Looking for Locals: Voter Information Demands and Personal Vote-Earning Attributes of Legislators under Proportional Representation

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Proportional representation systems affect the extent to which elected legislators exhibit various attributes that allow them to earn a personal vote. The sources of variation in personal vote-earning attributes (PVEA) lie in informational shortcuts voters use under different electoral rules. List type (closed or open) and district magnitude (the number of legislators elected from a district) affect the types of shortcuts voters employ. When lists are closed, legislators' PVEA are of decreasing usefulness to voters as magnitude (and hence the number of candidates on a list) increases. When lists are open, legislators' PVEA are increasingly useful to voters as magnitude increases, because the number of candidates from which voters must choose whom to give a preference vote increases. As predicted by the theory, the probability that a legislator will exhibit PVEA— operationalized as local birthplace or lower-level electoral experience—declines with magnitude when lists are closed, but rises with magnitude when lists are open.

The tradeoff between local and national represen- tation is a fundamental matter for democracy. Representation in some systems is highly focused around individual legislators catering to voters' local in- terests, while in others it revolves primarily around voters' preferences over national policy goals articulated by cohe- sive parties. Pitkin (1967, 215) called this local-national balance the "classical dilemma" of representation; King (1990) called the goals of local and national representa- tion "inherently incompatible." In this article, we explore the local-national tradeoff by building on the notion of the "personal vote," defined as that part of a legislator's vote that is based on his or her individual characteristics or record (Cain, Ferejohn, and Fiorina 1987). Where voters vote on the basis of the personal distinctiveness of politi- cians, candidates for elective office often seek to advertise the ways in which they will serve local interests. In other settings, where voters are not seeking candidate-specific information, parties and their collective appeals are the principle vehicles of representation, and legislators' ad- vertising personal attributes would have limited electoral utility. In other words, politicians may see an electoral benefit in signaling their responsiveness to local needs, for which they can claim credit more reliably than for na- tional policies (Fiorina and Noll 1979), but only if they are campaigning in an electoral context in which voters make use of such information.

In this article, we analyze how the attributes of legislators—specifically, their birthplaces and prior lower- level electoral experience—vary with electoral rules. We argue that certain variants of proportional representa- tion rules encourage voters to look for cues to politicians'

understanding of local needs. These cues, representing objective or virtually ascriptive characteristics, are potentially even more valuable to voters than the constituency-oriented behavior that has been the primary focus of the "personal-vote" literature, because politicians cannot modify their places of birth or existing political resumes as they can their behavior. A politician either has the right attributes to signal credibility as a local servant or not. We undertake an analysis based on original data from legislators' biographies and find that personal vote-earning attributes of legislators vary in a way consistent with variations in voter demand for information about politicians' commitment to local needs.

The Personal Vote and Attributes of Legislators

The literature related to the personal vote generally has focused on the behavior of legislators with respect to their constituencies, such as the vast literature on U.S. Representatives' "electoral connection" (Mayhew 1974) and "home style" (Fenno 1978). This literature argues that legislators engage in specific behaviors, such as the delivery of pork-barrel favors via committee service consonant with the constituency, casework on behalf of individual voters, or sponsorship of bills aimed at local credit claiming. These behaviors are geared towards increasing the legislators' electoral safety, in the sense of developing a voter following that might shield the legislator from adverse national partisan swings.

A complimentary literature developed somewhat later regarding other single-seat district systems (Anagnoson 1983; Cain, Ferejohn, and Fiorina 1987; Norton and Wood 1993; Searing 1994). However, it remains uncertain the degree to which personal-vote strategies actually have an electoral payoff in Westminster-type parliamentary systems, where national and partisan factors are so much more important to voters' choices (Gaines 1998; Mezey 1994). Other studies have compared legislators elected in large multiseat proportional-representation districts to those elected in single-seat districts, generally finding that the former are much less likely to maintain contact with their constituencies than are the latter (Bowler and Farrell 1993; Lancaster and Patterson 1990; Scholl 1986; Stratman and Baur 2002). Some recent work has traced the electoral value of personal-vote strategies in multiseat electoral formulas in which there is intraparty competition in East Asia (Grofman et al. 1999; Ramseyer and Rosenbluth 1993) and Latin America (Ames 1995; Crisp et al. 2004; Crisp and Ingall 2002). A key conclusion of this literature is that legislators who

are in competition with copartisans are likely to engage in behavior aimed at wooing subparty blocs of voters within their districts.

Relatively little cross-national literature has been devoted to understanding how an electoral connection might affect the *attributes*, rather than behavior, of legislators and legislative candidates. There have been numerous studies of the social backgrounds, occupations, and other attributes of legislators (e.g., Jewell and Patterson 1973; Lowenberg and Patterson 1979; Putnam 1976). However, this literature has rarely linked intracountry and cross-national variation in such attributes to the electoral system, although some studies of specific legislatures have drawn the link between personal-vote incentives and legislator attributes (e.g., Diaz 2004; Gallagher 1985). Yet there is a key advantage to undertaking a more systematic analysis linking the personal-vote and legislator-attributes literatures, as we do in this article—namely, that certain attributes are not matters of home *style*, but of substance.

Attributes like local origins and previous electoral experience provide voters with substantive cues to a politician's knowledge of the needs of the locality. While politicians can modify their behaviors if it is electorally rational for them to do so, they can do little or nothing to modify their more objective attributes. Gallagher states that, "when it comes to objective personal characteristics, one almost invariably sought is the possession of local roots" (1988, 251).[1] Similarly, Putnam states that "prior experience in lower elective office is among the most widely shared characteristics of national legislators" (1976, 51).[2] We agree that local roots and electoral experience are generally valuable, but we extend these notions by arguing that the value of such attributes varies systematically with the extent to which electoral rules generate a demand by voters for locally committed legislators. Drawing on the work of Valdini (2005), we argue that voters demand different kinds of information about their potential agents of representation under different electoral rules. Further, we argue that this variation is reflected in variations in the personal vote-earning attributes (PVEA) that elected legislators exhibit under different electoral rules. To the

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[1]The U.S. campaign of 2004 suggested politicians perceive nativity to be a valuable signal even in presidential elections, even if the politician has no other connection to the locality. John Edwards regularly cited his birth in South Carolina prior to that state's primary, notwithstanding that he had not lived there since infancy. John Kerry, a nearly lifelong resident of Massachussetts, nonetheless cited his birth "in an Army hospital in Colorado" in a campaign ad run in that state (excerpted on *Morning Edition*, National Public Radio, June 2, 2004).

[2]A significant literature on the U.S. House uses prior elective office as an indicator of the "quality" of a candidate, including Jacobson (1983), Bond et al. (1985), and numerous others.

extent that electoral rules vary within a country, we thus can expect intranational, as well as cross-national, variation in legislators' PVEA.

Moreover, because legislators can engage in personal vote-seeking behavior once they are in office, but cannot modify their more objective attributes, PVEA are in some respects more fundamental than the more commonly studied behavioral indicators. In fact, a corollary to the linkage of attributes and the personal vote—which we test below—is that where there is a premium on the personal vote, PVEA are even more important to rookie legislators than they are to their veteran colleagues. That is, politicians on the outside seeking to win a first term have a higher need for PVEA precisely because they are competing not only with veterans who have their own PVEA, but also with veterans who were able to be elected initially despite lacking PVEA, and who subsequently have compensated for it via their behavior.

In considering how electoral systems affect the information demanded by voters, and thus the PVEA of legislators, we focus our attention on two key variables within proportional representation (PR) systems. The first is the type of lists that parties present. In *closed lists*, the order of election of candidates from a given party in a multiseat district is determined by a party-provided rank. In *open lists*, candidates are elected from a party list in the order of their individual preference-vote totals. The second variable is the district magnitude, defined as the number of legislators elected from a district. As we develop in the next section, these two variables interact to affect the extent to which voters demand information about the personal attributes of legislators and legislative candidates.

Proportional Representation, Information, and the Personal Vote

All PR list systems—open or closed—involve competition in a district between l party lists, each of which contains c candidates. A list obtains s seats based on its (collective) vote share and, provided $s > 0$, seats are assigned to candidates, starting with the candidate ranked first, and so on, through the candidate at rank s. The only difference between list types is the way in which those ranks are determined. Under closed lists the party assigns each candidate a rank on the list: $1, 2, \ldots, c$. Under open lists, ranks are determined by preference votes. Generally, c for any given party is about the same as M, the district magnitude. According to Carey and Shugart (1995), the list type (closed or open) and the district magnitude interact to affect the incentive of the politician to cultivate a personal vote, whether through advertising objective attributes or through legislative behavior, or other means.

FIGURE 1 **Expected Relation Between District Magnitude and Politicians' Incentive to Cultivate a Personal Vote Under Open and Closed Lists**
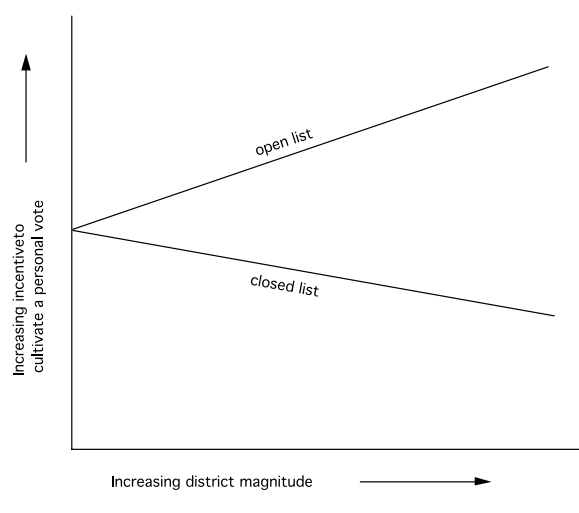

Figure 1 shows how the incentive to cultivate a personal vote increases or decreases with district magnitude under each list type. The effect stems from the degree to which it is electorally rewarding under varying rules for the politician to advertise ways in which he or she differs from other candidates of the party, or from the party as a whole. If lists are open, candidates of the same party are in competition with one another for preference votes. Therefore, they have an incentive to cultivate a personal reputation as a means to attract votes. As district magnitude rises, so does the number of copartisans against whom each member is competing. Thus, the incentive to cultivate a personal vote increases with magnitude when the list is open. When the list is closed, on the other hand, there is no intraparty competition. Nonetheless, the absence of such competition by itself does not mean there is no personal vote-seeking incentive. At low magnitudes, at least some of the candidates on the list may increase their chance of being elected by cultivating a personal vote that brings more votes to the party list as a whole. However, at very high magnitudes, the probability that such effort will be rewarded is low, because with a long (closed) list, the effect that any one candidate can have on his or her own chance of election is imperceptible. Thus, in closed lists, the incentive to cultivate a personal vote declines with magnitude.

Carey and Shugart's (1995) logic takes the perspective of the politician, cultivating (or not) a personal vote. We extend this logic further by tying it to the demands of voters. Efforts by legislators to cultivate a personal vote

would not work if voters did not respond to such efforts. But why would they respond? The answer lies, we argue, in the information shortcuts employed by voters, which, as noted by Valdini (2005) vary according to electoral rules. Information shortcuts are heuristics that rational voters use in order to make decisions in elections.[3] We assume that voters care about both the variety of party platforms and characteristics of candidates.[4] Both parties and candidates are potential *agents of representation*, but their relative importance varies across electoral contexts (Morgenstern 2004). Party platforms typically convey information for voters about the policy goals of parties, whereas the differing attributes of candidates may signal far more parochial and local considerations.

If voters were to attempt to assess all of their potential agents of representation, under closed lists they would need to know the attributes of each of the s' candidates nominated by each of the parties, where s' indicates the expected number of seats that will be won by a given party.[5] That is, if voters assess both party platforms and the attributes of candidates, each voter is assessing the platforms represented by l party lists, and each list's s' individual candidates. This can be expressed formally as:

$$AR = l' + \Sigma(s'_i), \qquad (1)$$

where AR is the number of potential agents of representation, l' is the number of lists expected to be in serious contention for at least one seat and s'_i is the expected number of seats for the ith list; the summation is over all l' lists. The higher the AR, the more burdensome acquiring this information is. Rational voters will not expend the time and energy necessary to acquire such information, and hence will rely on shortcuts.

To illustrate how this logic works under closed lists, imagine a district where $M = 3$ and $l' = 3$. Suppose further that it is common knowledge that what we will call Party 1 has a realistic chance of electing two candidates ($s'_1 = 2$), and Parties 2 and 3 each have some realistic probability

of electing one ($s'_2 = s'_3 = 1$). The range of expected outcomes is thus that one party elects the candidates ranked first and second on its list, with one of the other parties electing just the first ranked candidate, or else each of the three parties each elects just its first-ranked candidate. Then, according to Equation (1), the number of agents of representation to be assessed to acquire information on all potential agents is seven (three lists plus four candidates). At such low M, it is not unrealistic for voters to process information about these agents *if it is being provided*. And, we have already noted, at low M, even in a closed list, politicians have an incentive to provide information about their personal qualifications. Doing so may contribute votes to the party beyond that derived from the party's collective reputation, hence increasing individual candidates' probability of victory.

Now suppose that $M = 100$. Perhaps 12 or more parties have a realistic chance of winning at least one seat, and four or more of the parties each may have 10 or more candidates with a realistic chance of winning. It is evident that AR is very high. With many parties and candidates among the potential agents of representation, the rational voter will rely most heavily on the cue of party label, and fail to inform herself about very many candidates. More generally, the higher the magnitude in a closed list, the more the information shortcut of party label comes to be employed in place of seeking to become fully informed about all the potential agents of representation (Valdini 2005).

Now let us consider open lists. If we return to the case of $M = 3$ and three parties in the running, we saw under closed lists that AR = 7, under our previous assumptions. However, *in an open list, the information demand on the voter is higher, for a given magnitude*, than under a closed list. Unlike in closed lists, the ranks of the candidates are not known ahead of time; they depend on preference votes. Thus a voter will demand some shortcut for cutting through all the messages being provided by politicians who, given high personal-vote incentives, are seeking a competitive advantage by highlighting ways in which they differ from their party and copartisans. Absent shortcuts, the voter would have to know the platforms of the same l' lists, but also the attributes of the full $l'*c$ candidates, where c is the number of candidates on each list. The reason is that all candidates nominated on any party's list theoretically have an equal probability of obtaining the top s list ranks, because the ranking is made by voters themselves, collectively. Both l and c increase with magnitude, implying that the information demand under open lists increases with magnitude as well. A shortcut that simplifies the voter's decision process is to *find a candidate with a specific appealing attribute* to whom to give a preference vote.

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[3]See, for example, Downs (1957), Fiorina (1981), Krehbiel (1991), Iyengar and Kinder (1987), Popkin (1994), and Lupia and McCubbins (1998).

[4]There is little existing literature that provides insights into how voters process information on the personal qualities of candidates. Canache et al. (2000) undertake a laboratory experiment, the results of which suggest that the personal vote derives from a general human tendency to acquire information about personal qualifications. However, while the authors conducted their experiment under conditions meant to simulate an electoral environment that should minimize the importance of the personal vote, they did not attempt to see if the extent to which voters employ personal information varies with electoral rules, as argued by Valdini (2005).

[5]We assume for simplicity that voters do not have any interest in knowing the attributes of candidates ranked on any list below that list's s' rank.

Electoral rules thus affect the incentive of politicians to cultivate a personal vote through their impact on the degree to which being personally known and liked may affect their probability of being one of the successful candidates of their party. For the voter, electoral rules affect the information shortcuts employed in making a vote choice. If voters rely principally on party-label shortcuts, they will not demand legislators with personal vote-earning attributes (PVEA), but if they rely on politician-specific shortcuts, they will demand such legislators.

We have focused up to now only on how electoral rules affect the incentives of politicians and voters, but a critical factor that we have left out of the discussion is party organization. Some parties are more centralized than others (Duverger 1951; Gallagher 1988; Harmel 1981). A centralized nomination process may inhibit candidates' ability to articulate personal attributes while a more decentralized process may increase the relative importance of candidates and local considerations. Nonetheless, we do not directly test for party effects here. Partly this is for a pragmatic reason: indicators of party centralization or decentralization are simply not available for most parties. We also have a theoretical reason for setting aside party-specific variables: we expect electoral-system variables to be more fundamental than parties' own selection mechanisms, because parties are operating within a strategic environment given by list type and magnitude, which affect the extent to which voters demand information on the attributes of specific candidates.

If we are wrong, and in fact candidate-selection procedures are more important than electoral rules, then we should find little or no relationship between electoral-system variables and the attributes of legislators. On the other hand, if legislators' PVEA are found to vary with electoral rules, then we have strong evidence that they matter independently of party organizational characteristics. Furthermore, if we find intracountry variation in the manner predicted by our theory, then we will have evidence that the electoral rules affect the personal vote independently of the rules of candidate selection, which are unlikely to vary substantially across districts within the same party.[6] District magnitude varies, often substantially, within our countries, although list type is fixed. We now turn to our empirical models and results.

Statistical Models and Results

As we noted previously, we test for two personal vote-earning attributes: whether legislators are native to the district they represent, and whether they have electoral experience within the district at levels below the national legislature. Many other attributes could also be investigated, but these two can easily be represented by binary variables, and they have clear implications for politicians' local commitments. A politician who was born locally can use place of birth as a signal of his or her local knowledge. Birthplace also may correlate with other signals of candidates' local knowledge for which we have no data, such as speaking a distinctive local dialect or being engaged in the dominant local economic activity. Politicians who have a record of service on a municipal council or in a state or regional assembly are likely to have gained valuable knowledge about the way the political system works. Having a record of service is a useful shortcut that voters may employ to determine the capacity and credibility of the legislator to extract resources on their behalf or otherwise be responsive to local needs. Thus, whereas a candidate's advertising of his or her local birth can be viewed as a way of communicating to voters that "I know what you want," experience is a way of reminding voters that "I know how to get it." Based on the theoretical expectations of the previous section about how list type and district magnitude are related to the personal vote, we hypothesize that the probability that a legislator exhibits any given PVEA increases with magnitude when the list is open and decreases with magnitude when the list is closed. We also expect these effects to be stronger for first-time legislators than for those with longer service.

Case selection and aggregate data. For our empirical tests, we have assembled an original data set that is based on the biographies of approximately 1,100 legislators in six countries.[7] The cases we analyze are all "established" democracies, in that they have at least 25 years of democracy as of the election in which the legislators in our data were elected.[8] These cases include three closed-list cases (Norway,[9] Portugal, and Spain) and three open-list cases (Finland, Luxembourg, and Switzerland[10]).

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[6]The United States is exceptional in this respect, in that nomination procedures are regulated by state laws.

[7]Ideally we would analyze all candidates; however, data on defeated candidates are rarely compiled. This limitation is unlikely to have biased our results, because while we cannot compare winners to losers, we can compare the winners under varying rules.

[8]We also collected and analyzed data on several newer East European and Latin American democracies, and the results of including these cases were generally consistent with the models we report. We exclude these cases here because considerable data were missing for them. Results of this larger sample are available on request from the senior author.

[9]In Norway voters may strike names from a party list; however, this procedure is cumbersome (see Katz 1986) and apparently has never resulted in a change in the order of any list.

[10]In Luxembourg and Switzerland voters may give multiple preference votes across party lists (*panachage*). A control for this feature did not affect our results.

TABLE 1 **Attributes of Legislators Associated with the Personal Vote, by Country and Averages by List Type**

Country and Year of Election	District Magnitude		Native to the District Where Nominated, %	Experienced in Lower Elected Office Within the District, %
	(Range)	(Mean)		
Open-list				
Finland 1999	1–32	13.3	58.5	84.1
Luxembourg 1999	7–23	15	64.4	73.8
Switzerland 1999	1–34	7.7	70.1	73.9
Mean			**64.3**	**77.3**
Closed-list				
Norway 2001	4–16	8.6	69.4	84.8
Portugal 2000	2–49	10.5	55.2	49.8
Spain 2000	1–34	7	57.0	35.4
Mean			**60.5**	**56.7**
Overall mean			**62.4**	**67.0**

In selecting cases, we sought those that are as "pure" as possible on our list-type variable. A large number of countries, especially in Europe, use various hybrid lists. Often known as "flexible lists" (Katz 1986; Marsh 1985), these provide a ranked list, the order of which may be overridden if some candidate surpasses a legally stipulated preference-vote quota. Flexible-list cases are worthy of analysis in their own right, but currently there exists no straightforward way to scale them on an open-closed continuum. Thus, we include as "open" only those systems in which preference votes are the *sole* means of ordering the party list within districts.[11]

Table 1 indicates the six cases from which our data are gathered, grouped according to list type. The table indicates the year in which the members we analyze were elected and the range and mean for district magnitude. Table 1 also provides the mean for each case on our two dependent variables of interest: the probability that a member is native to the district, and the probability that the member has prior experience in lower-level elective office within the district. For ease of exposition, we shall refer to these as "Pr(native)" and "Pr(exper)." Table 1 shows that the means of the two groups of list type are in the expected direction, with both being higher under open list. There is a great deal of overlap of the mean values within the two sets for Pr(native). In Pr(exper), on the other hand,

only Norway breaks the otherwise complete separation of open and closed-list country means from one another.[12]

Analysis of individual legislators. In order to explore our hypotheses regarding the differential effect of district magnitude, we analyze the probability that an individual legislator has a given personal vote-earning attribute.[13] Our statistical tests take the following form:

$$PVEA = b_0 + b_1(\log M) + b_2(\log M * open)$$
$$+ b_3(open) + e,$$

where PVEA is operationalized as Pr(native) or Pr(exper), $\log M$ is the decimal logarithm of district magnitude,[14] open is a dummy variable that takes the value of 1 if the list is open and 0 if it is closed, and e is an error term. Because

[11]We also sought systems as pure as possible in terms of allocating seats at the district level, rather than through multi-tier compensatory arrangements. Norway has compensatory seats, but they represent only eight of 165 seats, implying that the probability that a legislator may win a compensatory rather than district seat is unlikely to affect how voters evaluate candidates.

[12]The reason for the very high value for Norway may lie in its legal incentives for parties to grant autonomy over nominations to local caucuses of members (Valen 1988).

[13]The correlation between Pr(native) and Pr(experienced) at the level of the individual legislator is .13. In other words, the set of legislators with one PVEA only partly overlaps with the set with the other. This implies that legislators with one or the other attribute may appeal to voters with different preferences. However, this is a possibility that currently we cannot explore further.

[14]The mean of $\log M$ in the sample is 1.06; the standard deviation is .33. Among closed lists, its mean is 1.03 (standard deviation .34); among open lists, 1.11 (.29). Two readers of an earlier draft of this article suggested replacing Log M with an indicator of the relation between district magnitude and assembly size, S, when the dependent variable is Pr(native). The closer a district comes to containing all of a country's legislators, the greater the probability that legislators are native (ignoring foreign born), regardless of the list type or raw magnitude. We ran models on Pr(native) with Log M/Log S; the results were almost exactly identical to those with Log M.

TABLE 2   Electoral Rules and Personal Vote-Earning Attributes: Regression Results

Dependent Variable	Probability That Legislator Is Native to District	Probability That Legislator Has Lower-Level Electoral Experience
Independent Variables		
District magnitude, logged (b_1)	$-.49^{***}$	$-.31$
	$(.11)$	$(.22)$
District magnitude,	$.63^{**}$	$.92^{***}$
logged $*$ open-list dummy (b_2)	$(.29)$	$(.31)$
χ^2 (testing b_1 and b_2)	20.01	9.19
Prob $> \chi^2$	0.0000	0.0101
Open-list dummy (b_3)	$-.43$	$-.22$
	$(.34)$	$(.35)$
Constant (b_0)	$.74^{***}$	$.34$
	$(.14)$	$(.21)$
N	$1,128$	$1,162$
Log pseudo-likelihood	-736.256	-728.766
Wald χ^2	32.58	59.74
Prob $> \chi^2$	0.0000	0.0000

Robust standard errors in parentheses.
$^*p \leq .10, ^{**}p \leq .05, ^{***}p \leq .01$.

our hypotheses are conditional in nature, we can factor our regression equation and produce separate equations estimating the effects for the separate groups of closed-list and open-list observations (Friedrich 1982). Under closed lists (i.e., when open $= 0$), the equation is:

$$PVEA = b_0 + b_1(\log M) + e,$$

while under open lists it is:

$$PVEA = (b_0 + b_3) + (b_1 + b_2)(\log M) + e.$$

Our hypotheses state that b_1 will be negative, and $(b_1 + b_2)$ will be positive. Additionally we test for statistical significance of the difference between b_1 and b_2, by means of a χ^2 test.

Both of our dependent variables are binary. Pr(native) $= 1$ when the legislator is native to the district in which nominated, and zero otherwise.[15] Pr(exper) $= 1$ when the legislator has previously served on a municipal council, as an elected mayor, or as a state/regional legislator or elected subnational executive in a jurisdiction that includes (part of) the legislator's current legislative district.[16] We estimate our models using probabilistic re-

gression (probit). Because of possible nonindependence of our observations, we cluster them by district.[17]

We now turn to a presentation of the results, pooling across veteran and rookie legislators. We then turn to a test of our corollary that the effect of magnitude and list type should be even greater on rookie legislators than on veterans. Table 2 shows results for both dependent variables in the full sample. The results are as expected, in that b_1, the coefficient for closed lists, is negative and $(b_1 + b_2)$, the coefficient for open lists, is positive. The χ^2 test indicates that the slopes on magnitude in the two list types are statistically distinct from one another.[18] The sign on Log M in the Pr(exper) model falls short of statistical significance, but as we shall see in the following simulations, the

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[15]The mean of Pr(native) is .62 (standard deviation .48).

[16]The mean of Pr(exper) is .61 (standard deviation .49).

[17]Close analysis of the districts revealed that one was an extreme outlier, and thus we dropped it from all the regressions shown here. The district is Uusimaa, Finland, which is a very fast growing suburban area of the capital, Helsinki, that was separated from a larger district only in 1964. Only about 16% of its legislators were born in the district—one of the lowest district-level rates of nativity in the entire sample. (By comparison, in all other open-list districts of $M > 20$, the average is 68%.) No other capital city in our sample has its suburbs in a separate district.

[18]The intercept for open lists is given by $(b_0 + b_3)$, and we can see that in both models it is lower than that for closed lists. However, we have no theoretical expectations regarding our intercepts, only the slopes on log M, conditional on list type.

FIGURE 2   **Simulated Effect of District Magnitude on Personal Vote-Earning Attributes (PVEA): Probability That a Legislator Is Native to His or Her District**
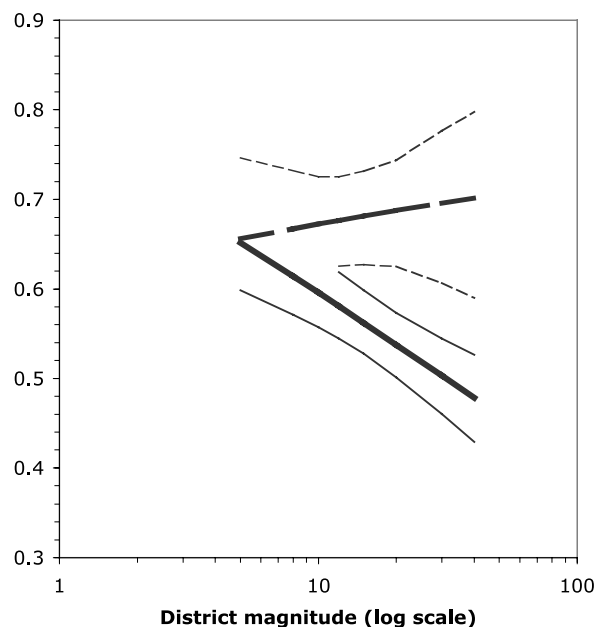
Legend: Solid lines indicate effect (estimated mean and 95% confidence interval) for closed list. Broken lines indicate effect for open list.

FIGURE 3   **Simulated Effect of District Magnitude on Personal Vote-Earning Attributes (PVEA): Probability That a Legislator Has Lower-Level Electoral Experience Within His or Her Legislative District**
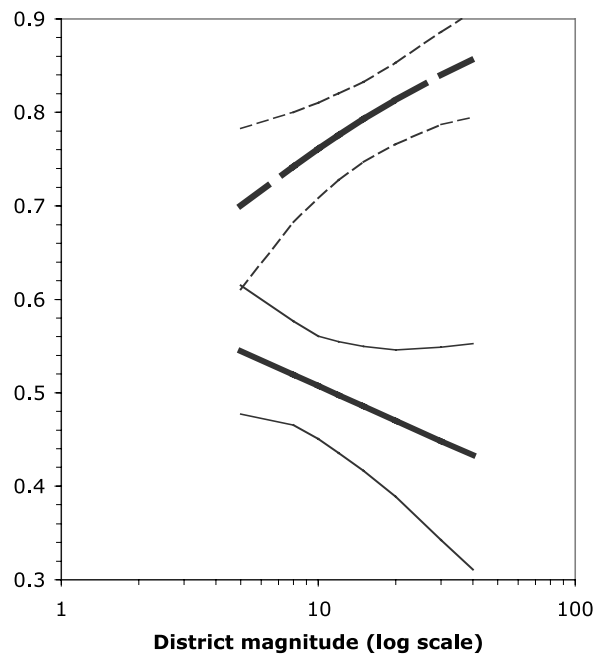

Legend: Solid lines indicate effect (estimated mean and 95% confidence interval) for closed list. Broken lines indicate effect for open list.

predicted means and confidence intervals within the range of our data are nonetheless consistent with the hypotheses.

Figures 2 and 3 show the results of simulations[19] of the models for Pr(native) and Pr(exper), respectively. We simulate the effect in a magnitude range of five to 40. Only about 10% of our observations occur in magnitudes smaller than five—not surprisingly, given that these data come from proportional representation systems. In the case of Pr(native) the mean estimates for the two list types are approximately identical at $M = 5$, and then diverge. The 95% confidence intervals diverge only after $M = 12$. In other words, for district nativity, we cannot distinguish open and closed lists at magnitudes smaller than 12. There is increasing scatter on open lists at magnitudes greater than about 20, but the 95% confidence interval for the open-list data remains separate from that for closed lists. Figure 3 suggests that the differential effect of magnitude is actually greater for Pr(exper) than it is for Pr(native).

[19]Using *CLARIFY*, in Stata.

At $M = 5$, not only is the open-list mean higher than the closed-list mean, but also the 95% confidence intervals are already diverging.

The models shown in Table 2 and their graphical representations in Figures 2 and 3 provide considerable support for our hypothesized differential effect of magnitude on personal vote-earning attributes in a cross section of established democracies. We performed various diagnostics that increase confidence in the results. For example, we ran models with fixed effects (shown in the appendix) and found the results were nearly identical to those presented in Table 2. One particularly important diagnostic was to test for the effect of $\log M$ on our dependent variables within each individual country. We cannot expect many of these to attain significance, because of smaller sample sizes and often limited variation in magnitude. Yet, we found that the results hold within most of the countries in our sample. When the dependent variable is Pr(native), $\log M$ has the expected sign and $p \leq .02$ in Finland, Norway, Portugal, and Luxembourg (and this despite its

small N). The sign is also as expected in the case of Spain, but only at p ≤ .12. For Pr(exper), the effect of Log M is of the expected sign and p ≤ .01 in Norway and Switzerland, and just short of p < .05 in Spain. Thus, magnitude affects PVEA within most of our countries, as well as overall. Various controls are discussed in the appendix.

Do PVEA matter more for rookies? If district nativity and prior lower-level electoral experience are important to earning personal votes, they should be even more important to those politicians who win legislative office for the first time. Once a legislator has been in office, he or she has a chance to engage in personal-vote seeking behavior (casework, committee service, sponsorship of pork amendments, etc.) that attracts locally oriented voters in subsequent elections. Rookies, on the other hand, are particularly reliant on ascriptive attributes like birthplace or their resume, because they have no record of national legislative service to draw on.

As a corollary to our main hypotheses, we propose that the slopes of the effect of district magnitude on PVEA will be steeper for rookies than they are for veterans. Under open lists, as magnitude increases, the more important it should be for rookies to have had PVEA to advertise in order that they could compete with veterans who already had established records of legislative service. Under closed lists, in high-magnitude districts, we would not expect greater PVEA for rookies than for veterans because where the personal vote is relatively unimportant, rookies are at no comparative disadvantage. However, at lower magnitudes, rookie legislators are likely to have required PVEA more than veterans because, as we have argued, the personal vote matters at low magnitudes under closed lists. Hence the slopes should be steeper for both list types.

In order to test this corollary, we ran models on both our dependent variables with interaction terms for rookie status (see Appendix).[20] In eight possible comparisons (two dependent variables times two list types times rookie-veteran status), seven of the slopes support the corollary;[21] however, the difference between rookies and veterans does not meet conventional standards of statistical significance. The largest effect is that on Pr(exper) for closed lists at low magnitude.[22]

Our investigation of differences between rookies and veterans reveals that the difference is not great, but most of the effects are in the direction expected. The lack of statistical significance of the different effects in these subsamples actually reinforces the fundamental character of PVEA: Where the personal vote is electorally valuable, even those who have had the opportunity to engage in personal vote-seeking behavior as legislators are likely to have brought PVEA to their legislative careers in the first place.

Discussion and Conclusions

If parties are conceived as the main agents of national and programmatic representation, and candidates as the main agents of local and parochial representation, as we suggested, then our findings show that electoral systems affect the national-local balance that has been noted by Pitkin (1967), King (1990), and others. For instance, closed-list systems with high magnitude result in less local representation, based on legislators' origins and experience. Although we could not explore the possibility here, such electoral rules may even permit parties to "hide" representatives of unpopular interest groups on their lists (Bawn and Thies 2003), where voters are unlikely to notice them and cannot vote against them (without rejecting their preferred party entirely). At the other extreme combination of list type and magnitude, very large-magnitude districts with open lists may undercut the ability of parties to act coherently as politicians compete to show how well they can represent local interests. These broader ramifications for interest representation and party cohesion are well beyond the scope of our research, but suggest extensions that could be explored subsequently. Currently, the literature is divided on the broader impacts of open versus closed lists. For instance, Kunicova and Rose-Ackerman (2002) report that the greater "accountability" of legislators in an open list reduces corruption, while Chang and Golden (2004) find the exact opposite, arguing that open lists induce candidates to obtain illicit campaign funds to survive the intraparty competition.[23] Back on the positive side, Farrell and McAllister (2003) report higher voter

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[20]Ideally, we would code as rookies those who had never served in the national legislature. However, the Swiss biographies did not provide this information. Using data on the previous election, we were able to determine which legislators had not been elected to the immediately preceding term. Within the rest of our data, the correlation between legislators who had not served in the immediately prior term and those who had never served is .93.

[21]The one contrary result is that the slope for open lists on Pr(exper) is slightly less steep for rookies than for veterans, but the difference is small and not significant.

[22]For example, from Clarify simulations, we found that the mean estimated Pr(exper) for rookies at $M = 5$ under closed lists is .61, whereas for veterans it is only .49. This difference is significant at a relaxed standard of p = .15. At $M > 15$, the estimated means for rookies and veterans become within .05 of one another.

[23]Chang and Golden specify a differential effects of magnitude model, such as ours.

satisfaction where there is preference voting. In short, knowledge of the broader effects of list type remains underdeveloped.

Our findings suggest that the balance of local and national representation varies not only across whole electoral systems, conceived as a country-level variable, but also across districts within the same country. In other words, there is a variance effect related to district magnitude, which complements a similar effect noted by Monroe and Rose (2002). They found that district magnitude causes a bias in favor of parties that obtain the bulk of their votes in the more disproportional lower-magnitude districts. Our findings imply that within the same country, some voters obtain more local representation than others, as a result of how district magnitude, for a given list type, affects the type of information shortcuts that voters use when making their vote decision. These findings thus suggest a previously unrecognized cross-district bias in electoral systems.

This intracountry variation reinforces our belief that the results we have found are not driven by the manner in which parties are organized, particularly for the selection of candidates. Party centralization is a potential rival explanation for the degree of local representation. However, we believe that we can safely cast aside any concern that our findings would be swamped by a variable on party centralization if such data existed for most of the parties in our sample. Among the closed-list cases, the secondary literature indicates that Portugal and Spain have several centralized and (some argue) internally clientelistic parties (Lundell 2004; Bruneau 1997; Hopkin 2001), while in Norway parties nominate candidates through local caucuses and the law prohibits intervention by the national party (Valen 1988). Among the open-list cases, Finland has a well-established national party system and highly regulated nomination processes (Sundberg 1997), while Swiss parties mirror the greater decentralization of their federal system (Ladner 2001). Notwithstanding these considerable differences, across and within countries, we found that magnitude and list type behaved as predicted on one or both indicators of PVEA *within* these countries as well as cross-nationally. These results suggest that list type (a fixed effect of countries[24]) and district magnitude (a variable within countries) are more fundamental than party organization in shaping the extent

of localized and personalized representation that voters obtain across districts.

In this article we have undertaken the first comprehensive cross-national study of variations in personal vote-earning attributes (PVEA). We theorized that electoral systems affect the extent to which voters demand information on the attributes of candidates, and that where such demand is high, elected legislators would be more likely to exhibit attributes that allow them to advertise their commitment to representing local needs. We obtained empirical confirmation that two nearly ascriptive attributes of legislators (local origins and lower-level electoral experience) vary in the hypothesized manner with electoral rules. Their prevalence increases with district magnitude when the list is open and decreases with magnitude when the list is closed. These findings potentially pave the way for further research, both on how voters employ party- or candidate-oriented shortcuts under different electoral rules, and on how parties construct their lists to anticipate the shortcuts voters employ. The findings also potentially provide greater guidance to electoral-reform efforts, as numerous countries have undertaken or are considering changes in the relative openness of their party lists. The general trend appears to be towards more openness,[25] yet we are only beginning to understand the consequences of such variations in electoral rules.

Appendix

In Table A1, we present additional models. The first model, run for each dependent variable, contains country dummies as controls. The country dummies control for list type as well as other fixed effects of countries, whereas in the models in Table 2, the list-type dummy implicitly controls for other variations across countries that are correlated with list type in our sample. We are unable to include country dummies and the open-list dummy in the same regression, due to extreme multicollinearity (because list type is correlated perfectly with countries). Including country dummies scarcely affects the results on our independent variables of interest.

Table A1 also shows a model that contains interaction terms for rookie legislators:

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[24]In the countries in our data, it is never the case that some districts or parties use closed lists and others open. In fact, such intracountry variation exists, to our knowledge, in only one country, Colombia, where a reform passed in 2003 permits parties the choice of open or closed list (Shugart, Moreno, and Fajardo 2004). Denmark permits parties to present either an open list or various forms of flexible list, but not a closed list (Elklit 2004).

[25]Japan's upper house has a national tier that was briefly elected via closed list (after decades of single nontransferable vote), but was soon changed to open list. In Austria and Belgium, reforms to open further their flexible lists have been implemented. Official commissions have proposed reforms to increase the role of preference voting in the Netherlands and Sweden, among other countries.

TABLE A1 Models with Additional Controls

Model	Fixed Effects		Veterans vs. Rookies	
Dependent variable	Pr(native)	Pr(exper)	Pr(native)	Pr(exper)
Independent Variables				
Log M (b_1)	−.51***	−.45***	−.43***	−.16
	(.13)	(.17)	(.15)	(.30)
Log $M *$ open (b_2)	.69**	1.04***	.49	.89**
	(.33)	(.27)	(.32)	(.41)
χ^2 (testing b_1 and b_2)	15.24	15.26	7.80	7.38
Prob > χ^2	0.0005	0.0000	0.0203	0.0249
Open-list dummy (b_3)	—	—	−.25	−.03
			(.37)	(.41)
Rookie dummy (b_4)			.30	.58*
			(.29)	(.30)
Log $M *$ rookie (b_5)			−.16	−.36
			(.24)	(.28)
Log $M *$ open $*$ rookie (b_6)			.39	.05
			(.55)	(.62)
Open list $*$ rookie (b_7)			−.48	−.45
			(.62)	(.70)
Control Variables				
Country dummies				
Finland	−.43	.32	—	—
	(.38)	(.31)		
Luxembourg	−.50	−.14	—	—
	(.48)	(.35)		
Switzerland	−.33	−.02	—	—
	(.36)	(.33)		
Norway	.36**	1.43***	—	—
	(.17)	(.17)		
Portugal	.10	.49***	—	—
	(.10)	(.12)		
Spain	omitted	omitted	—	—
Constant (b_0)	−.66***		.61	.09
	(.15)		(.19)	(.29)
N	1,128	1,162	1,128	1,162
Log pseudo-likelihood	−731.829	−664.917	−734.812	−724.023
Wald χ^2	43.19	233.76	35.40	81.97
Prob > χ^2	0.0000	0.0000	0.0000	0.0000

Robust standard errors in parentheses.
*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$.

$$\begin{aligned} \text{PVEA} = {} & b_0 + b_1(\log M) + b_2(\log M * \text{open}) + b_3(\text{open}) \\ & + b_4(\text{rookie}) + b_5(\log M * \text{rookie}) \\ & + b_6(\log M * \text{open} * \text{rookie}) \\ & + b_7(\text{open} * \text{rookie}) + e, \end{aligned}$$

where rookie is a dummy variable taking the value 1 when the legislator had not served previously, and all other variables are the same as in the model presented in the main text. This is an example of a higher-order interactive model (Friedrich 1982, 829–30) and our additional

expectations, regarding steeper slopes on log M for rookies, may be expressed as follows:

$$(b_1 + b_5) < b_1,$$

and

$$(b_1 + b_2 + b_5 + b_6) > (b_1 + b_2).$$

As Table A1 shows, these expectations are confirmed, with one exception (the second inequality above for Pr(exper)), but the coefficients, b_5 and b_6, are not significant at $p < .10$.

Not shown are other models that we ran with various controls. For instance, districts growing faster than the nation as a whole may contain more voters for whom the nativity of legislators is unimportant, because they themselves are not native. Experience may be related to the structure of government opportunity (e.g., whether there is a regional assembly or not, how many municipalities there are in the district). Introducing controls for such factors did not diminish our confidence in our results. Details are available from the senior author.

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