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Recovering a Basic Space from Elite Surveys: Evidence from Latin America

I used elite survey data and scaling techniques to estimate the location of political actors (parties, chief executives, and legislators) from nine countries in a common ideological space. The recovered ideological configuration of each country accurately reflects the description of that country's political landscape given by the popular press and in the scholarly literature. My findings demonstrate that data generated by survey responses can be reliably used to locate legislators' ideological positions in a low-dimensional space in a manner analogous to the roll-call-based methods commonly used in the scholarship on the U.S. Congress. My approach has two important advantages over methods that use roll-call data, expert surveys, or some combination thereof. First, it does not rely on recorded votes and so is unaffected by concerns about the validity of roll-call data as unbiased indicators of legislator preference. And, because it does not require access to voting records, this approach can be applied to any legislature in the world. Second, my method can be used to estimate the location of political actors in a common ideological space.

The main purpose of this article is to demonstrate how elite survey responses can be used to estimate the location of political actors (parties, chief executives, and legislators) in a common, low-dimensional ideological space. I analyzed data from nine Latin American countries included in the University of Salamanca's Parliamentary Elites of Latin America (PELA) survey. In particular, I examined the responses to questions that asked legislators to locate themselves and other relevant political actors on a ten-point ideological scale. I relied on the Aldrich-McKelvey (1977) scaling procedure to correct for interpersonal incomparability, or differential item functioning (DIF).¹

The findings presented in this article suggest that elite data can be reliably used to measure the spatial preferences of political actors and that the scaling technique produces estimates quite similar to those

generated by methods relying on the judgment of country experts and roll-call data. Moreover, the estimates of the ideological configurations of these countries accurately depict the way their political landscapes have been described by popular accounts and in the scholarly literature. The results also indicate that data generated by survey responses can be employed to estimate legislators' ideological positions in a low-dimensional space, in a manner analogous to the roll-call-based methods frequently used in studies of the U.S. Congress literature (see, for example, Poole and Rosenthal 1997).

My approach offers two main advantages over methods using roll-call data, the opinions of country experts, or both. First, this method does not rely on recorded votes, so it overcomes any concerns regarding the validity of roll-call data as unbiased indicators of legislator preference. Moreover, since it does not require access to voting records, this approach can be applied to legislatures the world over. An additional virtue of measuring spatial preferences using elite data is that it allows comparison of ideological preferences across institutions. Therefore, the estimated preferences of political actors can be used to address various propositions regarding executive-legislative relations.

The rest of the article proceeds as follows. In Section 1, I summarize the strengths and weaknesses of the different instruments frequently used to measure the positions of political actors in ideological spaces. Section 2 describes the data and estimation. In Section 3, I discuss my main empirical findings. A final section concludes.

1. Measuring Politicians' Policy Preferences

Since the seminal work of Davis, Hinich, and Ordeshook (1970), the Euclidean spatial model has become the standard for formal theoretical and empirical research on many aspects of the political process. For example, locating political parties within a common space facilitates comparison of party systems in terms of important indicators, such as the degree of polarization, the direction of political competition, and so on (Mair 2001).

One essential requirement for operationalizing several of these models is the development of accurate measurements of political actors' positions in policy spaces, ideological spaces, or both (Hug and Schulz 2007; Laver 2001). Often, researchers construct such indicators using a variety of data sources and analytical techniques, such as roll-call votes in parliaments, expert surveys, and elite studies (Mair 2001). I will summarize the strengths and weaknesses of each instrument.

Roll-Call Data

Recorded votes in legislatures (roll-call data) are the data most commonly used to measure politicians' spatial preferences. A well-established strategy is to use some type of statistical technique, such as multidimensional scaling, to represent patterns of legislative voting. This estimation method typically yields a set of policy dimensions on which the positions of key actors can be placed, revealing how cleavages between legislator positions reflect partisan affiliation or geographical schisms and whether these divisions remain stable or become more polarized over time (see, for example, McCarty, Poole, and Rosenthal 2006 and Poole 2005).

Recovering politicians' ideological positions from recorded votes is a frequently used practice not only in the study of the U.S. Congress, but also in comparative politics. Indeed, according to some views, this particular approach is the gold standard, and numerous scholars have examined legislative institutions around the world—including the European Union and the United Nations—using this approach (Alemán and Saiegh 2007; Ames 2001; Carey 2002; Desposato 2003; Figueiredo and Limongi 2000; Hix 2001; Jones and Hwang 2005; Londregan 2000; Morgenstern 2004; Rosenthal and Voeten 2004; Voeten 2000).

Despite its merits and centrality, however, the use of roll-call data is not without its criticisms. First, observed votes (that is, those that reach the legislative floor) may not constitute a random sample of the universe of legislative decisions, prompting doubts that unbiased estimates of preferences can be recovered from voting records (Gabel, Carrubba, and Hug 2007; Hug 2006; Kam 2001; Laver 2001; Vandoren 1990). Second, if strategic voting exists, then votes may not accurately reveal legislators' preferences (Ames 2002; Cox and McCubbins 2005). Finally, some scholars argue that much of the policymaking and bargaining action in most legislatures takes place before proposals reach the voting stage—in public pronouncements and debate, in legislative committees and party caucuses, or during negotiations between executive and legislative actors or between party leaders and rank-and-file legislators. Therefore, voting records may only partially reflect legislators' policy preferences.

Other scholars argue that the use of actions (votes) to impute policy positions can be problematic (Krehbiel 2000). These skeptics do not doubt the influence of ideology on legislative behavior, but they are concerned about how these ideological predispositions can be measured. In particular, they claim that assessing the effect of ideology on behaviors such as roll-call votes requires measurements

of ideology that are constructed independently of the roll-call votes themselves (Jackson and Kingdon 1992).²

From a practical standpoint, the main drawback associated with using roll-call data is the scarcity of information (Morgenstern 2004). Voting records in the United States are routinely available in a convenient, spreadsheet-type form, but comparable data are rare for many legislatures across the world. For example, for numerous Latin American legislatures, most of the information contained in voting records is invisible to all observers but those who were present for the votes themselves (Carey 2006). The paucity of visible votes in these countries reflects the technological and procedural obstacles to recording and publishing votes. Even in some legislatures with the technical capacity for transparency, votes remain invisible. According to Carey (2006), electronic systems are in place in the Costa Rican, Panamanian, and Venezuelan assemblies, but they are never used, and the electronic systems in the Argentine and Colombian lower chambers are very rarely employed. In other cases, the systems are used regularly, but voting records are not systematically published.

An additional challenge when measuring spatial preferences pertains to the ability to compare preferences across institutions. Placing different political actors in a common spatial map is important, because a large body of spatial theory predicts how legislative and executive institutions should interact, but estimating a common map for a legislature and an executive can be quite a challenge (Poole 2005). As Bailey notes, “no matter how well preferences are estimated within an institution, they are not comparable across institutions without clear points of reference” (Bailey 2007, 434). In spite of some significant difficulties, previous research has demonstrated that it is technically possible to make such comparisons. Still, the corresponding prerequisite, namely a common policy space for all actors being analyzed, can only be estimated if the appropriate ancillary information, such as interest groups’ ratings of legislators, is available.³ Unfortunately, these additional information requirements are unlikely to be met for most cases beyond the United States, rendering these technical innovations generally unusable for comparative research.

Expert Data

Another commonly used instrument for measuring party positioning is the expert survey. Such studies usually seek to establish interval-level measures of party distances along a number of ideological

dimensions by polling experts and asking them to assign a score on these dimensions to as many of the relevant parties as possible. These surveys have a number of advantages. First, because they reflect the judgment of experts—who are presumably well informed—these surveys carry a certain sense of validity. Second, expert judgments are quick, easy, and comprehensive (Mair 2001; Marks et al. 2007), allowing comparable and standardized data to be collected across a much wider variety of countries than could be afforded by evidence drawn from roll-call data.

Expert surveys have been used in a variety of studies. For example, Castles and Mair (1984) asked experts from 17 Organization for Economic Co-operation and Development countries to locate parties in their own country on a left-right scale. Huber and Inglehart (1995) followed with a more-systematic poll, seeking to locate parties on a left-right scale in 42 countries. In the case of Latin America, several studies have attempted to circumvent the lack of roll-call data by measuring the policy positions of political actors using expert surveys (Altman and Luna 2006; Coppedge 1998; Wiesehomeier and Benoit 2008).⁴

Although this approach is a valuable way to compare numerous countries, it is not devoid of problems. Marks et al. (2007) offer a good summary of the main weaknesses of expert data. First, because these measures are based on subjective judgments, reliability across experts may be problematic. Second, experts are likely to know more about major parties and less about obscure ones, thereby creating some reporting asymmetries. Third, if experts are asked to evaluate the locations of parties retrospectively, then their judgments may be affected by subsequent events. Finally, experts may draw on party rhetoric as well as on a party's actions in their evaluations and therefore end up conflating preferences with behavior (Marks et al. 2007).

Moreover, expert surveys tend to restrict their attention to the location of political parties and thus do not contain enough information to assess the ideological positions of individual legislators. Admittedly, questions regarding the location of the chief executive, other prominent politicians, or both are sometimes included in these surveys. For example, Wiesehomeier and Benoit's (2008) survey asked respondents to differentiate between the president's individual position and the positions of major political parties. Nonetheless, while expert surveys may help us place some political actors in a common spatial map, they are still ill-suited to measuring legislators' spatial preferences.⁵

Elite Data

Data gathered from interviews with political elites have also been used to assess the positions of political actors in policy and ideological spaces. That is, actual politicians, rather than country experts, have been asked to place the political parties of their country, along with other relevant political actors and themselves, on a common ideological scale defined a priori. For example, national legislators may be asked to locate themselves and the other political actors on a ten-point (or seven-point) ideological scale.

This method has two important virtues. First, legislators' responses to these surveys are unrelated to their legislative behavior. As previously mentioned, many scholars contend that legislators' actions do not necessarily reveal their sincere ideological leanings. For example, Alemán et al. (2008) claim that legislators' preferences retrieved from roll-call votes and those retrieved from other types of legislative activities (such as cosponsoring legislation, committee participation, and so forth) should be differently affected by partisan and institutional constraints. Unlike measures of behavior, survey responses are not contaminated by the effects of legislative or party institutions, including party discipline, agenda setting, logrolls, and the like (Kam 2001; Morgenstern 2004).⁶ A second advantage of elite data is that they can be used to estimate the location of political actors (parties, chief executives, and individual legislators) in a common ideological space.

One notable dataset used by a number of researchers to position Western European parties on a left-right scale stems from surveys conducted on the European Parliament's members. As of 2008, the data comprise a valuable time-series running back to every directly elected Parliament since 1979.⁷ Outside of Western Europe, the most comprehensive study of this type has been conducted by the Instituto de Estudios de Iberoamérica y Portugal of the University of Salamanca, whose researchers established the Parliamentary Elites of Latin American project and have conducted four waves of surveys in the lower chambers of 18 Latin American countries since 1994. Appendix 1 (available on the *LSQ* website; see http://www.uiowa.edu/~lsq/Saiegh_Appendix) shows the amount of elite data that is available from the PELA project.⁸

Aside from measuring legislators' preferences directly, using elite data surveys has the advantage of generating ideological scales with unambiguous interpretations. Of course, estimating ideological locations on a predetermined scale also carries a number of disadvantages. First, predetermined scales force respondents to cluster on only seven

or ten points (as the case may be), and thus the survey-based estimates of legislators' preferences are coarse relative to the actual positions that underlie the left-right ideological dimension under investigation (Kam 2001; Laver 2001). Second, the scale may have different meanings to different people. Namely, respondents may anchor their responses according to their own interpretations of the endpoints.⁹ Third, and associated with the endpoint ambiguity, the respondents may interpret the intervals on the scale differently. For example, an extreme leftist may see less difference between a center-left and center-right politician than a moderate would. Finally, as Aldrich and McKelvey (1977) note, given the forced categorization, respondents tend to place their perceptions of the stimuli, as well as their own ideal points, more frequently in the "prominent" categories (one, three, five, seven, nine).

These problems are quite common in studies of individual-level perceptual data, and their consequences are well understood. In essence, the difficulty is that if one uses the raw data to make inferences, then the conclusions can be seriously misleading. It is possible that complete agreement exists in the perceptions of the stimuli, but, because of different interpretations of the scale, we might detect little or no agreement. As I explain in the next section, this problem is not entirely avoidable but can be appropriately handled by using existing scaling techniques.¹⁰

From a practical standpoint also, surveys suffer some limitations. For example, scholars interested in historical patterns of political competition are constrained by the existing stock of surveys: it would be impossible for them to go back in time to interview legislators. This restriction may be particularly severe if existing surveys are not of very good quality (that is, they have low response rates, high attrition rates, or other problems). More generally, given how costly, both in terms of time and money, it could be for an individual researcher to carry out reliable and extensive interviews with a number of politically active individuals, our main concern as researchers is whether or not these data can be easily acquired.

Fortunately, a large number of studies that use surveys of legislators exist. By my own (and likely incomplete) account, in addition to the aforementioned surveys of members of the European Parliament and those included in the PELA project, elite data for the following countries and periods are available: Bangladesh (1973–74), Britain (1992, 1997, 2001), Bulgaria (1993), Canada (1992), Czech Republic (1993–94, 1996, 1998, 2000, 2003), Estonia (2000), Germany (1994, 2003–04), Greece (2007), Hungary (1993), Latvia (2000), Lithuania (2000), Poland (1993), Russian Federation (1993–96),

Switzerland (1974, 2006), Turkey (1984, 1988, 1995), and 11 national parliaments in Western Europe (1996).¹¹ Hence, although roll-call data are quite sparse outside of the United States, surveys of legislators provide a valuable way to estimate the preferences of political actors over long periods of time in a large number of countries.

As important as it is to develop accurate measurements of the positions of political actors in ideological spaces, we must recognize that all the instruments frequently used in the literature have both strengths and weaknesses. In this section, I have made an effort to systematically present the case for and against each of the three most widely used indicators, and to examine some of the trade-offs associated with the use of elite data. My conclusion is that, despite the disadvantages, responses to elite surveys constitute ideal instruments to estimate both the location of key political actors and to measure the ideological preferences of legislators around the world. Among the datasets currently available, the PELA project stands out as one of the best sources of elite data to construct measures of ideological positions. In the next section, I describe in more detail the PELA data and the estimation technique that I used to estimate politicians' ideological locations.

2. Data and Estimation

The PELA project constitutes the empirical foundation for my analysis. Given the vast amount of data available from these surveys, I have restricted my focus to the following nations: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Mexico, Paraguay, and Uruguay. The selection of countries does not correspond to any criteria other than my own interest and expertise on these polities. None of the results presented in this article depend on this selection.¹²

The overall response rate of these surveys is quite high: on average, more than half of the actual members of these legislatures (57.3%) completed the surveys. The response rates range from 90% in the case of Costa Rica, which has quite a small legislature, to 24–26% in the cases of Mexico and Brazil, two countries with very large legislative bodies. The surveys also have very low attrition rates (the difference between the projected and the actual samples) and are quite representative of the partisan composition of these legislatures. The respondents cannot be individually identified, because the surveys are anonymous, but all legislators were asked about their partisan affiliations. Previous rounds of the PELA study suffered from non-representative sampling, but in the latest round, which provided the surveys used for this study, none of the included parties are extremely

under- or overrepresented, compared with their actual legislative shares.¹³

For the surveys, all respondents were asked a very broad range of questions regarding matters from policy positions to personal characteristics (such as age, gender, and so on). The main goal of this article is to show how elite data can be used both to estimate the location of key political actors and to measure the ideological preferences of legislators. Therefore, before describing the particular PELA survey questions taken into consideration, I will briefly discuss the conceptualization of ideology used in this study.

Following the literature on mass behavior, I conceived of ideology as a constraint on policy positions, such that positions on a broad range of issues are related to each other in consistent and identifiable ways. Hence, ideology reduces differences in the positions of political actors over many policies to differences in their positions on a low-dimensional space (Converse 1964; Gabel and Huber 2000). As Poole (1998b) notes, *constraint* has a natural geometric interpretation. Moreover, the idea that preferences have a spatial manifestation implies that it is indeed possible to use survey data to create a low-dimensional representation of politics in the respondents' countries.¹⁴

My analysis is based on the answers given by legislators to a handful of questions included in the PELA surveys. Specifically, I examined those questions that asked respondents to locate themselves and other political actors on a ten-point scale. The typical format of these questions is: "When we talk about politics, the expressions *left* and *right* are usually used. Where would you place < yourself > on a scale where 1 is left and 10 is right?" The questions regarding political stimuli, such as the country's main political parties or its leading politicians, were phrased the same way.¹⁵

These are the most straightforward questions asking respondents to reveal their ideological positions and to evaluate the locations of other key political actors.¹⁶ Of course, as already discussed, using the raw data provided by these responses can be problematic because of interpersonal incomparability, or differential item functioning. As King et al. (2003) note, one of the most satisfactory approaches to correcting for DIF is the Aldrich-McKelvey (henceforth, "A-M") scaling procedure. Aldrich and McKelvey estimated the positions of candidates and voters in a common issue space in the United States during the 1968 and 1972 presidential elections (Aldrich and McKelvey 1977). One can use the A-M technique to estimate the location of key political actors and legislators in a common ideological space using the responses to the ten-point scales from the PELA surveys.¹⁷

The basic A-M model assumes that the actual positions of the political stimuli (that is, key political actors) are the same for all respondents; as such, they can be used as anchors to adjust both actor and legislator ideological positions. Since these actual positions are unobserved, one must assume that legislators have unbiased perceptions of each actor's positions but that the reported positions are linearly distorted in an unknown, yet estimable, manner.¹⁸ One criticism of the A-M approach is that, because of the limited computational resources available at the time, Aldrich and McKelvey recognized but did not model several other features of the problem, such as the ordinal nature of the response categories (King et al. 2003). Subsequent work by Palfrey and Poole (1987) has indicated that the A-M procedure recovers the stimulus locations very well, even if errors are heteroskedastic over stimuli.¹⁹

Poole (1998b) generalized the A-M procedure to multiple dimensions and to handle challenges caused by missing data. His procedure can be used to produce Eckart-Young lower-rank approximations and can be applied to a wide variety of perceptual data as well as preference data.²⁰ Therefore, for this analysis, I used both Aldrich and McKelvey's (1977) and Poole's (1998b) methods as my estimation techniques.²¹

3. Basic Space: Main Results

In this section, I explain how the elite data and my scaling techniques can be used to estimate the location of political actors (parties, chief executives, and legislators) in a common, low-dimensional ideological space. I first analyze the reliability of this approach to determine if using elite data is appropriate for measuring the spatial preferences of political actors. Second, to demonstrate the validity of these techniques, I examine the extent to which they produce estimates similar to those generated by methods that rely on expert surveys and roll-call data. Finally, I demonstrate one significant benefit of this method by showing how it effectively situates different political actors in a common spatial map.

Reliability Checks

Table 1 reports the number of survey respondents and the number of stimuli (political actors other than the respondent) that were included in each survey, as well as the percentage of respondents who were dropped from the analysis because they failed to locate either themselves or at least one of the stimuli on the scale.²²

TABLE 1
Overall Fit Statistics of PELA Left-Right Scales

Country	Respondents	Stimuli	% Missing	Reduction in Variance	Number Negative ^a	R ²
Argentina	81	11	23	.162	1	0.75
Bolivia	54	12	32	.153	0	0.77
Brazil	118	12	12	.269	2	0.61
Chile	81	11	8	.084	0	0.87
Colombia	82	10	14	.166	0	0.78
Costa Rica	31	11	40	.198	5	0.61
Mexico	94	12	24	.191	1	0.69
Paraguay	56	7	0	.145	9	0.38
Uruguay	62	10	8	.115	1	0.82

^aMeasure indicates the number of respondents with negative weights, \hat{w}_i . These individuals have very low levels of political information.

As Table 1 shows, there is a considerable reduction in the number of respondents in the cases of Costa Rica, Bolivia, Mexico, and Argentina. To check the robustness of the A-M estimates in light of these missing data, I reanalyzed the PELA survey responses using Poole's scaling procedure, which allows the recovery of latent dimensions from very sparse matrices (Poole 1998b). Comparison of the one-dimensional estimates and the first basic dimension recovered by Poole's procedure indicates that the A-M procedure reliably reproduced the data being scaled.²³

Table 1 also reports a number of measures that can be used to indicate the overall "goodness of fit" of the model and data. The first is the ratio of the overall variance of perceptions in the scaled data to the average variance ("Reduction in Variance" column), which indicates how well DIF is handled by the scaling procedure. It is quite reassuring to find that these figures indicate considerable reductions of variance in perceptions due to differential responses to the scale itself. These reductions range from approximately 27% of the variance in the original data in the case of Brazil to roughly 8% for Chile.²⁴

The estimates presented in the "Number Negative" column indicate the number of respondents with negative weights, \hat{w}_i , for each country. As Palfrey and Poole (1987) note, these are individuals who have very low levels of political information. The presence of such respondents may come as a surprise; the PELA survey was

administered to legislators, not voters. The percentage of uninformed respondents certainly indicates the (in)significance of the notions of “left” and “right” in some of these countries. If legislators are confused about the location of major parties on a left-right scale, then the party labels may not be meaningful indicators of legislators’ ideological orientations. In other words, if legislators are not well informed about the political stimuli, then we must be observing an ideologically disorganized party system (Rosas 2005).²⁵

It is important to account for the number of respondents who may interpret the political space as backward, because these respondents’ answers may affect the recovery of the individual legislators’ ideal points. The uninformed group will be mapped toward the center of the space, regardless of their true distribution. Fortunately, as Table 1 shows, this problem is restricted to the cases of Costa Rica and Paraguay. On the other hand, the scaling results pertaining to the location of the stimuli should not be affected by the presence of the uninformed respondents (Palfrey and Poole 1987).²⁶ There are a few exceptional cases of the stimuli recovered using these methods being different. These cases, again, overwhelmingly correspond to parties and politicians in Costa Rica and Paraguay. I will return to this issue when I examine these countries in more detail.

Finally, the dimensionality of the ideological space is another factor that affects the goodness-of-fit of these models. The last column in Table 1 indicates the one-dimensional fit of the models via the R^2 value. In almost every case, the R^2 is quite large. A straightforward interpretation is that, on average, the left-right dimension explains approximately 70% of the variance of the scaled positions.²⁷ Such a result is to be expected, because the left-right scales are designed to be one dimensional. The high R^2 values in this column also conform to current findings in the literature. Recent studies (for example, Rosas and Zechmeister 2000 and Zoco 2006) have challenged the traditional view that Latin American parties are primarily clientelistic or populist entities by demonstrating that political elites have a clear and coherent understanding of the ideological meaning of the terms *left* and *right*.²⁸

As a further robustness check, I calculated estimates of the basic space in two dimensions for each of these countries using Poole’s generalization of the A-M method. Closer examination of the two-dimensional estimates for all countries suggests that most political actors are primarily located along the left-right dimension.²⁹ In some cases, the second dimension reflects affective rather than ideological divisions (for instance, the extent to which respondents personally like or dislike particular politicians). In some other cases, the second

dimension corresponds to local ideological schisms that, for the most part, tend to overlap rather than substitute for traditional left-right divisions. Finally, in a few countries, the apparent salience of a second dimension is related to idiosyncratic events that took place in these countries close to the time that the surveys were conducted. Irrespective of this dimension's nature, the analysis reveals only a very modest gain from using the second dimension.

Deeper scrutiny of the case of Costa Rica offers a number of interesting insights. The one-dimensional fit of the model is an R^2 of .64. Adding a second dimension only improves the overall R^2 to .73. The structure and fit of the basic space suggest, however, that when the survey was taken (May/July 2002), the respondents held somewhat different interpretations of the concepts of left and right. On one hand, the basic dimension does reflect a classic liberal-conservative or left-right divide. On the other hand, the spatial map reflects the realignment of the party system in Costa Rica at the turn of the century (Lehoucq 2005).³⁰

In sum, the results presented in Table 1, along with the additional tests reported in this section, suggest that the one-dimensional estimates are quite reliable. Overall, the A-M procedure consistently produced sound measures of the locations of political actors in a common ideological space. I now turn my attention to validity concerns.

Cross-Validation: Scaled Stimuli

To demonstrate the validity of the measures of ideological preferences that were generated using the elite survey data, I will focus on the cases of Argentina and Paraguay and contrast the elite-based estimates with measures constructed from expert surveys and roll-call data.³¹

Figure 1a shows the location of Argentina's main political actors as generated from the responses to the PELA left-right scale and using Poole's (1998b) procedure. The first basic dimension corresponds to the left-right divide, and the way in which the country's main political actors are ordered—from Elisa Carrió and her party (Alternativa para una República de Iguales, or ARI) at the far left to Eduardo Duhalde and the Peronist Party (Partido Justicialista, or PJ) near the center of the spectrum to Ricardo Lopez-Murphy and his party (RECREAR) at the far right—is intuitively appealing. Figure 1a clearly demonstrates that the second dimension essentially separates the Peronists from the non-Peronists. This evidence indicates that the spatial map generated with the survey data provides a very good representation of the

Argentine political system. Note that the one-dimensional fit of the model is an R^2 of .77, compared to an R^2 of .82 in two dimensions, which suggests that the left-right divide matters the most.

It is also worthwhile to note the disparate locations of the Peronist Party and some of its main figures, with Nestor Kirchner at the left and Carlos Menem at the right. This configuration bodes well with the “big tent” characteristics of this traditional party. The location of the other traditional party, the Unión Cívica Radical (UCR), is also in line with established interpretations of Argentine politics. The UCR is close to the PJ in the left-right dimension, but, as the main opposition facing Peronists for decades, it clearly stands out as different in the second dimension.

Taken as a whole, the ideological space obtained from the legislators’ responses closely resembles different classifications of Argentine parties given by experts (Carey and Reynolds 2007; Coppedge 1998; Wiesehomeier and Benoit 2008). We can further substantiate this claim using Figure 1b, which presents the correlation between the left-right location of Argentina’s main political figures as recovered by the A-M procedure and by the expert assessments compiled by Wiesehomeier and Benoit.³² Clearly, a strong association exists between the scaled positions obtained from the PELA surveys and the left-right placement by the country’s experts.³³

A second validity test of the survey-based estimates involves comparison of the locations of Paraguay’s main political actors and those of Paraguayan legislators obtained from roll-call votes. Figure 2a plots the the location of Paraguay’s main political actors generated from the responses to the PELA left-right scale using Poole’s (1998b) procedure. The representation of the ideological space depicted in Figure 2a clearly reproduces the interparty and intraparty schisms in Paraguay. The first dimension separates the Colorados (Wasmosy, Argaña, Cubas, and Oviedo) from everyone else (Partido Liberal Radical Auténtico’s Domingo Laino and Partido Encuentro Nuevo’s Guillermo Caballero). The second dimension captures the distinction between the Colorado factions, with Oviedo and Cubas on one side of the ANR location and Wasmosy and Argaña on the other (Molinas et al. 2008).

Figure 2b plots the the two-dimensional coordinates of Paraguayan legislators based on roll-call votes and generated using optimal classification (OC).³⁴ For comparability with the 1998 PELA data, I restricted the analysis to those votes made in the Paraguayan legislature between 1999 and 2000 (which were cast by the same legislators who participated in the survey).³⁵ The C tokens are Colorados,

FIGURE 1

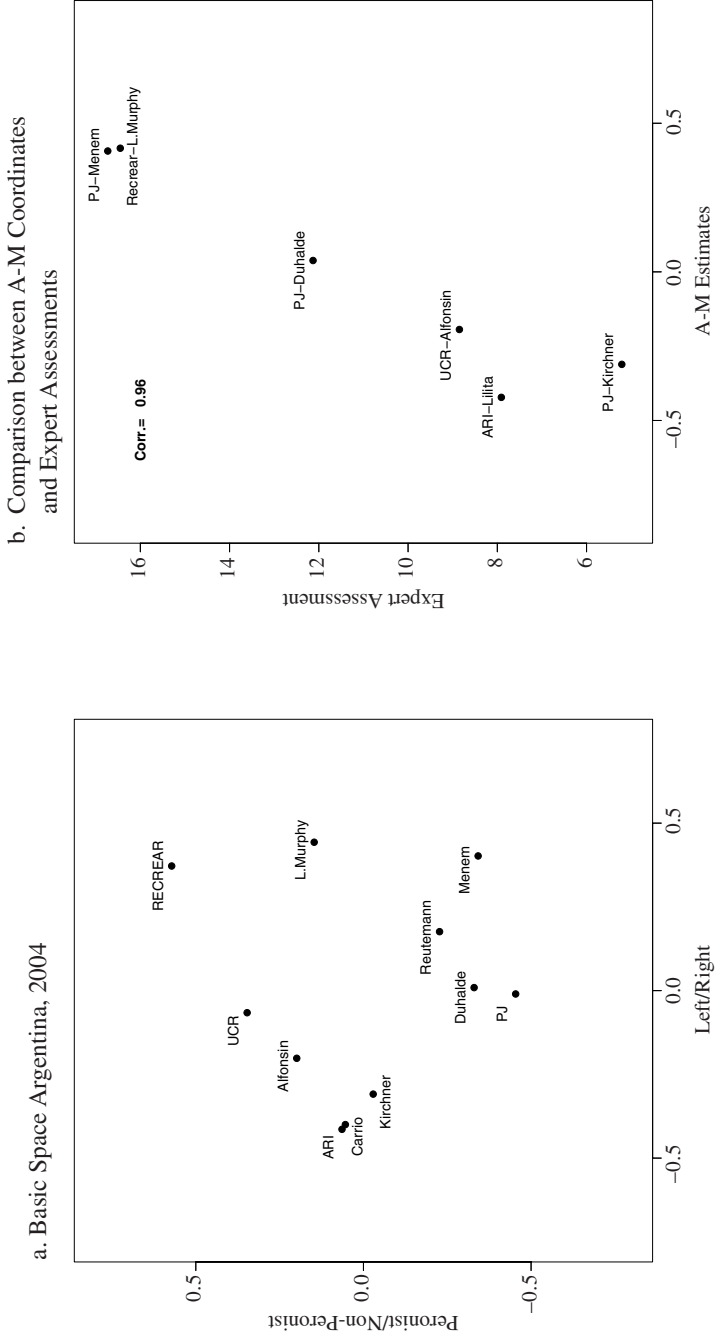
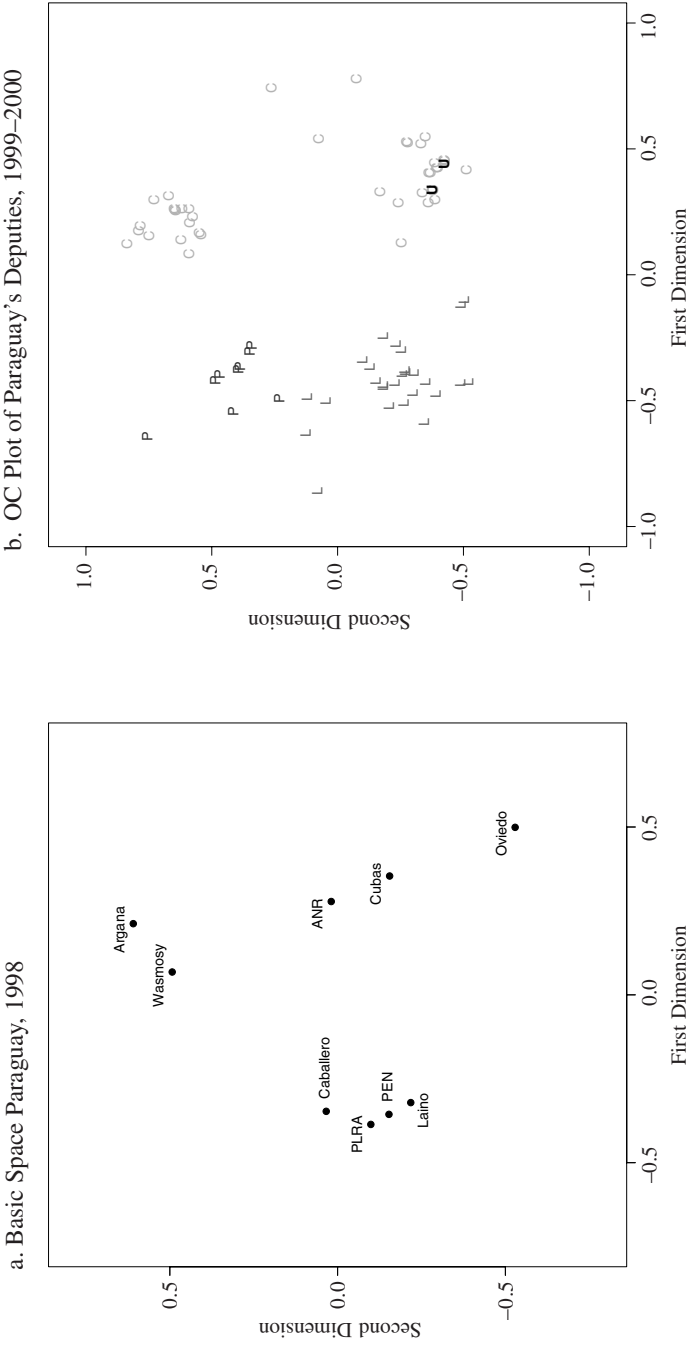


FIGURE 2



the L tokens are Liberales (PLRA), the P tokens are members of PEN, and the U tokens are members of Unión Nacional de Colorados Eticos (UNACE).

The spatial map generated by the OC scaling procedure also captures the political situation in Paraguay at the end of the twentieth century quite well. In May of 2000, an unsuccessful military coup was launched and, in the midst of several corruption scandals, the Oviedistas and the Liberal Party attempted to impeach González Macchi at least three times. In contrast, the leading members of PEN—including its 1993 presidential candidate, Caballero—participated in González Macchi's cabinet. Still in exile and banned from running in the presidential election, General Oviedo ordered the transformation of his Colorado faction into a new party, UNACE, for the 2003 race (Molinas et al. 2008).

More important, the OC scores reveal that Paraguayan legislators tended to cluster themselves in factions under the leadership of the political figures identified in Figure 2a. For example, the locations of the legislators of the Oviedista faction closely match the ideological location of Oviedo himself as recovered from the survey data. Similarly, the ideological locations of most PLRA parliamentarians and the party's leader, Domingo Laino, are almost identical.

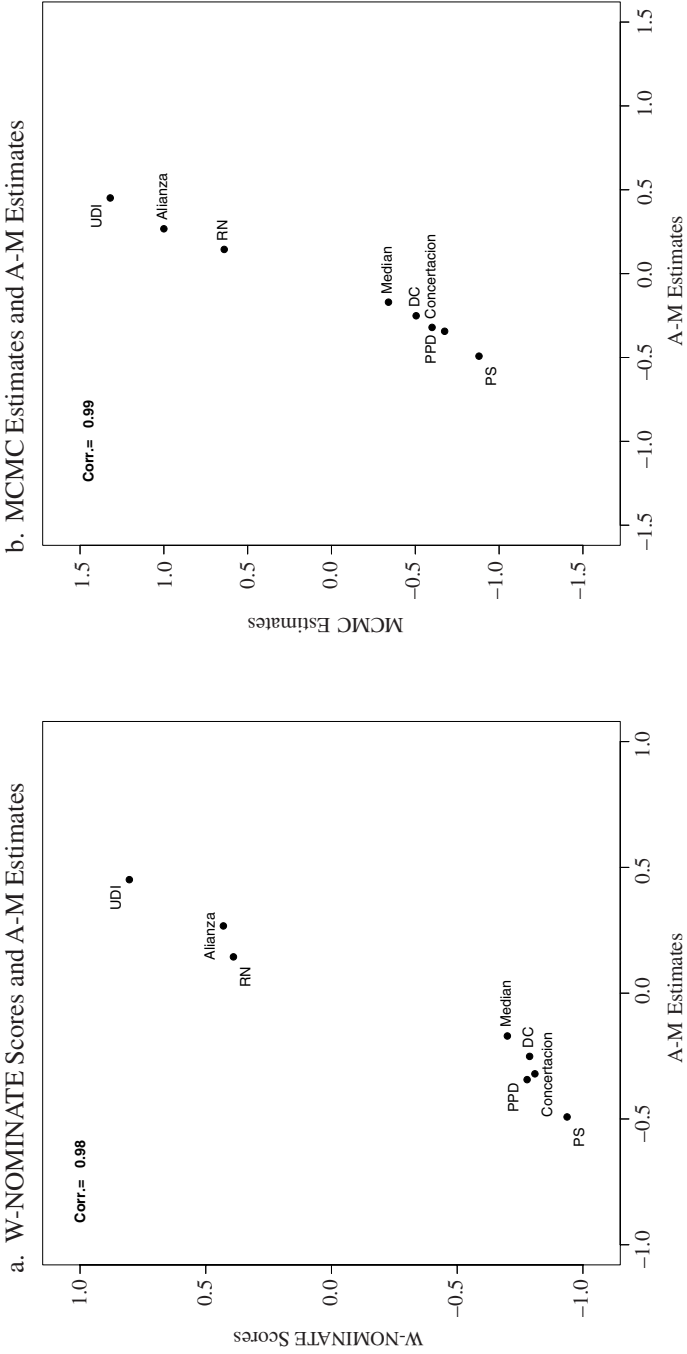
This brief analysis of the Argentine and Paraguayan cases illustrates only some of the many ways in which elite data can be used to estimate the ideological locations of political actors. Beyond this practical demonstration, the scaling results provide important validation for this approach: the recovered locations of partisan positions along the left-right ideological dimension in these two countries coincide with the way parties have been described in the literature and with estimates generated by expert surveys and roll-call data. Finally, these results show that there are significant advantages to using elite data on those occasions when it is neither possible nor desirable to use other methods.

Cross-Validation: Legislators' Ideological Positions

One of the main benefits of the elite data is that it also can be used to measure legislators' preferences directly. For example, the recovered locations of the legislators on the left-right continuum can be used to examine the extent to which these ideological preferences match the partisan composition of the corresponding legislatures (Luna and Zechmeister 2005; Rosas 2005).

I analyzed the validity of the elite-based estimates by comparing the ideological positions of Chilean legislators recovered using the

FIGURE 3
Comparison between Survey and Roll-Call-Based Estimates, Chilean House, 1998–99



A-M procedure with those obtained using roll-call-based scaling methods. Legislators' ideal points as retrieved from roll-call votes may reflect a mixture of ideology and partisan or institutional constraints. Consequently, a divergence between these different sets of estimates may not necessarily indicate a lack of validity. As Alemán and I have noted, however, majority leaders in Chile purposely work to keep issues that divide the ruling coalition off the plenary floor, and final-passage votes tend to reflect legislators' preferences accurately (Alemán and Saiegh 2007). Therefore, the Chilean legislature is an ideal case with which to check the validity of the A-M estimates. From a practical standpoint, this is also a very convenient case: unlike the legislatures of most Latin American countries, the Chilean legislature systematically takes and records roll-call votes.

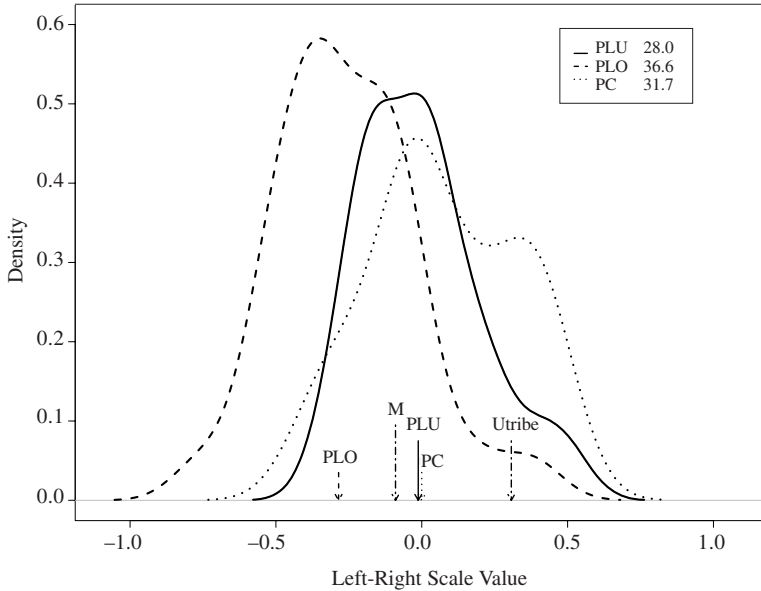
Because the PELA survey grants anonymity to the respondents, we cannot directly compare individual legislators. Nonetheless, we can match legislators according to their political affiliations and thus infer the partisan distribution of ideal points. Figures 3a and 3b present a comparison of W-NOMINATE scores and Bayesian MCMC estimates for the members of the Chilean House between 1998 and 1999 and A-M estimates generated using the 1998 PELA survey (which included the same legislators).³⁶ Each figure shows the position of the overall legislative median and the median legislator for each of the main parties or coalitions in Chile.

Figures 3a and 3b reveal almost no difference in the scores produced by W-NOMINATE and the Bayesian MCMC estimates versus the ideological positions recovered through the A-M procedure. The correlation between the NOMINATE scores and the ideal points generated using the PELA surveys is 0.98; the correlation between the PELA points and the Bayesian estimates is .99.³⁷ Also, partisan positions along the left-right ideological continuum coincide with the way in which Chilean parties typically have been ordered (Alemán and Saiegh 2007; Londregan 2000; Morgenstern 2004; Siavelis 2004). More important, the fact that the estimates from the self-declared ideological placements of Chilean legislators closely match those obtained from roll-call votes lends further support to the validity of using survey responses to recover legislators' ideological positions.³⁸

Bringing It All Together: Common-Space Ideological Locations

Overall, the results suggest that using survey responses to recover a basic space is a valid alternative to more-traditional methods that

FIGURE 4
Colombian Legislators from 2004 PELA 10-Point Scale



rely on expert data, roll-call votes, or some combination thereof. The main advantage of measuring spatial preferences using elite data is that it allows for comparison of ideological preferences across institutions. Therefore, these data can be employed to address various propositions regarding executive-legislative relations. For example, the scaled estimates are ideally suited to construct gridlock intervals or to test if the ideological reputation of executives or legislators (or some combination) is a reliable predictor of policy outcomes (see, for instance, Johnson and Crisp 2003).

Figure 4 graphs the ideological locations of Colombian legislators according to their membership in the country’s main political parties. The figure also shows the scaled positions of (1) the median legislator within each party, (2) the overall median legislator in the legislature, and (3) the president of Colombia, Alvaro Uribe. It is striking to note how Colombia’s main parties overlap on the left-right dimension. As Figure 4 shows, they are quite heterogeneous and tend to occupy the center of the political spectrum.

The recovered locations of the parties square well with existing interpretations of Colombian politics (see Archer and Shugart 1997 and Pachón 2002). In May and June of 2002, when the PELA surveys were conducted, the press portrayed Alvaro Uribe as an independent tasked with the responsibility of dealing with an unwieldy multiparty coalition in Congress. As Pachón (2002) notes, Uribe's candidacy became the axis of a realignment of the party system. The previously dominant Liberal Party (PL), of which Uribe had been a member before contesting the 2002 presidential election as an Independent, became fractured. The "officialist" leadership of the Liberals (PLO) openly opposed Uribe's government and his policies, but Uribe retained the support of a substantial minority within the party, including a majority of the elected Liberal legislators (classified as "Uribist" Liberals, or PLU, by the media). In addition, the Conservative Party (PC) became a close political ally of the president (Pachón 2002). The spatial map clearly captures the realignment of the Colombian party system and the positions of legislators from different factions of the Liberal party vis-à-vis the executive.

Conclusions

The analyses presented in this article indicate that, with the appropriate scaling methods, survey data can provide reliable estimates of legislators' ideological preferences. As illustrated with the cases of Costa Rica, Argentina, and Paraguay, these data offer concrete, systematic evidence of patterns of political competition. The data can also be employed to uncover the main dimensions of conflict in each of these countries. As the analysis of Colombia demonstrates, the recovered locations of the legislators on the left-right continuum can be used to assess the relative position of the legislature vis-à-vis the executive.

In addition, the strong correlation between the survey-based and roll-call-based estimates indicates that using survey responses to recover a basic space is certainly a valid option for legislative scholars. This finding opens up important possibilities for the study of legislatures that do not record votes or do not record votes that provide a random sample of the universe of legislative decisions. The method used in this article does not require access to voting records, so it can be applied to any legislature in the world.

More generally, the approach championed in this article not only provides real benefits in situations where roll-call data are not available but also enables researchers to test a myriad of hypotheses in

comparative legislative studies. For example, knowing the ideological locations of individual legislators can resolve the debate over party unity or party factionalization when roll-call data do not exist. We can also determine which issues create salient divisions among parties and legislators to address various propositions regarding executive-legislative relations or to explore the quality of representation in young democracies.

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NOTES

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1. The use of the term *differential item functioning* (DIF) to refer to interpersonal incomparability originated in the educational testing literature: a test question is said to have DIF if equally able individuals have unequal probabilities of answering the question correctly (cf. King et al. 2003).

2. These criticisms have led researchers to consider alternative indicators of legislator preference. Monroe et al. (2007) use records of legislative debates to capture legislators' positions on political issues. Another strategy focuses on cosponsorship data (Alemán et al. 2008; Fowler 2006). Although promising, neither of these approaches escapes criticism. As Carey (2006) notes, rhetorical ideological proximity might fail to identify the dividing lines between support and opposition for legislative proposals. As for cosponsorship, Crisp, Desposato, and Kearney (2008) argue that the data-generating process is undertheorized and understudied. In particular, they have examined the properties of ideal-point estimates from cosponsorship data and suggest that there are problems with using such data in all but very exceptional circumstances.

3. For example, Poole and Rosenthal (1997) use interest groups and some common roll calls to combine the two chambers in the U.S. Congress. Similarly, Bailey (2007) employs the positions taken by U.S. presidents and members of Congress on Supreme Court cases to "bridge" across institutions.

4. Michael Coppedge's classification of Latin American political parties includes approximately 800 parties, accounting for 97% of the vote in 166 legislative elections in 11 Latin American countries up to 1995. Each party is classified as left, center-left, center, center-right, right and Christian, or right and secular, or as personalist, other, or unknown. The Wiesehomeier and Benoit data include policy positions on numerous dimensions for both parties and presidents in 18 presidential systems from Latin America gathered by the authors from expert surveys collected in late 2006 and early 2007.

5. Another source of data commonly used to measure party positioning, the electoral manifesto, suffers from the same problem. Data collection efforts, such as those conducted by the Manifesto Research Group, have allowed researchers to estimate the policy preferences of political parties, but the locations of individual legislators cannot be inferred from these measures.

6. In some of these studies, the respondents cannot be individually identified, because the surveys are anonymous. While this condition restricts the researcher's ability to match the responses with other data sources, it ensures that the responses are sincere. As Kam (2001) notes, there seems to be little incentive for respondents to misrepresent their preferences in an anonymous survey.

7. The groups that conducted these surveys were led by Karlheinz Reif and Rudolf Wildenman (1979–84 Parliament), Rudolf Hrbek and Carl-Christoph Schweitzer (1984–89 Parliament), Shaun Bowler and David Farrell (1989–94 Parliament), Bernhard Wessels (1994–99 Parliament), and the European Parliament Research Group (1999–2004 and 2004–09 Parliaments). For additional information, see <http://www.lse.ac.uk/collections/EPRG/survey.htm>.

8. For a more-detailed description of the PELA project, see García-Diez and Mateos 2008 and Alcántara 2008, or go to <http://americo.usal.es/oir/elites/>.

9. The fact that respondents are asked to locate their own ideal points on the scale may exacerbate this tendency (Wilcox, Sigelman, and Cook 1989). For example, legislators who perceive themselves as “true leftists” are likely to interpret the end-points of the left-right scale in order to accommodate their own ideal points, thus pushing their perceptions of the candidates farther to the right than “less-committed leftists” would.

10. King et al. (2003) suggest the use of anchoring vignettes to evaluate and improve the information revealed by surveys. These vignettes are descriptions of hypothetical people or situations that survey researchers can use to correct otherwise interpersonally incomparable survey responses. Ideally, one would use such vignettes to enhance interpersonal comparability when measuring the preferences of key political actors. Unfortunately, this method is not feasible here because of data restrictions. Vignettes must be implemented at the design stage, and none of the elite surveys available to date have included vignettes.

11. A complete reference list is available from the author upon request.

12. Appendix 1, available on the *LSQ* website <http://www.uiowa.edu/~lsq/Saiegh_Appendix>, indicates the particular surveys that I used, with their main characteristics indicated in boldface.

13. The PELA study's website <<http://americo.usal.es/oir/elites/>> provides more details on the partisan distribution of the surveyed legislators.

14. As Poole (1998b) notes, this low-dimensional space was dubbed a basic space by Ordeshook (1976).

15. For example, the Argentine legislators sampled in 2004 were asked to locate themselves, four parties (the Peronist Party, Unión Cívica Radical (UCR), the Alternativa para una República de Iguales (ARI), and Partido Recrear para el Crecimiento (RECREAR)) and six prominent politicians (Carlos Menem, Lilita Carrio, Ricardo López-Murphy, Eduardo Duhalde, Raul Alfonsín, and Nestor Kirchner) on the left-right scale.

16. This is the first article that uses elite data to estimate the positions of key political actors in Latin America. Rosas (2005) uses PELA to assess the level of ideological organization of Latin American legislative parties, but his unit of analysis is the legislative party system rather than each individual legislator. Zoco (2006) uses PELA data to analyze the ideological organization of the legislative branch at both aggregate (political party) and individual (legislator) levels, but she restricts her analysis to Central America. Unlike these studies, which rely on a correlation or covariance matrix computed from the data matrix, my study uses a scaling procedure that analyzes the data matrix directly, without any intervening transformations of the original data. Other studies based on the Salamanca surveys use the respondents' raw data and thus fail to correct for some of the problems outlined here (cf. Alcántara 2008).

17. As King et al. (2003) note, it would be even better to correct for DIF at the design stage, but this is not possible with the data collected by the PELA team.

18. For a more-detailed description of the A-M methodology, see Aldrich and McKelvey 1977; see also Poole 1998b and King et al. 2003.

19. Palfrey and Poole (1987) also showed that the respondent positions may be biased toward the mean if the respondents are poorly informed.

20. It is important to bear in mind that the answers to the PELA questions described here can be considered preferential data—each legislator is asked to report his or her most preferred position on the scale—as well as perceptual data—each legislator is asked to indicate where he or she thinks a number of political actors fit on the scale.

21. I used MCKALNEW.FOR to implement the A-M scaling method (1977). The program is available from Keith T. Poole at <http://voteview.com/>. For the theory of the program and a more detailed description of the methodology employed here, see Aldrich and McKelvey 1977, Palfrey and Poole 1987, and Poole 1998a, 1998b. I used BLACKBOX.EXE and BLACKBOX_TRANSPOSE.EXE to implement Poole's (1998b) scaling procedure.

22. I only included legislators in the scalings if they placed themselves and all stimuli on the ten-point scale and reported at least some variance in the positions of the stimuli.

23. These results are not surprising: Monte Carlo tests by both Aldrich and McKelvey (1977) and Poole (1998b) show that their estimation procedures accurately reproduce the true data, even with high levels of error and missing data.

24. The estimates of the overall variance to perceptions in the scaled data have to be taken with a grain of salt, however, as they are not completely free of bias (Aldrich and McKelvey 1977; Palfrey and Poole 1987).

25. In the cases of Costa Rica and Paraguay, for example, 5 out of 31 and 9 out of 56, respectively (or approximately 16% of the legislators), have estimated weights that are negative.

26. Monte Carlo work conducted by Aldrich and McKelvey (1977) and Palfrey and Poole (1987) shows that the recovery of the configuration of stimuli is very accurate, even when the error level is very high and a large number of respondents are reporting mirror or semi-mirror images.

27. It should be noted that, once again, the exception is the case of Paraguay, which exhibits a considerably smaller R^2 .

28. Using data from expert surveys, Wiesehomeier and Benoit (2008) have found that positioning of presidents and parties on nearly all political issues neatly reduces to a single dimension of left-right contestation. The one-dimensional fit is also very consistent with existing assessments of the nature of the party systems in the literature. For example, Rosas (2005) has constructed an index of ideological organization of legislative parties. According to his results, Chile and Uruguay rank much higher in organization than the other countries. These results also square well with those obtained by Jones (2005), who has developed an index to capture the extent to which parties are institutionalized and programmatic. According to Jones's index, Chile and Uruguay exhibit the most programmatic party systems.

29. A graphical representation of the estimated locations of key political figures in each of these countries appears in Appendix 2, on the *LSQ* website at <http://www.uiowa.edu/~lsq/Saiegh_Appendix>.

30. It appears that many of the respondents in the PELA survey tended to conflate the concepts of left and right with the ideas of "traditional" versus "new" parties. This interpretation may also explain why so many Costa Rican legislators viewed the political space backwards. To determine if this conflation was at the root of the confusion, I conducted additional analysis of the Costa Rican basic space using the PELA surveys from 1998, before the realignment of the party system. As expected, the one-dimensional fit of this model was very large ($R^2 = .78$) and the advantage from adding a second dimension was quite small. The second basic dimension essentially separated former presidents Figueres and Arias from everyone else.

31. I chose Paraguay because it is one of the few Latin American countries for which multiple roll-call votes exist.

32. The experts in the Wiesehomeier and Benoit survey were primarily academics, ideally those who specialized in the political parties and electoral processes of their countries. In each country, experts were asked to place parties on a general left-right dimension, taking all other positions into account (the endpoints of the scale were 1 for left and 20 for right). Figure 1b presents the average of the responses. For comparability, I used the one-dimensional A-M estimates.

33. One small caveat regarding this comparison is that the PELA survey took place between April and June of 2004, whereas the Wiesehomeier and Benoit survey was conducted in 2007.

34. Optimal classification (OC) is a scaling procedure that performs nonparametric unfolding of binary-choice data. Given a matrix of binary choices by individuals (for example, Yes or No) over a series of parliamentary votes, OC produces a configuration of legislators and cutting lines or planes that maximize the correct classification of the choices. For the theory of the program and an in-depth description of the OC method, see Poole 2005.

35. The roll-call data contain 275 non-unanimous votes by Paraguayan legislators between January 15, 1999, and December 29, 2000. The correct classification is 94.5% (0.94511), with an aggregate proportional reduction in error of .79 (0.79564). The eigenvalue pattern suggests the presence of a second dimension underlying the data.

36. The W-NOMINATE scores come from Morgenstern 2004, and the Bayesian estimates from Alemán and Saiegh 2007.

37. As one would expect, there is also a high correlation between the W-NOMINATE scores and the Bayesian ideal points.

38. The scaling results generated by the A-M method for the cases of Argentina and Brazil are also very similar to the findings of Jones and Hwang (2005), who examined Argentine Chamber deputy behavior through roll-call vote analysis, and those of Zucco (2007), who explicitly examined the evolution of the ideological organization of the Brazilian legislature using both survey responses and roll-call data.

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