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Power to the Parties: Cohesion and Competition in the European Parliament, 1979–2001

SIMON HIX, ABDUL NOURY AND GÉRARD ROLAND*

How cohesive are political parties in the European Parliament? What coalitions form and why? The answers to these questions are central for understanding the impact of the European Parliament on European Union policies. These questions are also central in the study of legislative behaviour in general. We collected the total population of roll-call votes in the European Parliament, from the first elections in 1979 to the end of 2001 (over 11,500 votes). The data show growing party cohesion despite growing internal national and ideological diversity within the European party groups. We also find that the distance between parties on the left–right dimension is the strongest predictor of coalition patterns. We conclude that increased power of the European Parliament has meant increased power for the transnational parties, via increased internal party cohesion and inter-party competition.

Why do we observe party cohesion in legislatures and why does it differ across countries and political systems? Along what lines do parties compete in legislatures? In many normative accounts of liberal democracy, these two elements are complementary: democracy works because groups of elites with competing policies organize to secure these goals.¹ We address these questions in the context of the European Parliament.

Despite media focus on high profile events in the European Parliament, such as the role

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¹ E.g. Robert Michels, *Political Parties: A Sociological Study of the Oligarchical Tendencies of Modern Democracy* (New York: Free Press, 1961 [1911]); Max Weber, 'Politics as a Vocation', in Hans H. Gerth and C. Wright Mills, eds, *From Max Weber: Essays in Sociology* (Oxford: Oxford University Press, 1946 [1918]); Joseph Schumpeter, *Capitalism, Socialism and Democracy* (London: Allen & Unwin, 1943); Angelo Panebianco, *Political Parties: Organization and Power* (Cambridge: Cambridge University Press, 1988 [1982]); Hans-Dieter Klingemann, Richard I. Hofferbert and Ian Budge, *Parties, Policies, and Democracy* (Boulder, Col.: Westview Press, 1994); and Peter Mair, 'Party Organizations: From Civil Society to the State', in Richard S. Katz and Peter Mair, eds, *How Parties Organize: Adaptation and Change in Party Organizations in Western Democracies* (London: Sage, 1994). Similar normative claims have been made about the European Union: that democratic accountability via the European Parliament requires cohesive and competitive parties, e.g. Fulvio Attinà, 'Parties, Party Systems and Democracy in the European Union', *International Spectator*, 27 (1992), 67–86; Rudy Andeweg, 'The Reshaping of National Party Systems', in Jack Hayward, ed., *The Crisis of Representation in Europe* (London: Frank Cass, 1995); Cees van der Eijk and Mark Franklin, eds, *Choosing Europe? The European Electorate and National Politics in the Face of Union* (Ann Arbor: University of Michigan Press, 1996); and Simon Hix and Christopher Lord, *Political Parties in the European Union* (Basingstoke, Hants.: Macmillan, 1997).

of the parliament in the resignation of the Santer Commission in May 1999, the European Parliament remains relatively unknown outside the Brussels policy community and scholars of the European Union (EU). The European Parliament is, however, a particularly interesting institution on which to test theories of legislative behaviour. It is a young institution whose powers have evolved in the course of a few decades from a weak consultative 'assembly' into one of the most powerful institutions in the EU, with the power to enact legislation in many areas, amend most lines in the EU budget, veto the governments' nominee for the EU Commission President and sack the Commission.² Moreover, politics inside the European Parliament is unusually complex: with multiple 'party groups', who themselves are composed of delegations of national parties with strong ties to party leaderships at the domestic level, and a wealth of possible coalitions and salient dimensions of ideological conflict.

To understand voting in the European Parliament we have collected and analysed every roll-call vote since the first direct elections: from the start of July 1979 to the end of December 2001 (half-way through the fifth parliament). This data took several years to collect and constitutes a rich dataset which we hope will spawn a new generation of empirical research on the European Parliament.³

Our main findings are, first, that coalition-formation in the European Parliament occurs along the classical left-right dimension and, secondly, that cohesion of the main party groups has grown as the powers of the parliament have increased and as the importance of those party groups has grown.

Previous studies of roll-call voting based on limited samples of votes has established that MEPs vote along transnational party lines more than national lines and that the party groups are less cohesive than parties in domestic parliaments in Europe.⁴ However, our data allow us to use regression analysis to explain party group cohesion and to show that it has increased over time. We find in particular that ideological closeness alone cannot explain cohesiveness but that the effectiveness of transnational party groups is a key determinant of their voting cohesion.

Previous research using samples of votes has also shown that the left-right dimension is important in the formation of coalitions in the European Parliament.⁵ However, our

² Since the Treaty of Rome in 1957 the European Parliament has had the power to censure the Commission. The Single European Act in 1987, the Maastricht Treaty in 1993 and the Amsterdam Treaty in 1999 increased the powers of the European Parliament *vis-à-vis* the Council and Commission in the adoption of legislation. For more details of the powers of the European Parliament, see, *inter alia*, Simon Hix, *The Political System of the European Union* (Basingstoke, Hants.: Macmillan, 1999), pp. 56–98.

³ The data used in this article are available on Simon Hix and Gérard Roland's websites: <http://personal.lse.ac.uk/hix>, and <http://emlab.berkeley.edu/users/groland>, respectively.

⁴ Fulvio Attinà, 'The Voting Behaviour of the European Parliament Members and the Problem of Europarties', *European Journal of Political Research*, 18 (1990), 557–79; Marcel Quanjel and Menno Wolters, 'Growing Cohesion in the European Parliament' (paper presented at the Joint Sessions of the ECPR, Leiden, 1993); Joanne Bay Brzinski, 'Political Group Cohesion in the European Parliament, 1989–1994', in Carolyn Rhodes and Sonia Mazey, eds, *The State of the European Union, Vol. 3* (London: Longman, 1995); Tapio Raunio, *The European Perspective: Transnational Party Groups in the 1989–1994 European Parliament* (London: Ashgate, 1997); and Hix and Lord, *Political Parties in the European Union*.

⁵ Luciano Bardi, 'Transnational Party Federations, European Parliamentary Party Groups, and the Building of Europarties', in Richard S. Katz and Peter Mair, eds, *How Parties Organize: Change and Adaptation in Party Organizations in Western Democracies* (London: Sage, 1994); Hix and Lord, *Political Parties in the European Union*, pp. 158–66; Raunio, *The European Perspective*, pp. 101–6; Amie Kreppel and George Tsebelis, 'Coalition Formation in the European Parliament', *Comparative Political Studies*, 32 (1999), 933–66; Kreppel, *The European Parliament and the Supranational Party System*; Abdul Noury, 'Ideology, Nationality and Euro-Parliamentarians',

database allows us to analyse the stability of coalition patterns over time. Our regression analysis shows that variation in ideological distance between party groups is a main determinant of coalition formation.

Our findings suggest that further increases in the parliament's powers will increase rather than decrease party cohesion and left–right competition, because more powers will lead to greater incentives for stronger party organizations and greater possibilities for parties to shape EU policy outcomes in a particular ideological direction. This, then, suggests an optimistic message for the prospects of democratic accountability of the EU via the European Parliament, since more power for the European Parliament would probably lead to greater transnational and party-political, rather than intergovernmental, contestation in the EU policy process.

We organize the article as follows. The next section discusses possible theoretical explanations of party organization and competition in the European Parliament from the general political science literature and existing research on the European Parliament. We then discuss roll-call voting in the European Parliament and how we measure party cohesion with this data. The next section describes the main trends in party cohesion and competition across the five directly-elected parliaments. There are then two sections presenting a statistical analysis of the explanation of these trends, and finally a concluding section.

EXPLAINING PARTY POLITICS IN THE EUROPEAN PARLIAMENT

Party Organization and Cohesion

The theoretical literature on legislative institutions and behaviour predicts that the organizational strength and voting cohesion of legislative parties is explained by two types of institutions: external – the structure of relations between the parliament and the executive; and internal – the structure of incentives inside the legislature.

On the external side, legislative parties are more cohesive in parliamentary than in presidential systems.⁶ In parliamentary systems, where the executive is 'fused' to a parliamentary majority, governments can reward loyal backbenchers with ministerial seats. The re-election prospects of parliamentarians from the majority party are also closely associated with the performance of their party leaders in government.⁷ Moreover, governing parties can use a vote-of-confidence motion, which presents their parliamentary supporters with the risk of not being re-elected if the parliament is

(Footnote continued)

European Union Politics, 3 (2002), 33–58; Simon Hix, 'Legislative Behaviour and Party Competition in the European Parliament: An Application of Nominat to the EU', *Journal of Common Market Studies*, 39 (2001), 663–88; and Abdul Noury and Gérard Roland, 'More Power to the European Parliament?' *Economic Policy*, 34 (2002), 279–320.

⁶ E.g. George Tsebelis *Veto Players: How Political Institutions Work* (Princeton, N.J.: Princeton University Press/Russell Sage Foundation, 2002), chap. 3; John D. Huber, *Rationalizing Parliament: Legislative Institutions and Party Politics in France* (Cambridge: Cambridge University Press, 1996); Matthew S. Shugart and John M. Carey, *Presidents and Assemblies: Constitutional Design and Electoral Systems* (Cambridge: Cambridge University Press, 1992); Shaun Bowler, David M. Farrell and Richard S. Katz, eds, *Party Discipline and Parliamentary Government* (Columbus: Ohio State Press, 1999); and John M. Carey, 'Getting Their Way, or Getting in the Way? Presidents and Party Unity in Legislative Voting' (unpublished paper, Washington University, St. Louis, 2002).

⁷ E.g. Gary W. Cox, *The Efficient Secret: The Cabinet and the Development of Political Parties in Victorian England* (Cambridge: Cambridge University Press, 1987).

dissolved.⁸ In contrast, in presidential/separated-powers systems, parties in government are less able to enforce party discipline amongst their supporters in the parliament.⁹ Even if the party controlling the executive has a majority in the legislature, loyalty to their party leaders in the executive is less important since lack of discipline does not threaten survival of the executive. Also, because the elections for the executive and the legislature are held separately, and usually at different times, the connection between the performance of a party in government and the re-election prospects of its legislative representatives is less direct than in parliamentary systems.¹⁰

Institutionally, the EU is a separated-powers system, where the executive (the European Commission) does not require the support of a majority in the European Parliament to govern, and the Commission cannot introduce a vote-of-confidence motion in the European Parliament or dissolve the parliament, leading to new parliamentary elections.¹¹

However, even in separated-powers systems, the structure of incentives inside the legislature can lead to powerful legislative party organizations. Legislators who expect to have similar voting preferences on a range of future policy issues can reduce the transactions costs of coalition-formation by establishing a party organization.¹² This party organization constitutes a division-of-labour contract: backbenchers provide labour and capital (such as information gathering and policy expertise) and leaders distribute committee and party offices, communicate party positions and enforce the terms of the party organization contract.

The benefits associated with joining a party organization also entail costs. Sometimes the party takes a position that may be unpopular with the particular constituencies of a legislator. In this situation, a legislator may vote against her party to signal to supporters that the party's position is not radical enough. But, by doing so, she may contribute to the defeat of her party's position and give the majority to her political enemies. Recent theory shows indeed that there are two motives in voting: communication and decision.¹³ In the former, a vote is used to communicate one's policy preferences, in the latter a vote is used

⁸ John Huber, 'The Impact of Confidence Votes on Legislative Politics in Parliamentary Systems', *American Political Science Review*, 90 (1996), 269–82; Daniel Diermeier and Timothy J. Feddersen, 'Cohesion in Legislatures and the Vote of Confidence Procedure', *American Political Science Review*, 92 (1998), 611–21; and Torsten Persson, Gérard Roland and Guido Tabellini, 'Comparative Politics and Public Finance', *Journal of Political Economy*, 108 (2000), 1121–61.

⁹ E.g. David W. Rohde, *Parties and Leaders in the Postreform House* (Chicago: University of Chicago Press, 1991); Keith Krehbiel, *Pivotal Politics: A Theory of U.S. Lawmaking* (Chicago: University of Chicago Press, 1998); and Charles M. Cameron, *Veto Bargaining: Presidents and the Politics of Negative Power* (Cambridge: Cambridge University Press, 2000).

¹⁰ E.g. Alberto Alesina and Howard Rosenthal, *Partisan Politics, Divided Government, and the Economy* (Cambridge: Cambridge University Press, 1995); and Shugart and Carey, *Presidents and Assemblies*.

¹¹ The Commission can be censured by a 'double-majority': a two-thirds majority vote which must constitute an 'absolute majority' of all MEPs. This high voting threshold means that in practice the censure procedure in the European Parliament is more akin to the power of a parliament in a separated-powers system to 'impeach' the president (for 'high crimes and misdemeanours', as the US Constitution states), than the ability of the legislative majority in a parliamentary system to force a government to resign. Despite numerous attempts since 1979 to censure the Commission, a censure motion has never been passed. Perhaps the only exception to this was in May 1999, when the Santer Commission resigned on the eve of a prospective censure motion in the parliament, which the Commission expected to lose.

¹² Gary W. Cox and Matthew D. McCubbins, *Legislative Leviathan* (Berkeley: University of California Press, 1993), pp. 83–136. Also see D. Roderick Kiewiet and Matthew D. McCubbins, *The Logic of Delegation: Congressional Parties and the Appropriations Process* (Chicago: University of Chicago Press, 1991).

¹³ Thomas Piketty, 'Voting as Communicating', *Review of Economic Studies*, 67 (2000), 169–91; and Micael Castanheira, 'Why Vote for Losers', CEPR Discussion papers No. 3404, 2003.

to help obtain a majority. When there is more at stake in a vote, the decision motive is stronger.

Since the EU is not a parliamentary system with a governing majority and an opposition, the national and European parties that make up the Commission and the Council must build coalitions in the European Parliament on a case-by-case basis. Hence, we can expect the parties in the European Parliament to be significantly less cohesive than parties in parliamentary systems and have similar cohesion levels to parties in separated-powers systems. However, since the European Parliament has less power than many legislative chambers in separated-powers systems (such as the US Congress), we would expect the communication motive to be at least as important as the decision motive, and hence undermine cohesion in the European Parliament. But, increased powers of the parliament should lead to increased cohesion of party groups because with higher stakes the decision motive should outweigh the communication motive.¹⁴

These theoretical arguments give primacy to institutions as the main determinants of legislative behaviour. One could argue that this view undervalues the role of ideology or policy preferences in driving how MEPs vote.¹⁵ If ideology drives legislative voting, then increased homogeneity of policy preferences within a party should produce more party cohesion. The problem is that often ideology and interest produce observationally equivalent predictions.¹⁶ For example, if a high percentage of legislators of the same party vote the same way in a vote, the party organization is assumed to have produced this cohesion. But, if these legislators would have voted the same way because they share the same preferences, the effect of party organization, independent of the legislators' preferences, could not be determined.

To summarize, theory suggests that to explain cohesion in the European Parliament one needs to look at measures of ideological closeness, effectiveness of party group organization and the power of the parliament.

Party Competition and Coalition Formation

In the theoretical literature on legislative behaviour there are two competing explanations of inter-party competition and coalition formation. The first approach sees coalitions as primarily driven by the desire to be on the winning side. In this approach, any actor can coalesce with any other actor, regardless of the distance between their policy positions. Fewer coalition partners means fewer interests to appease in the distribution of benefits. Hence, Riker argued that coalitions are likely to be 'minimum-winning'.¹⁷ Similarly, Baron

¹⁴ But the reverse may also be true. With more powers, national parties have more incentives to influence how 'their' MEPs vote if their policy preferences diverge from those of their European party group. For example, case studies of particular high-profile votes show that party cohesion can break down when national interests are at stake. See Simon Hix and Christopher Lord, 'The Making of a President: The European Parliament and the Confirmation of Jacques Santer as President of the Commission', *Government and Opposition*, 31 (1995), 62–76; and Matthew Gabel and Simon Hix, 'The Ties that Bind: Partisanship and the Investiture Procedure for the EU Commission President', in Madeleine Hosli, Adrian Van Deemen and Mika Widgrén, eds, *Institutional Challenges in the European Union* (London: Routledge, 2002). Moreover, MEPs from national parties that are in government in the domestic arena might come under particular pressure, as these parties are represented in the other branch of the EU legislature (the Council) and so are likely to have high stakes in votes in the parliament.

¹⁵ In the US context, Poole and Rosenthal's work provides a more ideological view of Congressional voting. See Poole and Rosenthal, *Congress*.

¹⁶ Keith Krehbiel, 'Where's the Party?' *British Journal of Political Science*, 23 (1993), 235–66: p. 237.

¹⁷ William H. Riker, *The Theory of Political Coalitions* (New Haven, Conn.: Yale University Press, 1962).

and Ferejohn assume that legislators are willing to exchange votes with any other legislator in order to secure their preferred policy outcomes on the issues they care about.¹⁸ Also, if a party is decisive in turning a losing coalition into a winning coalition it can demand a high price for participating in a coalition. Hence, the more likely an actor is to be pivotal, the more power it will have in coalition bargaining. This insight consequently underpins the various ‘power index’ methods for measuring the power of actors with differential voting weights.¹⁹

In the context of the European Parliament, this approach predicts that relative party group size rather than party group policy preferences is the main determinant of coalition formation. For example, these ideas are often used to explain the implicit ‘grand coalition’ between the two largest party groups: the Socialists and the European People’s Party, who are composed of the parties on opposite sides in the domestic arena.²⁰ Similarly, when power indices are applied to the European Parliament, researchers find that the likelihood that a party will be pivotal or decisive is highly correlated with the size of the party group relative to the other parties.²¹

The second approach assumes that policy preferences drive coalition formation. In this view, a legislator is more likely to vote with someone with closer preferences than someone further away. Against Riker’s policy-blind view, Axelrod proposed that ‘minimum-connected-coalitions’ are more likely. But, a policy-driven coalition need not be minimum-winning. For example, if the status quo is located at an extreme and the alternative proposal is centrally located, an ‘oversized’ coalition will result.²²

For parties, socio-economic preferences are paramount, as attitudes on these issues distinguish party families from each other. In contrast, policy positions relating to European integration divide along national lines, *within* party families.²³ If parties try to compete against each other on this dimension, they risk undermining internal party cohesion.²⁴

¹⁸ David P. Baron and John A. Ferejohn, ‘Bargaining in Legislatures’, *American Journal of Political Science*, 83 (1989), 1181–206.

¹⁹ E.g. Lloyd S. Shapley and Martin Shubik, ‘A Method for Evaluating the Distribution of Power in a Committee System’, *American Political Science Review*, 48 (1954), 787–92; and John F. Banzhaf, ‘Weighted Voting Doesn’t Work: A Mathematical Analysis’, *Rutgers Law Review*, 19 (1965), 317–43.

²⁰ E.g. Richard Corbett, *The European Parliament’s Role in Closer EU Integration* (London: Palgrave, 1988); Richard Corbett, Francis Jacobs and Michael Shackleton, *The European Parliament*, 4th edn (London: Catermill, 2000), pp. 92–4; Amie Kreppel, ‘Rules, Ideology and Coalition Formation in the European Parliament: Past, Present and Future’, *European Union Politics*, 1 (2000), 340–62; Amie Kreppel, *The European Parliament and the Supranational Party System* (Cambridge: Cambridge University Press, 2002); Amie Kreppel and Simon Hix, ‘From “Grand Coalition” to Left–Right Confrontation: Explaining the Shifting Structure of Party Competition in the European Parliament’, *Comparative Political Studies*, 36 (2003), 75–96; and Amie Kreppel, Simon Hix and Abdul Noury, ‘The Party System in the European Parliament: Collusive or Competitive?’ *Journal of Common Market Studies*, 41 (2003), 309–31.

²¹ E.g. Jan-Erik Lane, Reinert Maeland and Sven Berg, ‘The EU Parliament: Seats, States and Political Parties’, *Journal of Theoretical Politics*, 7 (1995), 395–400; Madeleine O. Hosli, ‘Voting Strength in the European Parliament’, *European Journal of Political Research*, 31 (1997), 351–66; and Hannu Nurmi, ‘The Representation of Voter Groups in the EP’, *Electoral Studies*, 16 (1997), 317–27.

²² Krehbiel, *Pivotal Politics*; and Tim Groschlose and James M. Snyder Jr, ‘Buying Supermajorities’, *American Political Science Review*, 90 (1996), 303–15.

²³ Hix and Lord, *Political Parties in the European Union*; and Liesbet Hooghe and Gary Marks, ‘The Making of a Polity: The Struggle over European Integration’, in Herbert Kitschelt, Peter Lange, Gary Marks and John Stephens, eds, *The Politics and Political Economy of Advanced Industrial Societies* (Cambridge: Cambridge University Press, 1998).

²⁴ Simon Hix, ‘Dimensions and Alignments in European Union Politics: Cognitive Constraints and Partisan Responses’, *European Journal of Political Research*, 35 (1999), 69–106.

Hence, since parties (rather than governments) are the main actors in the European Parliament, we expect coalitions to be primarily ‘connected’ along the left–right dimension.²⁵

Theory thus suggests that in explaining coalition formation, we need to look at measures of ideological distance between party groups as well as measures of the size of groups forming the coalition.

USING ROLL-CALL VOTES TO STUDY PARTY BEHAVIOUR IN THE EUROPEAN PARLIAMENT

There are three types of votes in the European Parliament: (1) a ‘show of hands’, where the chair of the session observes which side has won the vote; (2) ‘electronic votes’, where MEPs press either the ‘yes’, ‘no’ or ‘abstain’ buttons on their desks, the result of the vote is flashed on the screen at the front of the chamber, but how each MEP voted is not recorded; and (3) ‘roll-call votes’, where how each MEP voted is reported in the minutes. Under the European Parliament’s rules, only certain votes are required to be taken by roll-call. However, a ‘political group’ or at least thirty-two MEPs can request any vote to be taken by roll-call. In practice, roughly a third of votes in the European Parliament are by roll-call.

Party groups call roll-call votes for a variety of reasons.²⁶ If roll-call votes in the European Parliament are called for strategic reasons, then MEP behaviour may be quite different in roll-call votes than in other votes. However, regardless of the strategic reasons for calling roll-call votes, it is reasonable to assume that roll-call votes are used for the more important decisions. The number of roll-call votes has increased as the power of the European Parliament has increased: from 886 roll-call votes in the first directly-elected parliament (1979–84) to 3,739 votes in the fourth parliament (1994–99), and 2,124 in the first half of the fifth parliament (July 1999 to December 2001).

To measure party group cohesion we use an ‘Agreement Index’ (AI) as follows:

$$AI_i = \frac{\max\{Y_i, N_i, A_i\} - \frac{1}{2}[(Y_i + N_i + A_i) - \max\{Y_i, N_i, A_i\}]}{(Y_i + N_i + A_i)}$$

where Y_i denotes the number of Yes votes expressed by group i on a given vote, N_i the number of No votes and A_i the number of Abstain votes. As a result, the AI equals 1 when all the members of a party vote together and equals 0 when the members of a party are equally divided between all three of these voting options. For example, if a party casts 30 votes and if all the party members vote Yes, the cohesion index is 1. But, if these deputies are completely divided – for example, 10 vote Yes, 10 vote No and 10 Abstain – the cohesion index is 0.

This agreement index is similar but not identical to other measures of voting cohesion in legislatures. For example, Rice’s ‘index of voting likeness’ is the absolute difference between the number of Yes and No votes of the members of a party, divided by the sum

²⁵ E.g. Gary Marks, Carole J. Wilson and Leonard Ray, ‘National Political Parties and European Integration’, *American Political Science Review*, 46 (2002), 585–94; Mark Aspinwall, ‘Preferring Europe: Ideology and National Preferences on European Integration’, *European Union Politics*, 3 (2002), 81–111; and Matthew J. Gabel and Simon Hix, ‘Defining the EU Political Space: An Empirical Study of the European Elections Manifestos, 1979–1999’, *Comparative Political Studies*, 35 (2002), 934–64.

²⁶ Richard Corbett, Francis Jacobs and Michael Shackleton, *The European Parliament*, 4th edn (London: Catermill, 2000).

of the Yes and No votes.²⁷ However, the problem with the Rice index in the European Parliament is that MEPs have three voting options: Yes, No and Abstain. Attinà consequently developed a cohesion measure specifically for the European Parliament, where the highest voting option minus the sum of the second and third options was divided by the sum of all three options.²⁸ But, the Attinà index can produce negative scores on individual votes, since a party split equally between all three voting options produces a cohesion score on the Attinà index of -0.333 .

As a result, by enabling all three voting choices to be taken into account, and by producing cohesion scores on a scale from 0 to 1, our Agreement Index is an alternative to the Rice and Attinà indices for measuring party cohesion in the European Parliament (or in any parliament with three voting options). Nevertheless, the cohesion scores produced by our index can be compared to scores produced by these other two indices. Our results correlate perfectly with the Attinà scores, as our index is simply a rescaling of the scores from 0 to 1, and correlate at the 0.98 level with the Rice scores for the same data on the European Parliament. Note, however, that the difference between our scores and the Rice scores are higher for parties that tend to Abstain as a block (for example, when parties Abstain strategically). For example, if a party is split between 10 Yes votes, 10 No votes and 100 Abstain votes, the Rice index would measure the party as completely divided (0.000) whereas our index would show the party as relatively cohesive in the vote (0.750).

TRENDS IN PARTY COHESION AND COMPETITION

Table 1 shows the strengths of the party groups in the European Parliament after each set of European elections. The Socialists (PES) and European People's Party (EPP) have been the two largest groups in all five parliaments. Three other parties have been present in all five parliaments: the Liberals (ELDR), Radical Left (LEFT), and French Gaullists and their allies (GAUL). And, the Greens and their allies (GRN) have been present in each parliament since 1984. These six parties controlled 80 per cent of the seats in the first parliament, rising to 93 per cent in the fifth parliament.

Table 2 shows the mean Agreement Index of the party groups in the roll-call votes in each parliament.²⁹ These results confirm that the six main political forces in the European Parliament are remarkably cohesive party organizations: with an average score between them of 0.823 in the first parliament and 0.842 in the fifth parliament. In addition, the three genuine 'Euro-parties' – the PES, EPP and ELDR – were more cohesive than the other party groups, with an average score between them of 0.835 in the first parliament, rising to 0.891 in the fifth parliament. However, the claim that party cohesion has increased as

²⁷ Stuart A. Rice, *Quantitative Methods in Politics* (New York: Knopf, 1928). To measure the difference between how committee members and other party members vote in the US Congress, Cox and McCubbins develop a variant of Rice's 'index of vote likeness', which they call the 'mean absolute difference' (MAD) index: whereby the absolute difference between the percentage of committee contingents from the same party voting 'yes' and the rest of the party voting 'yes' is averaged across a set of votes. In other words, this is Rice's index applied to the difference between committee contingents and parties rather than between parties. See Cox and McCubbins, *Legislative Leviathan*, pp. 220–4.

²⁸ Attinà, 'The Voting Behaviour of the European Parliament Members and the Problem of Europarties'.

²⁹ We also report standard deviations in order to give the reader an idea of the precision of our reported mean statistics. However, standard errors, not standard deviations, should be used to examine the significance of these means. Given the large number of observations, most of the differences in means reported in Table 2 are statistically significant.

TABLE 1 Party Group Strengths After the Five Direct Elections

Party Family (Party Group)	Abbr.	EP 1 (June 79)		EP 2 (June 84)		EP 3 (June 89)		EP 4 (June 94)		EP 5 (June 99)	
		Seats	%	Seats	%	Seats	%	Seats	%	Seats	%
Socialists (SOC, PES)	PES	113	27.6	130	30.0	180	34.7	198	34.9	180	28.8
Christian Democrats & Conservatives (EPP, EPP-ED)	EPP	107	26.1	110	25.3	121	23.4	157	27.7	233	37.2
Liberals (ELD, ELDR)	ELDR	40	9.8	31	7.1	49	9.5	43	7.6	51	8.1
Radical Left (COM, LU, EUL/NGL)	LEFT	44	10.7	43	9.9	14	2.7	28	4.9	42	6.7
Gaullists & allies (EDP, EDA, UFE, UEN)	GAUL	22	5.4	29	6.7	20	3.9	26	4.6	30	4.8
Greens & allies (RBW(84), G, G/EFA)	GRN	19	4.4	19	4.4	30	5.8	23	4.1	48	7.7
British Conservatives & allies (ED)	CON	64	15.6	50	11.5	34	6.6				
Extreme Right (ER)	RIGHT			16	3.7	17	3.3				
Regionalists & allies (RBW(89), ERA)	REG					13	2.5	19	3.4		
Italian Communists & allies (EUL)	-					28	5.4				
Anti-Europeans (EN, I-EN, EDD)	ANTI									16	2.6
Italian Conservatives (FE)	-							19	3.4		
Independents (TCDI, TGI)	IND	11	2.7					27	4.8	18	2.9
Non-attached members	NA	9	2.2	6	1.4	12	2.3	27	4.8	8	1.3
Total MEPs		410		434		518		567		626	

Key to party group abbreviations:	
COM	Communist Group
ED	European Democrats
EDA	European Democratic Alliance
EDD	Europe of Democracies and Diversities
EDP	European Democratic Party
ELD	European Liberal Democratic Group
ELDR	European Liberal, Democrat and
EN	Europe of Nations
EPP	European People's Party
EPP-ED	European People's Party-European Democrats
ER	European Right
ERA	European Radical Alliance
EUL	European United Left
EUL/NGL	European United Left/Nordic Green Left
FE	Forza Europa
G	Green Group
G/EFA	Greens/European Free Alliance
I-EN	Independents for a Europe of Nations
LU	Left Unity
PES	Party of European Socialists
RBW	Rainbow Group
SOC	Socialist Group
TCDI	Technical Coordination of Democrats and Independents
TGI	Technical Group of Independents
UEN	Union for a Europe of Nations
UFE	Union for Europe

TABLE 2 *Cohesion of the Party Groups*

Party	Absolute Cohesion (AI)					Relative Cohesion (Party AI/AI of EP as a whole)				
	EP 1 (1979-84)	EP 2 (1984-89)	EP 3 (1989-94)	EP 4 (1994-99)	EP 5 (1999-01)	EP 1 (1979-84)	EP 2 (1984-89)	EP 3 (1989-94)	EP 4 (1994-99)	EP 5 (1999-01)
PES	0.757 (0.25)	0.869 (0.19)	0.900 (0.16)	0.901 (0.15)	0.904 (0.15)	1.508 (0.89)	1.547 (0.88)	1.540 (0.78)	1.661 (0.86)	1.796 (0.92)
EPP	0.899 (0.15)	0.934 (0.13)	0.907 (0.13)	0.898 (0.14)	0.859 (0.17)	1.775 (0.82)	1.683 (0.91)	1.575 (0.83)	1.664 (0.88)	1.721 (0.94)
ELDR	0.849 (0.21)	0.849 (0.22)	0.847 (0.22)	0.861 (0.17)	0.909 (0.15)	1.667 (0.80)	1.507 (0.88)	1.451 (0.81)	1.584 (0.83)	1.819 (0.95)
LEFT	0.812 (0.24)	0.871 (0.20)	0.861 (0.25)	0.804 (0.23)	0.756 (0.23)	1.633 (0.90)	1.595 (0.97)	1.505 (0.90)	1.511 (0.92)	1.536 (0.95)
GAUL	0.800 (0.26)	0.842 (0.23)	0.849 (0.22)	0.788 (0.24)	0.717 (0.27)	1.566 (0.89)	1.506 (0.89)	1.469 (0.83)	1.467 (0.89)	1.441 (0.94)
GRN	-	0.813 (0.26)	0.850 (0.19)	0.913 (0.16)	0.906 (0.16)	-	1.500 (0.97)	1.476 (0.79)	1.719 (0.95)	1.829 (0.98)
CON	0.894 (0.17)	0.918 (0.14)	0.892 (0.17)	-	-	1.801 (0.94)	1.660 (0.92)	1.536 (0.81)	-	-
RIGHT	-	0.932 (0.19)	0.878 (0.24)	-	-	-	1.738 (1.01)	1.546 (0.92)	-	-
ANTI	-	-	0.834 (0.29)	0.673 (0.28)	0.535 (0.27)	-	-	1.510 (0.97)	1.233 (0.81)	1.041 (0.72)
REG	-	-	0.872 (0.26)	0.907 (0.19)	-	-	-	1.528 (0.93)	1.690 (0.91)	-
IND	0.776 (0.30)	-	-	-	0.636 (0.29)	1.587 (1.07)	-	-	-	1.291 (0.94)
NA	0.740 (0.30)	0.794 (0.31)	0.805 (0.27)	0.634 (0.29)	0.651 (0.24)	1.440 (0.86)	1.382 (0.89)	1.415 (0.88)	1.182 (0.84)	1.312 (0.83)
No. of RCVs	886	2,146	2,732	3,739	2,124	886	2,146	2,732	3,739	2,124

Key: PES: Party of European Socialists (SOC, PES); EPP: European People's Party - Christian Democrats & Conservatives (EPP, EPP-ED) and Italian Conservatives (FE); ELDR: European Liberal, Democrat and Reform Party (ELD, ELDR groups); LEFT: Radical Left (COM, LU, EUL/NGL) and Italian Communists & allies (EUL); GAUL: Gaullists & allies (EPD, EDA, UFE, UEN); GRN: Greens & allies (RBW(84), G, G/EFA); CON: British Conservatives & allies (ED); RIGHT: Extreme Right (ER); REG: Regionalists & allies (RBW(89), ERA); ANTI: Anti-Europeans (EN, I-EN, EDD); IND: Independents (TCDI, TGI); NA: Non-attached members.

Notes: Standard deviations are in parentheses. AI = 'Agreement Index'. See the text for the calculation of the AI. RCV = roll-call vote.

the powers of the parliament have increased is not clear from these data alone. For example, the trend has been upwards for the PES, ELDR and Greens, but downwards for the EPP since the second parliament, and rising and then falling for the Radical Left and the Gaullists and allies.

Nevertheless, when looking at the cohesion of the party groups it is necessary to take into account variations in majority size and the high level of consensus relative to other parliaments. Hence, Table 2 also shows party cohesion controlling for the cohesion of the European Parliament as a whole, by dividing each party's Agreement Index in a vote by the Agreement Index of the whole parliament. These relative agreement scores suggest that party cohesion has grown for all the main parties. For example, despite low absolute cohesion scores for most party groups in the first and fifth parliaments compared to the second, third and fourth parliaments, when the cohesion of the whole parliament is taken into account, this pattern is reversed for some of the party groups. This is most striking for the EPP. In absolute terms, the EPP was least cohesive in the fifth parliament, but in relative terms the EPP was more cohesive in this parliament than in the second, third or fourth parliaments.

In addition, the party groups are more cohesive than national groups of MEPs (see Table A1 in the Appendix). And, while party group cohesion has increased, national cohesion has declined over time. In other words, voting in the European Parliament has become more 'partisan' and less 'nationalist' or 'intergovernmental'.

Table 3 shows the proportion of times the majority in one party group voted the same way as the majority in another party group in the roll-call votes in each of the directly-elected parliaments. The party groups in the table are ordered from left to right, except for the three 'protest' forces that do not fit easily into this dimension: the Anti-Europeans (ANTI), Independents (IND), and non-attached MEPs (NA). The results confirm the prediction that coalition patterns follow a left-right dimension. In general, the closer two party groups are to each other on this dimension the more likely they are to vote together. For example, the EPP is more likely to vote with the ELDR than the PES and the PES is more likely to vote with the Greens than the Radical Left and with the ELDR than the EPP.

These results consequently question the notion that the PES-EPP coalition has been equally dominant in all the parliaments.³⁰ The peak of the PES-EPP coalition was in the third parliament (1989–94), which is the only period when these two parties voted together more than 70 per cent of the time and when the PES voted more with the EPP than with the ELDR. In the first and second parliaments, the PES was more likely to vote with the ELDR and the Greens and Radical Left than with the EPP. Also there was a break in coalition patterns between the third and fourth parliaments. In the fourth and fifth parliaments, the PES voted with the ELDR more than with the EPP, and the ELDR voted with the PES more than the EPP. However, the statistical analysis will give us a clearer picture of these patterns.

³⁰ Cf. Corbett, *The European Parliament's Role in Closer EU Integration*; Corbett, Jacobs and Shackleton, *The European Parliament*, pp. 92–4; Kreppel, 'Rules, Ideology and Coalition Formation in the European Parliament'; Amie Kreppel, *The European Parliament and the Supranational Party System*; Kreppel and Hix, 'From "Grand Coalition" to Left-Right Confrontation'; and Kreppel, Hix and Noury, 'The Party System in the European Parliament'.

STATISTICAL ANALYSIS: THE VARIABLES

Having presented the cohesion and coalition patterns aggregated for each parliament, we now seek to explain these patterns at a lower level of aggregation. We calculated two dependent variables for each of the forty-four six-month periods between July 1979 and June 2001:

1. RELATIVE COHESION – the mean relative cohesion (party AI divided by European Parliament AI) for each of the six main party groups in each six-month period;³¹ and
2. COALITION – the frequency that the majorities of any two of the six main party groups vote the same way in each six-month period.³²

We avoid using annual data since this would limit the number of observations and reduce the degrees of freedom. We also avoid using more disaggregated data (such as monthly or daily), because we want to focus on long-term variations in behaviour and because several of our independent variables only change slowly.

The Explanatory Variables

To test the theoretical explanations of party behaviour we analyse these dependent variables as a function of three types of explanatory variables: (1) roll-call vote characteristics; (2) party group characteristics; and (3) variables related to the power of the European Parliament. Summary statistics of the dependent and explanatory variables are reported in Table A2 in the Appendix.

In the first type of variable, we include the number of roll-call votes in a given period (NO. OF RCVS).³³ Including this variable enables us to investigate whether more roll-call votes reduces or increases party cohesion or the propensity of certain coalitions to form. A higher frequency of roll-call votes may indicate changes in the level of issue intensity, since if an issue is highly contentious one could expect more amendments to be proposed and hence more votes to be held.

In the analysis of coalition patterns we also include the Agreement Index of the European Parliament as whole (COHESION OF ALL EP). This variable controls for the effect of the degree of consensus in a given period on the propensity of groups to vote together.

Turning to party group characteristics, in the analysis of party cohesion we look at a number of variables that measure the impact of group size and internal national and ideological diversity on party group cohesion. Here, we include the size of the party group as a percentage of all MEPs. As seen in Table 1, there was significant variation in the size of the party groups across the five parliaments. We use lagged party group size (LPG SIZE) in order to avoid a potential endogeneity problem.

To measure national diversity in a party group we include two variables: (1) the number of national parties in the group (NO. OF NAT. PARTIES); and (2) the ‘fractionalization’ of the group between the national parties (FRACTIONALIZATION). We use Rae’s method of

³¹ Number of observations = (44 periods × 5 party groups) + (34 periods × 1 party group) = 254.

³² Number of observations = (10 periods × 10 coalitions) + (34 periods × 15 coalitions) = 610.

³³ The variable is divided by 1,000 for normalization reasons, otherwise the estimated coefficients appear too small.

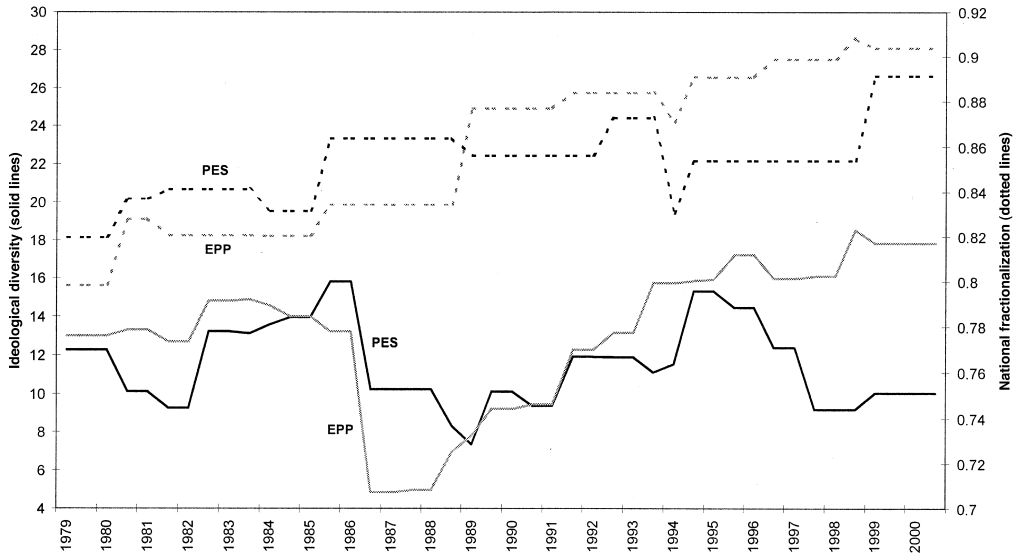


Fig. 1. Internal ideological diversity and national fragmentation of the two main party groups

measuring the fractionalization of a political body,³⁴ where the fractionalization of party group *i* is calculated as follows:

$$\text{FRACTIONALIZATION}_i = 1 - \sum_{j=1}^{n_i} s_{ji}^2 = S_{ji}^2,$$

where s_{ji} is the share of national party *j* in party group *i* with n_i national parties. As Figure 1 shows, national fractionalization increased over time. This is partly a mechanical effect of successive EU enlargements to smaller countries than the EU average, but is also due to the desire of several national parties to leave the smaller party groups and join the EPP and PES.

In the analysis of coalitions we include a variable to measure the effect of party group size on the propensity of the parties to vote together – measured as the combined percentage of MEPs in the two parties in the coalition (COALITION SIZE). This variable designates the effect of the ‘power’ of a coalition between two parties on its likelihood to form.

To measure internal group ideological diversity we use an established exogenous measure of national party policy positions over time: the Manifestos Research Group dataset.³⁵ We start with the left–right position of each national party in a party group in each of the six-month periods between 1979 and 2001.³⁶ From these national party

³⁴ Douglas W. Rae, *The Political Consequences of Electoral Laws* (New Haven, Conn.: Yale University Press, 1967).

³⁵ Ian Budge, Hans-Dieter Klingemann, Andrea Volkens, Judith Bara and Eric Tanenbaum, *Mapping Policy Preferences: Estimates for Parties, Electors, and Governments, 1945–1998* (Oxford: Oxford University Press, 2001).

³⁶ We use the Budge *et al.* ‘integrated’ left–right measure, which includes party manifesto statements covering socio-economic and socio-political issues.

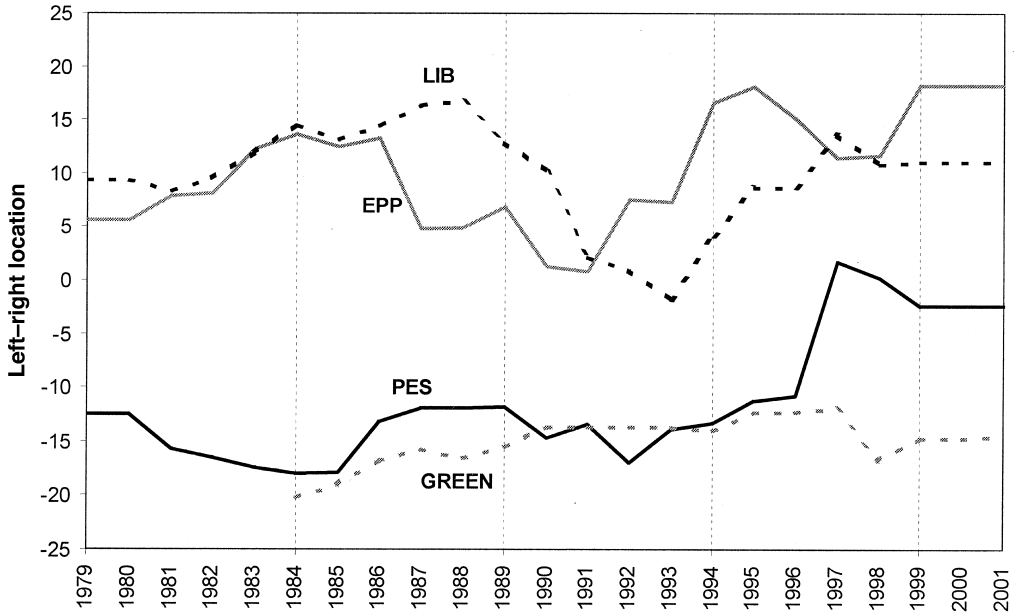


Fig. 2. Ideological distance between the four main party groups

locations we calculated the mean left–right position of each party group by multiplying the position of each national party in the group by the percentage of MEPs of that national party in the group. In the analysis of party cohesion we then use these data to calculate two variables: (1) the distance between the mean left–right position of the party group and the mean left–right position of the European Parliament as a whole (PG IDEOLOGY); and (2) the internal ideological diversity of a party group (IDEOLOGICAL DIVERSITY). The internal ideological diversity of party group i was calculated as follows:

$$\text{IDEOLOGICAL DIVERSITY}_i = \sum_{j=1}^{n_i} \left| P_j - M_i \right| S_{ji},$$

where P_j is the left–right location of national party j , M_i is the weighted mean location of party group i , and s_{ji} is the share of national party j in party group i . As Figure 2 shows, there has been substantial variation in ideological diversity within the two main party groups, and growing ideological diversity in the EPP since 1987.

In the analysis of coalition patterns, we also use the ideological data to calculate the distance between the mean left–right positions of the two party groups in the coalition (IDEOLOGICAL DISTANCE). This allows us to see if parties that are closer to each other on the left–right dimension are more likely to vote with each other than parties further away, as we found at the higher aggregate level. As Figure 2 shows, since the early 1990s, the EPP and PES have both moved to the right, whereas the ELDR has remained fairly centrist. The ideological distance between the EPP and PES has also increased whereas the distance between the ELDR and PES has decreased.

The last variable looking at internal party diversity is the percentage of MEPs in a party group who are from national parties that are in national government (% OF NAT. PARTIES

IN GOVT). Here we use the data on the partisan make-up of governments in Europe in Müller and Strøm.³⁷ This variable investigates whether MEPs from parties in government are more likely to receive instructions from the national parties than MEPs from parties in opposition – and, hence, the more MEPs in a party group that are from parties in government, the less cohesive the party group is likely to be.

In the third type of explanatory variables we include four variables that measure the power of the European Parliament. First, we include three dummy variables representing the increases in the parliament's powers in the three treaty reforms since the mid 1980s: the Single European Act, coded 0 for each period up to January–June 1987 and 1 thereafter (SEA); the Maastricht Treaty, coded 0 for each period up to January–June 1993 and 1 thereafter (MAASTRICHT); and the Amsterdam Treaty, coded 0 for each period up to January–June 1999 and 1 thereafter (AMSTERDAM). Secondly, we include a variable (TREND) representing the time trend from 1979 to 2002, which takes the value 1 for the first six-month period in the sample (July–December 1979), 2 for the second period, and so on.

Finally, in addition to a constant, we include five dummy variables indicating the party groups (EPP, ELDR, GAUL, LEFT, GRN). These dummies capture the effect of party-specific factors that do not vary over time. The estimates associated with these dummies represent the difference between the level of cohesion of these party groups and the PES, which is the reference party group. By including these dummies our focus is not on the variation between the party groups but rather on the variation within party groups. That is, we estimate fixed-effect models. This is important to bear in mind when interpreting the results of the regression. In the analysis of cohesion we also added dummies for the various enlargements of the EU in this period: ENLARGEMENT1 for Greece in 1981 (coded 0 for every period prior to January 1981 and 1 thereafter); ENLARGEMENT2 for Spain and Portugal in 1986; and ENLARGEMENT3 for Austria, Sweden and Finland in 1995.

Similarly, in the analysis of coalition patterns we include fourteen party-pair dummy variables (PES-ELDR, PES-LEFT, PES-GAUL, PES-GRN, EPP-ELDR, EPP-LEFT, EPP-GAUL, EPP-GRN, ELDR-LEFT, ELDR-GAUL, ELDR-GRN, LEFT-GAUL, LEFT-GRN, GAUL-GRN). The reference here is the PES-EPP coalition. In these equations, our focus is not on the comparison between two party-pairs, but rather on the effect of within party-pair variation over time in the explanatory variables on the dependent variable.

In estimating our models we considered several potential problems. First, multicollinearity of several variables forces one or several of the variables not to be significant. For example, the three variables NO. OF NATIONAL PARTIES, FRACTIONALIZATION and LPG SIZE, relating to internal party group diversity, are highly correlated, so too are the dummies indicating the power of the European Parliament (SEA, MAASTRICHT, AMSTERDAM) and the TREND variable. To check for robustness of our results to this problem, we exclude one of the two correlated variables in separate models. Secondly, non-stationarity of our dependent variables may be a source of concern, given that we have forty-four time periods. Performing tests of unit roots in panels, however, leads us to reject the null hypothesis of non-stationarity. Thirdly, to check for heteroscedasticity, we estimate and report the

³⁷ Wolfgang C. Müller and Kaare Strøm, eds, *Coalition Governments in Western Europe* (Oxford: Oxford University Press, 2000).

models using fixed-effects and panel corrected standard errors.³⁸ Thus, we controlled for both heteroscedasticity and correlation across party groups. Finally, to check for serial auto-correlation (if the error term for a party group is correlated across time periods) we specified models which correct for first-order and second-order auto-correlations. This did not change the direction or significance of the reported results.

RESULTS

Changes in Party Cohesion

Table 4 shows the results of the estimations of relative party cohesion in the European Parliament between 1979 and 2001 with fixed effects for parties (relative to the PES). The estimates are not only statistically significant but in most cases are highly so. Several conclusions can be drawn from these results.

First, an increase in party group size leads to more cohesion. In fact, a 1 per cent increase in the size of a party group leads to a 5.3 per cent increase in the cohesion of the group, as measured by our Agreement Index.³⁹ This thus confirms the idea that an increase in size of a party group makes it more likely to be able to influence policy outcomes and thus have bigger stakes in votes. This effect is of first order importance to explain the increase in cohesion because the main party families (Socialists, Conservatives, Liberals and Greens) have tended to see their size increase over time, and quite clearly so since 1989, while the smaller party groups have become more fragmented and less cohesive, and hence may disappear over time.

Secondly, although the number of national delegations in a group is irrelevant, increased fractionalization of a party group along national lines decreases party group cohesion. A 1 per cent increase in the national fractionalization of a party group leads to a 17.7 per cent decrease in the cohesion of the group.

Thirdly, the ideological variables do not have a significant effect on party group cohesion in all model specifications. When a party group moves further away or nearer to the mean of the European Parliament as a whole, the group's cohesion is not affected. When a party group becomes more ideologically heterogeneous, the group's cohesion goes down by a small and only marginally significant amount. A 1 per cent increase in the ideological diversity of a party group leads to a 2.6 per cent decrease in the cohesion of the group. In other words, the effect of internal national diversity is larger and more significant than the effect of internal ideological diversity.

These two results suggest an interesting interpretation of the effectiveness of party group discipline. The fact that variation in ideological diversity has no effect on cohesion indicates that policy preferences of MEPs and national parties alone cannot explain variations in party group cohesion. Variations in ideological diversity are successfully buffered by the discipline of the transnational party groups; but the ability of European parties to discipline their members is limited by national fractionalization.

Fourthly, the percentage of MEPs from parties in government has a significant effect. But more MEPs from parties in government actually leads to higher, rather than lower, party group cohesion. Pressure from parties in national governments thus produces more

³⁸ Andrew Levin, Chien-Fu Lin and Chia-Shang James Chu, 'Unit Root Tests in Panel Data: Asymptotic and Finite Sample Properties', *Journal of Econometrics*, 108 (2002), 1–24.

³⁹ The substantive elasticities are calculated at the means of dependent and independent variables.

TABLE 4 *Explaining Party Cohesion in the European Parliament*

	1	2	3	4
NO. OF RCVS	-0.214 (1.84)*	-0.214 (1.84)*	-0.215 (1.84)*	-0.088 (0.74)
LPG SIZE	0.465 (2.91)***	0.464 (3.40)***	0.688 (4.76)***	0.534 (3.83)***
NO. OF NAT. PARTIES	-0.000 (0.02)	-	-0.003 (1.41)	-
FRACTIONALIZATION	-0.306 (4.91)***	-0.307 (5.03)***	-	-0.255 (3.91)***
PG IDEOLOGY	-0.001 (1.41)	-0.001 (1.41)	-0.002 (2.78)***	-0.001 (1.45)
IDEOLOGICAL DIVERSITY	0.003 (1.81)*	0.003 (1.84)*	0.003 (2.35)**	0.003 (1.91)*
% OF NAT. PARTIES IN GOVT	0.117 (4.50)***	0.117 (4.57)***	0.124 (4.58)***	0.123 (4.67)***
SEA	-0.062 (1.28)	-0.062 (1.28)	-0.055 (1.11)	-
MAASTRICHT	0.015 (0.32)	0.015 (0.32)	0.002 (0.05)	-
AMSTERDAM	0.094 (2.15)**	0.094 (2.14)**	0.089 (2.03)**	-
TREND	0.003 (0.87)	0.003 (0.87)	0.003 (0.71)	0.003 (1.25)
EPP	0.089 (5.68)***	0.089 (7.11)***	0.107 (7.24)***	0.092 (7.24)***
ELDR	0.120 (3.10)***	0.120 (3.46)***	0.170 (4.85)***	0.137 (3.87)***
LEFT	0.070 (1.39)	0.070 (1.39)	0.185 (4.52)***	0.103 (1.97)**
GAUL	-0.035 (0.70)	-0.035 (0.70)	0.085 (2.08)**	0.000 (0.00)
GRN	0.160 (3.51)***	0.160 (3.61)***	0.235 (5.71)***	0.185 (4.05)***
ENLARGEMENT1	-0.002 (0.05)	-0.002 (0.05)	-0.001 (0.02)	-0.011 (0.24)
ENLARGEMENT2	-0.073 (1.56)	-0.073 (1.57)	-0.076 (1.61)	-0.138 (3.17)***
ENLARGEMENT3	0.066 (1.39)	0.065 (1.41)	0.073 (1.55)	0.075 (1.60)
Constant	1.412 (16.24)***	1.412 (16.42)***	1.136 (19.50)***	1.334 (14.34)***
Observations	248	248	248	248
R ²	0.465	0.465	0.436	0.417

Notes: The dependent variable is RELATIVE COHESION. Parameters of the models are estimated by fixed effects with panel corrected standard errors and correction for heteroscedasticity and correlations between parties. Robust *t*-statistics in parentheses. *Significant at 10 per cent. **Significant at 5 per cent. ***Significant at 1 per cent.

cohesion rather than less. One must remember that the European Parliament generally does not initiate legislation. Legislation is initiated by the Commission that is usually most concerned about the prospect of a veto in the Council. If the Council then adopts a

legislative proposal, one may expect parties from national governments to put pressure on their MEPs to ensure this legislation passes the hurdle of the European Parliament. This is thus a new and interesting finding.

Fifthly, the party groups have become more cohesive over time. In terms of specific treaty reforms, the Amsterdam Treaty had a clear effect of increasing party cohesion, but the Single European Act and the Maastricht Treaty did not. The party groups were 7.1 per cent more cohesive after the introduction of the Amsterdam Treaty than before, everything else being equal. Codecision was introduced with the Maastricht Treaty but has only become more important in recent years, which is probably what the Amsterdam variable picks up. This hence indicates that more power to the European Parliament has led to more rather than less party group cohesion. Note also that the various enlargements of the EU have not had a significant effect on party cohesion, whereas one could have expected a negative effect – although the enlargement effect is partly picked up in the national fractionalization measure.

Sixthly, regarding specific party groups, we see that the EPP, the Liberals and the Greens tend to be more cohesive than the Socialists, everything else being equal.

Changes in Coalition Patterns

Table 5 reports the results of four regression models of coalition patterns between 1979 and 2001. Again, several of the variables are highly significant.

First, as one would expect, the size of the overall coalition in the European Parliament is a strong predictor of the propensity of two parties to vote together.

Secondly, controlling for this effect, the policy position of the parties is much more important than the likely power of the coalition for determining coalition patterns. The size ('power') of a two-party coalition has a marginally significant and positive impact on the likelihood that the coalition will form. In contrast, an increase (or decrease) in the ideological distance between two parties on the left–right dimension is a strong predictor of how often these two parties will vote together. The estimates on this variable (IDEOLOGICAL DISTANCE) are not only statistically significant, but are also substantially large. A 1 per cent decrease in the ideological distance between two parties implies an increase of approximately 6 per cent in the probability that these parties will vote the same way. This result gives us a very strong indication of the crucial importance of left–right politics in the European Parliament. This also explains why we have observed, for example, an increase in joint voting between the PES and ELDR, since the ideological distance between those two parties decreased in the fourth and fifth parliaments while the distance between the EPP and the PES increased.

Thirdly, this left–right result is reinforced by comparisons of the frequency of pairs of coalitions to the frequency of the PES-EPP coalition. Here, we find all the expected signs. The Socialists vote more with the Radical Left and less with the Gaullists, the EPP vote more with Liberals, less with the Radical Left, the Greens and the Gaullists, and the Greens vote more with the Radical Left and less with the EPP.

Table 6 gives the coefficients for the pairs of coalitions over the five parliaments. These results reinforce the effects found in the aggregate coefficients and in the aggregate percentages for each parliament. A few additional remarks are nevertheless worth making. The Socialists and Radical Left coalesced most in the second parliament. In the fourth parliament, a Socialist-Liberal coalition was more common than a Liberal-EPP coalition.

TABLE 5 *Explaining Coalition Patterns in the European Parliament*

	1	2	3	4
NO. OF RCVS	0.014 (0.39)	0.014 (0.41)	0.020 (0.65)	0.036 (1.10)
COHESION OF ALL EP	0.689 (7.77)***	0.687 (7.78)***	0.686 (7.80)***	0.598 (8.91)***
COALITION SIZE	0.105 (1.75)*	– –	0.105 (1.75)*	0.102 (1.71)*
IDEOLOGICAL DISTANCE	–0.002 (4.35)***	–0.002 (4.25)***	–0.002 (4.35)***	–0.002 (4.22)***
SEA	–0.033 (2.31)**	–0.033 (2.30)**	–0.028 (3.02)***	– –
MAASTRICHT	–0.008 (0.68)	–0.009 (0.73)	–0.005 (0.55)	– –
AMSTERDAM	–0.001 (0.06)	–0.000 (0.00)	0.001 (0.06)	– –
TREND	0.000 (0.42)	0.000 (0.41)	– –	–0.001 (2.76)***
PES-ELDR	0.034 (2.04)**	0.009 (1.07)	0.034 (2.04)**	0.033 (2.01)**
PES-LEFT	0.065 (3.28)***	0.039 (2.77)***	0.065 (3.28)***	0.064 (3.26)***
PES-GAUL	–0.072 (3.77)***	–0.101 (9.93)***	–0.072 (3.77)***	–0.073 (3.82)***
PES-GRN	0.006 (0.26)	–0.021 (1.32)	0.006 (0.27)	0.006 (0.28)
EPP-ELDR	0.118 (5.58)***	0.088 (6.81)***	0.118 (5.57)***	0.118 (5.55)***
EPP-LEFT	–0.068 (3.15)***	–0.100 (9.29)***	–0.068 (3.15)***	–0.069 (3.20)***
EPP-GAUL	0.071 (2.93)***	0.036 (2.56)**	0.071 (2.93)***	0.070 (2.91)***
EPP-GRN	–0.119 (5.29)***	–0.154 (16.32)***	–0.118 (5.30)***	–0.119 (5.32)***
ELDR-LEFT	–0.013 (0.38)	–0.070 (6.75)***	–0.013 (0.39)	–0.015 (0.43)
ELDR-GAUL	0.052 (1.37)	–0.007 (0.37)	0.052 (1.37)	0.051 (1.34)
ELDR-GRN	–0.037 (0.96)	–0.097 (7.27)***	–0.037 (0.95)	–0.038 (0.98)
LEFT-GAUL	–0.036 (0.98)	–0.097 (8.62)***	–0.036 (0.99)	–0.038 (1.03)
LEFT-GRN	0.107 (2.74)***	0.045 (3.15)***	0.108 (2.75)***	0.107 (2.73)***
GAUL-GRN	–0.133 (3.26)***	–0.197 (12.39)***	–0.132 (3.27)***	–0.133 (3.30)***
Constant	0.203 (2.99)***	0.281 (4.95)***	0.208 (3.07)***	0.268 (4.56)***
Observations	610	610	610	610
R^2	0.602	0.601	0.610	0.599

Notes: The dependent variable is COALITION. Parameters of the models are estimated by fixed effects with panel corrected standard errors. Robust *t*-statistics in parentheses. *Significant at 10 per cent. **Significant at 5 per cent. ***Significant at 1 per cent.

TABLE 6 *Coalition Regression Coefficients for Each Parliament*

Coalition	EP 1 (1979-84)	EP 2 (1984-89)	EP 3 (1989-94)	EP 4 (1994-99)	EP 5 (1999-01)
PES-ELDR	-0.024	0.005	-0.006	0.052*	0.380
PES-LEFT	0.018	0.169*	0.041	-0.017	-0.207
PES-GAUL	-0.070	-0.096*	-0.081*	-0.121*	0.414
PES-GRN	-	0.061*	-0.093*	-0.029	0.428
EPP-ELDR	0.202	0.133*	0.072*	0.034*	0.654
EPP-LEFT	-0.083	-0.030	-0.120*	-0.171*	-1.360
EPP-GAUL	0.089	0.088	0.012	0.033	0.291
EPP-GRN	-	-0.145*	-0.185*	-0.185*	-0.757
ELDR-LEFT	-0.083	-0.012	-0.088*	-0.114*	-0.956
ELDR-GAUL	0.110	0.081*	-0.008	-0.082*	0.506
ELDR-GRN	-	-0.150*	-0.138*	-0.078*	-0.301
LEFT-GAUL	-0.020	-0.088*	-0.114*	-0.199*	-0.688
LEFT-GRN	-	0.053*	0.027	0.062*	0.466
GAUL-GRN	-	-0.184*	-0.246*	-0.223*	-0.215*
Constant	0.364	-0.137	0.338*	0.206	-0.664

Note: *Significant at 10 per cent.

The PES-EPP reference value is captured by the regression constant.

The coefficients for the first and fifth parliaments are not significant once the effects of all other variables are taken into account.

Fourthly, in contrast to the cohesion results, changes in the powers of the European Parliament in the Maastricht and Amsterdam Treaties do not have an effect on coalition patterns. There is a negative effect of the Single European Act but this effect disappears if we introduce enlargement dummies while the other main results remain unchanged.

To check for robustness of our regression results, in addition to specifying different models, we estimated a model with TREND and TREND-squared to capture the effect of the non-linear increase in cohesion. We also estimated a model where we dropped ‘outliers’: coalitions that formed less than 40 per cent of the time or more than 85 per cent of the time in a particular period (a total of thirty-one observations). Similarly, to make sure that the cohesion results are not driven by outliers, we excluded observations with Agreement Index scores above 0.95 and below 0.65 (a total of four observations). The results were robust to these changes.⁴⁰ These findings indicate that our results are not driven by outliers and also that the results do not suffer from misspecification.

CONCLUSIONS

We have put together a dataset covering all roll-call votes in the European Parliament between 1979 and 2001. We used these data to analyse patterns of party cohesion and coalition formation in this increasingly powerful transnational parliament. Our results indicate that the party groups in the European Parliament have behaved in an increasingly organized and competitive fashion.

The cohesion of the party groups has increased over time as the main party groups have gained in size and as the powers of the parliament have increased. This increase in cohesion has occurred despite an increase in the internal national fractionalization of the party groups, which we have shown to have a significant negative effect on cohesion. We also found that the ideological diversity of the national member parties of the groups has only a marginal effect on cohesion, indicating that the European party groups are able to have a disciplining effect on their national member parties. Also, while cohesion of parties has grown, cohesion of the parliament as a whole has decreased steadily since 1988, due to a decline in the number of votes that are highly consensual.

In terms of party competition, our results show that increased ideological distance between any two party groups has a strong negative impact on coalition formation between these groups. This explains for example why the PES and EPP voted together less in the fourth and fifth parliaments while the PES and ELDR voted together more. Also, we find that the size of the parties, generally assumed to be a main determinant of coalition behaviour (leading to the claim that the PES and EPP form a grand coalition), does not appear to play a role in coalition formation.

These results are remarkable given the specific institutional structure of the European Union. The Commission is not based on a coalition of parties commanding a majority in the parliament and voting in the Council is based mostly on national interests. The European Parliament is the only EU institution where debates and votes predominantly follow the traditional left–right dimension.

These findings suggest a particular theoretical explanation of political organization and

⁴⁰ More detailed results can be obtained from the authors on request.

behaviour in the European Parliament. First, the relatively high and increasing levels of party cohesion, and the declining levels of national cohesion, suggest that the external and internal institutional context of the European Parliament provides considerable, and increasing, incentives for the establishment of binding division-of-labour contracts (party organizations) between MEPs who have similar party-political preferences rather than national preferences. This leads to party organizations based on transnational party families, and increasing cohesion within these organizations, despite growing internal ideological and national diversity within these parties. Secondly, the fact that coalition behaviour is determined by left–right policy distances between the parties, rather than by the relative sizes of the party groups, suggests that policy preferences on socio-economic issues are more important for MEPs and national parties than simply being on the winning side.

These conclusions also suggest that increased powers of the parliament have in fact increased the power of the party groups in the European Parliament over EU policy outcomes. The main party groups have different policy preferences, and can organize to act upon these preferences. As a result, the European Parliament should not be treated as a unitary actor in theories of the EU policy process, but rather as a set of transnational party-political actors with predictable preferences on EU regulatory, redistributive or macro-economic policies.

This article has looked at the long-term trends in cohesion and coalition formation. Much research remains to be done to improve our understanding of many other aspects of the European Parliament, such as the relationship between individual MEPs and their two party principals (their national parties and supranational party groups);⁴¹ the relationship between MEPs and their electorate; the effect of the different electoral systems on MEP behaviour;⁴² the career concerns of MEPs, and so on. We also need to delve more deeply into the subjects of the roll-call votes, to investigate if voting behaviour differs across issues, whether special interest groups have an effect on voting in the European Parliament on the issues they care about, and so on. These issues and many more are left for future research. But we now have a dataset that should allow us to investigate many of these issues at both a theoretical and empirical level in a more sophisticated and thorough way.

⁴¹ E.g. Hix, 'Legislative Behaviour and Party Competition in the European Parliament'; Hix, 'Parliamentary Behavior with Two Principals: Preferences, Parties and Voting in the European Parliament'; Noury, 'Ideology, Nationality and Euro-Parliamentarians'; and Noury and Roland, 'More Power to the European Parliament?'

⁴² E.g. Simon Hix, 'Electoral Systems and Legislative Behaviour: Explaining Voting-Defection in the European Parliament' (unpublished paper, 2002).

APPENDIX

TABLE A1 *Voting Cohesion by Member State*

	Absolute Cohesion (AI)					Relative Cohesion (Party AI/AI of EP as a whole)				
	EP 1 (1979–84)	EP 2 (1984–89)	EP 3 (1989–94)	EP 4 (1994–99)	EP 5 (1999–01)	EP 1 (1979–84)	EP 2 (1984–89)	EP 3 (1989–94)	EP 4 (1994–99)	EP 5 (1999–01)
Austria	–	–	–	0.693 (0.27)	0.697 (0.27)	–	–	–	1.146 (0.46)	1.224 (0.44)
Belgium	0.669 (0.27)	0.731 (0.27)	0.674 (0.25)	0.637 (0.23)	0.655 (0.26)	1.228 (0.59)	1.162 (0.47)	1.033 (0.39)	1.055 (0.39)	1.164 (0.46)
Denmark	0.569 (0.30)	0.718 (0.29)	0.738 (0.28)	0.640 (0.29)	0.607 (0.26)	1.106 (0.82)	1.204 (0.68)	1.219 (0.70)	1.123 (0.68)	1.149 (0.69)
Finland	–	–	–	0.620 (0.26)	0.652 (0.26)	–	–	–	1.083 (0.59)	1.174 (0.51)
France	0.647 (0.29)	0.680 (0.26)	0.614 (0.24)	0.578 (0.25)	0.505 (0.22)	1.222 (0.76)	1.111 (0.55)	0.965 (0.43)	1.006 (0.56)	0.901 (0.42)
Germany	0.713 (0.29)	0.748 (0.29)	0.715 (0.26)	0.726 (0.28)	0.729 (0.27)	1.246 (0.48)	1.140 (0.36)	1.071 (0.31)	1.146 (0.32)	1.250 (0.34)
Greece	0.726 (0.29)	0.758 (0.27)	0.800 (0.26)	0.719 (0.27)	0.668 (0.24)	1.388 (0.78)	1.214 (0.54)	1.256 (0.52)	1.177 (0.45)	1.200 (0.49)
Ireland	0.744 (0.27)	0.822 (0.26)	0.744 (0.26)	0.663 (0.26)	0.634 (0.27)	1.451 (0.87)	1.449 (0.88)	1.239 (0.70)	1.163 (0.63)	1.174 (0.63)
Italy	0.693 (0.28)	0.758 (0.26)	0.719 (0.26)	0.678 (0.25)	0.611 (0.25)	1.272 (0.62)	1.226 (0.50)	1.121 (0.47)	1.121 (0.42)	1.056 (0.37)
Luxembourg	0.849 (0.25)	0.824 (0.26)	0.843 (0.26)	0.748 (0.29)	0.687 (0.28)	1.641 (0.89)	1.373 (0.71)	1.383 (0.70)	1.241 (0.57)	1.220 (0.51)
Netherlands	0.688 (0.28)	0.734 (0.27)	0.745 (0.25)	0.714 (0.24)	0.668 (0.24)	1.258 (0.67)	1.149 (0.41)	1.147 (0.41)	1.204 (0.49)	1.199 (0.44)
Portugal	–	0.755 (0.27)	0.762 (0.26)	0.682 (0.25)	0.680 (0.26)	–	1.203 (0.55)	1.201 (0.51)	1.130 (0.44)	1.187 (0.40)
Spain	–	0.810 (0.22)	0.800 (0.22)	0.725 (0.27)	0.698 (0.27)	–	1.314 (0.50)	1.254 (0.40)	1.165 (0.38)	1.188 (0.35)
Sweden	–	–	–	0.678 (0.26)	0.627 (0.26)	–	–	–	1.147 (0.52)	1.129 (0.52)
UK	0.779 (0.19)	0.715 (0.30)	0.772 (0.26)	0.820 (0.18)	0.620 (0.28)	1.527 (0.75)	1.139 (0.54)	1.200 (0.49)	1.437 (0.56)	1.098 (0.52)

TABLE A2 *Descriptive Statistics for Explanatory Variables*

Variable	Description	Mean	Std Dev	Minimum	Maximum
RELATIVE COHESION	Mean relative cohesion	1.32	0.12	0.98	1.76
COALITION	Frequency of any party pair voting together	0.64	0.12	0.20	0.98
NO. OF RCVS	Number of roll-call votes (per 1,000)	0.27	0.15	0.01	0.79
LPG SIZE	Proportion of MEPs in a party group	0.15	0.11	0.03	0.38
NO. OF NAT. PARTIES	Number of parties in a group	11.10	5.86	2.00	28.00
FRACTIONALIZATION	National fractionalization of a group	0.76	0.16	0.31	0.92
PG IDEOLOGY	Group ideological distance from the EP mean	13.33	6.93	0.50	32.86
IDEOLOGICAL DIVERSITY	Internal group ideological diversity	11.45	4.69	1.02	28.17
% OF NAT. PARTIES IN GOVT.	Proportion of MEPs from parties in national government	0.40	0.30	0.00	0.97
SEA	Single European Act	0.66	0.47	0.00	1.00
MAASTRICHT	Maastricht Treaty	0.38	0.49	0.00	1.00
AMSTERDAM	Amsterdam Treaty	0.12	0.32	0.00	1.00
TREND	Time trend	23.17	12.49	1.00	44.00
ENLARGEMENT1	EU enlargement to Greece	0.92	0.27	0.00	1.00
ENLARGEMENT2	EU enlargement to Portugal and Spain	0.73	0.44	0.00	1.00
ENLARGEMENT3	EU enlargement to Austria, Finland and Sweden	0.31	0.46	0.00	1.00
COHESION OF ALL EP	Agreement Index of the EP as a whole	0.65	0.05	0.53	0.74
COALITION SIZE	Combined size of a coalition, as proportion of all MEPs	0.36	0.18	0.08	0.82
IDEOLOGICAL DISTANCE	Ideological distance between two groups	19.22	12.23	0.02	58.46

Note: Std Dev is standard deviation.