Ideological Congruence and Electoral Institutions

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Although the literature examining the relationship between ideological congruence and electoral rules is quite large, relatively little attention has been paid to how congruence should be conceptualized. As we demonstrate, empirical results regarding ideological congruence can depend on exactly how scholars conceptualize and measure it. In addition to clarifying various aspects of how scholars currently conceptualize congruence, we introduce a new conceptualization and measure of congruence that captures a long tradition in democratic theory emphasizing the ideal of having a legislature that accurately reflects the preferences of the citizenry as a whole. Our new measure is the direct counterpart for congruence of the vote-seat disproportionality measures so heavily used in comparative studies of representation. Using particularly appropriate data from the Comparative Study of Electoral Systems, *we find that governments in proportional democracies are not substantively more congruent than those in majoritarian democracies. Proportional democracies are, however, characterized by more representative legislatures.*

Are representatives in some democracies more congruent with the ideological preferences of the people than those in other democracies? A large number of studies have examined the relationship between ideological congruence and electoral institutions (Blais and Bodet 2006; Budge and McDonald 2007; Huber and Powell 1994; McDonald and Budge 2005; McDonald, Mendes, and Budge 2004; Powell 2000, 2006; Powell and Vanberg 2000). Most have found that democracies employing proportional representation (PR) electoral rules produce more ideological congruence between citizens and their representatives than democracies employing majoritarian ones. This literature, however, has paid relatively little attention to how ideological congruence should be conceptualized.

To date, the predominant way to conceptualize and measure citizen-representative congruence is in terms of the absolute ideological distance between the median citizen and the government. However, this is just one of several plausible ways to conceptualize congruence. As we demonstrate, empirical results regarding ideological congruence can depend on exactly how scholars conceptualize and measure it. For example, scholars who conceptualize congruence purely in terms of the ideological distance between the median citizen and the government (absolute congruence) can rank the congruence of governments very differently from those who also take account of the dispersion of citizen preferences (relative congruence). This in itself is not necessarily a problem if how one conceptualizes congruence is theoretically or question driven—one simply chooses the conceptualization that is most appropriate for the research question at hand. For instance, we will argue that a concept of *relative* congruence is typically more appropriate for scholars interested in evaluating how well representatives are performing at producing congruence than the more common concept of *absolute* congruence. To a large extent, though, existing studies do not explicitly address how ideological

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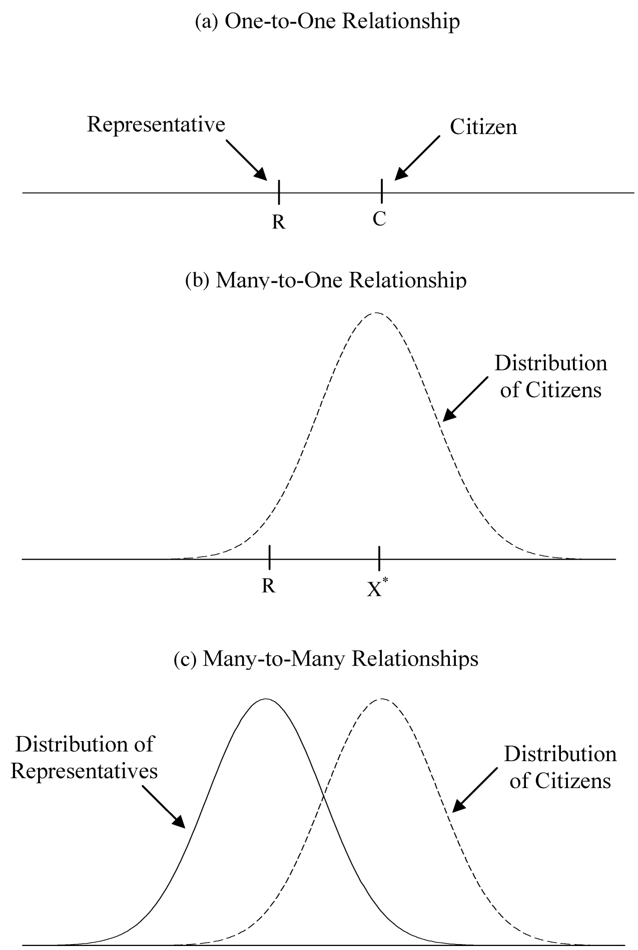
congruence is most appropriately conceptualized given their research goals.

In addition to clarifying various aspects of how scholars currently conceptualize ideological congruence, we introduce a completely new conceptualization and measure of congruence that captures a long tradition in democratic theory emphasizing the ideal of having a legislature that accurately reflects the ideological preferences of the citizenry as a whole (Pitkin 1967, 60–91). In many ways, our new measure is the direct counterpart for ideological congruence of the vote-seat disproportionality measures so heavily utilized in comparative studies of representation. While vote-seat disproportionality measures focus on how accurately the *votes* of citizens are translated into legislative seats, our new measure of congruence more directly captures how accurately the underlying ideological *preferences* of citizens are translated into legislative seats. Given the widespread use of vote-seat disproportionality measures, we believe that our new conceptualization and measure of congruence will prove valuable to scholars examining political representation.

We discuss how to conceptualize ideological congruence and how this can affect our empirical analyses in the second section. This is followed by a reexamination of the relationship between ideological congruence and electoral institutions. We start this reexamination in the third section by specifying how we operationalize our different concepts of congruence and describing the data that we use to construct our new measures. Our measurement of congruence offers a number of advantages over the practices and data currently employed by scholars working in this area. Before proceeding to our empirical analyses, we briefly summarize, in the fourth section, the theoretical arguments that have been put forth linking citizen-representative congruence to the proportionality of a country's electoral system. As we illustrate, the existing literature has proposed various causal pathways by which citizen-representative congruence might be achieved under both proportional and majoritarian electoral rules. Finally, we present and interpret results from a series of empirical tests that draw on data from 41 legislative elections in 24 parliamentary democracies. We find that the level of ideological congruence between citizens and their *government* is *not* substantively higher in proportional democracies than in majoritarian ones. Proportional democracies are, however, characterized by more congruent *legislatures*.

FIGURE 1 Conceptualizing Ideological Congruence



Note: X^* is the position that minimizes the distance between all the citizens.

Conceptualizing Congruence

What is ideological congruence? We believe that how one conceptualizes congruence depends on whether we are thinking about (1) one citizen or many citizens and (2) one representative or many representatives. Within this framework, we can think of situations in which we have one citizen and one representative (a one-to-one relationship), situations in which we have many citizens and one representative (a many-to-one relationship), and situations in which we have many citizens and many representatives (a many-to-many relationship).[1] Assuming a single ideological dimension for simplicity, these three types of congruence relationships are shown in Figure 1.[2]

[1]Logically, we can think of a fourth type of congruence relationship: a one-to-many relationship. In a general sense, this type of relationship captures the situation where there is a single principal and multiple agents. Thus, one might ask how well the cabinet appointees in a presidential system represent the interests of the president. We do not consider this type of relationship in what follows.

[2]Our terminology here is deliberately distinct from references to dyadic and collective representation in the American politics

One-to-One Relationships

As Figure 1a illustrates, conceptualizing congruence in a situation where we have one citizen and one representative is relatively simple—congruence is just the absolute distance between the ideological positions of the citizen (C) and the representative (R).

> **Congruence (One-to-One):** Congruence is high when the absolute distance between the citizen and the representative is small.

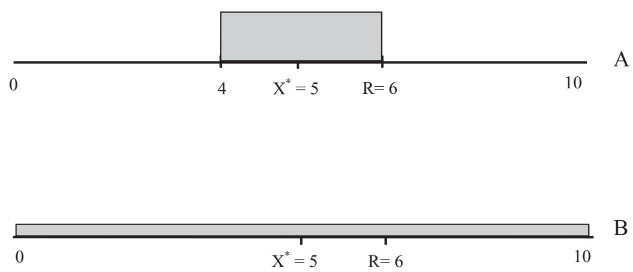
From the perspective of each individual citizen, this is arguably the main conceptualization of congruence that matters—each citizen wants to know how far the representative is from her preferred position. From the perspective of the representative, though, this conceptualization of congruence makes little sense since he is always in the position of representing multiple citizens with divergent ideological preferences. As a result, conceptualizing congruence in terms of a one-to-one relationship is not particularly useful if one wants to evaluate the congruence of representatives. However, conceptualizing congruence in this way *is* helpful as a building block as we now turn to the situation where we have many citizens and one representative; this is the situation of interest in virtually all comparative and American studies of ideological congruence.

Many-to-One Relationships

As Figure 1b illustrates, we now have some distribution of citizen preferences and a single representative. Although we use the term "single representative" here, we can just as easily think of the "single representative" as being the policy position of a government. There are several different ways that one might plausibly think to conceptualize many-to-one congruence. In what follows, we refer to these different conceptualizations as (1) absolute median citizen congruence, (2) absolute citizen congruence, and (3) relative citizen congruence. As we demonstrate, some of these conceptualizations are narrower or contain less information than others; in addition, some are more appropriate to particular research questions than others. Overall, we argue that conceptualizing many-to-one congruence in terms of *relative* citizen congruence has a number of significant advantages over alternative conceptualizations. Importantly, the different ways of conceptualizing congruence can lead to quite different rankings of the same set of representatives.

literature (Weissberg 1978). As will become clear, notions of dyadic and collective representation do not fully capture what we mean when we speak of one-to-one, many-to-one, and many-to-many congruence relationships.

FIGURE 2 Ideological Congruence in Many-to-One Relationships



Notes: The shaded areas indicate the distribution of citizens on a 0–10 issue dimension in countries A and B. X^* is the position that minimizes the sum of absolute distances between the citizens; in the context of a single issue dimension, this is the position of the median citizen in each country. R is the position of the citizens' representative.

We use the two hypothetical situations shown in Figure 2 as a running example to help illustrate these points. Figure 2 presents information about the position of citizens and their representatives on a single issue dimension measured on a 0–10 scale in two countries, A and B. The ideological position of the citizens' representative ($R = 6$) and the ideological position that minimizes the sum of absolute distances between all the citizens ($X^* = 5$) are the same in both countries. The only difference between the two countries involves the distribution of citizen preferences. In country A, all citizens are uniformly distributed between 4 and 6; in country B, all citizens are uniformly distributed between 0 and 10.

Absolute Median Citizen Congruence. One way we might begin conceptualizing congruence in a many-to-one relationship is to think in terms of a citizenry's "most preferred" policy position (Huber and Powell 1994, 292–93). Arguably, the ideological position with the best claim to this is the one that minimizes the sum of absolute distances between all the citizens (X^*). In the context of a single issue dimension, this is the position of the median citizen. Based on this, one might argue that congruence in a many-to-one relationship is just the extent to which the ideological position of the representative approximates the position of the median citizen. Indeed, this is how congruence is implicitly conceptualized in virtually every American and comparative study addressing ideological congruence. Because we follow existing studies by focusing on a single left-right issue dimension in our upcoming empirical analyses, we refer to this particular conceptualization as *absolute median citizen congruence*.

> **Absolute Median Citizen Congruence (Many-to-One):** Congruence is high when the absolute distance between the median citizen and the representative is small.

Absolute Citizen Congruence. Although absolute median citizen congruence contains some information about the congruence between citizens and their representative, it ignores all information about the distribution of citizen preferences. In effect, all that matters is the absolute distance between the median citizen and the representative. In the context of Figure 2, this would mean concluding that the representatives in countries A and B are *equally* congruent because they are equally distant from the median citizen (X^*). We suspect that many, perhaps most, scholars will feel uncomfortable reaching such a conclusion given that the representative in country A is much closer to his citizens on average than the representative in country B. One way to incorporate information about the distribution of citizen preferences would be to conceptualize many-to-one congruence as the average absolute distance between all citizens and the representative. Because this conceptualization explicitly takes account of the ideological positions of all citizens rather than just that of the median citizen, we refer to it as *absolute citizen congruence*. For any single constituency, absolute citizen congruence is highest when the representative is located at the ideological position of the median citizen. Conceptualizing many-to-one congruence in terms of absolute citizen congruence would lead us to conclude that the representative in country A in Figure 2 is *more* congruent with his citizens than the representative in country B.

> **Absolute Citizen Congruence (Many-to-One):** Congruence is high when the average absolute distance between the citizens and the representative is small.

To the extent that one cares about the ideological preferences of all the citizens rather than just those of the median citizen, absolute citizen congruence would seem to be superior to absolute median citizen congruence as a way of conceptualizing many-to-one congruence. To our knowledge, though, only two studies in the American and comparative literatures on congruence have adopted such a conceptualization (Achen 1978; Blais and Bodet 2006). One explanation for why existing studies do not take account of the distribution of citizen preferences may lie not with any conceptual difficulty or theoretical preference, but rather with data limitations that constrain empirical analyses of congruence. For example, any attempt to incorporate the distribution of citizen preferences into studies comparing the congruence of representatives across U.S. states runs into the problem that there is scant data about these preferences at this level of analysis. While this "limited data" explanation may work to explain why studies of representation ignore the distribution of citizen preferences in the context of American politics, it does not work so well in the context of comparative politics. This is because most cross-national studies of congruence have data available on the distribution of citizen preferences from mass surveys such as the *Eurobarometer* or the *World/European Values Survey*. Although these data exist, comparative studies only use these surveys to identify the ideological location of the median citizen and do not take advantage of the information about the actual distribution of citizen preferences.

Relative Citizen Congruence. Although we believe that absolute citizen congruence contains useful information about the congruence between citizens and their representative, it is important to note that the maximum level of absolute citizen congruence is not independent of the dispersion of citizen preferences. As we now demonstrate, this can cause potential problems if one wishes to compare the congruence of representatives across different units of analysis. Much depends on one's research question and/or whether the left-right dimension is perceived in the same way across the different units. In sum, we argue that it is important, in many settings, to conceptualize congruence in relative, rather than in absolute, terms, i.e., in terms of the distance between the citizens and their representative *relative to the dispersion of citizen preferences*. We refer to this conceptualization of many-to-one congruence as *relative citizen congruence*.

> **Relative Citizen Congruence (Many-to-One):** Congruence is high when the absolute distance between the citizens and their representative is small relative to the dispersion of citizen preferences.

Note that conceptualizing congruence in terms of absolute citizen congruence automatically puts representatives in homogenous constituencies like country A in Figure 2 at a significant advantage in terms of their ability to produce congruence compared to representatives in more heterogeneous ones like country B. Recall that the maximum level of absolute citizen congruence that can be achieved occurs when the representative is located at the position of the median citizen (X^*). Imagine now that the representative in country B in Figure 2 is located at X^*, while the representative in country A remains in the same location as that shown. If we conceptualize many-to-one congruence as absolute citizen congruence, then we must still conclude that the representative in country A is more congruent than the representative in country B. This is the case even though the representative in country B cannot increase the congruence of his representation any further—he is performing as well as is possible—and even though the "more congruent" representative in country A holds the most extreme position of anyone in his country.

If our research question means that we are interested in comparing the congruence of the two representatives in Figure 2 in an absolute sense, then this conclusion might make sense—the representative in country A *is* closer to his citizens on average than the one in country B. However, if our research question means that we are interested in comparing how well the representatives are producing congruence relative to what is possible, then this conclusion seems inappropriate. After all, the representative in country B in this example cannot increase congruence any further whereas the representative in country A can. In terms of relative "performance," then, it would seem more appropriate to conclude that the representative in country B is more congruent than the one in country A. This line of reasoning suggests that if we are interested in comparing the performance of representatives at producing congruence across different units of analysis, then we should conceptualize congruence in relative, rather than absolute, terms.[3] The extent to which it is important to take account of the dispersion of citizen preferences will obviously depend on how significantly it varies across different units of analysis. In the real world, this is likely to depend on the specific cases under consideration. For example, one might think that comparing the congruence of representatives across different units in the same country is less likely to generate inappropriate conclusions than comparing the congruence of representatives across different countries. Of course, whether this is true or not is ultimately an empirical question.

We have just argued that whether we should conceptualize congruence in absolute or relative terms is likely to depend on our research question—as always, the aptness of a concept is hard to evaluate in the absence of a specific question. Note, though, that concepts of *absolute* congruence can only be appropriately employed if the left-right issue dimension is perceived in the same way across the different units of analysis. This is not the case for concepts of *relative* congruence. By normalizing congruence relative to the dispersion of citizen preferences, relative citizen congruence avoids the use of an abstract left-right scale and provides a metric-free concept of congruence. As a result, it avoids potential difficulties with differential item functioning (DIF) that might arise if the left-right scale is not perceived in the same way in different countries (Aldrich and McKelvey 1977; King et al. 2004). Problems with DIF exist if (1) citizens in different countries place themselves at different points on the left-right scale even though they share identical preferences or (2) they place themselves at the same point on the scale even though they share divergent preferences. If DIF problems were to exist, it would obviously make it difficult, if not impossible, to appropriately compare the congruence of representatives across different units of analysis in absolute terms.

In terms of the comparative politics literature on congruence, McDonald, Mendes, and Budge (2004) present evidence that DIF is a real problem for those studies that employ mass surveys to place citizens on the left-right scale. For example, they note that responses on mass surveys tend to place the median citizen at the same point on the left-right scale in virtually every country even though we know that this is highly implausible given the nature of political debate in these countries. In other words, mass surveys do not seem to be capturing real *substantive* differences in policy positions across countries.[4] In this type of situation, it is inappropriate to employ concepts of absolute congruence; instead, it

[3]It is important to note that this line of reasoning does *not* imply that we can continue to use the concept of absolute citizen congruence and simply control for the dispersion of citizen preferences in our empirical analyses. Without going into too much detail, simply controlling for the dispersion of citizen preferences in this way would be equivalent to employing GDP as our dependent variable and controlling for population size when the concept we are trying to capture is GDP per capita. This is clearly inappropriate. Nor does this line of reasoning imply that we can just go back to evaluating the distance between the median citizen and the representative. Why? By measuring the distance between citizens and their representative relative to the dispersion of citizen preferences, we are putting citizens and representatives from different units of analysis on the same scale. In effect, one can think that we are proportionately shrinking the ideological positions of citizens and representatives in country B in Figure 2 to the same scale as those in country A. It should be obvious that a representative who is further away in absolute terms from his median citizen in a heterogeneous country like B than a representative in a more homogenous country like A is from his median citizen could be more congruent in relative terms. The bottom line is that both concepts of absolute congruence that we have examined are inappropriate if we are interested in comparing the relative performance of representatives across different units of analysis.

[4]This DIF problem is potentially mitigated, though certainly not eradicated (see below), by the fact that studies employing mass surveys to measure congruence in absolute terms are not directly comparing substantive policy positions across countries; instead,

would be better to utilize the metric-free concept of relative citizen congruence. Despite this, we know of only one study that conceptualizes congruence relative to the dispersion of citizen preferences (Achen 1978).

We have now presented three ways of conceptualizing many-to-one congruence. Although we personally prefer to conceptualize it in terms of relative citizen congruence because this allows us to both incorporate information about the full distribution of citizen preferences and avoid any problems with DIF, we realize that other scholars may well have different preferences. What we hope everyone will agree with, though, is that how one chooses to conceptualize congruence can affect how one ranks a set of representatives. For example, we have already seen how we can conclude that the representatives in countries A and B in Figure 2 are equally congruent (absolute median citizen congruence), that the representative in country A is more congruent (absolute citizen congruence), or that the representative in country B is more congruent (relative citizen congruence). Indeed, we should note that the potential to come up with these different rankings is not just theoretical. In our upcoming empirical analyses, we construct measures capturing all three ways of conceptualizing many-to-one congruence. Out of a total of 41 governments, we rank the 2003 Israeli government fourth in terms of relative citizen congruence, 19th in terms of absolute median citizen congruence, and 35th in terms of absolute citizen congruence. There are many examples like this that we could give.

The potential for these different rankings suggests that empirical claims regarding ideological congruence may depend critically on the particular conceptualization of congruence that is adopted. As a result, it is important for scholars to justify why they conceptualize (and, ultimately, measure) congruence in the way that they do or to demonstrate that their claims are robust to alternative conceptualizations. In the upcoming empirical analyses, we examine how alternative conceptualizations of congruence influence the relationship between electoral system proportionality and the level of ideological congruence between citizens and their government.

Many-to-Many Relationships

As previously noted, most comparative scholars interested in representation have focused their attention on how congruent governments are with their citizens (a many-to-one relationship). The primary reason for this is that these scholars are ultimately interested in how congruent policy is with citizen preferences, and they believe that governments generally play the decisive role in the policymaking process. Although the goal of this research agenda is extremely valuable, some may also want to know how accurately the *collective* body of representatives reflects the ideological preferences of the citizens. In other words, some may be more interested in how substantively representative the legislature as a whole is—if 10% of the population holds communist policy preferences, do communists hold 10% of the legislative seats, etc.?—than in the congruence between citizen preferences and the (expected) policy outcome. This could be because they value this type of substantive representation on a priori grounds and want to know how it can be brought about. It could also be because they wish to know whether substantively representative legislatures increase things like perceived levels of democratic legitimacy and responsiveness, satisfaction with democracy, political participation, or personal efficacy and trust in the political process.[5] These research questions cannot be satisfactorily addressed by focusing on the congruence between citizen preferences and the government (or median legislator) because this does not take account of the ideological composition of the legislature as a whole. However, they can be addressed if we explicitly conceptualize congruence in terms of a many-to-many relationship where we have many citizens and many representatives. As Figure 1c illustrates, this is a situation where we have a distribution of citizen preferences and a distribution of representative preferences.

An emphasis on the importance of having a representative body whose preferences accurately correspond to those of the nation as a whole has a long history in democratic theory dating back at least as far as the 17th century (Pitkin 1967; Skinner 2005). For example, John Stuart Mill claims that a legislature should be "an arena in which not only the general opinion of the nation, but that of every section of it, . . . , can produce itself in full light" ([1859] 1991, 116). One simple way to conceptualize the type of ideological congruence desired by democratic theorists such as Mill, Mirabeau, and Burke is in terms of the similarity between the distributions of citizen and representative preferences. To our knowledge, there is no research on representation that explicitly

they are comparing the *distances* between governments and their citizens. As a result, they need only assume that these *distances*, and not the actual positions, are meaningful across countries (Powell 2006, 296).

[5]These types of questions have been heavily addressed by scholars who emphasize *descriptive* representation (Atkeson and Carillo 2007; Gay 2001; Mansbridge 1999). However, they have drawn less attention from those who view representation in terms of substantive or ideological preferences. One potential reason for this is the lack of a measure that adequately captures the concept of many-to-many congruence. We provide such a measure shortly.

conceptualizes ideological congruence as a many-to-many relationship in this way.

> **Congruence (Many-to-Many):** Congruence is high when the distributions of citizen and representative preferences are similar; it is perfect when the two distributions are identical.

Measuring Congruence

Having discussed how to conceptualize ideological congruence and how this can affect our empirical analyses, we now turn to a reexamination of the relationship between ideological congruence and electoral institutions. In this particular section, we outline the measures we use to operationalize our conceptualizations of congruence in many-to-one and many-to-many settings. We also describe the data used to construct our measures. In doing so, we make the case that our measurement of congruence offers a number of advantages over the practices and data currently employed by scholars working in this area.

Measures (Many-to-One)

In a many-to-one relationship, we are interested in how congruent the ideological position of the government is with the preferences of its citizens. Recall that we provided three alternative conceptualizations of many-to-one congruence. We operationalize *absolute median citizen congruence* as follows:

$$\text{ABSOLUTE MEDIAN CITIZEN CONGRUENCE} = |MC - G| \quad (1)$$

where MC is the ideological position of the median citizen and G is the location of the government. This particular measure is the measure of choice in all but one study of congruence in comparative politics (Blais and Bodet 2006). The location of the government is calculated as the weighted average of the positions of the parties in the cabinet, in which the weights are the parties' share of legislatives seats controlled by the government. We operationalize *absolute citizen congruence* as follows:

$$\text{ABSOLUTE CITIZEN CONGRUENCE} = \frac{1}{N}\sum_{i=1}^{N}|C_i - G| \quad (2)$$

where N is the number of citizens and C_i is the ideal point of the i^{th} citizen. Finally, we operationalize *relative citizen congruence* as follows:[6]

$$\text{RELATIVE CITIZEN CONGRUENCE} = 1 - \frac{\sum_{i=1}^{N}|C_i - MC|}{\sum_{i=1}^{N}|C_i - G|}. \quad (3)$$

This measure of relative citizen congruence ranges from 0 to 1. If the ideological location of the government is at the position that minimizes the sum of absolute distances between all the citizens (MC), then RELATIVE CITIZEN CONGRUENCE will be 0. The further the government's position is away from MC, the closer the RELATIVE CITIZEN CONGRUENCE score will be to 1. In effect, the measure captures the average distance of a citizen from the citizens' most preferred position (MC) relative to the average distance of a citizen (C_i) from the government (G). The lower the score on all three measures, the better the congruence between citizens and their government.

Measure (Many-to-Many)

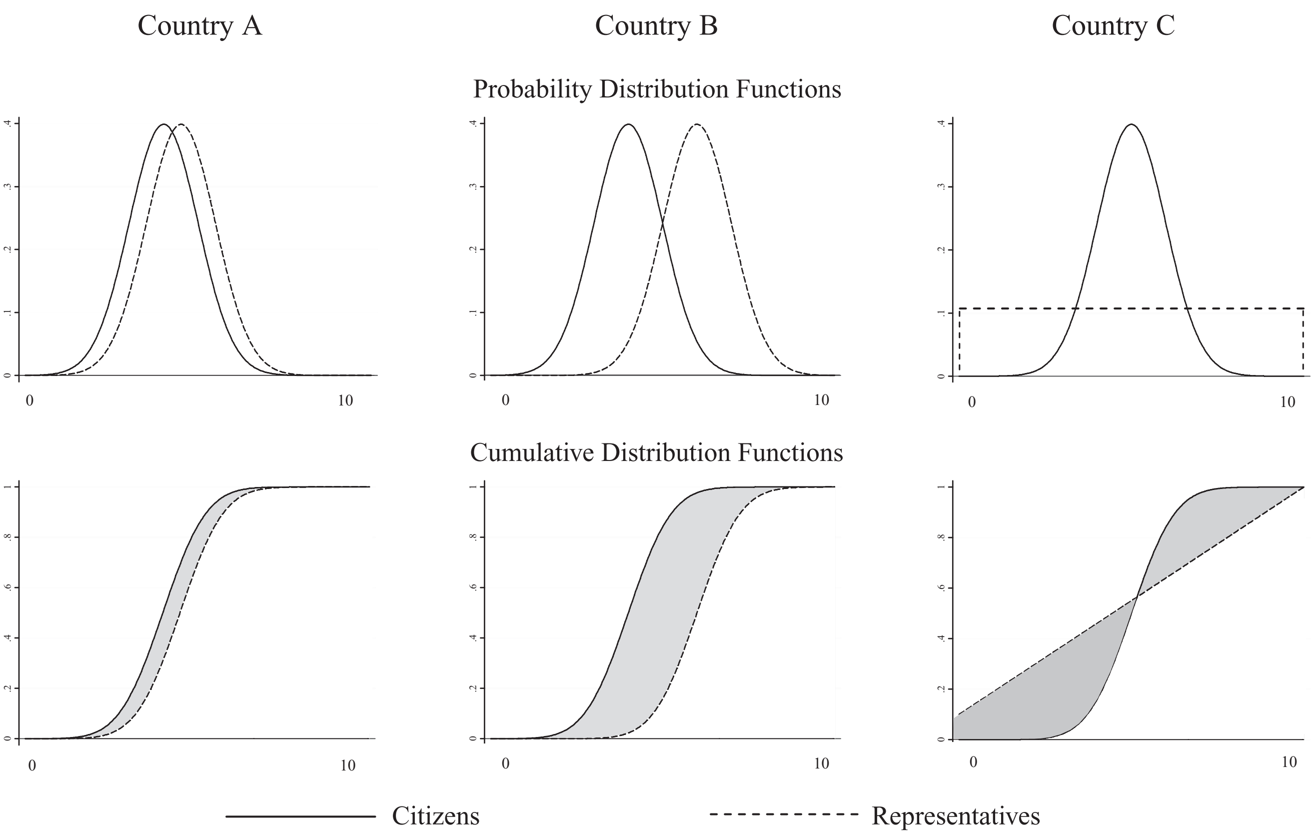
In a many-to-many relationship, we are interested in how congruent the ideological positions of the representatives in the legislature are with the substantive preferences of the citizens. This requires evaluating how similar the distributions of citizen and representative preferences are on the left-right issue dimension. We do this with the following measure:

$$\text{CONGRUENCE (MANY-TO-MANY)} = \sum_{x}|F_1(x) - F_2(x)| \quad (4)$$

where $F_1(x)$ and $F_2(x)$ are the *cumulative* distribution functions (CDFs) for the citizen and representative preferences. Essentially, this measure captures the area between the CDFs for the citizens and representatives. When the ideological preferences of the citizens and representatives are identically distributed on the left-right issue dimension, then the area between their CDFs will be zero. In this situation, many-to-many congruence will be perfect. As the distributions of citizen and representative preferences begin to differ, either in terms of their shape and/or location in the issue space, then the area between the CDFs will grow, indicating a decline in many-to-many congruence. In our upcoming empirical analyses, we assume that all legislative representatives from the same party share the

[6] Our measure of relative citizen congruence is adapted from Kollman, Miller, and Page's (1992) research on electoral landscapes and party system centrality. An alternative measure with similar properties is provided by Achen (1978, 487). The inferences from our upcoming empirical analyses are unaffected if we use this alternative measure of relative citizen congruence.

FIGURE 3 Measuring Many-to-Many Congruence



Notes: Probability and cumulative distributions on a 0–10 issue dimension are shown for citizens and representatives in three hypothetical countries, A, B, and C. The size of the shaded areas indicates the level of many-to-many congruence in each country; the larger the shaded area, the lower the level of citizen-representative congruence.

ideological position of their party. Although we are forced to make this assumption due to data constraints, this assumption is not too unrealistic given the highly cohesive nature of party voting in the parliamentary democracies that comprise our sample.

Given that our measure of many-to-many congruence is new, an example might help to clarify exactly how it works.[7] Figure 3 illustrates three hypothetical countries, A, B, and C. While the top row of Figure 3 shows the probability distributions on a 0–10 left-right issue dimension for the citizens and representatives in each country, the bottom row shows their associated cumulative distributions. As already indicated, our measure of many-to-many congruence is captured by the shaded area between the cumulative distributions. Let's start by comparing the ideological preferences of citizens and representatives in countries A and B. In both countries, the shapes of the citizen and representative probability distributions are identical. The only difference is that the probability distribution for the representatives in country B is located further to the right, away from that of the citizens, than in country A. As the associated graphs of the cumulative distributions clearly illustrate, this decreased level of many-to-many congruence in country B is captured by a larger shaded area and, hence, a higher value for our measure. It is easy to see that the size of the shaded area would continue to grow if the citizen and representative probability distributions moved further apart. Now let's turn to country C. In a loose sense, the "locations" of the citizen and representative probability distributions are identical—they are both centered at five on the left-right issue dimension. However, the shapes of the two probability distributions differ quite considerably. Specifically, the preferences of the citizens are normally distributed, whereas those of the representatives are uniformly distributed. As the associated graph of the cumulative distributions in country C illustrates, this difference in the shape of the two probability distributions

[7]Our measure of many-to-many congruence shown in equation (4) is related to the Kolmogorov-Smirnov test statistic that is commonly used to determine whether two one-dimensional probability distributions are the same.

is captured by our measure, i.e., the shaded area. As the different situations in these three hypothetical countries indicate, our measure of many-to-many congruence has the appealing feature that it captures differences in both the *shape* and/or *location* of citizen and representative preferences.

In many ways, our new measure is the direct counterpart for ideological congruence of the vote-seat disproportionality measures that are used so frequently in comparative studies of representation. When it comes to evaluating representation, one common criticism of vote-seat disproportionality measures is that they focus entirely on how accurately the votes of citizens are mechanically translated into legislative seats and ignore how the underlying ideological preferences of citizens are strategically translated into votes in the first place (Powell 2004, 282). To the extent that representation refers to citizen *preferences* rather than *votes*, this suggests that vote-seat disproportionality scores can be a potentially problematic measure of representation under some circumstances. Votes are only likely to be a good guide to underlying preferences when the electoral institutions and party system in a country provide citizens with a "complete" set of choices and few incentives to vote strategically. An appealing feature of our proposed measure of many-to-many congruence is that it directly captures both the strategic and mechanical aspects of representation by explicitly focusing on how accurately ideological *preferences* are translated into legislative seats (Clark and Golder 2006; Cox 1997).[8]

Data

In order to construct our measures of citizen-representative congruence, we need data on the ideological position of citizens and parties on the left-right issue dimension. We obtain these data from the ongoing *Comparative Study of Electoral Systems* (CSES) project, which currently comprises 70 election surveys in 36 countries from 1996 to 2005. In the upcoming empirical analyses, we focus specifically on legislative elections in nonpresidential democracies. One reason for this is that the government formation process and allocation of portfolios in presidential democracies is quite distinct from those in parliamentary ones (Clark, Golder, and Golder 2009, 443–49). A second reason is that it makes our results more comparable to those reported in the existing literature. Our sample includes 41 legislative elections in the following 24 countries: Australia, Belgium, Bulgaria, Canada, Czech Republic, Denmark, Finland, France, Germany, Hungary, Iceland, Ireland, Israel, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Taiwan, and the United Kingdom.[9]

The CSES surveys ask respondents to place themselves on a scale from 0 to 10, where 0 means the left and 10 means the right. The CSES surveys also ask respondents to place up to nine parties on the same left-right scale. We use the mean placement of each party by the top 40% of educated respondents in each country as an estimate of the actual placement of the party on the left-right dimension (Alvarez and Nagler 2004). The motivation for using only the most highly educated respondents to place the parties comes from research showing that uninformed (uneducated) voters tend to place a party that they are unfamiliar with in the middle of the issue dimension rather than report no opinion at all (Alvarez and Franklin 1994, 681–84). This suggests that samples comprising a large number of uninformed voters will tend to produce party placements that converge to the middle of the issue scale, thereby hiding the true ideological variation in the party system. Using only the most educated respondents to place the parties is designed to ameliorate this problem.

We believe that obtaining estimates of citizen and party positions on the left-right issue dimension by using CSES data has a number of advantages over the data sources employed by previous studies. To illustrate some of these advantages, it is informative to examine the types of data employed by previous studies. Existing studies of congruence can essentially be divided into two types. One set of scholars, namely Powell and his coauthors, have employed a combination of citizen self-placements on the left-right issue dimension and party placements based on expert assessments. For example, Powell (2006) combines citizen self-placements from mass surveys conducted by *Eurobarometer* and the *World Values Survey* with party placements taken from expert surveys conducted by Castles and Mair (1984) and Huber and Inglehart (1995). One problem with this approach is that the use of these two different data sources to estimate citizen and party positions raises a potentially significant differential item functioning (DIF) problem since experts and citizens are

[8]It is possible to think of legislative representation as a two-step process in which preferences are first translated into votes (strategic) and then votes are translated into seats (mechanical). Vote-seat disproportionality scores can only tell us about the mechanical aspect of representation. In contrast, our measure captures both the mechanical and strategic aspects of representation. Our measure could be adapted to focus exclusively on the strategic aspect of representation by using party votes, rather than party seats, for the CDF of the representatives in equation (4).

[9]One might plausibly argue that the salience of the left-right issue dimension is weaker in countries like Taiwan or in the newly democratic countries of Eastern Europe. However, our upcoming results do not depend on whether we include or exclude these particular countries.

unlikely to see the issue space identically. In fact, there is considerable evidence from the CSES data themselves that DIF is a real problem. In addition to asking citizens to place parties on the left-right scale, CSES country experts are also asked to place the parties on the same scale. Of the 217 cases in which experts and citizens are asked to place the same parties on the left-right scale, a difference in means test reveals a statistically significant difference at the 95% level or greater in 195 (90%) of the cases. Even if one were to ignore DIF problems of this sort, the fact that these citizen and expert surveys are not conducted at the same point in time and do not necessarily employ the same scales or wording raises significant validity concerns. The CSES data set avoids these problems by having (1) citizens place themselves and the parties on (2) the same 0–10 scale at (3) the same point in time.

A second set of scholars uses party manifesto data from the Comparative Manifesto Project (CMP) to obtain voter and party placements on the left-right issue dimension for the postwar period (Budge and McDonald 2007; Kim and Fording 1998; McDonald and Budge 2005; McDonald, Mendes, and Budge 2004). In this approach, party positions are estimated by subtracting the percentage of statements in a manifesto devoted to 13 issues that are construed as "left-wing" from the percentage of statements devoted to 13 issues that are construed as "right-wing" (Budge et al. 2001, 21–24). The position of the median voter is estimated by taking account of the estimated party positions and the percentage of votes that these parties win at election time. One limitation of this approach is that it can only produce an estimate of the median voter's position—it does not provide accurate information as to the actual distribution of citizen preferences. Moreover, the position of the median voter can only be estimated under the rather strong assumption that all voters cast ballots for the party closest to them. One consequence is that scholars employing CMP data cannot construct congruence measures that incorporate meaningful information about the distribution of citizen preferences. A second limitation is that by focusing on the percentage of left-right statements, it would seem that CMP scholars are capturing the relative emphasis that a party places on left-right issues rather than a party's substantive left-right policy position (Laver and Garry 2000). A third limitation is that the constituent elements of the CMP measure—the 26 issues that are construed as left- or right-wing—are the same for all countries and time periods. As a result, CMP scholars cannot capture contextual or temporal differences in the meaning of the left-right dimension (Benoit and Laver 2007, 94). This is potentially problematic given the relatively large number of countries and the long temporal coverage of the CMP data set. None of these problems exist with the CSES data.

We should note at this point that the CSES data set has two potential limitations of its own. One is the relatively short time period for which CSES data are currently available (1996–present). This raises issues with sample size and suggests that CSES scholars should be cautious when generalizing their results across time. This is a point we will return to shortly. A second potential limitation is that mass surveys like the CSES may be capturing the *perceived*, rather than the *objective*, positions of both citizens and parties. This is not a problem if we are interested in evaluating how well citizens feel they are being represented; indeed, it would seem to be an advantage in these circumstances. Arguably, CSES scholars are not alone in struggling to know for sure whether they are capturing the objective or perceived ideological positions of citizens and parties. Even CMP scholars who explicitly claim to be capturing the objective positions of political parties are basing their results on policy promises that party leaders have chosen to place in their manifestos. It seems to us that manifestos are, to some extent, as much about factional compromises and how parties choose to present themselves to the electorate as they are about what the party objectively stands for. The objective positions of citizens are equally difficult to pin down. Even mass surveys can only guarantee that they are capturing a citizen's perception of her own ideological position. With this in mind, all scholars should probably be cautious about making claims concerning the level of *objective* congruence between citizens and their representatives.

Theorizing Congruence

Before proceeding to our empirical analysis, we briefly summarize the theoretical arguments that have been put forth linking citizen-representative congruence and electoral system proportionality.

Proportional Electoral Rules

According to the literature, there are strong arguments as to why countries with proportional electoral rules might be characterized both by congruence between citizens and their government (many-to-one congruence) and between citizens and their representatives in the legislature (many-to-many congruence). In order to produce a legislature that faithfully reflects the preferences of as many citizens as possible, there needs to be a variety of political parties located across the whole range of the citizen distribution in the issue space. There are good theoretical reasons why proportional (PR) electoral rules might produce exactly this. At one level, Duverger's theory predicts that PR systems are likely to be characterized by multiple parties (Clark and Golder 2006; Duverger 1963). At another level, spatial theories of party competition predict that PR systems will create centrifugal incentives for parties to carve out niche electorates by dispersing throughout the policy space (Cox 1990). The combination of Duverger's theory and spatial theories of party competition leads to the prediction that countries with PR electoral rules will produce congruence between citizens and their legislative representatives (many-to-many congruence).

There are also good reasons having to do with theories of coalition formation why PR systems might also produce congruent governments under a wide range of situations. The fact that PR systems are expected to produce legislatures that faithfully reflect citizen preferences means that the median legislative party should be located fairly close to the median citizen. Recall that a government located at this position would produce maximum congruence. Given that PR systems typically produce fragmented legislatures, it is highly unlikely that a single party will control a majority of legislative seats. As a result, PR electoral rules tend to generate coalition governments. The requirement in parliamentary democracies that the government enjoy the support of a legislative majority places the median legislative party in a position of power in any government formation process. This means that the median legislative party can pull the policy of any government that forms towards its own ideological position and, hence, towards the position of the median citizen. This causal logic leads to the prediction that countries with PR electoral rules will produce congruence between citizens and their government (many-to-one congruence).

Majoritarian Electoral Rules

According to the literature, there are also strong arguments as to why countries with majoritarian electoral rules might be characterized by congruence between citizens and their government. At one level, Duverger's theory predicts that majoritarian rules will be characterized by two-party systems. At another level, spatial theories of party competition predict that parties in countries with majoritarian systems will converge to centrist policy positions relative to the electorate (Cox 1990; Downs 1957; Kollman, Miller, and Page 1992). By combining the prediction from Duverger's theory that there will be few parties in majoritarian systems and, hence, a greater likelihood of single-party majority governments, with the result from spatial theories of party competition that parties will converge to a centrist policy position, we obtain the prediction that governments in majoritarian democracies will be congruent with citizen preferences (many-to-one congruence).

What about congruence between citizens and their legislative representatives, though? One might expect that majoritarian systems will not produce legislatures that accurately reflect the diversity of citizen preferences because the number of parties will be low and because the parties that do exist are forced to converge to centrist positions. However, this expectation may not be entirely justified. One reason for this is that the distribution of citizen preferences may be endogenous to the number and ideological position of the parties. As Downs notes,

> the number of parties in existence molds the political views of rising generations, thereby influencing their positions on the [left-right] scale. In a [majoritarian system], since a two-party system is encouraged and the two parties usually converge, voters' tastes may become relatively homogenous in the long run; whereas the opposite effect may occur in a proportional representation structure. (1957, 124–25)

If Downs is correct, then the fact that majoritarian democracies are likely to be characterized by a few centrist parties does not necessarily imply that they will automatically exhibit low levels of congruence between citizens and their legislators (many-to-many congruence).

As we have illustrated, the existing literature provides various causal paths by which ideological congruence might be achieved in both majoritarian and proportional democracies. Whether PR or majoritarian systems lead to greater congruence ultimately depends on the assumptions one is willing to make about elite and voter coordination. As Cox notes, "[i]f coordination is more likely to fail at the electoral stage, then [majoritarian] systems will be more erratic. If coordination is more likely to fail at the government formation stage, then [PR] systems will be more erratic" (1997, 237).

Evaluating Congruence

Many-to-One Congruence

Do countries that employ PR electoral systems produce greater ideological congruence between their citizens and the government than countries that use majoritarian

Table 1 Mean Levels of Many-to-One Congruence by Electoral System Type

Dependent Variable	Proportional Systems	Majoritarian Systems	Significantly Different?
Absolute Congruence			
ABSOLUTE MEDIAN CITIZEN CONGRUENCE	1.46	1.06	NO
	(0.97)	(0.83)	
ABSOLUTE CITIZEN CONGRUENCE	2.25	1.89	YES
	(0.49)	(0.41)	
Relative Congruence			
RELATIVE CITIZEN CONGRUENCE	0.17	0.17	NO
	(0.13)	(0.14)	
Observations	31	7	

Notes: Lower scores indicate greater congruence. Parentheses indicate standard deviations. "Significantly Different?" means at the 0.10 significance level (two-tailed). ABSOLUTE MEDIAN CITIZEN CONGRUENCE captures the absolute distance between the median citizen and the government; ABSOLUTE CITIZEN CONGRUENCE captures the average distance between the citizens and the government; RELATIVE CITIZEN CONGRUENCE captures the average distance of a citizen from the citizens' most preferred position relative to the average distance between a citizen and the government.

ones? A majoritarian electoral system is one in which the candidate or party with the most votes wins, whereas a PR system is essentially one in which two or more winning candidates are selected in proportion to the votes that they receive (Golder 2005). Some countries employ mixed systems that combine majoritarian and proportional formulas in different electoral tiers. If these mixed systems are "dependent" in the sense that the proportional formula in the upper tier is specifically designed to compensate for the disproportionality produced by the majoritarian formula in the lower tier, as in Germany, then we code these democracies as proportional. On the other hand, if these mixed systems are "independent," then we omit them from our analysis in order to guarantee a clean test of the effect of majoritarian and proportional democracies on citizen-representative congruence. This line of reasoning leads to the omission of Hungary (1998, 2002) and Taiwan (2001).

In Table 1, we use a variety of measures to show how the mean level of ideological congruence varies across majoritarian and proportional democracies. There are two different measures of *absolute* congruence and one measure of *relative* congruence. As a reminder, lower scores indicate greater ideological congruence. None of the measures indicate that proportional democracies produce greater congruence than majoritarian ones. In fact, all of the measures indicate that the mean level of congruence is higher in countries that employ majoritarian electoral systems.

One thing worth noting is that congruence between citizens and their government is significantly higher ($p < 0.10$) in majoritarian democracies when we measure it in terms of absolute citizen congruence. A potential explanation for this has to do with the dispersion of citizen preferences across the two types of democracy. As we noted earlier, conceptualizing congruence in terms of absolute citizen congruence puts governments in homogenous countries at an advantage in terms of their ability to produce congruence compared to governments in more heterogeneous ones. Empirically, a standard t-test reveals that the dispersion of citizen preferences, as measured by the standard deviation, is significantly lower ($p < 0.05$) in majoritarian democracies than proportional ones. This is true not only when we employ data from CSES surveys as we do here, but also when we look at data from *Eurobarometer* and WVS surveys. This lower dispersion of citizen preferences in majoritarian democracies may help to explain why absolute citizen congruence is significantly greater in majoritarian democracies than proportional ones. Some evidence for this explanation comes from the fact that there is no significant difference in congruence between the two democracy types once we measure congruence relative to the dispersion of citizen preferences. As these results demonstrate, how scholars conceptualize and measure many-to-one congruence matters.

One concern with this initial analysis is that we only have seven observations of a pure majoritarian electoral system. Readers may be uncomfortable with us drawing inferences from a simple difference-in-means test using a sample of this size. One way to avoid this problem is to measure all electoral systems along a continuum of disproportionality rather than in terms of a

TABLE 2 Coefficient on Electoral System Disproportionality from a Series of Bivariate Regressions

Dependent Variable	Disproportionality	Significant?
Absolute Congruence		
ABSOLUTE MEDIAN CITIZEN CONGRUENCE	−0.02	NO
	(0.03)	
ABSOLUTE CITIZEN CONGRUENCE	−0.01	NO
	(0.02)	
Relative Congruence		
RELATIVE CITIZEN CONGRUENCE	−0.001	NO
	(0.003)	
Observations	41	

Notes: Parentheses indicate robust standard errors clustered by country. "Significant?" means at the 0.10 significance level (two-tailed). Substantively similar results are obtained if we do not employ robust or clustered standard errors. Results are also robust to a variety of other things, including leverage tests and jackknife and bootstrap resampling schemes.

majoritarian-proportional dichotomy. The most common measure of electoral system disproportionality is proposed by Gallagher (1991):

$$\text{DISPROPORTIONALITY} = \sqrt{\frac{1}{2}\sum_{p=1}^{P}(v_i - s_i)^2} \qquad (5)$$

where v_i and s_i are the percentage of votes and seats obtained by the i^{th} party, respectively. This measure ranges from 0 to 100, with higher numbers indicating increased disproportionality.

In Table 2, we report the coefficients on our measure of disproportionality from a series of bivariate regressions where ideological congruence is the dependent variable.[10] We employ robust standard errors clustered by country to take account of potential heteroskedasticity and the possibility that observations from the same country may not be independent. The results indicate that citizen-government congruence is not significantly different in proportional democracies than in majoritarian ones. This is the case no matter what measure of congruence we employ.[11]

Our results regarding the relationship between many-to-one congruence and electoral institutions are clearly at odds with the vast majority of studies in the existing literature. We should point out that this is not simply because we conceptualize and measure congruence differently. As the results in Tables 1 and 2 indicate, we find no evidence that proportional democracies produce greater congruence than majoritarian ones even when we employ the standard measure in the literature, i.e., absolute median citizen congruence. There are two potential explanations for the difference between our results and those in the existing literature. One has to do with the different data source that we employ and the other has to do with the fact that we are evaluating congruence in a more recent time period than previous studies. Powell (2009) has recently presented compelling evidence that the difference is not due to the different data source but rather the different time period. Extending citizen-expert and comparative manifesto data into the more recent time period covered by the CSES data, Powell finds, as we do, no evidence that proportional democracies produce greater absolute median citizen congruence than majoritarian democracies. Why proportional democracies would be associated with

[10] While all previous studies of ideological congruence have focused on electoral system disproportionality, some have recently included other variables such as the number of parties and party system polarization. However, there is considerable evidence that these other variables are a direct consequence of electoral system disproportionality. As Ho et al. note, "variables that are even in part a consequence of the treatment variable [disproportionality] should never be controlled for when estimating a causal effect . . . [It] can severely bias a causal inference. . . . This 'post-treatment bias' problem is far too common in many areas of political science" (2007, 202). It is for this reason, and due to our relatively small sample size, that we focus here on the bivariate relationship between congruence and electoral system disproportionality.

[11] In addition to Gallagher's measure of disproportionality, we also used a country's average district magnitude as an alternative measure of (dis)proportionality. The results are qualitatively similar. The coefficients on two of the congruence measures are insignificant. Although the coefficient on the third is significant, its size is so small as to make it substantively meaningless given the observed range of the district magnitude variable.

Table 3 Mean Levels of Many-to-Many Congruence by Electoral System Type

Dependent Variable	Proportional Systems	Majoritarian Systems	Significantly Different?
CONGRUENCE (MANY-TO-MANY)	82.95	92.46	NO
	(30.67)	(27.77)	
Observations	27	7	

Notes: Lower scores indicate greater congruence. Parentheses indicate standard deviations. "Significantly Different?" means at the 0.10 significance level (two-tailed).

greater ideological congruence in earlier time periods but not more recently is an open question at present.[12]

Many-to-Many Congruence

Do countries that employ PR systems produce greater congruence between citizens and their legislators than countries that use majoritarian ones? Before answering this question, we briefly discuss two details having to do with the construction of our measure of many-to-many congruence. First, recall that our measure captures the area between the CDFs of the citizens and parties (legislators) on the left-right issue dimension. Although citizens are placed at discrete integer points (0, 1, 2, etc.) along the 0–10 left-right scale, political parties are not. This is because we use the *mean* placement of a party by the top 40% educated respondents in each country as an estimate of the actual party placement. In order to capture the area between the CDFs of the citizens and parties, it is, therefore, necessary to allocate party seat shares to discrete integer points on the left-right dimension. We do this by proportionally allocating seat shares between the two integer points on either side of our estimated party position. As an example, consider a party with 100 legislative seats at an estimated position of 5.5 on the 0–10 scale. We would allocate 50% (50) of this party's seats to position 5 and 50% (50) to position 6. Similarly, if the same party were located at 5.3, then we would allocate 70% (70) of its seats to position 5 and 30% (30) to position 6.

Second, there are, unfortunately, some observations for which CSES respondents do not provide the ideological position of all legislators. Typically, these legislators are either independent candidates or they belong to extremely small parties. To deal with these situations, we first drop any observation for which we are missing the ideological positions of parties that together comprise more than 5% of the legislative seats. This results in the elimination of four elections (Denmark 1998; Ireland 2002; Israel 1996, 2003). Of the remaining 37 observations, over half (20) are missing the ideological positions of parties comprising less than 1% of all the legislative seats. Overall, we are missing the ideological positions of parties comprising, on average, just 1.64% of all legislative seats. Second, we normalize the seat share for those parties for which we have ideological positions back to 100%.[13] Recall that many-to-many congruence is greater, the smaller the area between the citizen and party CDFs.

In Table 3, we indicate how the mean level of ideological congruence between citizens and their legislative representatives varies across democracies employing majoritarian and PR electoral rules. The results indicate that the mean level of many-to-many congruence is greater (the mean score is lower) in countries that employ PR systems than in those that use majoritarian ones. However, this difference does not reach conventional levels of statistical significance.

For the same reasons as with our earlier analysis, we now report the coefficient on Gallagher's continuous measure of electoral system disproportionality from a bivariate regression where CONGRUENCE (MANY-TO-MANY) is the dependent variable in Table 4. In contrast to the results in Table 3 where we employed a majoritarian-proportional dichotomy, the results here clearly indicate that increasing a continuous measure of electoral system disproportionality substantively reduces the level of ideological congruence between citizens and their legislators, i.e., the coefficient on DISPROPORTIONALITY is positive,

[12] In a new paper, Powell (2008) suggests that changing party system polarization might explain this temporal variation.

[13] Implicitly, this normalization assumes that the seats for which we are missing ideological positions are distributed along the left-right dimension in the same way as the seats for which we have ideological positions. This is the best that we can do without additional information. However, there are occasions in the CSES survey where country experts place particular parties but individual respondents do not. Rather than simply ignore this additional information and fall back on the implicit assumption just stated, we take advantage of these expert placements wherever possible. As a result, the ideological positions for six of the 212 legislative parties utilized in this particular section are determined by country experts; the positions of the other 206 parties are determined, as before, by individual respondents.

TABLE 4 Coefficient on Electoral System Disproportionality from a Bivariate Regression

Dependent Variable	DISPROPORTIONALITY
CONGRUENCE (MANY-TO-MANY)	2.32***
	(0.80)
Observations	37

$^{*}p < 0.10$; $^{**}p < 0.05$; $^{***}p < 0.01$ (two-tailed).
Notes: Parentheses indicate robust standard errors clustered by country. Substantively similar results are obtained if we do not employ robust or clustered standard errors. Results are also robust to a variety of other things, including leverage tests and jackknife and bootstrap resampling schemes.

highly significant, and substantively meaningful. Put differently, the results show that countries where the electoral system accurately translates votes into legislative seats will also be characterized by a more accurate translation of citizen preferences into legislative seats. To our knowledge, this is the first empirical analysis to explicitly demonstrate that PR systems produce legislatures that accurately reflect the ideological *preferences* of citizens and not just their *votes*.

Conclusion

A growing consensus has emerged in recent years that democracies employing majoritarian electoral institutions are better at promoting things like government mandates, identifiability, clarity of responsibility, and accountability, whereas democracies employing PR institutions are superior at dispersing power, providing choice, and generating ideological congruence between citizens and their representatives (Powell 2000). In effect, this consensus states that there is an explicit trade-off when countries adopt majoritarian or proportional electoral rules. While democracies that adopt majoritarian electoral systems can expect to be characterized by high levels of government identifiability and accountability, they can also expect to experience low levels of ideological congruence between citizens and their representatives.

In some ways, our article supports this notion of a trade-off, at least with respect to ideological congruence. Specifically, we find strong evidence that countries with PR electoral rules are more likely to have legislatures that are congruent with the ideological preferences of the citizenry than countries with majoritarian ones. In other words, legislatures in proportional democracies tend to be a more accurate reflection of the diversity of ideological opinions in society than legislatures in majoritarian democracies. In other ways, though, our article challenges the notion of a trade-off. This is because we find no significant difference in the level of ideological congruence between citizens and their governments in proportional and majoritarian democracies. To the extent that we ultimately care about how well the preferences of citizens are reflected in the government, then the evidence that we present suggests that democracies can adopt majoritarian electoral institutions in the hope of promoting things like government accountability *without* sacrificing citizen representation. On the other hand, to the extent that we care about having substantively representative legislatures, then our analysis indicates that a trade-off does seem to exist.

Not only does our article have important insights for the debate about the relative merits of majoritarian and proportional democracies, but it also has broader implications for the study of representation more generally. As we have demonstrated, empirical results about citizen-representative congruence can depend in many situations on exactly how we conceptualize congruence. Despite this, relatively little attention has been paid to issues of conceptualization and measurement in the existing literature. At a minimum, our analysis suggests that it is important for scholars to better justify why they use the conceptualization of congruence that they do or to demonstrate that their results are robust to alternative conceptualizations.

How informative or appropriate a particular conceptualization of congruence will be is likely to depend on one's research question. On the whole, though, we believe that it is typically better to conceptualize congruence in a way that incorporates information about the distribution of citizen preferences rather than simply as the ideological distance between the median citizen and her representative(s). This point echoes the emphasis that Downs (1957, 130–31) places on looking at the distribution of citizen preferences for fully understanding democratic political competition. In addition, there are also good reasons why scholars should conceptualize congruence relative to the dispersion of citizen preferences if they are interested in comparing the relative performance of representatives across constituencies and/or if they have significant concerns that differential item functioning is a problem.

In addition to clarifying central aspects of how scholars currently conceptualize ideological congruence, we introduced a new conceptualization and measure of congruence that captures a long tradition in democratic political theory emphasizing the ideal of having a legislature that accurately reflects the ideological preferences of the citizenry as a whole. Those existing studies that address this type of "legislative representation" tend to do so by focusing on the ideological distance between the median citizen and the median legislator (McDonald, Mendes, and Budge 2004; Powell 2000). By ignoring the variance in the preferences of both citizens and representatives, though, these studies fail to fully capture the original conceptualization of congruence proposed by democratic theorists such as Mirabeau, Burke, and Mill (Pitkin 1967, 60–91). In effect, the current literature displays a sharp disconnect between the conceptualization and measurement of this type of ideological congruence. We believe that our proposed measure of many-to-many congruence offers a simple, yet useful, way to ameliorate this situation.

As we have already noted, our new measure of many-to-many congruence is, in many ways, the direct counterpart for ideological congruence of the vote-seat disproportionality measures that have proven so popular in comparative studies of representation. By focusing explicitly on how accurately the *preferences*, rather than just the *votes*, of citizens are translated into legislative seats, though, our measure of many-to-many congruence directly addresses the central criticism leveled at scholars who use vote-seat disproportionality scores as a measure of how well citizens are represented. Given the widespread use of vote-seat disproportionality measures, we believe that our new conceptualization and measure of many-to-many congruence will prove valuable to scholars examining political representation and will open up new avenues of research. For example, scholars will now be able to investigate whether substantive, and not just descriptive, representation in the legislature influences things like political participation rates, perceived levels of democratic legitimacy, trust in the political process, and satisfaction with democracy.

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