

# Party System Profiles: A New Way of Describing and Categorising Party Systems

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— Comments and criticisms welcome —

## 1. Introduction

This paper offers a new way of describing and categorising party systems. I recommend that we focus on three aspects of the party system: the degree of multi-partyism in votes, the extent to which legislative power is shared proportionately, and the degree of cabinet multi-partyism. For example, post-war Germany would be categorised as a proportional 3-party system with a 1.5-party cabinet system.

These ‘party system profiles’ combine the quantitative rigour of Laakso and Taagepera’s (1979) effective number of parties index with Sartori’s (1976) more qualitative emphasis on the contest for government. Scholars using one approach have tended to criticise the other approach’s weaknesses without recognising its strengths. Party system profiles seek the best of both worlds, offering a middle-ground between quantitative and qualitative approaches.

I do not wish to be imperialistic: different scholars will have different ways of describing and classifying party systems, due to different empirical, theoretical or normative perspectives. Party system profiles will suit some scholars but not others. And some scholars may drop the legislative-power criterion entirely, or replace it with one based on seats. We should also try not to get too caught up in arcane debates over how to categorise party systems, which is relatively unimportant compared to causal inference and normative evaluation.

The term ‘party system profiles’ echoes Taagepera and Shugart’s ‘proportionality profiles’, an innovative way of visualising and quantifying seats-votes relationships in different countries. By graphing each party’s vote share against its advantage ratio (vote share divided by seat share), Taagepera and Shugart find different patterns in different electoral and party systems. These graphs allow

calculation of the ‘breakeven point’, the vote share above which a party can expect to be over-represented rather than under-represented. The authors use proportionality profiles in general, and breakeven points in particular, both to categorise party systems and to analyse links with other features of electoral and party politics (Taagepera and Shugart 1989, 67-76, 89-91, 110-11, 139-40, 191-8, 270-3). I do not seek such links here, but I do follow Taagepera and Shugart’s visual and quantitative exploration of some key features of party politics.

The paper starts by explaining the ‘extended ENP’ approach, producing estimates of the weighted number of parties at four scales: votes, seats, legislative power and executive power (section 2). It outlines three criteria for describing party system: the degree of multi-partyism in votes, the degree of proportionality from votes to legislative power, and the degree of multi-partyism in cabinet portfolios (section 3). These criteria are then turned into categories (section 4) which are applied to six party systems: Austria, Denmark, Germany, Ireland, Scotland and the UK (section 5). An alternative way of depicting these ideas is then presented (section 6).

## 2. Where and how to count parties<sup>1</sup>

Explanation matters more than classification, but classification still matters, because we can so easily give misleading impressions about what is happening in a political system. Describing the UK simply as a two-party system, for example, overlooks increasing multi-partyism in electoral politics and in the second chamber (Dunleavy 1999, 214-5; Russell and Sciara 2007, 301, 313-5).

How we count parties depends on where we look. Consider the two main party-counting methods, Laakso and Taagepera’s (1979) ‘quantitative’ measure of the effective number of parties (ENP), and Sartori’s more ‘qualitative’ approach (Sartori 1976: 119-25, 186-92, 300-4). Although these approaches are often discussed in terms of their technical merits, arguably the more important difference is their perspective: quantitative approaches focus mainly on votes and seats, qualitative approaches look more at competition for government. Both perspectives have their strengths and weaknesses, just as both methods have technical pros and cons. But while ENP indices have some curious technical flaws (Dunleavy and Boucek 2003), and may need to be supplemented with other measures (e.g. Grofman et al. 2004), they are generally regarded as being more technically robust and quantitatively meaningful.

I have therefore tried to get the best of both worlds, using ENP indices while looking beyond votes and seats alone. In this respect I largely agree with Peter Mair’s view that ‘the core of any party system *qua* system is constituted by the structure of competition for control of the executive’ (Mair 2006, 65). But I think Mair goes too far in pronouncing himself ‘against numbers’ in describing party systems (Mair 2006, 64-5). Not all quantification is misguided or unthoughtful. Mair’s concerns are, I feel, better targeted at the *particular* ways in which numerical analysis of party systems is sometimes applied. And certainly, ENP-based analyses usually miss something important about power. How should we rectify this?

To calculate an ENP index we simply need to know each party’s share of what is being measured:

$$NX = \frac{1}{\sum x_i^2}$$

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<sup>1</sup> Parts of this section are summarised from Blau (2008).

where  $x$  is the object being measured, and  $NX$  is the effective number of parties in  $x$ . Consider  $NV$ , the effective number of parties in votes. If an election has just two parties, with the same vote, the index is 2.0, implying two equally sized parties. If the parties have 60 and 40 percent of the vote respectively, the index is 1.9, which is close to two equally-sized parties but leans slightly in the direction of just one party. If three parties take 50, 40 and 10 percent of the vote, the index is 2.4, which is nearly midway between two and three parties. The same applies, of course, to  $NS$ , the effective number of parties in seats.

There is no reason to restrict ENP indices to votes and seats. I have argued that we can and should apply them at the governmental and legislative levels, such that we need party shares of executive and legislative power. We can estimate party shares of executive power by using party shares of cabinet portfolios, which are easy to calculate from readily available data (Blau 2008, 173-4). This method assumes that government influence is roughly proportional to a party's share of cabinet portfolios over a given time. That is a simplification. For example, it says nothing about junior ministers, who are often an important tool of power in coalitions (Thies 2001). Unfortunately, we do not have readily available information about the distribution of junior ministerial portfolios in many countries. More importantly, even if we did, we would need estimates of their importance relative to full cabinet posts. Does a junior finance minister weigh the same as the finance minister in the cabinet? Half as much? A third? As we will see, this need for *qualitative* assessments is a continual problem in the extended ENP approach.

That brings me onto a second issue with operationalising  $NC$ . My initial study assumed that each cabinet portfolio is of equal importance, or at least that differences between portfolios cancel out between parties. Yet we know that posts vary in importance in different countries at different times, and it is by no means clear that these differences would cancel out. At the time, I wrote that 'satisfactory answers have proved elusive' (Blau 2008, 174) but this overlooked important work by Druckman and Warwick (2005), who use expert assessments to weight different portfolios in 14 countries. For example, in Austria the Chancellor's weighting is estimated as 2.1, the Finance Minister's weighting is 1.6, the Justice Minister is 1.0, and the Youth Minister's weighting is only 0.5. In practice, though, Warwick and Druckman find an extremely close correlation between party shares of unweighted and weighted cabinet portfolios (Warwick and Druckman 2001, 644). And initial indications are that weighting will have almost no effect on my estimates of  $NC$ .<sup>2</sup> However, a full assessment remains to be made.

I now turn to a much trickier issue: operationalising  $NL$ . The approach used by Blau (2008, 172-3) follows Powell's (2000, 103-6) estimates of government and opposition influence. In Powell's approach, the government always has 1 unit of influence. Oppositions facing unsupported minority governments have 0.5 units of influence, oppositions facing minority governments supported by another party have

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<sup>2</sup> In Austria (1945-99), the mean absolute difference between the weighted and unweighted values of  $NC$  was 0.02 units, and the largest difference was 0.15 units. In Ireland (1948-97), the mean absolute difference was 0.07 units, and the largest difference was 0.5 units. (That single case, Ireland's first coalition government, is the only example in these two countries where weighting would affect our descriptions.) Before I reach a firm conclusion on the merits of weighting, I will of course compare weighted and unweighted values of  $NC$  in the other countries in the Warwick-Druckman dataset, but if the differences continue to be mostly negligible, an unweighted approach is preferable given that it can be applied to countries outside the Warwick-Druckman sample – unless we use uniform weightings, such as 2.0 for prime minister and 1.5 for chancellor and foreign minister.

0.2 units, and oppositions facing majority governments have 0.1 units of influence. Strong committees, and opposition committee chairs, each give a further 0.125 units of influence to the opposition. Oppositions controlling the upper house get another 0.1 units. Overall, oppositions have 0.1 to 0.85 units of influence. Powell's estimates are closely correlated with Laver and Hunt's expert-based estimates (Powell 2000, 104, 107-9), and appear to be plausible approximations of government and opposition legislative power. As an ENP index for legislative power requires shares for individual parties rather than for the government and the opposition as wholes, I divide a coalition's legislative power between governing parties in proportion to their share of government seats in the lower chamber, and make the equivalent calculation for opposition power.

One alternative would be a power index approach (Dumont and Caulier 2005; Kline forthcoming). However, this would not distinguish between minority and coalition governments, or supporting and coalition parties. Calculating each party's share of legislative power solely according to Banzhaf measures of lower-house pivotal-vote probabilities, for example, would reduce the whole of legislative politics to what happens on the floor of the lower chamber. A more realistic picture requires qualitative judgements about the impact of lower-chamber committees and second chambers, which are crucial influences on opposition legislative power. Power indices may well end up having a place in more sophisticated measures of NL, but they are not a panacea. It is extremely difficult to see how NL can be measured without some qualitative judgements. Political scientists often face hard choices about measurement; in this case, the hard choice is not best solved by easy numbers.

Furthermore, there are technical reasons why we should not be overly concerned about some aspects of precisely how we estimate party shares of legislative power. ENP indices are calculated by squaring each party's share of what is being measured, and squaring means that small shares soon disappear. Yet small shares are precisely what we often find where the government has a large majority of legislative power. As the sensitivity analysis in Appendix A shows, for example, some decisions that we take about operationalising NL will have little or no impact on the final figure.

A brief note on names. NS is often called the effective number of legislative parties (ENLP) or the effective number of parliamentary parties (ENPP). This is ambiguous, as NS addresses legislative/parliamentary seats but not legislative/parliamentary power. NV is sometimes called the effective number of electoral parties (ENEP), which is acceptable but could confuse in the future if we move beyond the cabinet to the executive more broadly and abbreviate the effective number of executive parties as ENEP. I therefore propose that we refer to the effective number of parties in votes, in seats, and so on, abbreviated as NV, NS, NL and NC (or NE for executive power, eventually). NP can be used for the effective number of parties in preferences, if we can overcome measurement problems (Blau 2008, 184). The two-letter abbreviations are also clearer than the four-letter versions, and less ugly on the page. Subscripts like  $N_V$ , which look awkward beside punctuation marks, should be avoided.

### **3. Criteria for categorising party systems**

So, we know party shares of votes, seats and cabinet portfolios, and we have satisfactory estimates of party shares of legislative power. We can thus calculate ENP indices at four areas of the party system. After the 2005 British general election, there were in effect three and a half parties in votes, two and a half in seats, one and a half

in legislative power, and one in cabinet power, at the national level. In Germany before the 2005 grand coalition there were in effect just over three parties in votes, just under three in seats, two and a half in legislative power, and one and a half in cabinet power (Blau 2008, 183).

Describing each party system in this way is obviously beneficial, and tells us far more than simply classifying both countries as multi-party systems on account of their high NV, say. The mean post-war NV is 2.8 in the UK and 3.0 in Germany – but in other respects the two party systems look very different, as a visual depiction of the profiles shows (see Figures 1 and 2). Party system profiles have considerable benefits over one-sided descriptions.

Nevertheless, description is not the same as *categorisation*. Categorisation is a further simplification of reality whereby we *group* cases according to certain criteria. (Saying that someone is 2 metres tall is a description. Putting her in the class of ‘tall people’ is a categorisation.) Describing each country in terms of four numbers, whether averaged over time or for a given election, is not itself a categorisation. Categorisation involves focusing on features of particular importance, then grouping countries accordingly. To take a trivial example, we might categorise countries according to whether they have an NC of 1.0 or more than 1.0 – single-party cabinets all of the time, or more than one party in the cabinet at least once. (I talk of categorisation rather than ‘classification’ because the latter is ambiguous between simple description and putting objects into classes. ‘Categorisation’ is more obviously about putting things into categories.)

Why categorise? One possibility is that it can help us move from description to explanation. Wolinetz suggests that Sartori’s typology of party systems was valuable partly because the distinction between moderate and polarised pluralism explained ‘an important puzzle: why certain kinds of multiparty systems led to cabinet instability and system collapse, while others did not’ (Wolinetz 2004, 6). However, a continuous measure could also have explained this: for example, we could have correlated cabinet stability with an index of the degree of polarisation, or used a dummy variable for polarised pluralism. So, while classification can help explanation, it is not *necessary* for explanation.

Two different reasons motivate the categorisation in this paper. First, to improve the way that we talk about party systems. The language of ‘multi-party’ politics is now widely used by academics, politicians, journalists and citizens – yet often we do not know if the focus is votes, seats and/or power. The extended ENP approach used in this paper tries to clarify what we mean when we talk about the number of parties.

Second, and most important, I seek to improve the way we talk about party systems by incorporating features of *normative* importance. The standard ENP approach does point us towards certain normative features (Dunleavy 1999, 214-5) but it misses out on important normative aspects of party systems that Sartori’s typology aimed at. The extended ENP approach seeks to provide a picture which is not only more informative in general, but which also provides information of more (normative) importance.

The first step in categorising is thus to choose features worth making categories out of. I suggest that we focus on three criteria:

- (1) the degree of multi-partyism in votes;
- (2) the degree of proportionality from votes to legislative power; and
- (3) the degree of multi-partyism in executive power.

For example, we could classify the post-war UK as *a disproportional 3-party system with a 1-party cabinet system*, at least at the national level (to which this paper is largely restricted).

Criterion 1 is unsurprising. Criterion 3 is the most important thing missing from the standard ENP approach. Some scholars will be quite satisfied with an approach which describes and categorises party systems using these two criteria alone.

Nonetheless, there are good reasons to include criterion 2. Opposition parties vary greatly in their legislative influence, and a party system where opposition parties are largely excluded from legislation is very different to one where a party's share of legislative power roughly mirrors its vote share. A key lesson of Powell's (2000) analysis is that 'majoritarian' and 'proportional' models of democracy are about more than the relationship between votes and seats alone. (Scholars who are mainly interested in the direct effect of *electoral* systems can talk about the proportionality of electoral systems without including this in their categorisation of *party* systems.) In any case, high proportionality between votes and legislative power indicates the same between votes and seats, but the reverse is not necessarily true. So, looking beyond votes and seats, by incorporating legislative power into our categorisation, tells us something important about the nature of the party system, and previous categorisations have overlooked this.

Normatively or empirically, the distribution of legislative power is thus an important feature of party systems which deserves more attention than it has previously received.

#### **4. From criteria to categories**

I do not propose to provide categories for criterion 1, the degree of multi-partyism in votes. Instead I will use a continuous measure, NV – the effective number of parties in votes – and build it into the broader categorisation in a way that I will explain shortly.

How should we select categories for criteria 2 and 3? We can take inductive and/or deductive approaches. Inductively, we could calculate indices for as many party systems as possible, then look for relevant similarities: if we found that systems tended to group themselves in certain ways, we could draw categories accordingly. But this might produce theoretically meaningless categories. If we found, for example, that systems tended to have a mean NC of under 1.6 or over 1.8, why would it be interesting to know that a country had shifted from one category to the other? Deductively, it may be possible to pinpoint categories in advance; for example, we might decide on normative grounds to distinguish between single-party and coalition cabinets.

Some combination of inductive and deductive approaches is likely. If nothing else, we should test categories inductively, to check that a schema works in practice. Even inductive approaches may need updating: Sartori's original classification (predominant-party systems, two-party systems, moderate pluralism, and polarized pluralism) is less useful today, since most countries are now moderate pluralist systems (Mair 2002, 93).

I propose to take a partly inductive, partly deductive approach. Consider criterion 2, the degree of proportionality between votes and legislative power. We already know that Germany and the UK spread legislative power proportionately and

disproportionately, respectively. It seems obvious to nominate an in-between category: moderate proportionality. This gives us three categories of proportionality between votes and legislative power:

- (2a) proportional
- (2b) moderately proportional
- (2c) disproportional

These categories are, of course, provisional. For example, category 2b may need to be split in two if we find that too many countries fit into this camp. But three categories will suffice for this paper.<sup>3</sup>

Criterion 3 can be approached more deductively. We already know that many countries have coalitions dominated by one large party. Deductively, we can thus expect NC to be around 1.5 in these cases, because ENP indices are based on squaring, and small shares weigh much less. (See Appendix B for a fuller justification of this point.) We can thus propose three categories of cabinet system:

- (3a) 1-party cabinet systems;
- (3b) 1.5-party cabinet systems;
- (3c) 2-party cabinet systems and over.

One problem, as we will see, is that a mean NC of around 1.5 can arise in different ways: not only coalitions with one large and one small party, as just described, but also countries which fluctuate between single-party cabinets and two-party grand coalitions, say. In such situations we should describe a system as fluctuating between 3a and 3c, not as an example of 3b.

This last point is worth emphasising. Most categorisations are static rather than dynamic, but change over time can be empirically and normatively important. Sartori, for example, distinguishes between systems where two parties alternate in single-party government, and ‘predominant’ systems where one party consistently wins power (Sartori 1994, 109). Both are examples of one-party cabinets but empirically and normatively they are very different. We can also assess this quantitatively, by calculating NC over time (Blau 2008, 179-81).

## 5. Application

I now apply the extended ENP approach to six countries: Austria, Denmark, Germany, Ireland, Scotland and the UK. Germany and the UK exemplify proportional and majoritarian/pluralitarian political systems respectively (Blau 2008). Ireland and Scotland have fairly proportional electoral systems combined with more Westminster-style legislatures. And Austria and Denmark exemplify PR systems with low and high degrees of multi-partyism respectively. The diversity of these countries thus gives a useful road-test for party system profiles.

I will explore the party systems of these countries in three ways. First, by graphing each country’s party system profile – the best way to see spatial and temporal differences in NV, NS, NL and NC. Second, by calculating mean values of the four ENP indices. Third, by categorising and tabulating each party system according to the criteria developed above.

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<sup>3</sup> I have not yet offered precise dividing-lines for these categories. See section 6.

## 5.1 Germany

Figure 1 shows (West) Germany's party system profile. Germany's mixed-member proportional electoral system with a relatively low threshold means that the values of NV and NS are usually very close. Formal and informal power-sharing mechanisms in the legislature mean that NL is usually close to NS as well. Table 1 shows that the mean post-war values of NV, NS and NL, respectively, are 3.0, 2.7 and 2.4. This indicates a relatively proportional system as one moves from votes through seats to legislative power.<sup>4</sup> Visually, this proportionality is strikingly brought out by the closeness of the top three lines on Figure 1. The line for NC is usually much lower, the mean value of 1.6 indicating that the average number of cabinet parties is (in effect) one large party and one small party.

Germany can thus be categorised as *a proportional 3-party system with a 1.5-party cabinet system*. Germany is an easy case for categorisation under criterion 3: the cabinet system really does usually involve one large party and a second smaller party.

## 5.2 The UK

Figure 2 shows how much the UK differs to Germany. The UK's single-member plurality electoral system means that the lines for NV and NS are much further apart, despite the evident rise in NV in recent years. And the lack of power-sharing mechanisms keeps opposition parties away from legislative power, despite occasional bouts of minority government. Although the pre-war years saw much greater multi-partyism and cabinet coalitions (Blau 2008, 176-82), post-war governments have seen single-party cabinets only. The mean post-war values of NV, NS, NL and NC are 2.8, 2.1, 1.3 and 1.0 (Table 1). The post-war UK, like Germany, can be categorised easily: *a disproportional 3-party system with a 1-party cabinet system*.

One advantage of party system profiles is that they help us to distinguish big and small changes in party systems. While Dunleavy is right that the UK has seen an important rise in NV since the 1970s, in other respects the party system is essentially unchanged: the most important features, in terms of power, remain largely one-party affairs. One might object to my argument here by raising a normative point: the disproportional electoral and legislative systems are failing to translate electoral multi-partyism into multi-partyism in seats and legislative power. I would agree: but in terms of *categorising* party systems, this accepts that the rest of the British party system has not significantly changed (at least at the national level and in terms of the criteria addressed here). Comparing the UK with Germany is also instructive: the British increase in NL from the mid-1970s onwards may seem large in comparison to the 1950s and 1960s, but it is not sizeable in relation to countries like Germany.

I will sidestep the primarily semantic issue of whether the UK now has a different party system, moving from a disproportional 2.5-party system with a 1-party cabinet system to a disproportional 3-party system with a 1-party cabinet system. (See Mair 1996, 51-4, on what it means to say that a party system has changed.) If the British party system has changed, it is not yet a major change, whether in scale, in

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<sup>4</sup> Strictly speaking, we should test this with disproportionality indices (Blau 2005, 12-14) as well as the relative reduction of parties (Blau 2008, 175-8). Disproportionality indices are needed because the same values of NV and NS would apply, for example, if one party had 40 percent of the vote and 60 percent of the seats, and its competitor had 60 percent of the vote and 40 percent of the seats. But such biased scenarios are unlikely and I do not need to test for this here.

terms of criteria 2 and 3, or in comparative perspective. This last point will become more obvious as we examine other countries.

### 5.3 Ireland

Ireland has a Single Transferable Vote electoral system with a mean post-war district magnitude of between 3 and 4, usually seeing fairly high proportionality between votes and seats (Gallagher 2005, 517-22). However, the legislative system is closer to the Westminster model on which much of the Irish system was modelled, with weak committees and a compliant second chamber (Mitchell 2003, 419-21, 434-5).

Figure 3 shows the party system profile for post-war Irish elections up to 1997. NV and NS fall in the early post-war years, as the post-war party system took shape, then rise again as Fine Gael's decline saw more electoral competition in the late 1980s. Perhaps the most interesting feature of the Irish graph is NL, in two respects. First, it is usually much lower than NS – closer to the British profile than the German one. Second, it mirrors NC very closely. This is because there is no variation in the committee system and almost no variation in who controls the upper house. Changes in NL thus almost completely reflect the cabinet being single-party or coalition; the only important exceptions to this are the Fianna Fáil minority governments of 1961-5 and 1987-9.

The profile as a whole might lead us to classify Ireland as *a moderately proportional 3-party system with a 1.5-party cabinet system*. But that covers up the important fluctuations in NL and NC. Figure 4 thus splits Ireland into single-party governments and coalition governments. On this view, Ireland moved back and forth between *a disproportional 3-party system with a 1-party cabinet system*, and *a moderately proportional 3.5-party system with a 2-party cabinet system* – 10 changes in 18 elections. Again, it is a semantic issue whether we say that Ireland fluctuated between two different party systems in this period, or that there was one Irish party system which fluctuated between two different profiles. What matters is that we are explicit that Irish party politics saw empirically and normatively significant changes in legislative and executive power, and categorisations of its party system should reflect these fluctuations.

Note too that Figure 4's left-hand graph is entirely composed of Fianna Fáil cabinets. This reflected three related factors: Fianna Fáil's opposition to coalitions in this period; its status as the largest Irish party, in votes and seats; and the small but significant degree of over-representation afforded by the interaction between electoral behaviour, electoral system and party system (Gallagher 2005, 521-2). The fact that Ireland fluctuated between two different party system profiles was thus facilitated by an asymmetric party system. That suggests a hypothesis for further exploration, but one which is beyond the scope of this paper.

### 5.4 Austria

Figure 5 shows Austria, often seen as an exception to Duverger's law because it was dominated by two large parties despite having a fairly proportional party list system (Sartori 1994, 40). In the period graphed, NV and NS were always between 2 and 3 until the rise of the Freedom Party (FPÖ) in the 1980s and 1990s. There were grand coalitions between the Social Democrats (SPÖ) and the People's Party (ÖVP) for the whole period except 1966-73. So, the low value of NS and the willingness of the two main parties to share power leads to a high value of NC for most of the period.

The mean NC of 1.7 in this period suggests that we might classify Austria as a *proportional 2.5-party system with a 1.5-party cabinet system*. However, we can identify a more dynamic pattern – not regular fluctuations, as in Ireland, but a change from a *proportional 2.5-party system with a 2-party cabinet system* to the same with a *1-party cabinet system*, and then a reversion to the original state.

One concern is the odd fact that NL is higher than NV and NS until 1966. Because of the grand coalitions, the remaining opposition power was all held by the Communists and the Federation of Independents (replaced by the FPÖ in 1956). Yet these minor parties surely exerted little influence over the government, in which case the estimates of NL are too high. An amendment to the method may be needed for grand coalitions. Nonetheless, NL would still be over 2 in these coalitions, indicating a high degree of proportionality between votes and legislative power, so this will not affect our categorisation of Austria.

## 5.5 Denmark

Figure 6 shows Denmark, which has much more electoral multi-partyism than the other countries. The frequent incidence of minority and coalition government means that legislative power is shared quite widely: NL was over 2.5 at all but three of the 19 elections included here. Even this might not capture the full extent of opposition power (see Damgaard and Svensson 1989, 736-41). Nonetheless, as NL is currently estimated, the degree of disproportionality from seats to legislative power is quite high – a mean absolute relative reduction of parties (RRP) of 30 percent, compared to an RRP of only 5 percent when we move from votes to seats.

So, Danish legislative power is shared widely but not very proportionately. This partly reflects the relative paucity of *institutional* power-sharing mechanisms – no upper house, for example. But the main reason is simply that ENP indices are based on squared shares, and that will effectively negate the legislative power of the many very small parties in the Folketinget. Again, this might indicate a flaw in the way that NL is currently calculated. Whereas the Austrian case suggested that grand coalitions might overstate small-party power, the Danish case suggests that fragmented oppositions might understate small-party power. Further research is needed here too.

Denmark could be categorised as a *moderately proportional 5-party system with a 1.5-party cabinet system*. But change over time is again relevant: mean values of NC and NL are considerably higher from 1984 onwards. Table 1 implies that Denmark moved from a 1.5-party cabinet system in the 1960-81 period to a 2-party cabinet system from 1984 on. However, even this arguably overstates the degree of cabinet multi-partyism before 1984, as there were single-party cabinets after six of the ten elections between 1960 and 1981. But weighting these cases by time gives us a mean NC of 1.6. (A third of this period was spent with two large values of NC: 1.9 in 1960, and 3.0 in the 1968 coalition between the Radicals, Liberals and Conservatives.) This makes the period hard to categorise. We might say that between 1960 and 1981 there was a *moderately proportional 5-party system which fluctuated between a 1-party and a 2-party cabinet system*, while from 1984 on there has been a *proportional 5-party system with a 2-party cabinet system*.

This categorisation may be accurate, but it is not so easy to communicate and understand. This highlights an inherent difficulty with categorisation – a tradeoff between simplification and usefulness. Categorising the first Danish period as a 1.5-party cabinet system may gloss over the fact that the majority of cabinets were single-party affairs. Categorising the period in terms of fluctuations between a 1-party and 2-

party cabinet system may start to get overly complicated, as well as being somewhat inaccurate given that one of the two big coalitions was a genuinely three-party affair. There is no easy answer here.

This discussion echoes the issues raised in Wolinetz's criticism of Siaroff's categorisation of party systems. Wolinetz argues that Siaroff has 'too many categories', such that he is not describing changes between party systems, merely changes in 'patterns of party strength' which may only apply for a single election (Wolinetz 2004, 58-9). Siaroff classifies Germany, for example, as an extreme multiparty system with two main parties for the 1949 election, a moderate multiparty system with one main party for the next pair of elections, and a two-and-a-half-party system thereafter (Siaroff 2000, 269).

I think we can argue either way here. To resolve the issue we ultimately need to get into the semantics of what a party *system* is, a topic I am avoiding in this paper. For now I would urge a middle ground. Siaroff's party-counting approach is not only more rigorous than Sartori's but also gives us useful information about the extent to which patterns of party strength change or persist over time. Whether we describe this as a change from one party system to another is less important than the fact that we explicitly identify a change. (As it happens, for Germany the initial changes are not very important: they simply reflect an evolving party system and are probably not worth building into a general categorisation.) My categorisations are not as fine-grained as Siaroff's, but both approaches highlight change over time.

Note that for Denmark, Siaroff's method does not pick out any party system changes after 1950 (Siaroff 2000, 226). Clearly our two approaches focus on different features of the party system, and our categorisations differ accordingly. I think there are good reasons for our categories to include legislative and executive power, but Siaroff's approach is very useful for scholars more interested in electoral competition.

Also interesting is the fact that neither Siaroff's method nor mine sees 1973 as a fundamental change, even though some party system scholars see the large rise in NV as significantly altering the nature of party politics (e.g. Bille 1989, 43-56; compare Ware 1996, xxx). True, the 1973 'earthquake' (Bille 1989, 56) was a key cause of the 1980s shift in legislative and cabinet politics. But 1973 did not itself see such a shift. So, *if* we choose to categorise party systems partly in terms of power, then the 1973 election does not immediately push Denmark into a new category. Nonetheless, as I have emphasised throughout this paper, there is no one way of categorising party systems, and even the criteria offered in this paper sometimes offer us alternative categorisations.

## 5.6 Scotland

Figure 7 shows the three post-devolution Scottish elections. Interestingly, NL does not increase in 2007 despite a shift from a two-party Labour/LibDem cabinet with a legislative majority to a one-party SNP cabinet with only just over a third of the seats in the legislature. The reason for NL staying the same is that opposition power is now spread between several parties, while from 1999 to 2007 the government's legislative power was spread between two parties. So the Powell approach suggests that the effective number of parties in legislative power was about the same in each of the three parliaments. Scotland, overall, would be classified as a *disproportional 4.5-party system with a 1.5-party cabinet system*.

## 5.7 A six-country comparison

Figure 8 underlines the differences between these six party systems by comparing them side-by-side on the same scale. Danish multi-partyism in votes is clearly far greater than any of the other countries considered here. The closeness of the top three lines in Germany and Austria also shows their relatively high proportionality from votes to legislative power – an important feature of a party system which previous categorisations have not addressed. That point is worth stressing: this aspect of party politics is important, we can now quantify it satisfactorily, and there are good reasons to include it in our categorisation of party systems.

Ireland's fluctuating NC also stand out: no other country sees so much shifting from single-party to coalition cabinets in this period. Again, this is a significant feature of Irish party politics in the period studied, and it is right and proper that there should be a classificatory system which addresses the executive side of party politics, as well as change over time. The disproportional nature of the UK's profile is very evident, but note again that changes in this profile over time are not especially dramatic. With only three elections, the Scottish case has little to explore, but it will be fascinating to see how the profile evolves.

I will now briefly explain how these categorisations can be turned into a single table. If there had only been two criteria for classification, for example multi-partyism in votes and in cabinet portfolios, then a two-dimensional matrix would have enabled easy comparisons of different countries. Having three criteria complicates the situation. But one reason why I dealt with criterion 1 (the degree of multi-partyism in votes) on a continuous scale rather than in discrete groups is that we can still use a two-dimensional matrix – by referring to the value of NV inside each cell. For example, in Table 2, 'UK: 3' in the top left-hand cell means that the UK is classified as a disproportional 3-party system with a one-party cabinet system. As in Table 1, italicised text indicates a subset of a particular country. The double-headed dotted arrows indicate party systems which fluctuated between two different cells. This could, however, get confusing on tables with many countries on them, and better solutions may be needed.

Interestingly, although five of the six countries analysed here average out as one-and-a-half-party cabinet systems, variation over time means we see entries in eight of the nine possible cells on the matrix. This gives initial confirmation that the combined inductive/deductive approach outlined earlier has generated a matrix that really does pick out differences in party systems within and between countries. Of course, analysis of more countries will be needed before a firmer conclusion can be made.

So, it appears that the classificatory approach proposed here helps us see important differences in some aspects of party systems which capture substantively and normatively important differences between different countries, and within the same country over time.

## 6. A continuous rather than categorical approach

I will now briefly illustrate an alternative approach. Whereas sections 4 and 5 used categories for NC and legislative disproportionality, with a continuous measure for NV, I now propose to use a continuous measure for NC too.

Figure 9 shows a two-dimensional graph with NV and NC on the  $x$  and  $y$  axes respectively. Criterion 2 is then built in by using orange points for proportional

systems, green points for moderately proportional systems, and blue points for disproportional systems. Only the mean values for the six countries are considered.

Figure 10 now adds the subsets of the Austrian, Danish and Irish cases, to highlight change over time. Figure 10 portrays the same information as in Table 2, but in a different way.

Such graphs are probably preferable to the more categorical approach in sections 4 and 5. Having continuous measures for NV and NC sidesteps some of the problems of choosing categories. Eventually, it may even be desirable to replace the categories for legislative disproportionality with a simple index of disproportionality between votes and legislative power.

## 7. Conclusion

Focusing on four aspects of the party system – votes, seats, legislative power and executive power – allows us to see more than traditional approaches, which usually tackle *either* electoral competition *or* competition for government. The categorisation offered here focuses on three aspects of the party system, but scholars will benefit even by focusing on votes and cabinet portfolios alone. A dynamic categorisation can also reveal significant shifts in how parties divide cabinet portfolios: Austria, Germany and Ireland have similar mean values of NC but these means arose in different ways. For scholars not interested in categorisation, even simply graphing party system profiles has great benefits. Comparison over time and space is also aided by placing these graphs side by side on the same scale.

Of course, question marks still hang over the calculation of NL. If this changes, so too might some of the categorisations in this paper. Some scholars may prefer to concentrate on votes and cabinet portfolios only, or to replace the legislative power criterion with one involving seats, which can at least be known for certain. Nonetheless, I would reiterate the value of quantifying what we need to know rather than what is easy to quantify, and there are good reasons why legislative power should be included in descriptions and categorisations of party systems.

So, the approach offered here still needs development, but it is a promising method which has already highlighted important and traditionally under-emphasised differences within and between party systems.

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## Appendix A: sensitivity analysis of estimates of NL

To understand why some operational issues have little effect on the final value of NL, we can conduct a sensitivity analysis, calculating the minimum and maximum values of NL for different scenarios.

Consider a single-party majority government: on the Powell approach, it has 1 unit of power and the opposition has 0.1 units. The minimum possible value of NL is 1.20, when there is a single opposition party, and the maximum possible value of NL is 1.21, when there are so many opposition parties that they can be ignored. Just as there are some situations where it does not really matter how one deals with ‘other’ parties when calculating disproportionality indices and the effective number of parties (Gallagher and Mitchell 2005, 599-605), so too with NL – at least in this situation.

Now consider a single-party government without a majority in the upper or lower houses: the government has 1 unit of power while the opposition has 0.3 units. Here, the minimum and maximum values of NL are 1.55 and 1.69. Again, how we divide opposition power between different opposition parties will not really affect the classifications of party systems in this paper.

These maximum and minimum values of NL diverge more markedly when the opposition has more than 0.3 units of power. But as long as a single-party government has at least three-quarters of legislative power, the way that we distribute power between opposition parties is largely irrelevant.

A similar though not identical picture applies to two-party coalitions. Consider a two-party coalition with a large and a small party. Say that the large party has three-quarters of the government’s legislative power while the second party has one quarter (because they have three-quarters and one-quarter of the governing parties’ seats respectively). The minimum and maximum values of NL are 1.91 and 1.94 where the opposition has 0.1 units of power, and 2.36 and 2.70 where the opposition has 0.3 units. Again, these differences are mostly not big enough to affect our portrayal of party systems.

Powell’s approach is, of course, more sensitive to how much power we allot the opposition. For example, say that Powell was wrong to give 0.2 units of power to oppositions facing supported minority governments: perhaps they should have 0.3 units. The minimum and maximum values of NL for a single-party opposition facing a single-party government would be 1.44 and 1.69; for the two-party coalitions described above, 2.30 and 2.70.

So, the value of NL is most sensitive to how much power we allot the opposition, secondarily to the number of parties in the government, and only thirdly ways to the number of opposition parties and how we divide power between them.

## Appendix B: 1.5-party cabinet systems

This appendix explains why any country which usually has a coalition dominated by one party is likely to have an NC of around 1.5. Consider a country which, over a series of ten governments, has one single-party cabinet, one grand coalition with two equally sized parties, and a variety of coalitions mostly dominated (though not overwhelmingly) by one party, as overleaf:

party shares of cabinet portfolios		
A	B	C
100	0	0
50	50	0
90	10	0
90	10	0
80	20	0
80	20	0
90	5	5
80	10	10
70	15	15
60	20	20

In this case, NC is 1.52. So, the squaring nature of ENP indices means that NC should be around 1.5 in any country where most governments are coalitions dominated by a single party.

**Table 1: The effective number of parties in votes, seats, legislative power and cabinet power in six countries**

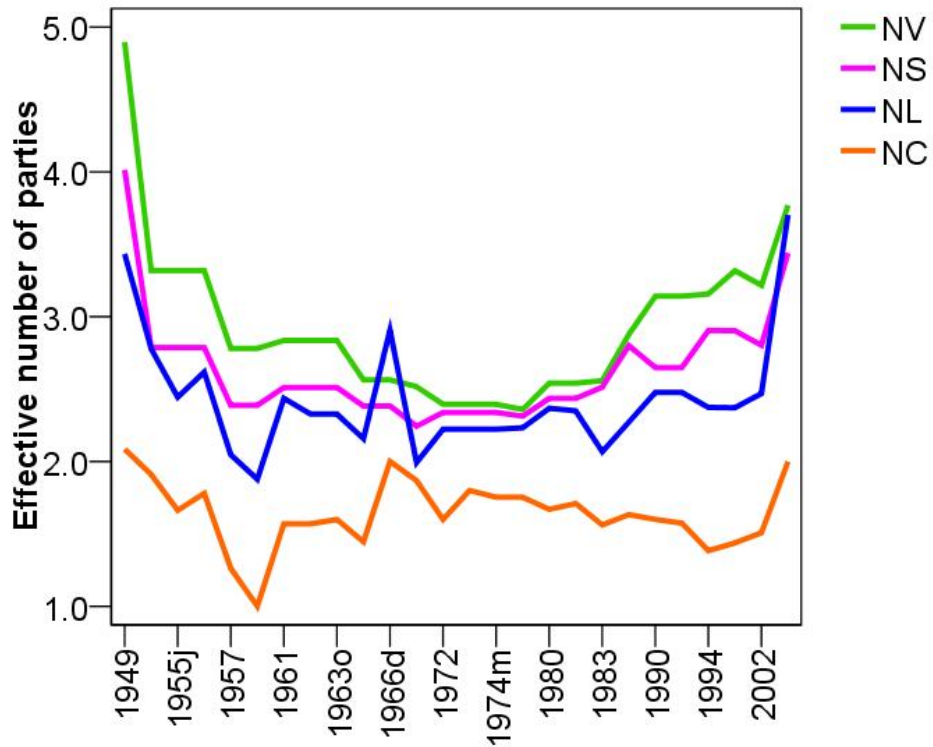
Country	NV	NS	NL	NC	<i>n</i>
<b>Austria (1945-97)</b>	<b>2.7</b>	<b>2.5</b>	<b>2.6</b>	<b>1.7</b>	22
<i>grand coalitions</i>	2.8	2.5	2.9	2.0	15
<i>other cabinets (NC &lt; 1.8)</i>	2.4	2.3	1.9	1.2	7
<b>Denmark (1960-2007)</b>	<b>4.9</b>	<b>4.6</b>	<b>3.4</b>	<b>1.7</b>	10
<i>1960-81</i>	4.7	4.5	2.8	1.6	10
<i>1984-2007</i>	5.0	4.8	4.0	1.9	9
<b>Germany (1949-2005)</b>	<b>3.0</b>	<b>2.7</b>	<b>2.4</b>	<b>1.6</b>	26
<b>Ireland (1948-97)</b>	<b>3.3</b>	<b>2.9</b>	<b>2.1</b>	<b>1.5</b>	18
<i>single-party cabinets</i>	3.0	2.7	1.7	1.0	8
<i>coalition cabinets</i>	3.4	3.0	2.4	1.9	10
<b>Scotland (1999-2007)</b>	<b>4.5</b>	<b>3.7</b>	<b>2.3</b>	<b>1.4</b>	3
<b>UK (1945-2005)</b>	<b>2.8</b>	<b>2.1</b>	<b>1.3</b>	<b>1.0</b>	22

NOTES: figures for Denmark, Germany and the UK are weighted by time, Austria, Ireland and Scotland have not yet been weighted by time. NC is based on unweighted rather than weighted cabinet portfolios. Data for Denmark and Scotland are from Pettitt (2008). Data from Germany and the UK are from Blau (2008). For Austria and Ireland, data on votes and seats are from Wikipedia, data on cabinet portfolios are from Paul Warwick (<http://www.sfu.ca/~warwick/datasets>).

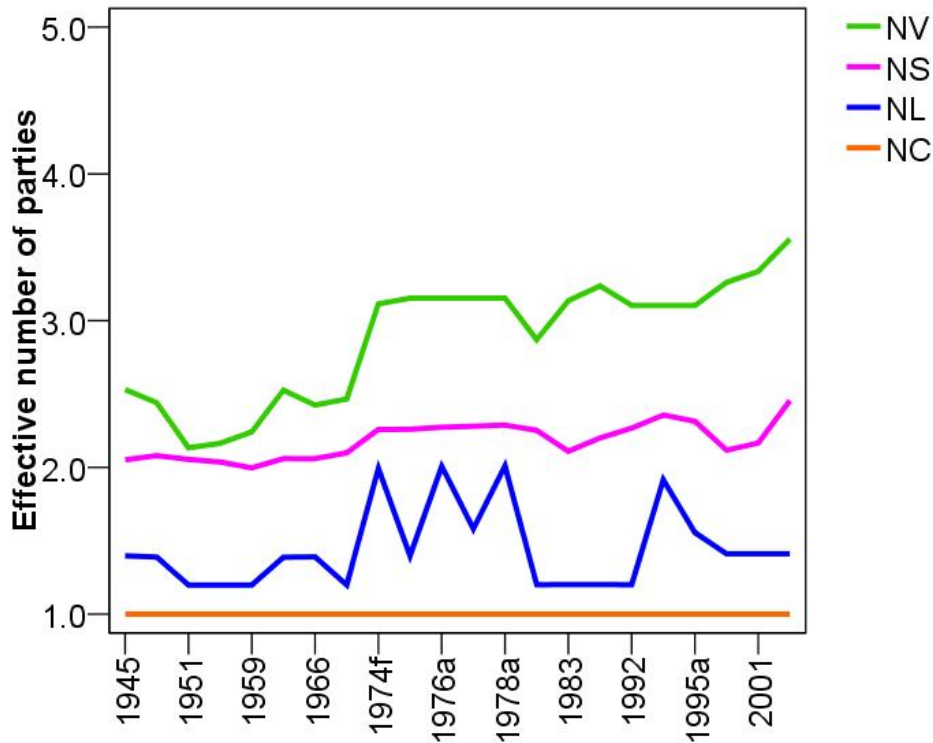
**Table 2: Categorising the six countries**

		<b>Cabinet system</b>		
		<b>one-party</b>	<b>one-and-a-half-party</b>	<b>two-party +</b>
<b>Legislative system</b>	<b>disproportional</b>	UK: 3 <i>Ireland: 3 (single-party cabinets)</i>	Scotland: 4.5	
	<b>moderately proportional</b>	<i>Denmark: 5 (1960-81)</i>	Denmark: 5 Ireland: 3	<i>Denmark: 5 (1960-81)</i> <i>Ireland: 3 (coalitions)</i>
	<b>proportional</b>	<i>Austria: 2.5 (non-grand-coalitions)</i>	Germany 3 Austria: 2.5	<i>Denmark: 5 (1984-2007)</i> <i>Austria: 2.5 (grand coalitions)</i>

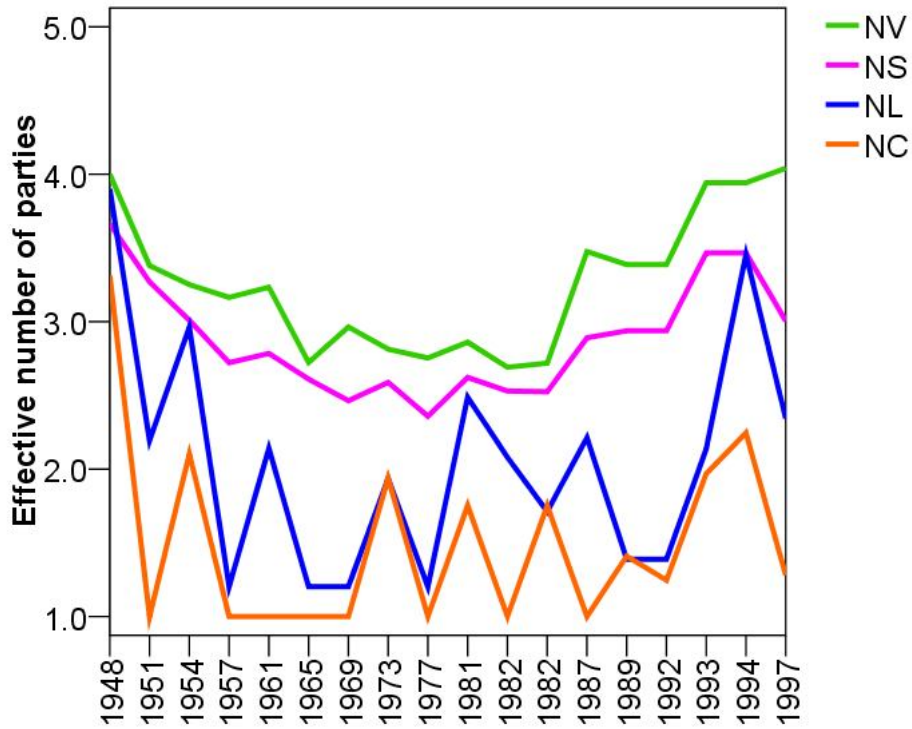
NOTES: as Table 1.



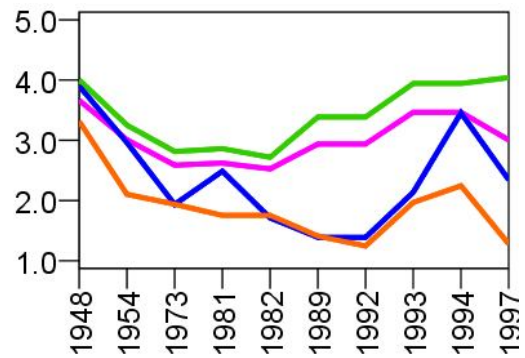
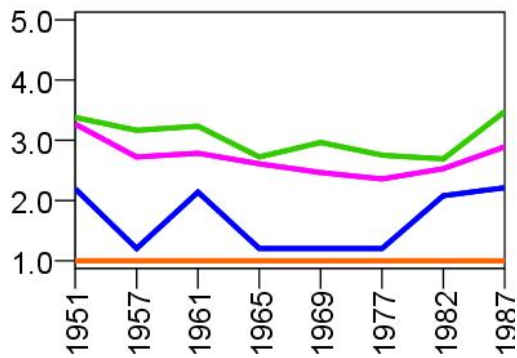
**Figure 1.** Party system profile for (West) Germany  
 NOTES: See notes for Table 1.



**Figure 2.** Party system profile for the UK  
 NOTES: See notes for Table 1.



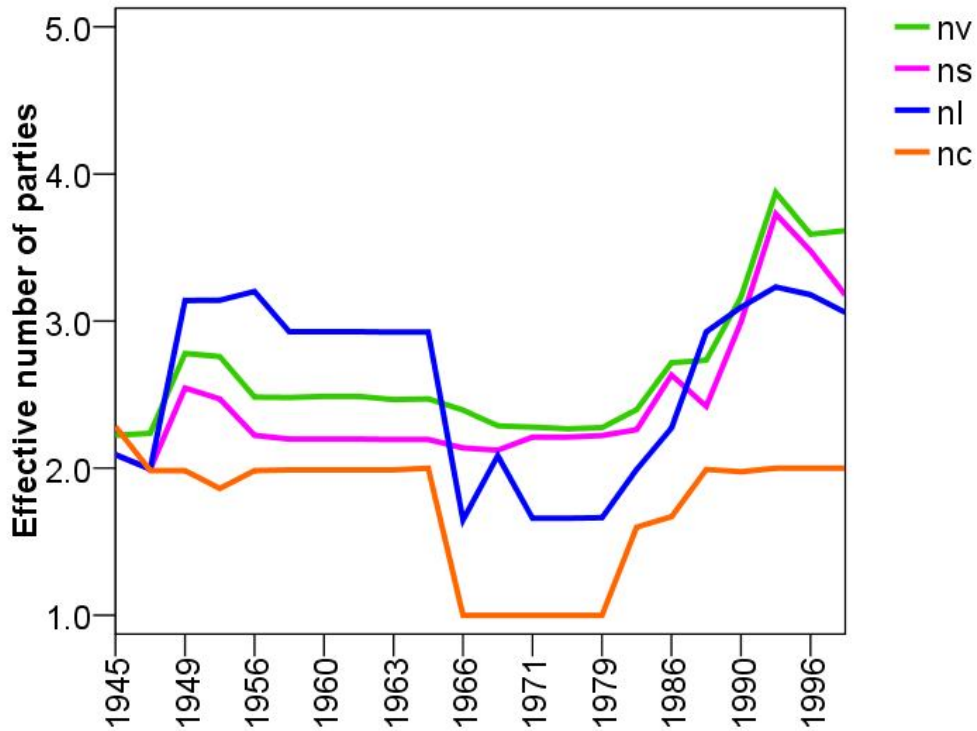
**Figure 3.** Party system profile for Ireland  
 NOTES: See notes for Table 1.



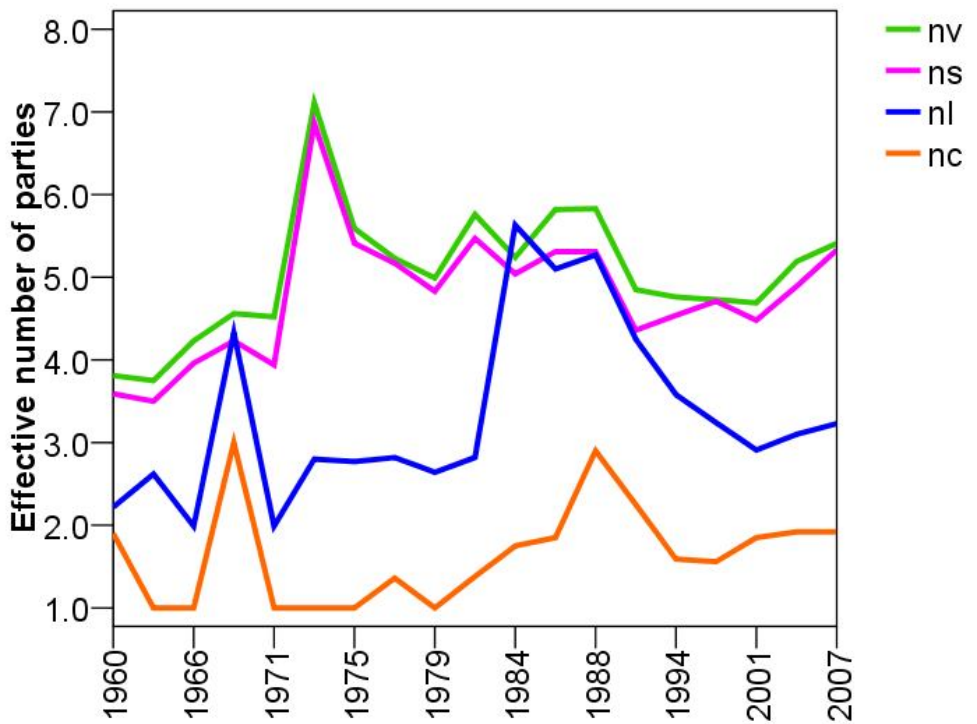
(a) single-party cabinets

(b) coalition cabinets

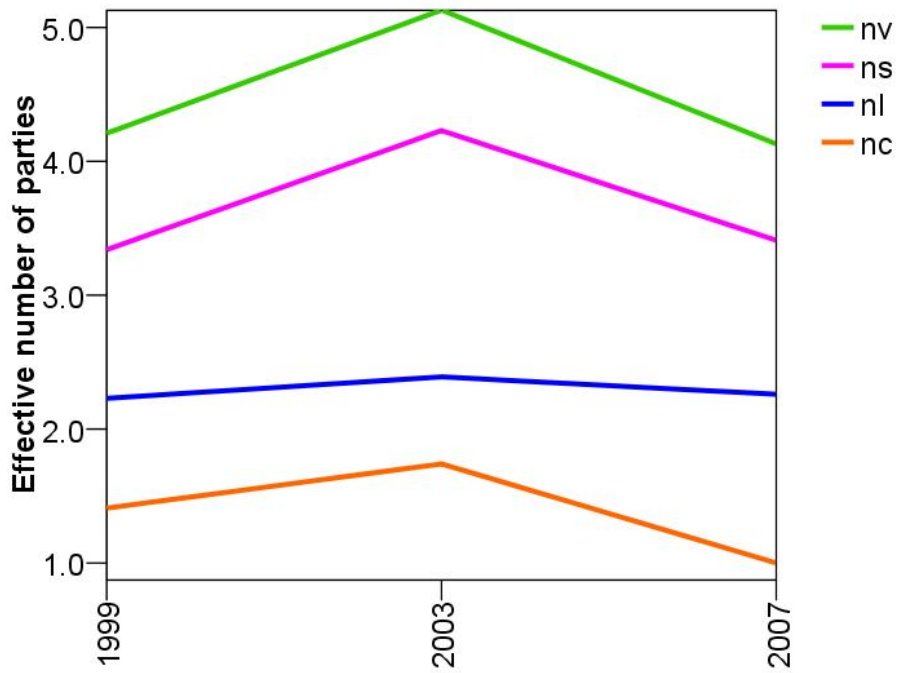
**Figure 4.** Party system profiles for Ireland, separated by type of cabinet  
 NOTES: See notes for Table 1.



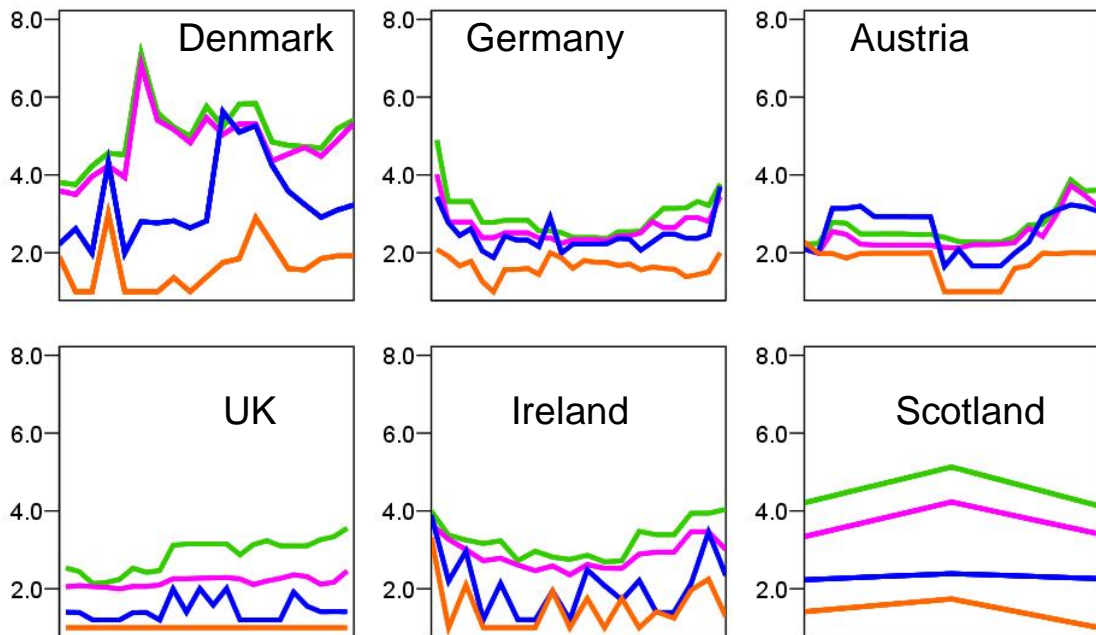
**Figure 5.** Party system profile for Austria  
 NOTES: See notes for Table 1.



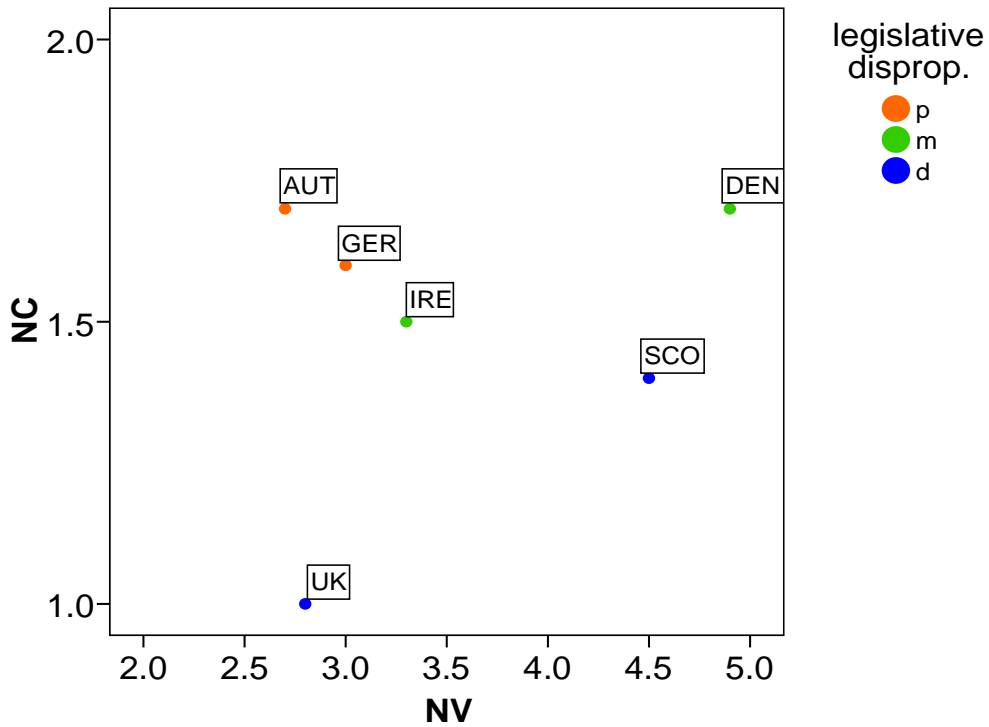
**Figure 6.** Party system profile for Denmark  
 NOTES: See notes for Table 1.



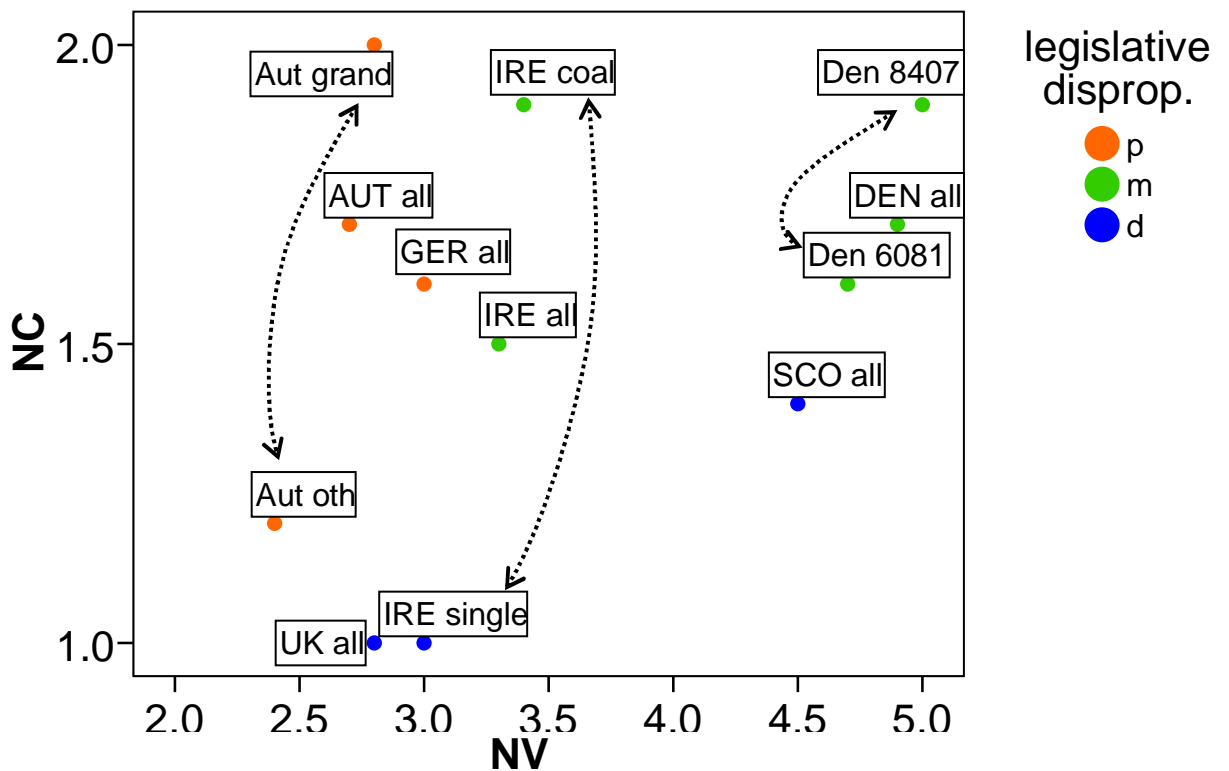
**Figure 7.** Party system profile for Scotland  
 NOTES: See notes for Table 1.



**Figure 8.** Six-country comparison



**Figure 9.** Graphical depiction of the new approach (mean values only).  
 NOTES: Orange dots: proportional. Green dots: moderately proportional. Blue dots: disproportional.



**Figure 10.** Graphical depiction of the new approach (subsets of countries included).  
 NOTES: 'Aut grand': Austria under grand coalitions. 'Aut oth': Austria not under grand coalitions. 'Den 6081': Denmark 1960-81. 'Den 8407': Denmark 1984-2007. 'Ire coal': Ireland under coalition government. 'Ire single': Ireland under single-party government.