to disregard shadow rapporteurships for opinions.
12. While centrality measures may be sensitive to random measurement error, existing research (Borgatti et al. 2006) suggests that random error below 10 per cent is largely inconsequential.
13. Plots of the distribution of size and ideology scores by party group are provided in the Online Appendix.
14. Results for models including only particular independent variables and further possible combinations thereof are reported as robustness checks in the Online Appendix.
15. Some of our interviews suggest that mainstream parties may be more actively excluding the Eurosceptic far right during the current 2014–2019 term than they did before (Interviews 6, 8, 11).
16. Figures showing equivalent patterns for betweenness centrality and network constraint are in the Online Appendix. Given the strongly left-skewed distributions of all three variables, we take their natural logarithm as dependent variables in the regression analyses. By default, the centrality and brokerage measures are normalised to range between 0 and 1. Before taking the natural logarithm, we rescaled the variables to range from 0 to 100. As the logarithm of 0 is undefined, we added 1 to all values before transforming the variable.
17. Note that regression procedures in UCINET (Borgatti et al. 2002) only provide significance levels and p-values, not standard errors. This is reflected in Table 2.
18. Readers might wonder why the mean centrality and brokerage scores of EFD members are higher than of members of the two larger party groups. This finding can be explained by the fact that the effect of party group size outweighs the effect of ideology (see Figure 4); it does not imply that larger party groups as a collective are less central in the network. Our analysis focuses on the centrality of individual MEPs; it does not address the question of how central entire party groups are.

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