

CHAPTER 6

THE IMPACT OF ELECTORAL LAWS ON POLITICAL PARTIES

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To understand electoral system effects we must understand both the *formal properties* of electoral rules (including the prosaic fact that the maximum number of parties elected in a constituency is capped by the number of seats that are up for election) and the (short-run and long-run) *incentives for voters, candidates, and parties* created by those rules. While the formal properties of electoral rules determine how “inputs,” i.e. completed ballots, will be converted into electoral outcomes, it is the structure of electoral incentives that helps determine both what options will actually be available to the voters on the ballot and how voters will decide among those options. In particular, when there is *strategic voting* such that voters do not always support the candidate/party they most prefer if they do not believe that this candidate/party has a realistic chance to be elected, then the nature of the relationship between underlying voter preferences, electoral rules, and electoral outcomes may be significantly affected. Electoral incentives—in conjunction with beliefs about likely outcomes under different scenarios—affect not just voter choice but also *how many* parties or candidates we can expect and also *which* candidates/parties might choose to run.¹ Electoral incentives affect as well how those candidates/parties will position themselves, and how they can be expected to behave if elected to office.

¹ Voters often are prohibited from expressing their support for alternatives that are not on the ballot, and even if allowed a write-in ballot, write-in votes are unlikely to be efficacious.

Electoral incentives cannot be expected to operate "instantaneously," however. Rather, even if institutions remain essentially unchanged, it will take time until voters, candidates, and parties come to understand how a given set of institutions, embedded as they are within a particular political context, will affect outcomes. Moreover, the structure of electoral incentives involves a complex interplay between the incentives for voters and those for candidates and parties. Ideally, we seek to endogenize all relevant factors in a model of dynamic equilibrium—which requires a game-theoretic perspective.²

The formal study of the properties of voting rules has a long history, dating at least as far back as Condorcet (1785). For example, consider the *Condorcet criterion*, which is the requirement that a voting rule always choose the *majority winner*, aka the *Condorcet winner*, i.e. that candidate, if any, who can defeat each and every one of the other alternatives in paired contest. If such a candidate exists, among voting rules that pick a single winner, a classic social choice question is "Which rules satisfy the *Condorcet criterion*?" Major contributions to the axiomatic underpinnings of electoral rules have been made by economists such as Black (1958) and Arrow (1962), and recent work by economists, mathematicians, and others has built on those foundations.

In political science, the publication of Douglas Rae's seminal dissertation *The Political Consequences of Electoral Laws* (Rae 1967; 2nd edn. 1971) marks the beginning of the present empirical and theoretical renaissance in electoral studies, of which works such as Duverger (1955), Eckstein (1963), and Grumm (1958) were harbingers. Subsequent to Rae's work, a vast empirical and statistical modeling literature on electoral systems and their effects has grown up (much of it summarized in works such as Lijphart 1992, 1999; Taagepera and Shugart 1989), while important recent work has dealt with electoral system adoptions and changes (Boix 1999; Grofman and Lijphart 2002; Colomer 2004).³

In one short chapter it is impossible to review the wide range of contributions to what is now an established sub-field, with a journal of its own, *Electoral Studies*, since the areas that were once the central concerns of researchers—fairness of results in terms of the relationships between votes and seats, incentives for party proliferation, and issues of cabinet stability—now constitute only a small and diminishing proportion of work in the sub-field. Also, the definition of the sub-field has widened to consider electoral laws more broadly and not just rules for converting votes into seats, e.g. rules affecting suffrage, ballot format, candidate eligibility, campaign finance regulation, legal constraints on political advertising, calendaring overlaps between presidential and legislative campaigns, etc.

Here, to keep our task manageable we (*a*) focus on empirical research rather than on the axiomatic (and hence implicitly normative) underpinnings of different voting rules, or on formal modeling results that look at incentive considerations in a purely

² Gary Cox (1997) is an exemplar of this research style. For example he has looked at how voter preferences and the levels of expected support for the various available alternatives condition to what extent and in what ways we might expect *strategic voting* by individual voters (or voting blocs).

³ For many purposes it is useful to take electoral rules as given, but it is also as well to recognize that parties seek electoral rules that advantage them.

theoretical fashion; (b) we confine ourselves to comparisons of only a limited number of polar electoral system types, with a focus on the list form of proportional election methods, on the one hand, and plurality elections, on the other—two of the most important voting methods both from a theoretical standpoint and in terms of the frequency of their use in the world's major democracies (see e.g. Reynolds and Reilly 1997); and (c) we report results for only one of the four main concerns of the field (parties, voters, governance, and policy outputs) by looking at electoral system effects on only the first of these, parties. In particular, we examine electoral system effects on the number of parties, disproportionality of partisan representation, the degree of dispersion of party ideological locations, the strength of internal party discipline, etc.

1 DEFINITIONS :

Before we can turn to a discussion of electoral system theory and the search for empirical regularities, it is necessary to begin with some basic definitions.

As noted earlier, list PR and plurality methods are two of the most important methods in common use.

Under *plurality*, in a district where there are m places to be filled, every voter has m votes and the m candidates with the highest votes are declared elected. We refer to m as *district magnitude*. When $m = 1$, commonly called a *single-member district*, and we use plurality, we have the form of elections that in Britain and other English-speaking nations are referred to as *first past the post*. When $m > 1$, we have what is commonly called a *multimember district*. In multimember districts that also use plurality, we have what is called *plurality bloc voting*. Under the most basic form of proportional representation, involving choice among a ranked list of candidates from a set of political parties in districts where $m > 1$, commonly known as party list PR, voters have just one vote to cast (for a political party), and the parties are then entitled to elect a number of candidates proportional to the party's share of the votes cast. Under pure party list voting, if a party vote share entitles it to elect, say k , representatives from a given m seat district, then the top k names on the party's pre-designated list will be the ones chosen to represent that party.

It is common to view electoral systems along a continuum from *majoritarian* to *proportional*. List PR and plurality methods may be used to exemplify the poles of this continuum.

One standard way to define the proportionality continuum is to take an a priori approach in which proportionality is defined in terms of *the threshold of exclusion*, the *maximum* support that can be attained by a party while still failing to win even one seat in a district (Loosemore and Hanby 1971). Defining the low proportionality end of this continuum are plurality and majoritarian systems where the threshold of exclusion is $1/2$. In a given district of size m , the party which captures a plurality of the votes in that district gains all m seats; thus, the threshold of exclusion for that district

is $1/2$ since a majority party *ipso facto* must have a plurality of the votes. Defining the high-proportionality end of the continuum are systems involving proportional representation in nationwide districts, where the threshold of exclusion is roughly $1/S$, where S is the size of the legislature.⁴ In between are multimember districts using proportional representation in districts of size less than S . For example, in a district that elects nine members, the threshold of exclusion would be roughly 10 per cent+ under most proportional voting rules because, no matter how votes were divided among the remaining parties, any party with 10 per cent+ share of the vote cannot be denied representation (at least one of nine seats) in that district.⁵

However, as Rein Taagepera (personal communication, 4 June 2004) observes: "The same electoral rules can lead to vastly different disproportionality, even in the same country and even in consecutive elections," so a purely theoretically derived index of disproportionality such as the threshold of exclusion may be misleading. To deal with this problem, scholars commonly calculate empirical indices of disproportionality over several different elections held under a given set of electoral rules. For *partisan elections*, i.e. elections involving competition where all or most politically viable candidates run on a party label, the two most common measures of overall proportionality are the *Loosemore-Hanby Index of Distortion* (Loosemore and Hanby 1971):

$$D = 1/2 \sum |v_i - s_i|,$$

with v_i the vote share of the i th party and s_i the seat share of that same party;⁶ and the *Gallagher Index* (Gallagher 1991):

$$Gh = [1/2 \sum (v_i - s_i)^2]^{0.5}.$$

For two-party competition, another approach to measuring disproportionality empirically is in terms of what is called the swing ratio. Tufte (1973) proposed that, in two-party legislative competition, a party can expect to be receive a share of seats such that

$$\log s/(1 - s) = k \log v/(1 - v) + \epsilon,$$

In this equation, k is an estimate of the *swing ratio*. The closer k is to 1, the closer we are to a purely proportional system. The swing ratio has been empirically estimated to be around 1.7 for recent elections to the US House of Representatives. In the long-term democracies, it is very close to one for elections under PR.

⁴ The extreme case of plurality bloc voting, when $m = S$, is called an *at-large election*.

⁵ Another approach to defining the theoretical proportionality continuum puts so-called *semi-proportional systems* such as cumulative voting and limited voting in between plurality and strictly proportional methods. In *cumulative voting*, each voter has multiple votes to cast and can split his vote among several candidates or cumulate it on a single candidate. Under *limited voting*, each voter has k votes to cast, where k is less than district magnitude m . The closer k is to m , the less proportional is the method.

⁶ The usual citation to this index is Loosemore and Hanby 1971 but the same idea is found in other contexts in earlier work (see Taagepera and Grofman 2003).

Now we turn to an examination of hypotheses and evidence about the effects of electoral systems on parties and candidates.

2 EFFECTS OF ELECTORAL SYSTEMS ON PARTIES AND CANDIDATES

2.1 Impact on Number of Candidates/Parties who Compete/Win

Duverger (1955) hypothesized that single-member district plurality will tend to generate two-party competition at the level of individual districts, and Duverger also proposed that PR systems would generate multiparty competition. We can synthesize these two results in terms of our earlier discussion by proposing that the lower the threshold of exclusion, the greater the number of parties we can expect to compete in a given district. The key reason we expect such a result is that when parties (and their candidates) are instrumental in seeking office in order to win (and not just, say, to "send a message"), then only parties that have some reasonable prospect of achieving electoral success should enter political competition. Plurality systems have the highest threshold of exclusion of any electoral system, while among PR systems, the higher the district magnitude, the lower the threshold of exclusion (or of representation), and thus the easier it is for parties to achieve representation with only relatively limited electoral support. Thus, for any electoral rule (with the exception of plurality bloc voting), expectations of possible electoral success should increase with district magnitude, and thus more parties should be expected to compete at the district level.

However, if there are numerous small parties or independent candidacies (some of them even "joke" candidacies), and many of those seeking office receive very few votes, simply counting up the number of parties contesting for office can be almost meaningless. Indeed, while we can simply count the number of parties with office-holders represented in a district (or in the entire legislature), even this number can be misleading for some purposes, since it does not take into account the relative sizes of the parties. Clearly a legislature with five parties of roughly the same size can have very different political alliances and distribution of real political power from a parliament with two parties whose combined seat share is 95 per cent and three minuscule parties.

Laakso and Taagepera (1979) addressed this problem by proposing what in political science is known as the *Laakso-Taagepera Index of the Effective Number of Parties*, defined as

$$1/(\sum v_i^2), \text{ for vote share}$$

and

$$1/(\sum s_i^2), \text{ for seat share.}$$

When we calculate *effective number of parties* we take into account the relative sizes of the parties, so that small parties are heavily discounted.⁷ Much of the literature on electoral systems effects uses the effective number of parties rather than the number of parties, per se. However, we should not interpret the term "effective" literally. The Laakso-Taagepera index is simply a useful way to provide a single number to summarize a range of values (i.e. party vote shares or party seat shares).⁸

Empirical work supports the theoretical expectations that both the (effective) number of parties competing for office and the (effective) number of parties represented in parliament increases monotonically with m (see e.g. Taagepera and Shugart 1989; Lijphart 1992). Cox (1997) provides a game-theoretic argument that the number of viable parties who compete in a constituency will be bounded by $m + 1$. Taagepera and Shugart (1989) provide empirical evidence to show that, in general, the average *effective* number of parties elected to office in a constituency is roughly the square root of m , and thus increases (but not in a linear fashion) with m . Their argument is a statistical one about bounded variables and the principle of insufficient information. In a nutshell, since the number of parties elected from a district of magnitude m must be between 1 and m , they take the *geometric mean* of these bounds as their best a priori estimate of the (effective) number of parties represented in a given constituency of size m .

In more recent work Taagepera and Shugart (1993) have examined how to move from the number of parties expected to compete at the district level to predictions about how many (effective) parties we can expect to find at the national level. They model outcomes as a statistical function of the mean value of m and of the size of the legislature.

While district magnitude, m , is the most studied variable in terms of its impact on the number of parties competing for and winning office in a given district, and its importance is undoubted, there certainly are other features of electoral laws (conceived broadly) that also have important impacts on party proliferation. For example, in systems where there are separate presidential elections, the nature of the linkage between presidential and legislative elections can significantly affect the number of political parties. Summarizing past empirical work, Geddes (2003, 208) observes: "Where presidential and legislative elections occur at the same time . . . two-party systems tend to emerge" even if legislative elections are held under PR.⁹

⁷ For example, if there were four parties, one with 40%, one with 30%, one with 20%, and one with 10% of the vote, the effective number of parties at the electoral level would be 3.33.

⁸ Also, the Laakso-Taagepera Index fails to take into account the pivotal power of parties. An alternative approach (not yet found in the electoral systems literature) is first to calculate a *power score* such as the *Banzhaf Index* or the *Shapley Shubik value* (Brams 1975), and then calculate the effective number of parties based on a normalization of each party's power score shares that sums to one.

⁹ However, we would also expect that presidential systems without run-offs that use single-member districts for their legislative elections would exhibit the lowest levels of party fragmentation of any of the presidential systems. In my view, the USA falls into this latter category. While the US Constitution provides for a run-off that is resolved (under special voting provisions) by the US House of Representatives if no candidate receives a majority of votes in the Electoral College, the winner-take-all Electoral College vote allocation provisions of forty-eight of the fifty states make the likelihood of such a resolution of a presidential contest unlikely.

The essential idea behind this result is that competition for the single office of president generates pressure for parties to coalesce behind a presidential candidate who has a chance of winning. But if they do that, they begin to lose their separate identities; while, on the other hand, parties that are not associated with a viable presidential candidate come to be seen as irrelevant and lose support. It is easier for parties to resist such pressures for coalescing when elections for different offices occur on different schedules, since parties that have no hope of winning presidential office can, nonetheless, hope to continue to do well in legislative and municipal elections.

However, the generalization given above must be qualified by the observation that, in presidential systems which use PR for legislative elections, “[p]residential run-offs encourage the formation of small parties” (Geddes 2003, 208).¹⁰ This effect is expected to be strongest when a victory on the first round is scored only if a candidate receives an absolute majority of the votes cast. When there are run-offs, “rather than forming pre-election coalitions, small parties enter the first round in order to establish their bargaining power as coalition partners for the second round.”¹¹ Thus, for presidential systems with legislative elections held under PR, “party fragmentation tends to be greater in countries with presidential run-offs” than in countries where simple plurality determines the presidential winner (Geddes 2003, 208).¹²

Another electoral system feature that substantially affects the degree of party fragmentation is the set of rules governing ballot access. Many non-democratic nations have stringent legal restrictions on competition, or in practice make it impossible for other parties to compete successfully with the ruling party. But even in some democratic nations with genuine political competition, such as the USA we can find a fairly drastic form of cartelized politics, in which existing major parties seek to restrict the domain of competition to bar further entrants by raising substantial legal barriers to new parties (or independents) qualifying for a listing on the ballot.

2.2 Effect on Proportionality of Party Representation

Based on the formal (mechanical) properties of electoral systems, using some straightforward algebra, we would expect that, *ceteris paribus*, the closer the threshold of exclusion of the electoral rule is to zero, the more disproportional will be the results of elections under that rule. In other words, the more proportional the electoral rule, the more proportional the expected results. Thus, under a system where the threshold of exclusion was $1/S$, if S is large, we might expect very little disproportionality

¹⁰ Duverger hypothesized that there are strong incentives for party proliferation in two-stage run-off systems in which only candidates who received some specified level of support in the first round are allowed to compete in the second and final round.

¹¹ See further discussion of run-off rules later in the text.

¹² In general, for systems using PR for legislative elections, Jones 1995 argues that, while district magnitude is the most important single determinant of party fragmentation in parliamentary systems, its effects are overshadowed in presidential systems by the presence or absence of run-offs and by the nature of the election calendar.

between votes and seats. In contrast, if we had two-party plurality competition, the theoretically worst case would give us a disproportionality of nearly one-half;¹³ while disproportionality under plurality could even approach one as the number of parties increases.

But we also expect that, the closer the threshold of exclusion is to zero, the more parties there are that will contest the election, since the incentives are for smaller parties to contest if there is a chance they might be successful.¹⁴ The existence of both a mechanical and an incentive effect means that differences in disproportionality as we increase district magnitude are not as large as we might first think based on the purely mechanical effects of district magnitude. The reason is that PR systems with high district magnitude tend to be contested by more parties than PR systems with a lower district magnitude and, even with a highly proportional system, some of these parties will still not achieve representation. Thus, the incentive effect of district magnitude, which acts to increase disproportionality by increasing the number of parties, operates in an opposite direction to the mechanical effect of district magnitude in reducing disproportionality.¹⁵ Moreover, there are many other complicating factors, such as spillover effects in which parties with little chance in a given constituency nonetheless run candidates there in order to enhance their stature as national parties, or to assist candidates of the party running for other offices in the same or an overlapping constituency by motivating party supporters to participate in the election. Nonetheless, empirically, there is a strong relationship in which high district magnitude is associated with low disproportionality.

2.3 Effect on Biases in Favor of the Larger Parties and Against the Smallest Parties in the Translations of Votes into Seats

If district magnitude is large, and there are no special threshold rules that exclude parties that receive less than some given percentage of the vote from being eligible for seats in the parliament, list PR and other forms of proportional representation tend to treat large parties and smaller parties relatively symmetrically in translating vote shares into seat shares.

In plurality-based competition in single-member districts there can be strong biases in favor of the largest party. For example, for multiparty competition under single-member district plurality in Great Britain, in the 2005 election, we saw the plurality vote-getting party, Labour, win a clear majority of the seats despite having

¹³ Since only one seat is to be filled, for two-party competition, the Loosemore–Hanby Index would be about one-half when one party received just barely more than half the vote, and the other barely less than half the vote.

¹⁴ Recall that the threshold of exclusion is a theoretical construct. Often parties will be able to elect a representative with a much lower share of the vote.

¹⁵ In other words, there is reciprocal causality between number of parties and disproportionality. Taagepera and Shugart (1989) were apparently the first to call attention to the phenomenon of the countervailing incentive effects of increased district magnitude on disproportionality.

barely more votes nationwide than its two major rivals (36 per cent). Similarly, for the past decades we have seen a substantial bias against the smallest party in Great Britain, the Liberal (later Liberal Democrat) Party, in its ability to translate vote share into seat share.¹⁶ And, in plurality systems, biases against third parties can be self-reinforcing in that, as Duverger hypothesized, they can generate strategic voting among potential supporters toward a larger party with a better chance of winning the election in order to avoid "wasting one's vote".¹⁷

2.4 Incentives for Non-convergence of Party Platforms and for the Formation of "Extremist" Parties

From Duverger (1955), as noted above, we anticipate that single-seat plurality elections will tend to generate two-party competition (at least at the constituency level). From Downs (1957) we anticipate that, if we have two parties in a plurality-based system, and if there is one principal dimension of political competition, each party will locate at the preferences of the overall median voter. But, as noted earlier, Taagepera and Grofman (1985) have found that, empirically, the effective number of parties winning representation is approximately $I + 1$, where I is the number of issue dimensions. Thus, in a two-party competition we should see only a single issue dimension. But combining the theoretical insights of Downs and Duverger and the empirical findings about dimensionality, theory leads us to expect—at least under the assumptions specified above—that the politics of the candidates who run for legislative office in plurality systems will be centrist.

However, when we look at real-world elections under plurality, while we find the kinds of centripetal pressures that Downs (1957) models, we also find strong countervailing centrifugal effects. Among the most important of these countervailing forces are the role of political activists in pushing for policies closer to their liking, the nature of the party nomination process (with party primaries tending to reinforce divergence from the overall voter median because of the restricted enrollment in the party primary electorate with disproportionate participation by hard-core supporters of the party, and the tendency to select candidates who reflect the views of those voters), the existence of geographically based differences in party support and political attitudes, and the presence of policy-motivated goals of elected politicians.¹⁸

Even in plurality systems with predominantly two-party competition at the national level, such as the USA, we do not find two major parties that look completely like Lewis Carroll's Tweedledum and Tweedledee. Indeed, I have argued that the

¹⁶ Another form of electoral system bias is *partisan bias*, i.e. a *party-specific* asymmetry in the translation of votes into seats, such that, for identical vote share, different parties will receive different seat shares (Grofman 1983). Bias occurs because some parties are more "efficient" in turning their votes into seats than other parties. For example, in two-party competition in a legislature, one party may win its seats with an average of 70% of the vote, while the other party may win its seats with an average of only 55% of the vote. Partisan biases may arise "naturally" as a result of the partisan distribution of votes across territory, and/or they may be manipulated.

¹⁷ We return to this topic later.

¹⁸ See esp. Wittman 1973, 1977, 1983, 1990.

Downsian convergence result gets it quite wrong. In plurality elections, rather than being the rule, full convergence should rather be thought of as a bizarre exception (Grofman 2004). In a nutshell, the argument is that the Downsian convergence result rests on more than a dozen specific assumptions, and that changing almost any one of these assumptions makes the convergence result go away (cf. Adams, Merrill, and Grofman 2005). Based on their empirical work, Merrill and Grofman (1999) suggest that plurality politics is apt to generate what they call "moderate divergence."

Moreover, the Downsian convergence result for two-candidate plurality elections is what is expected to happen within a *single* constituency. However, even if, within any single constituency, the candidates of every party are offering identical platforms, if local candidates have "wobble room" to move their positions closer to the views of the median voter in their constituency, then the platforms espoused by the candidates of a given party need not be identical across constituencies. If (a) there is considerable variation in the location of the median voter across constituencies (as was the case for much of US history, with the South being more conservative than the rest of the nation, at least on issues having to do with social values), and (b) if, when we have otherwise identical candidates of opposite parties in a given constituency, the voters in that constituency use their proximity to the *national* party positions as a cue to decide among them, we can get national divergence of parties even though, locally, parties are more convergent. This is arguably the situation which was characteristic of the USA in the 1980s, in which constituencies (predominantly urban ones) where the median voter is a liberal tended to elect Democrats, and constituencies where the median voter is a conservative (especially constituencies in the South) tended to elect Republicans. Thus, national divergence of party positions can occur even when, locally, we have substantial (or even complete) convergence.¹⁹

In contrast, when we turn to look at incentives for ideological spread in PR systems, it is easy to see that PR systems offer the opportunity for relatively small groups of like-minded voters to elect a candidate of choice. In particular, ideologically fringe groups have an incentive to compete (as might other types of minorities, e.g. ethnic-based parties) because they have a real chance to win some representation, especially when district magnitude is high. Consequently, theory leads us to expect not just more parties but also a wider *range* of (ideological and other) points of view represented in the legislature under list PR than under plurality (Cox 1990, 1997). And this is confirmed by the empirical data. Of course, there may still be incentive effects, such that voters will choose not to support parties that have no chance to be part of a governing coalition even if those parties might win representation in a proportional voting system. Still, incentive effects to shift away from parties that have little chance of being part of a governing coalition will be weaker in situations under PR where voters might realistically expect their first-choice party to at least win some representation than in situations under plurality where a vote for

¹⁹ More recently, it can be argued that we have (perceived) policy divergence of Democratic and Republican candidates in the USA even at the local level, because "wobble room" has been largely eliminated in favor of Steinian propositions of the form "A Republican is a conservative is a Republican," and "A Democrat is a liberal is a Democrat."

a minor party is truly wasted except as a protest vote or in terms of a belief that support for the party this election is a means of building toward the party's future success.

2.5 Effect on Degree of "Localist" Perspectives of Representatives

Electoral system scholars have tried to understand the links between election system type and the extent to which parliamentarians exhibit a localistic orientation. But degree of proportionality is not the only useful way to distinguish among electoral systems. There are other features across which voting rules can be compared which give us categorization schemes that can also be used for predictive purposes. For example, one such typology considers the nature of the ballot, with the key distinction being between ballots that only require voters to mark one or more x's, on the one hand, and those that require voters to supply a partial or complete ranking of alternatives, on the other. This distinction cuts across the PR-plurality distinction. While list PR only requires x's from the voter, another form of proportional representation, the *single transferable vote*, requires voters to list their rankings among alternatives.²⁰ Another useful categorization scheme is based on the degree to which voters vote only for individual candidates or only choose among parties, with *non-partisan elections*, where party labels are barred, anchoring one pole, and *pure list PR elections*, where voters cast a single vote and must accept the party list ranking of candidates, anchoring the other pole. List PR and STV do not fall on the same point on this continuum either.²¹

Carey and Shugart (1995) hypothesize that the probability that legislators are more likely to pursue localistic concerns, such as pursuing "pork-barrel" projects for their constituencies is greater, the greater the electoral incentives they have to cultivate a *personal vote*, i.e. a vote based on the service record or personal traits of an individual candidate, as distinct from support for that candidate based on the general policies of the party which nominates him. Carey and Shugart (1995) propose to rank electoral systems in terms of the incentives for cultivation of personal votes by looking at the values of four variables: (Each of these distinctions allows us to specify hypotheses about electoral systems, some of which are discussed below.) (a) the extent to which party leaders can determine which candidates are nominated, (b) the degree to which

²⁰ The *single transferable vote*, also known by its abbreviation STV and as the *Hare* system, requires that voters must rank order their preferences for candidates. If there are m seats to be filled and n voters then winning candidates must receive a *Droop quota* of votes (the greatest integer bound of the quotient $n/(m + 1)$). If no candidate receives a Droop quota of first preference votes, the candidate with the fewest first preference votes is eliminated and, for those ballots where she was first choice, votes are reallocated to the next candidate on the voter's list. This process continues until exactly m candidates have received a Droop quota, or until the pool of eligibles is down to as many candidates as there are seats remaining to be filled.

²¹ Each of these distinctions allows us to specify hypotheses about electoral systems, some of which are discussed below.

any given candidate's electoral fate rides on the votes received by others of his own party. (c) in party list systems, the extent to which party leaders control the exact placement of candidates on the party list and thus, by placing favored candidates near the top of the list, can make it more likely that they will be elected, and (d) district magnitude, m .²²

From the Carey and Shugart perspective, list PR methods with large district magnitudes anchor one end of the party-centric continuum, with the lowest expected levels of localism, while the system used in Japan during much of the post-Second World War period, the single non-transferable vote (SNTV) with small magnitude constituencies, represents the other end of the continuum.²³ Plurality-based single-member district systems are intermediate, but toward the localistic end of the continuum. They tend to be characterized by what Wattenberg (1992) called "candidate-centered politics," i.e. politics where the personal characteristics of the local candidates matter as much as or more than the national party platform in affecting voter choices, and where elections tend to be decided by voter preferences on issues that are local to the constituency as much as or more than over national issues.

2.6 Impact on Within-party Ideological Homogeneity

As suggested earlier, we may think of candidates as being tethered by a rubber band to the ideology espoused by the parties whose label they run on. How elastic that rubber band is (i.e. how far it will stretch and thus how much wiggle room the candidacy has to deviate from the party position) varies with a number of different factors.

One important factor seems to be the degree of party control over the party nomination process. If central party organizations can deny dissidents the right to campaign under the party label, they can preserve (to the extent that they wish to) the party's ideological purity.

Another important factor is the control central party leaders have over the career path of party members. If advancement within party ranks is largely or entirely centrally controlled, then, *ceteris paribus*, we would expect that deviation from the party line could better be kept in check.²⁴ In the extreme, as in some party systems in the former Soviet Union, we may have a party authorized to expel members, including sitting legislators, more or less at the discretion of party leaders, and a rule that legislators elected on a given party's label who are no longer in that party may no longer serve in the legislature. Under such rules, party leaders can control party dissidents quite thoroughly.

²² They treat each of these variables as dichotomous (e.g. distinguishing only between $m = 1$ and $m > 1$) and weigh the first three factors equally to arrive at a composite index.

²³ SNTV allows voters one vote, in a district in which there are m seats to be filled. Thus, the threshold of exclusion for SNTV is $1/(m + 1)$. See Grofman et al. 1999.

²⁴ See discussion in Katz 1980, 8-9.

Ceteris paribus, in a pure party list PR system, voters in the general election have no effect on party orderings in determining which of the party's candidates will be selected, and in most such systems, the party leaders completely control the order in which candidates are located on the party list. We expect that such systems will exhibit greater party cohesion (as signaled by the unwillingness of party members to cast legislative votes that diverge from the national party position) than single-member district plurality systems where the nomination process is localized. The argument is simply that when the national party controls your re-election chances there are considerable costs to not doing what party leaders want.²⁵

Another factor is how political geography and the nature of the districting process affect the nature of district homogeneity. If we have districts that differ greatly in their voters' ideological characteristics, there will be incentives for parties to allow variation in candidate platforms at the local level in order to increase the party's chances of winning seats. Thus, the nature of the districting process is relevant. The more alike in ideological characteristics are the constituencies being constructed, the easier it is for parties to enforce ideological unity on their candidates. Of course, since, under list PR, it is like-minded voters who aggregate to form the party constituency, list PR systems might be expected to lend themselves to more homogeneous parties than plurality systems and, relatedly, we might expect that, *ceteris paribus*, countries with high district magnitude would be the ones most likely to have ideologically cohesive parties.

Because we expect high district magnitude to yield more ideologically homogeneous parties we should also expect that, *ceteris paribus*, party candidates will be closer to the mean party supporter of that party in countries with high district magnitudes than in countries with low district magnitudes, because in the former set of countries we should expect highly differentiated party systems with large numbers of parties where both voters and candidates with policy preferences can readily find a party close to their own issue position.²⁶

2.7 Impact on Incentives for Party Factionalism

The nature of the electoral system used for general elections potentially affects the internal homogeneity of political parties. One important consideration is whether or not the electoral rules allow for/require that candidates of the same party compete with each other for votes as well as with candidates of the other parties. Some electoral rules, perhaps most notably the *single non-transferable vote (SNTV)*, with m seats to be filled, but with each voter having only one vote, set up a situation in which party

²⁵ However, this is not to say that you cannot have strong parties even under plurality. For example, Great Britain has managed to do this by only partly decentralizing the nomination process; in that nation's contemporary politics often, when it comes to nominations, the national party proposes, while the local party only disposes.

²⁶ For some relevant (but inconclusive) empirical results bearing on this issue see Holmberg 1999, esp. table 5.5, p. 104; Wessels 1999, esp. figure 7.4, p. 156.

members are potentially in competition with one another. This encourages party factionalism, as organized factions within the party support candidates with factional ties against those of other factions within the party. Thus, we expect that countries using SNTV will be likely to have factionalized parties. This expectation is confirmed for Japan during the post-Second World War period when SNTV was used for its lower national chamber (Reed 1990; see chapters on Japan in Grofman et al. 1999). However, SNTV's incentives for factionalism can be overcome if the party leadership is strong enough—as apparently was true in Taiwan which also used SNTV, for the long-time ruling party (see chapters on Taiwan in Grofman et al. 1999).

3 CONCLUSIONS

The remarks above give some feel for what is known/theorized about electoral systems effects in one important domain, consequences for parties and candidates. But, as noted earlier, effects on parties are only one of four large-scale topics that have been important in electoral system research, and despite the sub-field's remarkable expansion and development over the past several decades, there remain a number of challenges for future research on electoral system impacts:

1. More work is needed on the linkages between electoral system effects and public policy outcomes.
2. We need to understand better the interaction between electoral system effects and institutional features such as federalism and presidentialism.²⁷
3. We need to better understand how the "minutiae" of electoral rules (including the rules of the nominating process and subtle differences in implementation among largely identical voting rules) help determine electoral system consequences.²⁸

And last, but not least,

4. We need to answer better the question: "How much do electoral systems matter, as compared to factors such as social heterogeneity, political culture, political history, or other institutional practices?" (cf. Norris 2004, 5–6, and the discussion of electoral systems as embedded institutions in Bowler and Grofman 2000).

²⁷ For example, both Persson and Tabellini 2003 and Jones 1995 have argued that some effects of electoral systems may be totally different when the electoral rules are part of a presidential system from when they are part of parliamentary systems.

²⁸ For example, in the empirical work on turnout across nations, the effects of electoral systems, *per se*, on turnout do not appear nearly as large in their impact as factors such as whether voter registration is automatic, the availability of weekend voting or other extensions of time to cast a ballot, and, perhaps most importantly, the imposition of compulsory voting (Jackman 1987).

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