

The Quantity and the Quality of Party Systems

Party System Polarization, Its Measurement, and Its Consequences

Russell J. Dalton

University of California, Irvine

Previous research claims that the number of parties affects the representation of social cleavages in voting behavior, election turnout, patterns of political conflict, and other party system effects. This article argues that research typically counts the quantity of parties and that often the more important property is the quality of party competition—the polarization of political parties within a party system. The author first discusses why polarization is important to study. Second, the author provides a new measurement of party system polarization based on voter perceptions of party positions in the Comparative Study of Electoral Systems, which includes more than 50 separate elections from established and developing democracies. Third, the author compares party polarization and party fractionalization as influences on cleavage-based and ideological voting and as predictors of turnout levels. The finding is that party polarization is empirically more important in explaining these outcomes.

Keywords: *party polarization; party fractionalization; turnout; voting*

One of the most widely examined properties of party systems is the counting of the number of parties. A large body of research examines the merits of a two-party system versus a multiparty system (or a range of parties) and links the number of parties to the representation of social cleavages in voting behavior, turnout in elections, representation, and levels of political conflict (e.g., Blais & Dobrzynska, 1998; Kim, Powell, & Fording, 2006; Norris, 2004; Powell, 1982). Douglas Rae (1971) and others have examined how the number of parties influences strategic voting and other aspects of electoral behavior. At a systemic level, Lijphart (1999) includes the number of parties as a prime indicator for the development of consociational democracy and links a range of effects to the consociational model.

The list of studies comparing the correlates of the number of parties is extensive, touching many aspects of party and electoral behavior (Lijphart & Grofman, 1991; Norris, 2004; Taagepera & Shugart, 1989).

The simple premise of this article—but one often overlooked—is that instead of counting the quantity of parties, a more important property of party systems is often the quality of party competition. Many of the consequences attributed to the number of parties are actually linked to the degree of polarization in a party system. Party system polarization reflects the degree of ideological differentiation among political parties in a system. Giovanni Sartori (1976) focused attention on this concept when he compared the consequences of centripetal and centrifugal party systems. In the former, parties converge on the center to compete for the median voter; in the latter, parties are more widely dispersed along the political continuum. In other words, counting the number of parties was less important than knowing how they were distributed ideologically. Similarly, many of Anthony Downs's (1957) theoretical arguments on the consequences of party system competition were based on presumptions of how parties were distributed along an ideological continuum.

In historical terms, analysts claim that one of the factors contributing to the collapse of democracy in the Weimar Republic was its heavily fractionalized party system. Similar claims are made about the breakdown of Austrian democracy in the 1930s, the French Fourth Republic in the 1950s, Chilean democracy in the 1970s, and the fragility of democracy in other nations with a large and diverse party system (Powell, 1982; Sartori, 1976). However, the problem facing Weimar, the French Fourth Republic, and these other examples was not primarily the number of parties but the vast ideological differences that separated parties and made governing problematic. The polarization of a party system is a property that can be independent of the number of parties, and I suspect that many of the effects attributed to the fractionalization of party system are better understood as a consequence of party system polarization.

This article focuses on the meaning, measurement, and consequences of polarization in contemporary democratic party systems. I begin by discussing the concept of party system polarization in the research literature and why polarization is important to study. Second, I provide a new measurement of party system polarization based on public perceptions of parties from the Comparative Study of Electoral Systems (CSES). The CSES has now conducted surveys in two waves and has polled citizens in more than 50 elections. Most important, I examine two potential implications of party system polarization and demonstrate how polarization has stronger

effects than party fractionalization. Finally, I discuss the implications of these findings for contemporary party systems.

The Literature on Party Polarization

The concept of polarization has developed from two distinct approaches. First, Anthony Downs (1957) introduced the concept of the spatial modeling of party systems, in which political parties (and voters) are aligned along a Left and Right continuum. This provides a framework for party competition. For instance, voters will typically select the party most proximate to their own position on this continuum. Thus, the relative movement of voters and parties along this dimension alters outcomes from election to election. Similarly, if the nearest party is far from the voter, he or she might decide to abstain from voting. Or if two or more parties are equidistant, this produces indifference that may also increase the likelihood of nonvoting and makes voting predictions less certain.

This spatial model is a powerful theoretical tool in studying elections and voter behavior, party competition, and coalition formation (e.g., Adams, Merrill, & Grofman, 2005; Laver & Hunt, 1992; Laver & Schofield, 1990). Moreover, embedded in Downs's (1957) analyses was a concern for the degree of polarization in a party system, although it was often expressed in terms of the number of parties. For instance, Downs assumed that two-party systems would converge to the center, whereas multiparty systems would be spread along the Left and Right dimension. Downs believed that the diversity of parties would also affect the correlates of voting choice:

Voters in multiparty systems, however, are given a wide range of ideological choice, with parties emphasizing rather than soft-pedaling their doctrinal differences. Hence regarding ideologies as a decisive factor in one's voting decision is usually more rational in a multiparty system than in a two-party system. (p. 127)

The ideological spread of parties also should affect the voters' proximity to a preferred party and thus the likelihood of turning out to vote.

A second approach is reflected in Giovanni Sartori's (1976) influential study of political parties (also see Evans, 2002). Sartori began with the Downsian concept of an ideological space structuring party competition. He specifically focused on the degree of polarization within a party system

and argued that there were both centripetal and centrifugal forces that influenced parties' locations along the Left and Right scale. In some systems—most often multiparty systems—these centrifugal forces produced a fleeing from the center and a pattern of polarized pluralism (Sartori, 1976, pp. 131–145). High levels of party system polarization can intensify ideological debates, weaken the legitimacy of the regime, and destabilize the political system. Sartori illustrated his theory with descriptive accounts of highly polarized systems, such as the German Weimar system and the postwar French and Italian systems. He contrasted polarized pluralism with the patterns of moderate pluralism or two-party systems, where centripetal forces produced a different electoral dynamic and its consequences (Sartori, 1976, pp. 173–192). Subsequent studies have adopted this framework to examine how the number of parties—if not system polarization—influences the nature of electoral choice, party coalitions, democratic representation, and political stability (e.g., Kim et al., 2006; Lijphart, 1999; Norris, 2004; Powell, 1982).

These spatial models thus converge on a common framework for studying party systems. Parties can be conceptualized as aligned along a single policy or ideological continuum. Even if this is an oversimplification of political reality, it provides a good first approximation of the nature of party competition (Cox, 1990; Knutsen, 1998). In addition, the distribution of parties along this continuum is an important characteristic of party systems. Often, researchers have resorted to the shorthand of counting the number of parties, because it was assumed that the number of parties reflected the degree of polarization. However, the underlying theoretical logic implies that the distribution of parties along the continuum is of equal or of greater importance than the simple number of parties. The quantity of parties is thus used as a surrogate for the distribution of parties. However, the degree of party system polarization should more directly influence both the patterns of voter behavior as well as the broad characteristics of the political system. I examine this framework in this research.

Measuring Party System Characteristics

Scholars have long emphasized the number of parties as an important characteristic of party system. Empirical researchers have adopted two different methods to count the number of parties to give weight to the relative size of parties and not just their absolute numbers. Party fractionalization (the Herfindahl index) is calculated from statistics on the relative size of parties:

$$\text{Herfindahl} = \sum (\text{party seat share in legislature}_i)^2,$$

where i represents individual parties. The Herfindahl index can be interpreted as the probability that two deputies picked at random from among the legislative parties will be of different parties, with higher values indicating a less fractionalized party system. This measure or its variants have been widely used in empirical research on party systems (e.g., Klingemann, 2005; Rae, 1971; Sigelman & Yough, 1978; Taylor & Herman, 1971). An alternative statistic is the Laakso and Taagepera (1979) measure of the effective number of parties (also Taagepera & Shugart, 1989). The Laakso-Taagepera index is simply the inverse of the Herfindahl index, which counts the number of parties weighted by size to discount the relevance of small parties.¹ In other words, different studies comparing the number of parties in a party system use either of these two indices, but these two measures are essentially interchangeable. For instance, in the elections included in the CSES database, the Herfindahl and Laakso-Taagepera scores are correlated at $r = .92$ ($N = 62$). Furthermore, these statistics on the number of parties are readily calculated for each election and each legislature from publicly reported data.

Party system polarization is a more difficult concept to measure. The logic of party system polarization implies that it should reflect the distribution of parties along an ideological dimension. Following the lead of Downs (1957), I conceptualize parties as aligned along a single ideological dimension. A few large parties near the center of the continuum would reflect a centrist party system in which centripetal forces encourage parties to move toward the center. Conversely, a system with a number of large parties at the political extremes is a highly polarized system in which centrifugal forces are pressuring parties to move to the extremes.

Until recently, however, it was difficult to compare party systems on their degree of polarization, because this required measuring the ideological position of parties as well as their vote shares. Typically, researchers estimated polarization from indirect indicators, such as the number of parties in an electoral system, the size of extremist parties, or the vote share for governing parties (Pennings, 1998; Powell, 1982). Sartori (1976) attempted to estimate polarization by categorizing parties as Left, Right, or Center; Sigelman and Yough (1978) used a 4-category grouping of party families available from a U.S. State Department report; Gross and Sigelman (1984) used 10-party family categories (e.g., communist, socialist, centrist, fascist) coded by the *Britannica Yearbook* and assigned them interval values. These methods provide broad approximations of the actual

ideological position of parties but treat all parties of a family as identical and differences between families as equal interval differences. Another option is the use of party manifestos to estimate parties' Left and Right positions (Budge, Robertson, & Hearl, 1987; Caul & Gray, 2000; Klingemann, 2005). However, the comparative manifesto project focused on the salience of issues rather than party positions, and thus there is debate about the validity of this methodology (Gabel & Huber, 2000; Harmel, Tan, & Janda, 1995; Laver & Garry, 2000).

I therefore turn to another source to directly measure the distribution of parties: the perceptions of the electorate in the nation. The CSES is a cooperative international project that asks a common questionnaire in the national election studies of many contemporary democracies.² The first module of the CSES included 36 nations, and the current release of the second module includes 29 nations. Thus, the CSES offers an unparalleled resource to compare partisan images across nations and to track changes in perceptions across two waves of surveys.

Following Downs (1957) and previous researchers, I begin by assuming that party politics is structured along a Left and Right dimension. The use of a Left and Right scale does not imply that citizens possess a sophisticated conceptual framework or theoretical understanding of liberal-conservative philosophy. I simply expect that positions on this scale summarize the issues and cleavages that structure political competition in a nation. Ronald Inglehart (1990), for instance, found that citizens in most nations can locate themselves on the Left-Right scale and described the scale as representing "whatever major conflicts are present in the political system" (p. 273; also see Dalton, 2006; Huber & Inglehart, 1995; Knutsen, 1999). The meaning of this dimension can, and indeed likely does, vary across nations. In keeping with Downs's logic, these labels provide reference points that help citizens interpret and evaluate political parties and other political actors and policies. Thus, the Left-Right dimension provides a metric for the cross-national comparisons.

The CSES asks respondents to position themselves along a Left-Right scale using the following question:³

In politics people sometimes talk of Left and Right. Where would you place yourself on a scale from 0 to 10, where 0 means the Left and 10 means the Right?

After placing themselves on the Left-Right scale, the survey asked respondents to position the parties in their nation; up to six parties were included. These citizen placements of the parties provide the basis for measuring polarization for the party system as a whole.

Figure 1
Citizen Placement of Parties on the Left–Right Scale

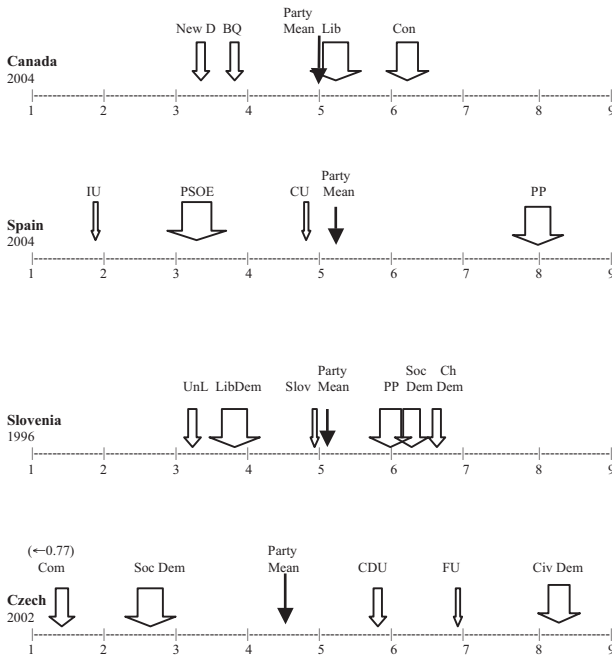


Figure 1 illustrates the distribution of parties in four nations as examples of the patterns in this study. The first two panels in the figure present two nations—Canada and Spain—both with a relatively small number of parties. The size of the arrow in the figure approximates the vote share for the party in the immediately previous election. In the Canadian 2004 election, for instance, the Liberals (mean placement = 5.11) and the Conservatives (mean = 6.22) are located near the center of the scale. The New Democrats and Bloc Quebecois are further to the Left. However, all the parties are relatively near the weighted mean of the party distribution (mean = 4.99).

Spain presents a contrasting case. The number of major parties is comparable to Canada, but the Spanish parties were much more polarized in 2004. Spaniards located the two major parties—the Socialist party (PSOE) and the People's party (PP)—near the poles of the Left–Right scale, and the PSOE is even outflanked on the Left by the United Left (*Izquierda Unida*). Indeed, this was a highly polarized election initially because of sharp

disagreements between the PSOE and PP over economic policy and the war in Iraq, then punctuated by the Madrid terrorist bombing on the eve of the election. In short, even though the numbers of parties is roughly equivalent in these two party systems, polarization varies substantially.

The last two nations in Figure 1 show a similar pattern for two new democracies in Eastern Europe, both with a larger number of political parties. In the Slovenian election of 1996, the public positioned all the major parties within a modest range along the Left–Right scale. In contrast, the Czech party system in 2002 had approximately the same effective number of parties, but the parties were much more widely dispersed along the Left–Right scale. The Communists were positioned at 0.77, and the Civic Democrats at 8.24. These parties represent more than 40% of the electorate, yet they are positioned near the ideological extremes. The other Czech parties are also widely dispersed between these two poles.

Figure 1 illustrates two points. First, the measurement of polarization can be relatively independent of the number of parties because even party systems with relatively similar numbers of parties vary widely in the Left–Right distribution of these parties. Second, my conceptual measure of party polarization should include two elements: (a) the relatively position of each party along the Left–Right scale and (b) the party's position weighted by party size (because a large party at the extreme would signify greater polarization than a splinter party in the same position).

I developed an index to measure the distribution of parties along the Left–Right scale.⁴ The Polarization index is measured as the following:

$$PI = \text{SQRT}\{\sum(\text{party vote share}_i) * ([\text{party L/R score}_i - \text{party system average L/R score}] / 5)^2\},$$

where *i* represents individual parties. This index is comparable to a measure of the standard deviation of a distribution and is similar to the statistics used by other scholars.⁵ It has a value of 0 when all parties occupy the same position on the Left–Right scale and 10 when all the parties are split between the two extremes of the scale. This statistic calculates what is apparent from the party locations in Figure 1. For instance, the Canadian party system in 2004 has a Polarization index of 2.06, whereas the Spanish system has an index of 4.33. Similarly, the Slovenia party system has an index of 2.15, whereas the Czech polarization score is more than twice as large at 5.43.

Table 1 presents the Polarization index for all the democracies in the two modules of the CSES. There is considerable variability in the polarization

Table 1
Party Polarization Index by Nation

Nation	Time 1	Time 2	Change
Australia	2.04	1.96	-.08
Belgium	2.46	—	
Brazil	—	2.00	
Bulgaria	—	4.37	
Canada	1.83	2.06	.23
Czech Republic	5.44	5.43	-.01
Denmark	3.84	3.57	.27
Finland	—	2.85	
France	—	3.29	
Germany	2.51	2.70	.29
Hungary	3.40	5.85	2.45
Iceland	4.49	4.08	-.41
Ireland	—	2.20	
Israel	3.99	3.87	-.12
Japan	3.30	3.30	.00
Korea (S.)	0.70	3.55	2.85
Lithuania	3.41	—	
Mexico	1.29	2.10	.81
Netherlands	2.89	3.64	.75
New Zealand	3.81	3.35	-.46
Norway	3.42	3.75	.27
Peru	0.84	—	
Philippines	1.33	0.46	-.87
Poland	5.18	4.92	-.26
Portugal	3.62	3.44	-.12
Romania	2.13	—	
Russia	4.01	—	
Slovenia	2.15	—	
Spain	4.02	4.33	.29
Sweden	5.19	4.07	-1.08
Switzerland	3.19	4.01	.82
Taiwan	1.18	1.14	-.04
United Kingdom	2.82	2.37	-.45
United States	—	2.43	
Total <i>N</i>	29	28	

Source: Comparative Study of Electoral Systems; available from www.cses.org.

of contemporary party systems. In a few instances, polarization drops below 1.0. For instance, in the 2000 South Korean election, the democratic reformer Kim Dae Jung switched parties to run with the conservative Millennium Democratic Party to win the election; this dramatically reduced

party polarization in this election (which rebounded in the 2004 election). In the case of the Philippines and Peru, the low Polarization index implies that these party systems are not offering significantly different choices in terms of the public's perceptions. At the other extreme, polarization is substantially higher in a range of other party systems (e.g., Sweden and Iceland among established democracies and Poland and the Czech Republic among new democracies). These are nations where the public sees party choices that nearly span the entire Left–Right continuum. In addition, although there is variability over time, most party systems have fairly stable levels of party polarization, with most ranging within $\pm .25$ between the two modules of the CSES.

In broad terms, it seems logical to assume that party systems with a large number of parties also tend to be more polarized. However, correlating polarization with the Herfindahl index of party fractionalization shows that these two party system characteristics are unrelated ($r = .067$, $N = 33$).⁶ The examples of Figure 1 are thus typical in showing how polarization can vary nearly independent of the number of parties. Reaffirming this pattern, Gross and Sigelman (1984) similarly found that party system fractionalization and polarization were essentially orthogonal characteristics of the 46 party systems they compared in the late 1970s.

The structure of the electoral system, measured by the district magnitude, has a stronger relationship with polarization ($r = .338$).⁷ However, it is also apparent from Table 1 that party system polarization can vary considerably between the two CSES modules even when the electoral system is constant. We also might assume that fractionalization is greater in new party systems where party alignments are still forming and parties are less institutionalized. In fact, polarization is slightly greater in an established party system ($r = .087$), although this is also an insignificant correlation.

In addition, Downs's analyses presume that the polarization of a party system reflects the dispersion of citizens along the ideological dimension: In systems with voters compacted together, the parties will converge toward the median, whereas in systems with voters dispersed along the continuum, the parties will spread out to reflect this distribution. In fact, this is not empirically correct. The dispersion of citizens along the Left–Right scale (measured by the standard deviation of Left–Right self-placement) is almost unrelated to the party system Polarization index ($r = .144$, $N = 28$; CSES Module I). This is partially because most publics follow a single-peaked distribution with only modest differences in their standard deviation and because party polarization seems to vary independently of these patterns.⁸

Rather than such institutional structures or societal characteristics, party polarization often reflects the internal dynamics of electoral competition in a nation. Parties and their leaders make strategic or ideological choices when they begin a campaign, and other parties respond to these choices. If one thinks of the ebbs and flows of party positions across campaigns in a nation (e.g., the Nixon–McGovern campaign of 1972 versus Bush–Clinton in 1992), this illustrates how parties' campaign choices vary the level of polarization. The polarization statistic is capturing this process and displaying the nature of party competition in each system, which is also my objective.

Certainly there are limitations to these measures of polarization, as there are to measures from other data sources. I am assuming that voters can meaningfully place political parties along a Left–Right continuum. Some might question whether a single dimension is sufficient; but this often yields a good approximation of the basic cleavages in a society (e.g., Inglehart, 1990; Knutsen, 1999). In addition, research often questions the sophistication of mass publics. However, cumulating estimates over all voters should generate a reliable measure of party positions. Moreover, even if one argues that the placement of a party is incorrect, this is still the placement that the public perceives and this is what should influence their behavior. To the electorate, their perceptions are reality. Thus, there is a strong internal logic to using citizen estimates of party positions to predict citizen political behavior.

The Correlates of Polarization

A considerable body of research maintains that the degree of polarization in a party system—often measured by fractionalization—has important consequences. A highly polarized system presumably produces clearer party choices, stimulates participation, affects representation, and has more intense partisan competition. Thus, the ideological gap between winners and losers is greater and the policy implications of government control are more substantial. Conversely, a centrist party system should reflect greater consensus within the electoral process—at least in Left–Right terms—and less interparty conflict and less political responsiveness.

To illustrate the value of measuring party system polarization, I examine two areas of party system differences that are widely discussed in the literature. First, I analyze how polarization and fractionalization might be related to the strength of voter–party relationships. Second, I examine how these two party system characteristics affect turnout in elections.

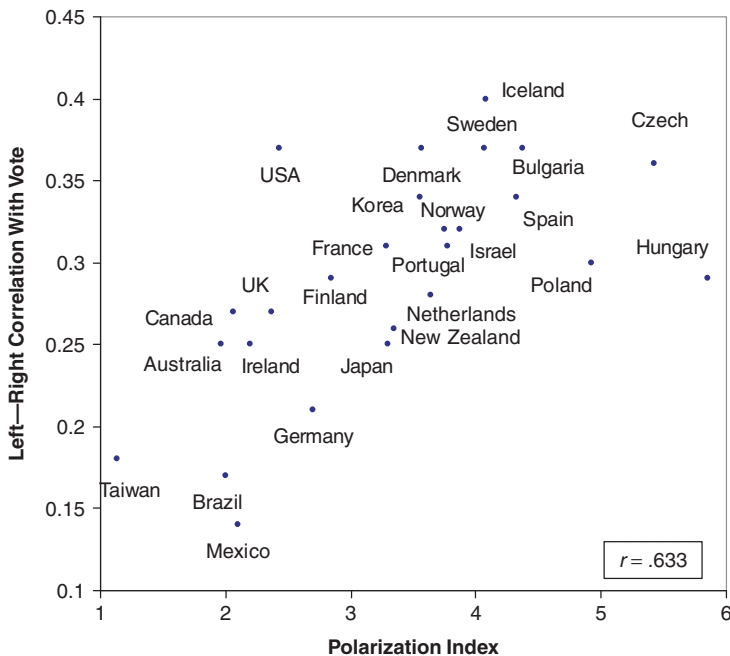
The Polarization of Voter Preferences

One hypothesized effect of party polarization is on the correlates of party preferences. If parties offer limited choices to voters, then it is not likely that the voter blocs will differ sharply across parties. Downs expressed this idea in terms of the number of parties, although his logic is clearly based on party polarization: "Voters in multiparty systems are more likely to be swayed by doctrinal considerations—matters of ideology and policy—than are voters in two party systems" (1957). Bing Powell (1982) discussed this hypothesis in terms of class voting. He maintained that when parties offer distinct ideological choices, then it is more likely that social class groups could identify and support a party that was more representative of their positions. When tweedledum is running against tweedledee, then there is little to choose between them. Pippa Norris (2004) similarly found that the overall level of social cleavage voting was higher in proportional representation systems than in majoritarian systems with fewer parties.

However, the focus on class voting is merely a shorthand for a broader hypothesis: Diverse party choice should generally strengthen the polarization of voters. If parties are distinctive in their issue positions, then issues can have greater weight, all else being equal (such as when the issues are of equal relevance across nations). I might debate the causal direction of this relationship, but the present analyses simply focus on the strength of this relationship.

I can test this hypothesis in two ways with the CSES surveys. First, I calculated the relationship between social class and party support across nations. I expect that class issues are generally relevant in contemporary electoral systems and that the level of class voting will be stronger in more polarized systems. However, I also know that the institutional history of a party system and the nature of class-interest group alignments affect the level of class voting (Lipset & Rokkan, 1967). Therefore, as a second step, I generalize this test to examine variations in the correlation of Left-Right self-placement with party choice. Most voters in most party systems can locate themselves along the Left-Right scale. As noted earlier, I do not presume that they have a deep understanding of the Left-Right scale in liberal and conservative ideological terms. Rather, Left-Right positions summarize positions on the political issues of relevance in a nation (Fuchs & Klingemann, 1989; Inglehart, 1990; Knutsen, 1999). In some nations, this may tap class conflicts; in other nations, cultural or social issues are more important. Thus, Left-Right position acts a summary of the issues most relevant to the respective public in each nation.

Figure 2
The Impact of Left–Right Attitudes on Vote Preferences
as a Function of Party Polarization



Source: Comparative Study of Electoral Systems, Module II and the Polarization index in Table 1; available from www.cses.org.

To demonstrate the value of the Polarization index, I compare the level of class voting as a function of the polarization and fractionalization of the party system. I examined the 26 nations in the second module of the CSES that asked the same question on party preferences and coded social class into the same categories.⁹ My dependent variable is the correlation (Cramer's V) between social class and party preference.

The strength of class voting is related to the nature of the party system. Using the Fractionalization index, there is a .32 correlation between fractionalization and the strength of the class voting correlation. That is, class voting is stronger in more fractionalized party systems. However, the Polarization index shows a stronger tendency for the strength of class voting to be higher in more polarized party systems ($r = .47$).

An even more robust test is the correlation of Left–Right self-placement with party preference, because this is a more encompassing measure than the single cleavage of class voting. I believe the Left–Right position is more comparable across nations in examining party system effects because class voting may reflect the structure of interest groups or the composition of the labor force. Figure 2 presents the relationship between Left–Right attitudes and party preferences as a function of party system polarization. There is an impressively strong ($r = .63$) relationship between the party polarization and the correlation between Left–Right attitudes and party choice. For instance, returning to the examples from Figure 1, Canada in 2004 has a low level of party polarization on the x -axis (2.06) and the correlation between Left–Right attitudes and vote is only .27 on the y -axis; polarization is higher in Spain and the correlation is stronger ($r = .34$); and even higher polarization in the Czech Republic yields an even stronger correlation ($r = .36$).

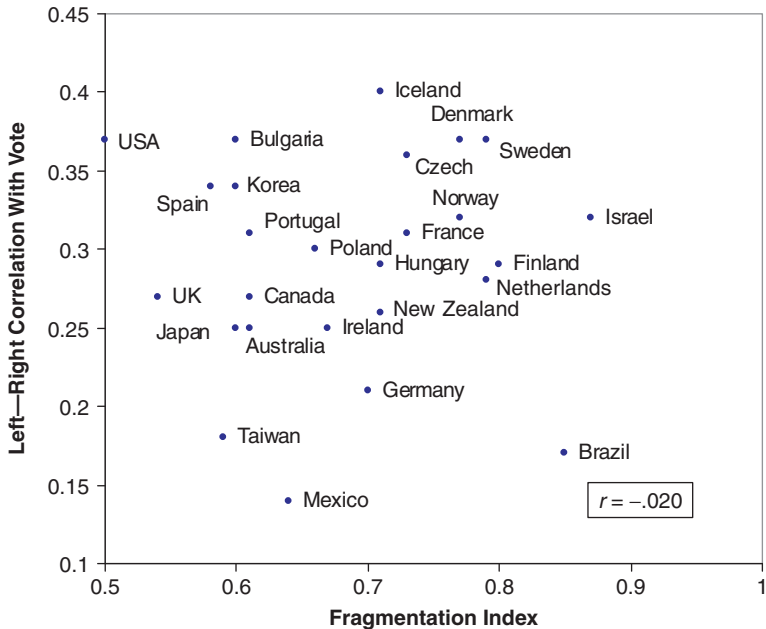
The results of Figure 2 may seem unsurprising and inevitable: With more electoral choice, voters can more clearly translate their Left–Right orientations into a party preference. Indeed, this is the theoretical logic I am testing. But the important factor is not the number of party choices, which is what previous research has primarily tested, but the ideological diversity of choice as measured by the Polarization index. I can demonstrate this point by repeating the analysis using the Fractionalization index instead of polarization. Figure 3 shows that party system fractionalization is unrelated to the strength of the Left–Right relationship ($r = -.020$).¹⁰ As I demonstrated above, party systems can vary in the number of parties almost independently of the polarization among the parties. Thus, the correlation between Left–Right attitudes and party preferences can be stronger in a system with fewer parties but more polarization (e.g., Spain, $r = .34$) than in a system with many parties but less polarization (e.g., Finland, $r = .29$).

A unique aspect of the CSES study is that I can replicate these analyses with the nations from the Module I data set. I again find that the impact of Left–Right attitudes on party preferences is strongly conditioned by the level of polarization in the party system ($r = .69$, $N = 27$).¹¹ At the same time, party system fractionalization has little relationship to the strength of the Left–Right relationship with party preference ($r = .16$).

The Party System and Voting Turnout

Another commonly cited consequence of the fractionalization and polarization of party systems is turnout in elections. The logic is quite clear. With few choices, voters have limited opportunities to find a party that represents

Figure 3
The Impact of Left–Right Attitudes on Vote Preferences
as a Function of Party Fractionalization



Source: Comparative Study of Electoral Systems, Module II and Fragmentation index; available from www.cses.org.

their views and thus may choose to abstain from voting. However, as the number of choices increases, voters should more easily find a party they agree with, which justifies the effort to cast a ballot. Thus, a host of cross-national empirical studies have demonstrated that party system fractionalization, along with other institutional characteristics, is related to aggregate levels of election turnout (Blais & Dobrzynska, 1998; Jackman & Miller, 1995; Norris, 2004; Powell, 1982).

This pattern reflects Downs's (1957) logic that abstention increases when the distance between a voter and the nearest party on the political continuum also increases. However, if the underlying process is based on ideological distances, then the number of parties may be a poor measure of

proximity. As seen above, there are multiparty systems with parties compacted together and thus offering limited choices, whereas systems with fewer parties have these parties dispersed along the Left–Right scale. In other words, even when studies examine the number of parties, the dispersion of parties along the Left–Right scale should be a more accurate measure of the hypothesized causal process.

Although the logic of party system polarization effects seems straightforward, the estimation of effects is complicated by the other institutional and contextual factors that influence aggregate turnout levels. For instance, Pippa Norris's (2004) recent analysis of aggregate turnout used seven different institutional variables. In addition, prior research identifies other predictors that one might include in a comprehensive model (e.g., registration requirements or when elections are held).

It is not possible with the small number of nations in the CSES to have such an extensive model, and so I focus on a subset of key predictors. First, to have a comparable measure of turnout, I measure turnout percentages as a function of the total voting age public that partially adjusts for the differences in voter registration requirements across nations.¹² Then I entered several predictors into three regression models. I started with the two measures of party system characteristics: polarization in Model I, fractionalization in Model II, and then both characteristics in Model III. The models also include two other institutional factors: the existence of compulsory voting requirements and whether the turnout was for a sole parliamentary election or for an executive or executive–parliamentary election. These two variables were among the strongest institutional predictors in Norris's (2004) models.¹³

Table 2 presents these three regression models. In the first model, the polarization of a party system has a distinct positive impact on turnout ($\beta = .289$). These effects are comparable to those of a compulsory voting system, which has a slightly stronger effect ($\beta = .384$). By comparison, the second model exchanges party system fractionalization for polarization. Using the standardized coefficients as a guide, fractionalization has approximately half the impact of the polarization variable. A third model includes both party system measures. Again, party polarization emerges as substantially stronger than party fractionalization; the results are largely the same as Model I, and the explained variance is quite similar. Only the coefficients for compulsory voter in Models I and III are statistically significant at the .05 level for a one-tailed test, largely because of the small number of nations I am analyzing. However, party system polarization approaches significance even with this small N , and the Fractionalization index is far from

Table 2
The Predictors of Voting Turnout (*N* = 29)

Predictors	Model I			Model II			Model III		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
Polarization	2.89	2.09	.289	—	—	—	2.61	2.31	.264
Fractionalization	—	—	—	16.76	22.14	.149	6.38	23.86	.057
Compulsory voting	15.85	8.12	.384	10.82	7.97	.262	15.06	8.77	.365
Simultaneous executive election	3.20	5.45	.118	1.12	5.25	.041	3.26	5.56	.120
Constant	59.96	7.79	—	56.98	15.92	—	55.27	15.91	—
<i>R</i> ²		.385			.325			.389	

Note: Table entries for each model are unstandardized coefficients and standardized coefficients from ordinary least squares regression analyses.

Source: Comparative Study of Electoral Systems, Module I; available from www.cses.org.

being significant. These results reinforce the point that polarization is the key variable, not the quantity of parties.

In summary, the nature of the choices available to voters is strongly related to the level of turnout in elections. However, the number of parties, although easily measured, is less important than the diversity of choices that the parties offer.

Polarization and Democratic Politics

The point of this article was not to criticize the concept of party system fractionalization. Counting the number of parties has proven to be one of the more powerful theoretical and empirical concepts in explaining important aspects of party competition and even the workings of the democratic process (e.g., Klingemann, 2005; Lijphart, 1999; Powell, 1982, 2000; Taagepera & Shugart, 1989).

However, I maintain that counting the number of parties is often a surrogate for a richer characteristic of a party system that is more difficult to measure—party system polarization. Polarization measures how parties are dispersed along an ideological continuum, indicating the range of ideological choices that parties represent and not just the discrete number of parties. Embedded in formal theories and empirical analyses of party system is

the belief that this ideological dispersion does matter, and this research focused on testing this belief.

An initial finding is that these two party system characteristics—polarization and fractionalization—can vary almost independently of one another (also see Gross & Sigelman, 1984). I used public perceptions of party positions to measure party system polarization and then to demonstrate its independence from fractionalization. Thus, this research shows that simply counting the number of parties may be easier and readily available for most party systems, but in many cases it will miss the property of party systems that is of prime interest.

Second, I found clear empirical differences in the correlates of polarization and fractionalization. The polarization of a party system is related to stronger correlations between class and the Left–Right relationship with party preferences. To the extent that political parties are supposed to be channels of expression that allow citizens to vote their preferences (Sartori, 1976), then party system polarization substantially strengthens this process—but party fractionalization has little impact on these relationships. Similarly, voting turnout appears more strongly related to party system polarization than fractionalization. Moreover, because of the expansion in the number of democracies, these effects appear for a broader range of democracies than has typically been found in earlier studies on party systems. In addition, the two modules of the CSES have already provided replications of several of my findings.

This does not mean that counting the number of parties is irrelevant. In some cases, the number of parties may be of prime interest, such as the increase in coalition negotiation costs as the number of parties increases. In other instances, the number of parties may be the only surrogate for party-system diversity. However, when party system effects are contingent on processes linked to the ideological distance between voters and parties, such as the two examples presented here, then we should strive to add polarization measures to the analyses of party and political behavior.

Indeed, the evidence of polarization effects described here suggests that further attention to past studies of party system fractionalization is warranted. Arend Lijphart (1999), for example, emphasized the number of parties as an element of consociational democracy, largely derived from his initial research on the Netherlands. However, the relationship between parties may be more important than the number of parties; thus, polarization in the Dutch 1998 election with many parties was barely higher than the British 1997 election with its two-and-a-half party system. Similarly, the stability of political systems should be more a function of the polarization

of parties than the fractionalization of the party system (Powell, 1982). In the end, quality should count more than quantity.

Notes

1. The effective number of parties is calculated as follows:

$$\text{Effective Number of Parties} = \frac{1}{\sum(\text{party seat share in legislature}_i)^2}.$$

This means that the relationship between the Herfindahl and Laasko-Taapera measures is formally nonlinear, but in practice, a linear correlation shows a very strong relationship.

2. The data used in this study were downloaded from the Comparative Study of Electoral Systems (CSES) Web site (www.cses.org). The Web site also includes documentation on the survey. I did not use the Belarus or Hong Kong surveys because these are not based on democratic elections, and a few nations did not include the Left–Right battery. I added the 1998 Philippines CSES survey that was provided by the Social Weather Station. All the analyses and interpretations of these data are my own.

3. The Japanese survey used a Progressive–Conservatives scale as an equivalent to Left–Right. The Left–Right question is widely used in electoral research in other democratic party systems (Dalton, 2006; Fuchs & Klingemann, 1989; Inglehart, 1990; Inglehart & Klingemann, 1976).

4. I thank Rein Taagepera and Aiji Tanaka for their advice in developing this index. In some nations, the survey did not ask for the position of some significant parties and therefore they were not included in the calculation of polarization. I had less than 80% of the election vote share in Brazil, Israel, Lithuania, and Peru, so these nations might be interpreted with caution.

5. Caul and Gray (2000), Pennings (1998), and Sigelman and Yough (1978) use a formula for the variance of the distribution, without taking the square root of differences to moderate the impact of extreme scores that are squared in the numerator. To avoid the exaggeration of squared differences in another way, Gross and Sigelman (1984) calculate the absolute value of the difference, and Klingemann (2005) calculates the absolute differences between pairs of parties in his set.

6. To be consistent with other analyses of party fractionalization, I create a fractionalization measure that is $1 - \text{Herfindahl index}$. This simply transposes the Herfindahl index so that higher values equal greater fractionalization. The Herfindahl index of legislative fractionalization is from the World Bank Political Institutions database, Database of Political Institutions 2004 (<http://econ.worldbank.org>). The Herfindahl index is available by year from the World Bank database for every nation so that I can easily match results to the CSES surveys.

7. District magnitude is drawn from the World Bank Political Institutions database; see Note 6.

8. For instance, using the examples of Figure 1, the standard deviations for the public in Canada (1.90 in 2004) and Spain (2.10 in 2004) are quite similar, but the party Polarization index values are much more distinct. Similarly, the standard deviations for Slovenia (2.14 in 1996) and the Czech Republic (2.54 in 2002) are more similar than the Polarization index scores for these two nations.

9. I used the question on which party best represents the respondent's opinions as the dependent variable (B3024), because this included the largest number of respondents in most

nations and was most comparable across different elections for presidents or the lower or upper house of Parliament. The class variable is B2012 in the CSES dataset (April 2006 release). I excluded the Philippines from these analyses because only a very small proportion of the respondents were willing to express their partisanship on any question.

10. To illustrate how fractionalization and effective number of parties yield equivalent results because of their high intercorrelation, I related both to the level of class voting and Left–Right voting using the CSES Module II. Fractionalization has a .32 and –.02 correlation with both variables as described in the text. The effective number of parties yields .25 and .00 correlations for these same two relationships.

11. Module I does not have the same question on the preferred party. Therefore, I use party choice in the legislative election or the presidential election if there was not a legislative election (A2029, A2030).

12. Similar to Norris (2004), I measure turnout based on the voting age population and draw these data from the International Institute for Democracy and Electoral Assistance (<http://www.idea.int/vt/survey/index.cfm>). However, the voting age population statistics are not available for the most recent elections, so I limited the analyses to the Module I nations where the data are available.

13. The other aggregate predictors were human development, district size, the frequency of national elections, and three measures of party system fractionalization (electoral system, party competition, and effective number of parliamentary parties). See Norris (2004, pp. 158–159). I would like to include additional variables, but the results of Table 2 suggest that there are relatively few cases for the number of predictors.

References

- Adams, J., Merrill, S., & Grofman, B. (2005). *A unified theory of party competition: A cross-national analysis integrating spatial and behavioral*. New York: Cambridge University Press.
- Blais, A., & Dobrzynska, A. (1998). Turnout in electoral democracies. *European Journal of Political Research*, 33, 239–261.
- Budge, I., Robertson, D., & Hearl, D. (Eds.). (1987). *Ideology, strategy and party change: Spatial analysis of postwar election programmes in 19 democracies*. Cambridge, UK: Cambridge University Press.
- Caul, M., & Gray, M. (2000). From platform declarations to policy outcomes. In R. Dalton & M. Wattenberg (Eds.), *Parties without partisans* (pp. 208–237). Oxford, UK: Oxford University Press.
- Cox, G. (1990). Centripetal and centrifugal incentives in electoral systems. *American Journal of Political Science*, 34, 903–935.
- Dalton, R. J. (2006). Social modernization and the end of ideology debate: Patterns of ideological polarization. *Japanese Journal of Political Science*, 7, 1–22.
- Downs, A. (1957). *An economic theory of democracy*. New York: Harper.
- Evans, J. (2002). In defence of Sartori: Party system change, voter preference distributions and other competitive incentives. *Party Politics*, 8, 155–174.
- Fuchs, D., & Klingemann, H. (1989). The Left–Right schema. In M. K. Jennings & J. van Deth (Eds.), *Continuities in political action* (pp. 203–234). Berlin, Germany: de Gruyter.
- Gabel, M., & Huber, J. (2000). Putting parties in their place: Inferring party Left–Right ideological positions from party manifestos data. *American Journal of Political Science*, 44, 94–103.

- Gross, D. A., & Sigelman, L. (1984). Comparing party systems: A multidimensional approach. *Comparative Politics*, 16(4), 463-479.
- Harmel, R., Tan, A., & Janda, K. (1995, September). *Substance vs. packaging: An empirical analysis of parties' issue identity*. Paper presented at the annual meeting of the American Political Science Association, Chicago.
- Huber, J., & Inglehart, R. (1995). Expert interpretations of party space and party locations in 42 societies. *Party Politics*, 1, 73-111.
- Inglehart, R. (1990). *Culture shift in advanced industrial society*. Princeton, NJ: Princeton University Press.
- Inglehart, R., & Klingemann, H. (1976). Party identification, ideological preference and the Left-Right dimension among Western mass publics. In I. Budge, D. Crewe, & J. Farlie (Eds.), *Party identification and beyond* (pp. 243-273). London: Wiley.
- Jackman, R., & Miller, R. (1995). Voter turnout in industrial democracies during the 1980s. *Comparative Political Studies*, 27, 467-492.
- Kim, H., Powell, G. B., & Fording, R. (2006, April). *Party systems and substantive representation: Static and dynamic performance*. Paper presented at the annual meetings of the Midwest Political Science Association Meeting, Chicago.
- Klingemann, H. (2005). Political parties and party systems. In J. Thomassen (Ed.), *The European voter: A comparative study of modern democracies* (pp. 22-63). Oxford, UK: Oxford University Press.
- Knutsen, O. (1998). Expert judgments of the Left-Right location of political parties: A comparative longitudinal study. *West European Politics*, 21(2), 63-94.
- Knutsen, O. (1999). Left-Right party polarization among the mass publics. In H. Narud & T. Aalberg (Eds.), *Challenges to representative democracy* (pp. 229-277). Bergen, Sweden: Fagbokforlaget.
- Laakso, M., & Taagepera, R. (1979). Effective number of parties: A measure with application to West Europe. *Comparative Political Studies*, 12, 3-27.
- Laver, M., & Garry, J. (2000). Estimating policy positions from political texts. *American Journal of Political Science*, 44(3), 619-634.
- Laver, M., & Hunt, W. B. (1992). *Policy and party competition*. New York: Routledge.
- Laver, M., & Schofield, N. (1990). *Multiparty government: The politics of coalition in Europe*. Oxford, UK: Oxford University Press.
- Lijphart, A. (1999). *Democracies*. New Haven, CT: Yale University Press.
- Lijphart, A., & Grofman, B. (Eds.). (1991). *Electoral laws and their political consequences*. New York: Agathon.
- Lipset, S. M., & Rokkan, S. (Eds.). (1967). *Party systems and voter alignments*. New York: Free Press.
- Norris, P. (2004). *Electoral engineering: Voting rules and political behavior*. New York: Cambridge University Press.
- Pennings, Paul. (1998). The triad of party system change: Votes, office and policy. In P. Pennings & J. Lane (Eds.), *Comparing party system change* (pp. 79-100). London: Routledge.
- Powell, G. B. (1982). *Contemporary democracies: Participation, stability and violence*. Cambridge, MA: Harvard University Press.
- Powell, G. B. (2000). *Elections as instruments of democracy: Majoritarian and proportional visions*. New Haven, CT: Yale University Press.
- Rae, D. (1971). *The political consequences of electoral laws* (2nd ed.). New Haven, CT: Yale University Press.

- Sartori, G. (1976). *Parties and party systems*. New York: Cambridge University Press.
- Sigelman, L., & Yough, S. N. (1978) Left–Right polarization in national party systems: A cross-national analysis. *Comparative Political Studies*, 11(3), 355-379.
- Taagepera, R., & Shugart, M. (1989). *Seats and votes*. New Haven, CT: Yale University Press.
- Taylor, M., & Herman, V. M. (1971). Party systems and government stability. *American Political Science Review*, 65, 28-37.

Russell J. Dalton is a professor of political science at the University of California, Irvine, and was the founding director of the Center for the Study of Democracy. He has been a Fulbright Research fellow at the University of Mannheim, a German Marshall Research fellow, and a POSCO fellow at the East/West Center. His scholarly interests include comparative political behavior, political parties, social movements, and democratic development.