Parties' Policy Programmes and the Dog that Didn't Bark: No Evidence that Proportional Systems Promote Extreme Party Positioning

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There is extensive theoretical research that explores the linkages between parties' policy positions, on the one hand, and the characteristics of the political system (i.e. voting rules and the number of parties) on the other, but empirical research on this topic is less developed. Building on earlier work by Jay Dow, this article reports empirical analyses exploring the connections between the average party policy extremism in fifteen party systems (defined as the average party policy distance from the party system centre), and two important system-level variables: the proportionality of the electoral laws used to select representatives to the national legislature, and the number of political parties. Contrary to expectations – but consistent with recent theoretical work by Norman Schofield and his co-authors – no evidence is found that average party policy extremism increases under proportional representation, nor that policy extremism increases in countries that feature large numbers of parties. These findings have important implications for political representation and for understanding parties' election strategies.

There is an emerging body of work that seeks to understand the factors that affect the degree of policy distinctiveness offered by parties and candidates across political systems, i.e. the extent to which competing parties/candidates offer divergent sets of platforms that provide voters with diverse sets of policy options.[1] The spatial modelling literature has identified several features of voting behaviour that plausibly influence vote-seeking parties' position-taking incentives and, through this, the degree to which parties/candidates take divergent policy positions.[2]

While the theoretical literature on the topic of party polarization is extensive, there has been little empirical work that evaluates the predictions derived from formal theory.

[1] Ian Budge and Michael McDonald, 'Choices Parties Define: Policy Alternatives in Representative Elections – 17 Countries 1945–1998', *Party Politics*, 12 (2006), 451–66; see also Michael McDonald and Ian Budge, *Elections, Parties, and Democracy: Conferring the Median Mandate* (Oxford: Oxford University Press, 2005).

[2] These factors include (but are not limited to): the electoral salience of policies relative to unmeasured sources of voters' party evaluations, the importance of 'valence' dimensions of voters' party evaluations relative to policy dimensions of evaluation, the spatial distribution of voters' partisan affiliations, and the strategic effects of voter abstention. See, for example, Tse-Min Lin, James Enelow and Han Dorussen, 'Equilibrium in Multicandidate Probabilistic Spatial Voting', *Public Choice*, 98 (1999), 59–82; Norman Schofield, 'Valence Competition in the Spatial Stochastic Model', *Journal of Theoretical Politics*, 15 (2003), 371–83; Norman Schofield and Itai Sened, *Multiparty Democracy: Elections and Legislative Politics* (Cambridge: Cambridge University Press, 2006); James Adams and Samuel Merrill III, 'Party Policy Equilibrium for Alternative Spatial Voting Models: An Application to the Norwegian Storting', *European Journal of Political Research*, 36 (1999), 35–55; Melvin Hinich and Peter Ordeshook, 'Plurality Maximization vs. Vote Maximization: A Spatial Analysis with Variable Participation', *American Political Science Review*, 64 (1970), 772–91.

Indeed, Jay Dow has written the only comparative empirical study exploring the factors that influence the degree of policy differentiation among political parties/candidates observed in real world party systems. In this study, the enquiry initiated by Dow is extended to encompass party systems in fifteen post-war democracies. Specifically, with respect to these fifteen party systems, I address the following question: how extreme are parties, on average, with respect to the centre of the voter distribution within a political system? This query is further subdivided by considering two, related, questions: (1) is there a *direct* relationship between electoral laws and party policy extremism? and (2) do electoral laws exert an *indirect* effect on party policy extremism via their influence on the number of political parties? The latter question is motivated by Duverger's well-known law and hypotheses,[3] which posit that the number of political parties is influenced by the electoral system.[4]

Contrary to expectation, the empirical analyses suggest that the answer to each of the above questions is 'No'. Specifically, there is little evidence to suggest that electoral laws (specifically the proportionality of the electoral system) exert an effect – either directly or indirectly – on parties' tendencies to propose extreme as opposed to moderate policy positions. Furthermore, to the extent that linkages are uncovered between electoral systems and party policy extremism, the relationships that are found are in the *opposite* direction than expected: namely, the analyses suggest that more proportional electoral systems may actually motivate greater policy moderation by political parties. This finding runs contrary to the conventional wisdom that proportional electoral systems motivate parties to present more extreme policies. This connection is acknowledged in an early analysis of voting systems, where F. A. Hermens posits that proportional representation made 'it natural that there be a party to represent every shade of political opinion. This means that political differences are not only more clearly expressed, but multiplied and intensified'.[5]

However, although some evidence is uncovered to suggest that more proportional voting systems actually motivate party policy moderation, the weight of the evidence is most consistent with the finding of *no effect*, i.e. that electoral system proportionality does not systematically influence extreme party positioning. This suggests that the role of the country's electoral system in explaining party policy extremism is analogous to the role of the 'dog in the night-time' in the Sherlock Holmes story *Silver Blaze*: namely, that contrary to the expectations of political scientists, electoral system proportionality does *not* systematically increase or depress the distinctiveness of political parties' policy offerings. Thus I conclude that when exploring the factors that affect divergent party positioning, electoral systems are the dog that did not bark.

However, these conclusions come with four caveats. First, due to measurement issues (discussed below), the empirical analyses are limited to fifteen party systems in Western democracies. While the scope of the study thereby covers a significant portion of the population that I wish to describe (i.e. reasonably stable and well-developed democracies), I am nevertheless cautious about extrapolating these conclusions to political systems outside of the study. Secondly, the fluidity of the more elegant two-dimensional spatial

[3] Maurice Duverger, *Political Parties* (New York: Wiley, 1954).

[4] See also Douglas Rae, *The Political Consequences of Electoral Laws* (New Haven, Conn.: Yale University Press, 1967); William H. Riker, 'The Two-Party System and Duverger's Law: An Essay on the History of Political Science', *American Political Science Review*, 76 (1982), 753–66; Rein Taagepera and Matthew Shugart, *Seats and Votes: The Effects and Determinants of Electoral Systems* (New Haven, Conn.: Yale University Press, 1989); Gary Cox, *Making Votes Count* (Cambridge: Cambridge University Press, 1997).

[5] F. A. Hermens, *Democracy or Anarchy?* (Notre Dame, Ind.: Notre Dame University Press, 1941), p. 19.

mapping in a smaller number of countries has been consciously exchanged for unidimensional measurements of ideology in order to widen the geographical scope of this study.[6] Nevertheless, an analysis of left–right policy extremism can still be illuminating. With respect to this point, Ian Budge and Michael McDonald comment that, 'while the issues involved in Left–Right divisions do not cover the whole spectrum of democratic politics, few would deny they are at the centre of them'.[7] There is convincing empirical research which complements these authors' remarks, and suggests that the left–right dimension captures an important and meaningful component of political competition across the national settings and time period that are under review here.[8]

Thirdly, it should be emphasized that the conclusion that electoral system proportionality does not systematically affect the incentives for parties to take non-centrist positions does not imply that electoral laws exert no influence on party elites' policy strategies; indeed, given the extensive theoretical and empirical literature suggesting that politicians do indeed account for electoral laws, such a conclusion would be remarkable. What the findings do suggest is that, in the fifteen democracies in the study, electoral system proportionality does not exert a significant net effect on party policy extremism. Thus to the extent that proportionality presents parties with incentives to moderate their policies in some circumstances, the results imply that there must be other circumstances where proportionality motivates parties to shift towards more radical policies.

The fourth caveat relates to the first two caveats discussed above, namely that in exploring the research question significant theoretical and practical difficulties are confronted in measuring the dependent variable, average party policy extremism. These issues are explored extensively in the Data and Measurement section, where several alternative measures of average party policy extremism are developed. The fact that the central substantive conclusions hold regardless of which measure is used increases the confidence in the results.

The above limitations notwithstanding, these results have important implications for institutional design, for democratic representation, and for spatial models of elections. With respect to institutional design and democratic representation, these findings suggest that scholars need to rethink the proposition that proportional election systems promote more extreme party positioning, an assumption that underlies the long-standing debate over the relative virtues of proportional versus plurality voting systems. This posited policy divergence is seen as an advantage by some scholars, who argue that it enhances mass–elite policy linkages,[9] but as a potential disadvantage by other scholars who point out that too

[6] For examples of spatial mappings on more than one dimension, see Norman Schofield, 'A Comparison of Majoritarian and Proportional Electoral Systems Based on Spatial Modeling and "Rational" Politicians' (paper presented at the Conference on Constitutional Issues in Modern Democracies, Messina, 1997); Jay K. Dow, 'A Comparative Spatial Analysis of Majoritarian and Proportional Elections', *Electoral Studies*, 20 (2001), 109–25.

[7] Budge and McDonald, 'Choices Parties Define', p. 453.

[8] See, for example, G. Bingham Powell, *Elections as Instruments of Democracy: Majoritarian and Proportional Visions* (New Haven, Conn.: Yale University Press, 2000); John Huber and G. Bingham Powell, 'Congruence between Citizens and Policymakers in Two Visions of Liberal Democracy', *World Politics*, 46 (1994), 291–326; G. Bingham Powell and Georg S. Vanberg, 'Election Laws, Disproportionality, and Median Correspondence: Implications for Two Visions of Democracy', *British Journal of Political Science*, 30 (2000), 383–411; John Huber, 'Values and Partisanship in Left–Right Orientations: Measuring Ideology', *European Journal of Political Research*, 17 (1989), 599–621; McDonald and Budge, *Elections, Parties, and Democracy*.

[9] Russell J. Dalton, *Citizen Politics*, 2nd edn (Chatham, N.J.: Chatham House Publishers, 1996).

much party policy divergence may also be destabilizing.[10] These findings suggest that, regardless of the virtues/drawbacks of greater average party policy extremism, both sides in this debate should be cautious of their underlying assumption that electoral proportionality actually promotes extreme position-taking by the competing parties within a political system. With respect to spatial models of elections, the findings suggest an important puzzle on parties' policy programmes, which may prove susceptible to the spatial modelling approach, namely: what are possible rational choice explanations for the finding that parties do *not* tend to present more radical policy programmes in proportional systems? I will offer some possible answers to this question, following the presentation of the initial results.

In the next section, I develop hypotheses that link institutional variables (i.e. electoral rules and the number of parties) to average party policy extremism. The section after that develops measures of party policy extremism based on previous work done by Alvarez and Nagler,[11] and presents data from fifteen long-standing democracies that are used to evaluate the hypotheses. Later sections specify the statistical models that are used to test the hypotheses, discuss the empirical findings, and outline possible reasons why the hypotheses developed earlier are not supported by the data. The final section concludes.

HYPOTHESES ON VOTING SYSTEMS, THE NUMBER OF PARTIES AND AVERAGE PARTY POLICY EXTREMISM

Following Gary Cox, *centripetal incentives* refer to factors that reward parties that converge to the centre of the voter distribution, while *centrifugal incentives* refer to the factors that cause parties to take distinctly non-centrist positions.[12] The conventional understanding developed in the influential spatial modelling study by Cox is that proportional electoral rules exert centrifugal incentives that motivate parties to present non-centrist policy programmes.[13] Assuming deterministic policy voting along a unidimensional continuum, Cox establishes the independent effects of electoral rules (specifically, the electoral formulae, district magnitude and ballot structure) and the number of competitors (discussed in more detail later in the section) on the positioning incentives for parties. Cox concludes that proportional electoral formulae create incentives for parties to present non-centrist policies.

Jay Dow advances the debate by presenting intuitive arguments and empirical analyses suggesting that proportionality does indeed exert centrifugal policy incentives on political parties.[14] Dow's argument is that parties have weaker incentives to maximize votes in proportional systems than they do in disproportional/plurality systems, and given the expectation that centrist policy positioning tends to enhance parties' vote shares, this implies that disproportional electoral systems motivate centrist party positioning compared

[10] Elisabeth Carter, 'Does PR Promote Political Extremism? Evidence from the West European Parties of the Extreme Right', *Representation*, 40 (2004), 82–100.

[11] R. Michael Alvarez and Jonathan Nagler, 'Party System Compactness: Consequences and Measures', *Political Analysis*, 12 (2004), 46–62.

[12] Gary Cox, 'Centripetal and Centrifugal Incentives in Electoral Systems', *American Journal of Political Science*, 34 (1990), 905–35.

[13] Cox, 'Centripetal and Centrifugal Incentives in Electoral Systems'.

[14] Dow, 'A Comparative Spatial Analysis of Majoritarian and Proportional Elections'.

with proportional systems.[15] Dow bases this argument about vote-seeking incentives on the logic that, because disproportional electoral laws tend to punish small parties by awarding them seat shares in parliament that are less than their national vote shares – while correspondingly awarding seat shares to large parties that exceed their vote shares – disproportional electoral laws give office-seeking parties added motivation to maximize their electoral support.[16] Thus, in disproportional systems fewer parties are capable of 'winning' parliamentary seats, and maximizing votes means staking out popular positions. This suggests that there are strict limits to the viable *policy space* for competition in disproportional systems, i.e. the expectation is to see in plurality systems a 'clustering' of a small number of competitive parties close to the mean or median voter position.

By contrast, given that electoral thresholds in proportional systems permit more parties to win seats in the legislature, the competing parties in proportional systems can afford to be less concerned about whether they are occupying moderate, vote-maximizing positions. Thus parties competing in PR systems are plausibly free to advocate their sincere policy beliefs, even if these preferred policies are distinctly non-centrist. It is in this fashion that in systems with proportional electoral rules, the viable policy space for politics should be larger than is the viable policy space in disproportional systems. This provides the basis for the first hypothesis – the Proportionality Hypothesis – that seeks to explain variation in average party policy extremism across systems:

> HYPOTHESIS 1: (THE PROPORTIONALITY HYPOTHESIS) Proportionality increases average party policy extremism along the left–right dimension (i.e. an effect that is independent of the number of parties).

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[15] There is both a theoretical and empirically-based literature suggesting that parties in multiparty elections (i.e. elections involving at least three parties) maximize votes by presenting centrist positions. Theoretically, when voting is probabilistic and voters do not attach too much salience to policy distance compared with unmeasured, non-policy motivations, then a unique vote-maximizing equilibrium exists in which all parties in a multiparty election locate at the mean voter position (Lin, Enelow and Dorussen, 'Equilibrium in Multicandidate Probabilistic Spatial Voting'; but see Schofield, 'Valence Competition in the Spatial Stochastic Model'). Empirically, scholars report computations on survey data from real world elections which suggest that the non-centrist parties that contested these elections could have increased their support in elections held in Britain, France, The Netherlands, Germany and Canada (see R. Michael Alvarez, Jonathan Nagler and Jennifer Willette, 'Measuring the Relative Impact of Issues and the Economy in Democratic Elections', *Electoral Studies*, 19 (2000), 237–53; R. Michael Alvarez, Jonathan Nagler and Shaun Bowler, 'Issues, Economics, and the Dynamics of Multiparty Elections: The 1997 British General Election', *American Political Science Review*, 42 (2000), 55–96; James Adams and Samuel Merrill III, 'Spatial Models of Candidate Competition and the 1988 French Presidential Election: Are Presidential Candidates Vote-Maximizers?' *Journal of Politics*, 62 (2000), 729–56; James Adams, Samuel Merrill III and Bernard Grofman, *A Unified Theory of Party Competition: A Cross-National Analysis Integrating Spatial and Behavioral Factors* (Cambridge: Cambridge University Press, 2005). For static analyses, see also Lawrence Ezrow, 'Are Moderate Parties Rewarded in Multiparty Systems? A Pooled Analysis of Western European Elections, 1984–98', *European Journal of Political Research*, 44 (2005), 881–98.

[16] In addition, votes are less directly tied to office in proportional systems – i.e., parties with smaller vote shares can still participate in governing coalitions in PR systems. By contrast disproportional, plurality-based voting systems frequently manufacture single-party parliamentary majorities, as is the case in Britain, as well as in New Zealand prior to its switch to proportional representation for the 1996 election (for a review of evidence on this issue, see Michael McDonald, Sylvie Mendes and Ian Budge, 'What are Elections For? Conferring the Median Mandate', *British Journal of Political Science*, 34 (2004), 1–26). In these cases, 'losing' parties have no chance of becoming part of the government. Alternatively, proportional systems give small parties the opportunity to coalesce with larger parties and take part in the governing coalition (e.g., the Free Democratic Party (FDP) throughout most of the post-war period in Germany).

The second hypothesis is also motivated by the work of Gary Cox.[17] In addition to voting rules, Cox considers the effects of the *number of competitors* on the incentives for party positioning in a spatial model with deterministic policy voting. Cox concludes that the greater the number of competitors in a political system, the stronger the expectation that at least some of these parties will present non-centrist positions.[18] This conclusion is also supported by Merrill and Adams's theoretical results on multiparty elections with probabilistic voting, which conclude that vote-seeking politicians' centrifugal incentives grow stronger as the number of parties increases.[19] Roughly speaking, the logic that underlies both the Cox and the Merrill–Adams conclusions is that the greater the number of parties contesting an election, the greater the danger that centrist parties will be 'squeezed' by less centrist competitors, thereby depressing the centrist parties' vote shares and making non-centrist positioning more attractive.

The conclusions of Cox, Merrill and Adams, and others on the relationship between the number of parties and centrifugal policy incentives are independent of the proportionality of the electoral system. However, these conclusions are nevertheless related to electoral systems research, since there is extensive empirical evidence that electoral laws exert effects on the number of viable parties in a political system. Specifically, dating back at least to Duverger's formulation of his famous law[20] – namely, that single-ballot plurality systems favour two-party political systems[21] – scholars have argued that the number of parties increases with electoral system proportionality.[22] This suggests in turn that electoral systems may exert an *indirect* effect upon average party policy extremism, via their influence on the number of parties. This provides the basis for the second hypothesis – the Party System Size Hypothesis – that seeks to explain variation in average party policy extremism across systems:

> HYPOTHESIS 2: (THE PARTY SYSTEM SIZE HYPOTHESIS) Proportionality increases average party policy extremism along the left–right dimension, indirectly, via its influence on the effective number of parliamentary parties.

DATA AND MEASUREMENT

Measuring the Independent Variables: Electoral System Proportionality and the Number of Parties

The two independent variables that are central to the Proportionality and the Party System Size Hypotheses are the proportionality of the electoral system and the number of parties in the political system. The measures of these institutional characteristics are reported by Arend Lijphart for thirty-six democracies over the period 1945–96.[23]

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[17] Cox, 'Centripetal and Centrifugal Incentives in Electoral Systems'.

[18] See also Curtis B. Eaton and Richard G. Lipsey, 'The Principle of Minimum Differentiation Reconsidered: Some New Developments in the Theory of Spatial Competition', *Review of Economic Studies*, 42 (1975), 27–49.

[19] Samuel Merrill III and James Adams, 'Centrifugal Incentives in Multi-Candidate Elections', *Journal of Theoretical Politics*, 14 (2002), 275–300.

[20] Duverger, *Political Parties*.

[21] Related to this is Duverger's Hypothesis, that proportional voting systems are associated with multipartism (Duverger, *Political Parties*).

[22] See Arend Lijphart, *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries* (New Haven, Conn.: Yale University Press, 1999); Taagepera and Shugart, *Seats and Votes*; Cox, *Making Votes Count*.

[23] Lijphart, *Patterns of Democracy*.

Lijphart's measure of electoral system disproportionality, which is based on the index developed by Gallagher, varies with the squared differences between parties' vote shares and their subsequent seat shares in parliament.[24] According to this measure larger differences between votes and seats indicate greater disproportionality. Column 3 of the Appendix Table A reports measures of these variables for the fifteen countries included in the study.[25] These measures indicate that countries such as Denmark, Germany, Sweden and Norway feature quite proportional voting systems, while Britain, the United States, France and Canada – the four countries in the study that employ some form of plurality – are comparatively disproportional. These measures conform to common sense.

In addition to Gallagher's Index, the specifications were estimated in Equations 3–5 below using alternative measures developed to assess the level of disproportionality based on a dichotomous variable that indicates whether a country has single member districts (SMD) or some form of proportional representation; the 'effective district magnitude' measure developed by Taagepera and Shugart;[26] and Lijphart's 'effective threshold'.[27] The substantive conclusions that are reported in the subsequent empirical analyses persist when disproportionality is measured based on each of these measures.[28]

The *effective number of parliamentary parties* (ENPP) developed by Laakso and Taagepera and applied by Lijphart is used to estimate the number of competitors in the party system.[29] The Laakso–Taagepera (L–T) measure is constructed so that large parliamentary parties are counted more heavily than small parties. Thus if four parties are competing and each receives 25 per cent of the seats in parliament, the L–T measure of the effective number of parties is four, while if two large parties each control 40 per cent of the seats in parliament and two smaller parties each control 10 per cent of the seats, the effective number of parties is about three.[30] Appendix Table A also reports the L–T estimates of the effective number of parliamentary parties (ENPP) for the fifteen countries included in the analysis.

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[24] Michael Gallagher, 'Proportionality, Disproportionality and Electoral systems', *Electoral Studies*, 10 (1991), 33–51. The equation for the Gallagher Index of Disproportionality is $\sqrt{\frac{1}{2}\Sigma(v_i - s_i)^2}$, where v_i and s_i are the vote shares and subsequent seat shares for party i.

[25] The criteria used to select these fifteen countries are discussed below.

[26] See Table 12.1 in Taagepera and Shugart, *Seats and Votes*.

[27] Arend Lijphart, *Electoral Systems and Party Systems: A Study of Twenty-Seven Democracies, 1945–1999* (Oxford: Oxford University Press, 1994), p. 27.

[28] These additional analyses, using an alternative measure of proportionality, also directly address endogeneity concerns for the specifications identified in Equations 3 and 4, i.e. the concern that vote share is a component of the Gallagher Index as well as the weighted version of average party policy extremism (the dependent variable).

[29] Markku Laakso and Rein Taagepera, ' "Effective" Number of Parties: A Measure with Application to West Europe', *Comparative Political Studies*, 12 (1979), 3–27; Lijphart, *Patterns of Democracy*.

[30] The Effective Number of Parliamentary Parties (ENPP) is calculated using the following equation developed by Laakso and Taagepera: $N = 1/\Sigma s_i^2$, where s_i is the proportion of seats of the ith party (Laakso and Taagepera, ' "Effective" Number of Parties'). The authors' alternative measure, the Effective Number of Elective Parties (ENEP) is based on votes (i.e., $N = 1/\Sigma v_i^2$, where v_i is the proportion of votes of the ith party). The measure based on seats (ENPP) is employed in the empirical analyses reported below. However, I also ran these analyses using the Laakso–Taagepera measure based on vote share weightings (ENEP), as well as a third measure which is based on the number of parties receiving over a minimum threshold of votes (5 per cent) in the election. In all cases the substantive conclusions were unchanged.

Measuring the Dependent Variable: Average Party Policy Extremism

While the measurements for the two key independent variables are straightforward – in the sense that widely accepted measures of these variables have already been developed – measurement of the dependent variable, *average party policy extremism*, is more complicated. Although the measure of average party policy extremism requires only three pieces of information per country (these are the ideological placements of parties, the ideological placements of voters and the parties' vote shares), scholars sharply disagree both over how best to measure the parties' policy positions, and also about how to aggregate these party position measures into a valid country-level estimate of party policy extremism.

With respect to the measurement of parties' policy positions, for instance, some scholars argue for expert placements of party positions,[31] others rely on citizen placements of parties as recorded in national election surveys,[32] and still other scholars emphasize the virtues of locating parties based upon content analyses of their election manifestos.[33] With respect to aggregating the party position measures into a measure of average party policy extremism, scholars disagree about whether or not the parties' positions should be weighted by their size.[34] In order to ensure that the substantive conclusions are not artefacts of the measurement approach, Hypotheses 1–2 are evaluated using both weighted and unweighted measures of average party policy extremism. Furthermore, while there are disagreements over how to place parties most accurately along a left–right policy dimension, these debates are sidestepped by evaluating each of the hypotheses using the three alternative approaches discussed above; namely, those that rely on citizen placements, expert placements and party manifesto codings.[35]

To measure average party policy extremism, it is necessary to measure the mean voter position so that it is possible to determine how far parties' policies deviate from the centre

[31] John Huber and Ronald Inglehart, 'Expert Interpretations of Party Space and Party Locations in 42 Societies', *Party Politics*, 1 (1995), 73–111; Francis Castles and Peter Mair, 'Left–Right Political Scales: Some Expert Judgments', *European Journal of Political Research*, 12 (1984), 73–88.

[32] Alvarez, Nagler and Bowler, 'Issues, Economics, and the Dynamics of Multiparty Elections'; Adams and Merrill, 'Party Policy Equilibrium for Alternative Spatial Voting Models'; Adams and Merrill, 'Spatial Models of Candidate Competition and the 1988 French Presidential Election?'

[33] 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). In addition, scholars have employed the technique of multidimensional scaling, which involves estimating the parties' positions relative to voters' positions via analyses of voters' policy preferences in combination with their party evaluations (see Dow, 'A Comparative Spatial Analysis of Majoritarian and Proportional Elections'; Schofield and Sened, *Multiparty Democracy*).

[34] Alvarez and Nagler, 'Party System Compactness'; Dow, 'A Comparative Spatial Analysis of Majoritarian and Proportional Elections'; Ken Kollman, John H. Miller, and Scott E. Page, 'Political Parties and Electoral Landscapes', *British Journal of Political Science*, 28 (1998), 139–58. The argument for weighting average party policy extremism by party size is that such weighting accounts for the fact that the small parties in some countries (e.g., the American Green party, the British Socialist party, and so on) have virtually no political influence, so that their policy proposals do not enlarge the menu of policy choices available to voters in any meaningful sense. The arguments for relying on an unweighted measure of party policy extremism are, first, that any weighting system is unavoidably arbitrary given that parties' policy influence does not necessarily correlate with vote (or seat) share, and, secondly, that small parties provide a vehicle through which voters can express their policy preferences, regardless of whether or not such parties significantly influence government policy outputs.

[35] A special issue of *Electoral Studies* presents several articles which analyse the tradeoffs that accompany each approach used to estimate parties' policy positions (Gary Marks, ed., 'Special Symposium: Comparing Measures of Party Positioning: Expert Manifesto, and Survey Data', *Electoral Studies,* 26 (2007), 1–141).

of the voter distribution. I rely on the Eurobarometer surveys from each election-year of the countries in the empirical analyses to estimate the mean voter position. Specifically, these surveys ask approximately one thousand respondents per country to place themselves on a 1–10 left–right ideological scale, and the mean respondent self-placement score constitutes the measure of the centre of the party system.[36] Furthermore, in order to make the coefficients in the subsequent empirical analyses reasonably comparable, the ideological scales based on experts (ranging from 0 to 10) and manifestos (ranging from − 100 to 100) have been recalibrated so that these placements are also on the traditional 1–10 scale that is used in the Eurobarometer surveys. In relation to this, I also note that to the extent that 'different metrics' issues arise due to the use of multiple data sources, the analyses based on the Eurobarometer surveys address these concerns directly because the *source* of party and voter ideological measurements is the same (i.e., voters).

The average party policy extremism measure also requires data about the dispersion of voter ideologies in each country, as well as data on parties' vote shares.[37] Citizen policy dispersion is defined as the standard deviation of respondents' left–right self-placements in the country, calculated for all respondents who were willing to place themselves on the left–right scale.

Thus the countries were selected based on the availability of underlying voter distributions, and of reliable left–right party placements. The specific national elections were chosen based on the proximity to the time at which experts (1982) and citizens (1989) were asked to place parties along a left–right policy dimension. In sum, it was possible to gather fifteen country-level observations for the elections between 1980 and 1983, and twelve additional observations from 1987 to 1990. Appendix Table B presents the list of countries and elections that are included in the empirical analyses (for more information about the data, see also footnote 36).

Here is an illustration of why it is important to measure party policy extremism relative to the dispersion of the voter distribution. Suppose that two countries A and B have parties which present, on average, platforms that are equally non-centrist – but that country A has a more dispersed voter distribution than country B. If we look only at the party platforms the countries' party policy extremism scores will be the same. However, when we account for the differing voter distributions, we conclude that the party system in country B is more extreme because the parties in this system are more widely distributed *relative to the voter distribution*. The decision to normalize the measure of average party policy extremism based upon the voter dispersion in the country is consistent with the arguments advanced by Alvarez and Nagler and Kollman *et al.*, both of whom develop voter-normalized party

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[36] I rely on the Eurobarometer surveys from 1980 (13), 1981 (15), 1982 (17), 1983 (19) for the analyses based on experts and manifestos, and the Eurobarometer surveys from 1987 (27), 1988 (29), 1989 (31A), and 1990 (33) for the analyses that are based on the citizen placements of parties' left–right policy positions. The questions in the Eurobarometer are phrased: 'In political matters, people talk of "the left" and "the right". How would you place your views on this scale? [The following question is included *only* in the Eurobarometer 31A (1989)] And, where would you place the political parties (of your country)?'

For analyses of political systems outside of the European Community, I rely on Table 7.1 in Powell (*Elections as Instruments of Democracy*, p. 168) for left–right self-placements of voters. The benefit of using the information from this table is that it allows for the addition of Australia, Canada, Finland, Norway, Sweden and the United States to the analysis of West European countries in the early 1980s. Also, note that the Castles–Mair survey does not ask experts to place parties in Greece, Luxembourg and Portugal.

[37] The Manifesto Research Group provides vote shares in a CD-ROM in its 2001 publication.

dispersion measures.[38] Note, however, that all of the analyses reported below have been replicated using measures of average party policy extremism that are not normalized for the dispersion of the voter distribution, and that these analyses support identical substantive conclusions.

With these considerations in mind, I employ a measure of average party policy extremism that is analogous to the Party System Compactness measure established by Alvarez and Nagler.[39] *Party System Compactness* is expressed as voter dispersion divided by net party policy differentiation. In the following empirical analyses, however, the numerator and the denominator are reversed so that higher scores indicate increased party policy extremism. An additional variation is that the centre of the party system is defined as the ideological centre of the voter distribution (i.e. public opinion) as opposed to the weighted mean of the parties' ideological positions.[40] The *weighted* measure of average *party* policy *extremism* (WPE) is defined as follows:

$$\text{WPE}_k = \frac{\Sigma_{j=1} \, VS_j |(P_{jk} - \bar{V}_k)|}{\sigma_{vk}}, \tag{1}$$

where:

$\bar{V}_k$ = the mean voter left–right ideological self-placement in country k.
P_{jk} = the ideological position of party j in country k.
VS_j = vote share for party j.
σ_{vk} = the standard deviation of voter self-placements in country k.

The alternative to weighing parties' positions by their vote shares is to weight all parties equally. This measure is the *unweighted* measure of the average *party* policy *extremism* (UPE), and it is constructed as follows:

$$\text{UPE}_k = \frac{[\Sigma_{j=1} |(P_{jk} - \bar{V}_k)|]/n}{\sigma_{vk}}, \tag{2}$$

where:

n = the absolute number of parties included in the analysis for country k.

To visualize the mechanics of the unweighted (UPE) and weighted (WPE) measures of average party policy extremism, refer to Figures 1a and 1b. Each figure depicts the 1983 elections in Great Britain, and measures party policy extremism based on UPE and WPE. WPE measures the average party extremism at 0.96, while UPE registers

[38] Alvarez and Nagler, 'Party System Compactness'; Kollman, Miller and Page, 'Political Parties and Electoral Landscapes'.
[39] Alvarez and Nagler, 'Party System Compactness'.
[40] The Alvarez and Nagler formula is: $\sigma_{vk}/[\Sigma_{j=1} \, VS_j \, |(P_{jk} - \bar{P}_k)|]$, which is identical to the one above with the noted exceptions that the party system centre is identified as the mean voter's ideological position, and that the numerator and dominator have been switched. However, empirical analyses have been conducted that substitute the weighted mean party position, $\bar{P}_k$, as the measure for the party system centre. Furthermore, the parameters have been estimated for each of the specifications featured in Equations 3–5, employing a version of the dependent variable that squares the party policy deviations from the party system centre (i.e. based on *variances*), and the results for each of these analyses support the substantive conclusions reported in this study.
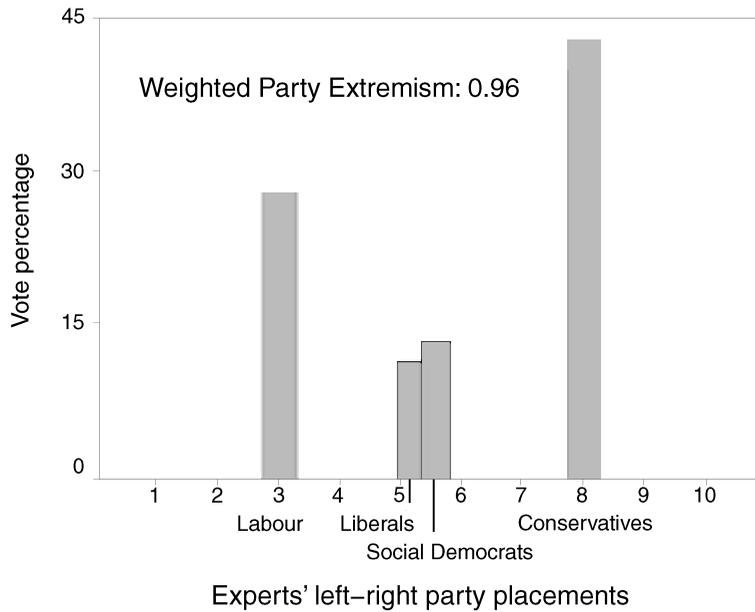
(a) Weighted
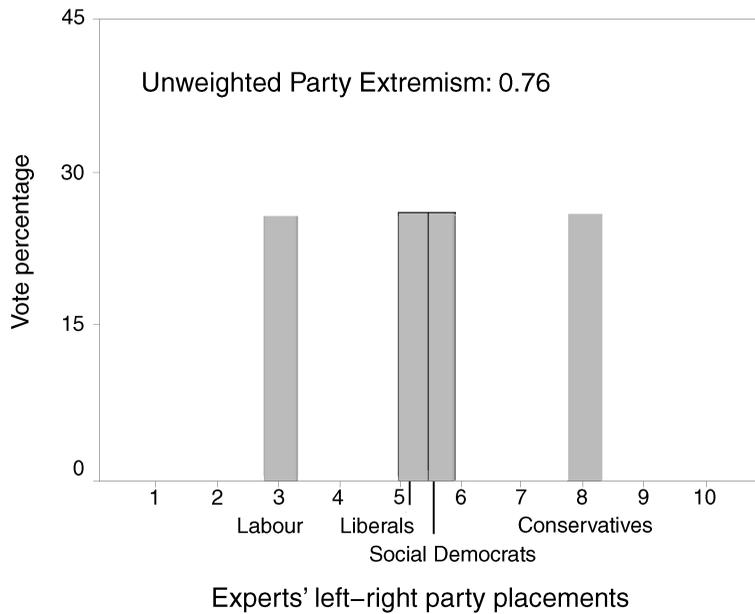
(b) Unweighted

Fig. 1. *Demonstrating the weighted and unweighted measures of average party policy extremism: the 1983 British national elections*

Notes: Although the Social Democratic party and the Liberals were allied for the 1983 elections, the two parties are each coded separately in the Castles and Mair (see fn. 31) study, as well as by the Comparative Manifesto Project (CMP). Their left–right scores are 5.14 and 5.50, respectively, on a 1–10 scale. After the 'Alliance' performed poorly in the 1987 elections, the parties formally merged in 1989 to become the Liberal Democrats, and are thus coded as a single party by the CMP from this time onwards.

$0.76.$[41] The explanation for the difference is straightforward – in 1983, the two largest parties, the Conservatives and Labour, were relatively non-centrist, while the two smaller parties, the Liberals and Social Democrats, were centrist. Thus the unweighted average party policy extremism score of the British political system decreases when the Liberals and Social Democrats are treated on equal footing with the Conservatives and Labour. However, the average party policy extremism increases when the parties' vote shares are taken into consideration.

TESTING THE PROPORTIONALITY AND THE PARTY SYSTEM SIZE HYPOTHESES

Recall that the Proportionality Hypothesis predicts a positive relationship between the degree of proportionality and the average party policy extremism, i.e., that as the electoral system becomes more proportional, party policy extremism increases. The Party System Size Hypothesis posits that there exists a positive relationship between the effective number of parties and the average party extremism variable. The parameters of an ordinary least squares (OLS) regression model are estimated in order to evaluate these hypotheses. The full specification is given below:

$$\textit{Average Party Policy Extremism} = B_0 + B_1 \, [\textit{Degree of proportionality}] + B_2$$
$$[\textit{Effective Number of Parliamentary Parties}] \quad (3)$$

$$\text{H}_1 \colon B_1 > 0,$$

$$\text{H}_2 \colon B_2 > 0.$$

However, the independent variables relating to proportionality and the effective number of parties are correlated, which raises concerns about collinearity and its effects on the efficiency of the parameter estimates.[42] Consequently, bivariate regression equations are also estimated to test Hypotheses 1–2. The bivariate proportionality specification is:

$$\textit{Average Party Policy Extremism} = B_0 + B_1 \, [\textit{Degree of Proportionality}], \quad (4)$$

$$\text{H}_1 \colon B_1 > 0.$$

The bivariate number of parties specification is:

$$\textit{Average Party Policy Extremism} = B_0 + B_1 \, [\textit{Effective Number of Parliamentary}$$
$$\textit{Parties}] \quad (5)$$

$$\text{H}_2 \colon B_1 > 0.$$

Results for the weighted measure of average party policy extremism. Table 1 reports parameter estimates for the full specification, the bivariate proportionality specification,

[41] Specifically, *WPE* is calculated $(0.289 \times |3.07 - 5.87| + 0.144 \times |5.14 - 5.87| + 0.122 \times |5.50 - 5.87| + 0.444 \times |8.02 - 5.87|)/2 = 0.96$, where the parties' deviations from the centre of the voter distribution are weighted by their relative shares of the vote, and the denominator (which equals 2) represents the standard deviation of the British respondents' left–right self-placements on the 1983 Eurobarometer survey. Alternatively, *UPE* is calculated $(0.25 \times |3.07 - 5.87| + 0.25 \times |5.14 - 5.87| + 0.25 \times |5.50 - 5.87| + 0.25 \times |8.02 - 5.87|)/2 = 0.76$, where each of the four parties' deviations from the mean party placement on a left–right scale is counted equally, so that consequently each is weighted at 0.25.

[42] Based on the countries included in the analyses, the correlation coefficient between proportionality and the effective number of parties is 0.58, which is statistically significant at the 0.05 level.

TABLE 1   *Estimating Weighted Average Party Policy Extremism*

Left–right party placements based on:

Variable	Experts (1980–83)			Citizens (1987–90)			Manifestos (1980–83)		
	Full	Bivariate	Bivariate	Full	Bivariate	Bivariate	Full	Bivariate	Bivariate
Degree of proportionality	**−0.009** **(0.01)**	**−0.004** **(0.01)**		**−0.02*** **(0.007)**	**−0.02*** **(0.006)**		**−0.001** **(0.01)**	**0.001** **(0.008)**	
Effective Number of Parliamentary Parties	0.03 (0.06)		0.01 (0.05)	0.01 (0.03)		−0.03 (0.04)	0.02 (0.05)		0.02 (0.04)
Constant	0.78*** (0.20)	0.85*** (0.15)	0.76*** (0.19)	1.09*** (0.12)	1.12*** (0.09)	0.96*** (0.15)	0.39** (0.15)	0.43*** (0.11)	0.38** (0.14)
N	15	15	15	12	12	12	15	15	15
Adjusted R^2	−0.12	−0.06	−0.07	0.38	0.44	−0.03	−0.15	−0.07	−0.06

Notes: Parameters are ordinary least squares (OLS) coefficients. Estimated standard errors are in parentheses. $*p < 0.10$, $**p < 0.05$, $***p < 0.01$, two-tailed test. The dependent variable is the average party's policy distance from the left–right position of the mean voter weighted by its relative share of the vote, divided by the standard deviation of voters left–right self-placements (refer to Equation 1 in the text). The definitions of the independent variables are given in the text. The ideological scales based on experts and manifestos have been recalibrated so that these placements are also on the 1–10 scale that is used in the Eurobarometer surveys. Each country is observed only once for each set of analyses. The specific countries included in each set of analyses are presented in Appendix Table B.

TABLE 2   *Estimating Unweighted Average Party Policy Extremism*

Left–right party placements based on:

Variable	Experts (1980–83)			Citizens (1987–90)			Manifestos (1980–83)		
	Full	Bivariate	Bivariate	Full	Bivariate	Bivariate	Full	Bivariate	Bivariate
Degree of proportionality	**−0.01** **(0.01)**	**−0.003** **(0.01)**		**−0.02** **(0.01)**	**−0.02*** **(0.01)**		**0.00004** **(0.01)**	**0.0007** **(0.009)**	
Effective Number of Parliamentary Parties	0.02 (0.06)		0.002 (0.04)	−0.05 (0.05)		−0.08 (0.05)	0.006 (0.05)		0.006 (0.04)
Constant	0.82*** (0.18)	0.86*** (0.13)	0.80*** (0.17)	1.33*** (0.18)	1.21*** (0.14)	1.24*** (0.18)	0.44** (0.17)	0.45*** (0.13)	0.44** (0.16)
N	15	15	15	12	12	12	15	15	15
Adjusted R^2	−0.14	−0.07	−0.08	0.25	0.24	0.17	−0.17	−0.08	−0.08

Notes: Parameters are ordinary least squares (OLS) coefficients. Estimated standard errors are in parentheses. $*p < 0.10$, $**p < 0.05$, $***p < 0.01$, two-tailed test. The dependent variable is the average party's policy distance from the left–right position of the mean voter, divided by the standard deviation of voters left–right self-placements (refer to Equation 2 in the text). The definitions of the independent variables are given in the text. The ideological scales based on experts and manifestos have been recalibrated so that these placements are also on the 1–10 scale that is used in the Eurobarometer surveys. Each country is observed only once for each set of analyses. The specific countries included in each set of analyses are presented in Appendix Table B.

and the bivariate number of parties specification, with each specification estimated using the weighted version of the average party policy extremism variable. Each specification was estimated in turn for each of the three different versions of the party policy extremism variable – one based on expert placements, another on voter placements and another on codings of party manifestos – so that there are nine regressions in all.[43]

The most striking feature of the results reported in Table 1 is the consistent lack of support for the Proportionality and the Party System Size Hypotheses. None of the estimated coefficients for the degree of proportionality and for the number of parties is positive and statistically significant. Indeed, half of the twelve parameter estimates for these independent variables are negative, perhaps suggesting that average party policy extremism actually *declines* as electoral system proportionality and the number of parties increases. While most of these parameter estimates do not attain statistical significance, the estimates are significant (and negative!) for the full and the bivariate proportionality specifications, when citizen placements are used to locate the parties (see Table 1).

Results for the unweighted measure of average party policy extremism. Table 2 reports analyses that are identical to those reported in Table 1, *except* that the results in Table 2 are based on the unweighted version of the party policy extremism variable. Once again, there is no support for the Proportionality Hypothesis and the Party System Size Hypothesis. That is, none of the estimated coefficients estimating the effects of the degree of proportionality and for the number of parties are positive and statistically significant and, in fact, once again half of the parameter estimates for these independent variables are negative, suggestive of effects that are possibly in the opposite direction to the relationships posited.

Overall, I find no evidence to support the Proportionality or the Party System Size Hypotheses, that average party policy extremism increases with electoral system proportionality and with the number of parties. This conclusion persists despite the fact that these hypotheses have been evaluated using alternative measures of party policy extremism (weighted and unweighted) and of party positions (expert placements, citizen placements and party manifestos). I conclude that in the fifteen post-war democracies included in the study, increased electoral proportionality and larger numbers of parties were not systematically linked to the average party policy extremism in the party system.

EXPLAINING THE RESULTS: RESEARCH ON PARTY STRATEGIES

Given that the previous scholarly research discussed earlier tends to support the Proportionality and the Party System Size Hypotheses, the empirical findings reported above are surprising. What accounts for the finding that average party policy extremism does not systematically increase with electoral system proportionality and with the number of parties? Here recent theoretical research – much of it by Schofield and his co-authors – illuminates the findings.

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[43] The parameters for each of these specifications were also estimated using the left–right estimates of party positions presented in Huber and Inglehart (Huber and Inglehart, 'Expert Interpretations of Party Space and Party Locations in 42 Societies') for the early 1990s. The substantive conclusions based on these results are identical to the ones reported below.

In the past few years, Schofield has identified two factors that can motivate vote-seeking parties to shift *away* from the centre of the voter distribution, thereby increasing the policy divergence of the party system. The first is the strategic implications of 'valence' dimensions of party evaluation, i.e. dimensions related to voters' impressions of party elites' competence, honesty or charisma.[44] Schofield and his co-authors argue that 'valence-disadvantaged' parties have electoral incentives to differentiate themselves on policy grounds, because if they present centrist policies that are similar to those advocated by valence-advantaged parties, then voters will choose based on the valence dimension – that is, they will choose parties that have superior valence images.[45] To the extent that Schofield's argument captures real-world parties' electoral strategies, we should not expect all vote-seeking parties to converge towards the centre of the policy space. In this case, then even if plurality systems motivate parties to attach greater weight to vote-seeking, this will not in turn imply that plurality elections motivate policy convergence.[46]

Miller and Schofield, building on Aldrich, develop a second motivation for vote-seeking parties to diverge from the centre of the policy space, which revolves around strategic incentives related to *party activists*.[47] The Miller–Schofield argument is that parties can enhance their vote shares by appealing to party activists who provide scarce campaign resources (i.e. time and money) – and that these activists typically hold extreme views. Specifically, the authors argue that parties can use the added campaign resources they acquire via their policy appeals to activists to enhance their images along valence dimensions such as competence and integrity – and that this in turn will increase the parties' electoral support among rank-and-file voters.

A final interpretation is that while maximizing votes is obviously important, maximizing the likelihood of being included in the governing coalition is more important. If this is the case then centrist positioning in proportional systems should not be surprising. Schofield *et al.* examine Dutch and German elections and determine that parties (intentionally or unintentionally) forgo their vote-maximizing positions, and try to put themselves in good positions for the post-coalition negotiations.[48] This entails presenting policies that are acceptable to potential coalition partners, which may provide incentives for policy moderation. If proportional systems motivate parties to present policies that are acceptable

[44] See Donald Stokes, 'Spatial Models of Party Competition', *American Political Science Review*, 57 (1963), 368–77.

[45] See Norman Schofield and Itai Sened, 'Modeling the Interaction of Parties, Activists and Voters: Why Is the Political Centre so Empty?' *European Journal of Political Research*, 44 (2005), 355–90; Schofield, 'Valence Competition in the Spatial Stochastic Model'; James Adams, 'Policy Divergence in Multiparty Probabilistic Spatial Voting', *Public Choice*, 100 (1999), 103–22. See also Stuart Elaine Macdonald and George Rabinowitz, 'Solving the Paradox of Nonconvergence: Valence, Position, and Direction in Democratic Politics', *Electoral Studies*, 17 (1998), 281–300.

[46] Adams and Merrill present an alternative argument that voters' partisan loyalties can motivate vote-seeking parties to diverge from the centre, in the direction of the policies favoured by the members of their partisan constituencies (Adams and Merrill, 'Party Policy Equilibrium for Alternative Spatial Voting Models'; Adams and Merrill, 'Spatial Models of Candidate Competition and the 1988 French Presidential Election?'; see also Adams, Merrill and Grofman, *A Unified Theory of Party Competition*).

[47] Gary Miller and Norman Schofield, 'Activists and Partisan Realignment in the United States', *American Political Science Review*, 97 (2003), 245–60; John Aldrich, 'A Downsian Spatial Model with Party Activists', *American Political Science Review*, 77 (1983), 974–90; John Aldrich, 'A Spatial Model with Party Activists: Implications for Electoral Dynamics', *Public Choice*, 41 (1983), 63–100; John Aldrich, *Why Parties?* (Chicago: University of Chicago Press, 1995).

[48] Norman Schofield, Andrew Martin, Kevin Quinn and David Nixon, 'Multiparty Electoral Competition in the Netherlands and Germany: A Model Based on Multinomial Probit', *Public Choice*, 97 (1999), 257–93.

to coalition partners, then these parties may well present centrist positions. This finding is also in line with that of the other prominent coalition scholars who present theoretical and empirical results that support the claim that in proportional systems, gaining membership in the governing coalition is closely linked with centrist positioning.[49]

CONCLUSION

Political scientists and casual political observers have long been in agreement that proportional electoral rules enhance the distinctiveness of parties' policy programmes. Conversely, plurality and plurality-runoff systems are thought to produce Downsian 'tweedledum–tweedledee' political competition where the number of competitors is low and policy moderation is the dominant party strategy. The empirical analyses reported in this article – which are based on several alternative measures of average party policy extremism – do not support these claims. In this analysis of fifteen democratic party systems, I find no evidence that the average party policy extremism systematically increases with electoral system proportionality. Nor do I find evidence for an 'indirect effect' of proportionality on party extremism, via the influence of electoral systems on the number of political parties.

   The limitations (stated in the introduction) of this study are also avenues for future research on the relationship between institutional settings and party behaviour. Future studies would benefit by having more than fifteen countries and/or by analysing parties' positions along multiple policy dimensions. However, preliminary evidence suggests that by excluding analyses of a second dimension the average party policy extremism along the left–right dimension is *not* being artificially reduced. Indeed, an appraisal of the spatial mappings of Schofield and Sened for the Netherlands and Italy (two proportional systems) and for the United Kingdom and the United States (systems that feature plurality voting) suggests that there is at least as much variation in party positions along the second dimension in the plurality-based party systems as there is in the PR-based systems.[50]

   To summarize, the relationship has been evaluated between proportionality and average party policy extremism over a much larger set of countries than has been explored in previous empirical work. Furthermore, the results are robust across several alternative measures of parties' positions. This study therefore contributes to our understanding of the relationship between electoral laws, parties' policy programmes and political representation.

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[49] See Robert Axelrod, *Conflict of Interest* (Chicago: Markham, 1970); Michael Laver and Kenneth Shepsle, *Making and Breaking Governments* (Cambridge: Cambridge University Press, 1996); Powell, *Elections as Instruments of Democracy*; Huber and Powell, 'Congruence between Citizens and Policymakers in Two Visions of Liberal Democracy'.
[50] Schofield and Sened, *Multiparty Democrcacy*.

APPENDIX

TABLE A   *Data Points in the Empirical Analyses*

Country	Experts		Citizens		Manifestos			
	WPE*	UPE†	WPE	UPE	WPE	UPE	Proportionality‡	ENPP§
Australia	1.06	1.08	–	–	0.28	0.27	9.79	2.19
Belgium	0.74	0.75	0.71	0.70	0.31	0.28	16.85	5.49
Canada	0.44	0.57	–	–	0.30	0.34	7.78	2.35
Denmark	0.85	0.82	0.89	0.83	0.59	0.61	18.16	5.11
Finland	0.78	0.67	–	–	0.83	0.78	16.77	5.17
France	1.14	1.22	1.06	1.25	0.46	0.54	1.29	3.54
Germany	0.91	0.75	0.79	0.81	0.45	0.39	18.46	2.84
Greece	–	–	0.96	1.07	–	–	11.86	2.20
Ireland	0.45	0.87	0.75	1.13	0.65	0.88	16.74	2.76
Italy	0.82	0.91	0.91	0.76	0.33	0.37	16.12	5.22
Luxembourg	–	–	0.62	0.71	–	–	16.01	3.68
Netherlands	0.67	0.71	0.81	0.91	0.31	0.26	18.65	4.68
Norway	0.94	0.95	–	–	0.41	0.52	15.24	3.61
Portugal	–	–	0.84	1.18	–	–	15.90	3.33
Spain	0.92	0.94	0.71	0.72	0.25	0.28	11.79	2.76
Sweden	0.80	0.79	–	–	0.37	0.39	18.17	3.52
United Kingdom	0.96	0.76	1.14	1.09	0.63	0.58	5.28	2.20
United States	0.42	0.42	–	–	0.47	0.47	4.34	2.41

Notes: Each parameter estimate reported in Tables 1 and 2 derives from these observations.
*WPE: Weighted measure of *average party policy extremism* (Equation 1).
†UPE: Unweighted measure of *average party policy extremism* (Equation 2).
‡*Source*: 'Index of Disproportionality' developed by Michael Gallagher (see fn. 24). The scale has been reversed so that higher scores now denote increased proportionality. The purpose of this transformation is to improve the substantive interpretation of the results.
§*Source*: Laakso and Taagepera (see fn. 29) measure of effective number of parliamentary parties (ENPP).

TABLE B   *Elections Included in the Empirical Analyses*

Country	Election	Included in empirical analyses based on:
Australia	1983	experts, manifestos
Belgium	1981	experts, manifestos
Belgium	1987	citizens
Canada	1980	experts, manifestos
Denmark	1981	experts, manifestos
Denmark	1988	citizens
Finland	1983	experts, manifestos
France	1981	experts, manifestos
France	1988	citizens
Germany	1983	experts, manifestos
Germany	1990	citizens
Greece	1989	citizens
Ireland	1982	experts, manifestos
Ireland	1989	citizens
Italy	1983	experts, manifestos
Italy	1987	citizens
Luxembourg	1989	citizens
Netherlands	1982	experts, manifestos
Netherlands	1989	citizens
Norway	1981	experts, manifestos
Portugal	1987	citizens
Spain	1982	experts, manifestos
Spain	1987	citizens
Sweden	1982	experts, manifestos
United Kingdom	1983	experts, manifestos
United Kingdom	1987	citizens
United States	1980	experts, manifestos

Notes: No country was observed more than once in any single set of statistical analyses.