The Impact of Federalism on National Party Cohesion in Brazil

This article explores the impact of federalism on national party cohesion. Although credited with increasing economic growth and managing conflict in countries with diverse electorates, federal forms of government have also been blamed for weak party systems because national coalitions may be divided by interstate conflicts. This latter notion has been widely asserted, but there is virtually no empirical evidence of the relationship or even an effort to isolate and identify the specific features of federal systems that might weaken parties. In this article, I build and test a model of federal effects in national legislatures. I apply my framework to Brazil, whose weak party system is attributed, in part, to that country's federal form of government. I find that federalism does significantly reduce party cohesion and that this effect can be tied to multiple state-level interests but that state-level actors' impact on national party cohesion is surprisingly small.

Introduction

Federalism is one of the most widely studied of political institutions. Scholars have shown how federalism's effects span a wide range of economic, policy, and political dimensions (see Chandler 1987; Davoodi and Zou 1998; Dyck 1997; Manor 1998; Riker 1964; Rodden 2002; Ross 2000; Stansel 2002; Stein 1999; Stepan 1999; Suberu 2001; Weingast 1995). In economic spheres, federalism has been lauded for improving market competitiveness and increasing growth; in politics, for successfully managing diverse and divided countries. But one potential cost of federalism is that excessive political decentralization could weaken polities' ability to forge broad coalitions to tackle national issues.¹

Federalism, the argument goes, weakens national parties because subnational conflicts are common in federal systems and national politicians are tied to subnational interests. Federalism reinforces existing subnational conflicts and creates new sources of conflict. For example, regional societal differences are common in both unitary and federal systems, but federalism reinforces such differences by creating subnational political space for their representation. Regional religious, ethnic, and ideological differences frequently predate federal forms of government

and are often the very reason federal forms of government are adopted. In fact, current discussions in Indonesia, Afghanistan, and Iraq have suggested federal forms of government for those countries' diverse ethnic and religious groups (Cameron 2001; Global Intelligence Update 1999; O'Leary 2002). Federalism also creates new conflicts. Independent subnational governments naturally compete with each other and with the central government for resources and power. For example, in both India and the United States, interstate competitions over water resources are common (Richards and Singh 2002). In Brazil, state governors clash with the president over revenue sharing and tax burdens (Abrúcio 1998).

One arena where such interstate disagreements should be apparent is national legislatures. Members of national legislative bodies in federalist systems are in most cases tied to subnational units via elections. These legislators are responsible for sometimes crucial national policy questions, and they usually belong to parties with national policy platforms. But these legislators' career survival depends on addressing the regional interests of voters and on maintaining good relations with state or provincial political elites, including governors, local party leaders, and bosses.

The resulting tension between state and national interests can weaken political parties, with legislators succumbing to provincial interests and pressures and defecting from party positions. This party-weakening tension need not always be problematic for democratic regimes' survival but, in moments of economic or political crisis, it can lead to dangerous stalemates if subnational actors assert veto power over national legislation. One recent example of this scenario arose in Argentina. During a deepening economic crisis in the fall of 2001, repeated attempts to pass reforms, reduce spending, and avoid loan defaults failed when provincial governors came out against such measures and ordered legislators from their states to do the same. The result was a rapid series of regime failures as Argentina cycled through five presidents in two weeks.

Scholars have previously identified mechanisms that determine the extent to which federalism weakens national parties. Mayer (1970) argues that parties will be weaker in "congruent" than in "legalistic" federalism. Legalistic federalism is the formal institutional structure of subnational governments without systematic cultural or economic differences across states. Congruent federalism combines the legal structures with diverse subnational societies. Chandler (1987) writes that federalism is mostly likely to weaken national coherence of parties in countries where regional cleavages are strong and as decentralization of authority increases. These factors accentuate the "fragmenting or centrifugal effects" of federalism (Chandler 1987, 156). Thorlakson (2001) compares party organization in Austria, Australia, Germany,

Switzerland, the United States, and Canada to show that we can further differentiate among federal systems by examining their resource and policy decentralization. She finds that resource and policy decentralization lead to less vertical integration and more decentralized parties.

The arguments are quite compelling, but there is little empirical evidence that federalism has any impact on party strength in national arenas. Further, we know even less about the specific mechanisms of state influence over national legislators. Is influence exerted by popular demands, by governors, or by local parties? Finally, we lack a set of methods for answering these questions.

In this article, I seek to enrich our understanding of the relationship between federalism and political parties. I build a framework and set of methods for measuring the influence of subnational-level actors on national party cohesion. I apply my framework to the case of Brazil, a country where federalism combines formally decentralized federalism and diverse regional societies. The combination of legal and societal federalism means that if federalism does reduce national party cohesion anywhere, then it should do so in Brazil. Besides being a useful test case, Brazil is an important country in its own right. The eighth largest country in the world and the most powerful South American country, Brazil has aspirations of international influence. And this young democracy has been identified as being ungovernable and at risk of regime failure because of its weak national parties.

My analysis finds consistent party-weakening federal effects in Brazil. Using data from the Chamber of Deputies and the previously unstudied Senate, I show that national party cohesion is significantly reduced by interstate divisions within national parties and that legislators are, in fact, influenced by subnational actors. The apparent impact of federalism on party cohesion, however, is surprisingly small.

The article proceeds in three steps. In the next section, I discuss the mechanisms by which federalism weakens national parties, both generally and in the case of Brazil. In Section II, I test for evidence that federalism reduces national party roll-call cohesion. Finally, in Section III, I discuss the implications of my findings and several directions for future research.

I. Brazilian Federalism and Political Parties

Brazil is a case of congruent federalism, combining legal and societal regionalism (Mayer 1970). The country comprises 26 states and a federal district, Brasília. After the return to democracy in 1985, elected politicians reacted strongly against the military's centralization of authority. The 1988 Constitution decentralized political and budgetary

TABLE 1
Federal and State Spending in Selected Countries
(as percentage of total government spending)

	Spending		
Country	Federal	State	
Argentina	52%	40%	
Brazil	36%	41%	
Chile	87%	1%	
Colombia	67%	16%	
Mexico	88%	10%	
Venezuela	78%	16%	
United States	59%	23%	

Source: Geddes and Benton 1997, 5-6.

authority to state and municipal governments. The Constitution even includes a clause that the basic federal pact *cannot* be amended!²

Table 1 compares national- and state-level spending as a percentage of total government spending for a sample of countries. Brazil clearly stands out as one of the most decentralized, with over 40% of government expenditures made at the state level and only 36% made at the national level. In comparison, only 23% of the United States' government expenditures are made at the state level.

Fiscal decentralization is paralleled by political decentralization. State-level actors control many resources that are important to national legislators. Nominations for most political offices, electoral coalition formation, and the distribution of free media time for campaigns all happen at the subnational level. This decentralization of governance and resources to state and local institutions helps direct national politicians' career aspirations to local offices and enhances the influence of local politicians among national legislators (Samuels 2003).

These institutions are superimposed on a very diverse society. Brazilian states vary widely in their political histories, economic development, and demographic profiles. The richest states have an index of human development nearly 50% greater than that of the poorest (PNUD 1998). Interior states are primarily agricultural, whereas those in the southeast have concentrations of heavy industry. There are also significant cultural and ethnic differences across states. The Northeast is predominantly Afro-Brazilian; the Deep South includes descendants of Japanese, German, and Italian immigrants. The congruence of decentralized authority and regional societal diversity make Brazil an extreme case of federalism.

The result, as many scholars have argued, is that national legislators are susceptible to pressure from local interests, to the detriment of national party cohesion (Ames 2001; Mainwaring 1997, 1999; Samuels 2003; Selcher 1998; Souza 1998). This argument rests on several simple assumptions. Legislators are rational and career seeking. Career advancement requires access to political resources, including committee appointments, campaign finance, publicity, and pork. Legislative behavior, including roll-call votes, reflects legislators' efforts to obtain the resources they need for advancement. In other words, legislators cast votes, introduce legislation, and lobby for pork to please the actors that control the most important resources. In federal systems, many of these resources are controlled by state actors, so legislators' behavior is partly a function of national actors' demands and partly a function of local actors' demands. Consequently, the decentralization of political resources leads to weaker or less cohesive parties as national parties are divided into competing state subparties.

The preceding discussion suggests an approach to studying federalism's impact on national parties—we should start by identifying the influential state- and national-level actors likely to be in conflict. The specific influential actors will vary across countries, but in the case of Brazil, three state and two national actors are potentially influential in the legislative arena. At the state level, state governors, state parties, and state electorates may split national coalitions into state subgroups. At the national level, the president and national legislative parties control resources that could be used to unify legislators behind a national agenda. In the following paragraphs, I discuss the potential influence of each of these competing actors.

State-level Actors in Brazil

Brazilian federalism includes three primary state-level actors with the potential to divide national parties on state lines: state executives, state party organizations, and broader state interests.

State Executives. State governors are the most powerful of subnational actors. Governors play a central role in Brazilian politics in general and in politicians' career goals in particular, controlling several career resources of interest for national legislators (Abrúcio 1998; Ames 2001; Mainwaring 1997; Samuels 2003). First, governors control access to pork through state budgets. As shown in Table 1, government spending in Brazil is quite decentralized. But within state governments, most budget and policy authority is centralized in the executive branch (Schneider 2001). Governors can thus use the distribution of state pork to reward and punish federal legislators' behavior.

Second, governors control access to state government jobs, some of which are useful for rewarding activists and volunteers, others of which are coveted by deputies themselves. Legislators do enjoy limited appointment privileges, but the state executive controls many more. Governors can trade jobs for responsiveness, allowing legislators to name appointments to the state bureaucracy in exchange for responsive and reliable support for the governors' policy positions (Abrúcio 1998). In addition, governors control access to state ministerial jobs coveted by deputies. Many deputies aspire to lead state government departments of planning, health, or roads. Frequently, national legislators take leaves of absence from Congress to take state ministerial positions in their home states. These positions enhance politicians' visibility as they work closely with the governor and present and implement projects. They also gain access to part of the state machine—and an opportunity to expand their own personal network.

Governors can provide numerous other resources to federal legislators. For example, governors can facilitate campaigning by providing candidates with cars and drivers, paying for gasoline, and otherwise using the state machine to support candidacies. Finally, simply demonstrating a close relationship with the governor tells voters that, if elected, candidates will be able to work with the government machine to obtain and distribute largess. Deputies have even been known to argue over who gets to be closest to the governor in publicity photos.

State Party Organizations. State political parties have the potential to play an important role in politicians' careers (Mainwaring 1997). In the Brazilian system, state political parties control nominations for state deputy, federal deputy, senator, and gubernatorial candidates; they can also be influential in mayoral and city council nominations. Furthermore, these parties control media access during elections, deciding how to distribute television time to candidates.³ Consequently, state parties are potentially very influential with national legislators.

State parties' influence might be limited, however, by several factors. First, in the Chamber of Deputies during the period studied, legislators were guaranteed renomination under the *candidato nato* rule. Regardless of their voting records, incumbents were guaranteed renomination to their party lists—party leaders could not punish incumbents by limiting ballot access.⁴ Second, state party strength is weakened in Brazil by frequent, easy, and relatively painless party switching. A deputy under pressure from a state party can simply switch to another party. Third, Brazilian state parties do not control significant financial resources for campaigns. Candidates raise their own funds without party assistance, using their own resources, soliciting contributions, or relying on state resources in one form or another.

Broader State Interests. Other political actors may also pressure deputies to respond to state rather than national interests. These actors may include business and political elites, local politicians, voters, and interest groups. These groups are not the direct creation of federalist structures; in fact, they are present in unitary polities as well. The difference is that in federal systems these groups are more likely to be mobilized around state conflicts than around national ideological issues.

These actors' impact on national party cohesion can stem from at least two kinds of interest. First, these actors may reflect broad, interstate ideological differences. Historical religious, ethnic, economic, or other divisions often make federalist forms of government attractive to constitution writers. To the extent that these cleavages persist, they can lead to intraparty divisions along state lines. Second, federal systems often create issues that pit states against each other. Federal systems make interstate conflict the likely arena for many policy questions, transforming them into resource battles between states or between states and central governments. Such conflict-inspiring resources include national government revenues, tax burdens, and natural resources like water. These kinds of issues ought to unify state delegations, to the detriment of national political parties.

National-level Actors in Brazil

The influence of state-level actors is countered by two national actors: national party organizations and the national executive. Their control of resources works to unify party coalitions and parties, respectively, against the efforts of state political actors.

National Party Organizations. Brazilian national parties control access to several resources within Congress that could give them influence over legislators' behavior. First, party leaders can affect the legislative agenda and hence the success or failure of bills and budget amendments. Leaders' influence stems from their membership in the college of leaders and their leverage to push bills through the legislative process by granting them "urgent" status or pushing for roll-call votes. Legislators who wish to advance a bill or budget amendment can benefit greatly from the assistance of their party leaders (Câmara Federal 1994; Figueiredo and Limongi 2000)

Second, party leaders have nearly complete control over committee assignments, which are distributed proportionately among parties every two years. Each party above a minimum threshold has a proportionate number of powerful committee seats to assign. The assignments belong to the party and can be reassigned as punishment or reward for deputies' behavior.

On the other hand, Brazilian national party leaders lack many of the sticks and carrots commonly used to discipline members. They do not control nominations (except for the presidential race), they do not distribute media time, and they do not have financial resources for campaigns. In addition, Brazilian legislators do not appear to value the few resources that national parties have. For example, evidence suggests that legislators are little concerned with their committee assignments: choice assignments do not deter defections (Desposato 2002). Further, it is not clear that party leaders' influence on the legislative process motivates deputies to cooperate with their parties. Scholarship has tied electoral success to delivery of pork projects, but not to the passage of laws. If passing legislation and serving on committees do not advance legislators' careers, then this lack of incentive should reduce party leaders' ability to enforce discipline among members.

National Executive. The Brazilian president has been characterized as very powerful vis-à-vis national legislators. The president can propose legislation and has exclusive authority to propose legislation in certain policy areas. The president has veto power, the prerogative to move legislation to the top of the congressional agenda, and the authority to write decree laws (medidas provisórias), which have the force of law.⁵

For individual legislators, even more important is the president's control over execution of the budget. Like the state governor, the Brazilian president has substantial flexibility in budgetary matters and spending decisions. Funds appropriated to projects may only be "liberated" for expenditure with the executive's approval. In addition, the president can distribute cabinet appointments to legislative partners. Ministerial appointments are highly visible and prestigious appointments and give the parties that control them additional access to and influence over that ministry's budget and programs (Ames 2001; Amorim Neto 1998).

Previous work has shown how the executive uses these resources to build support for his or her legislative agenda (Ames 1995, 2001; Amorim Neto 1998; Amorim Neto and Santos 2001; Figueiredo and Limongi 1995). Coalitions are first assembled by negotiating the distribution of cabinet appointments among parties that agree to support the president's legislative agenda. When cabinet control is not enough, presidents can try to assemble working majorities vote by vote, trading pork projects for pledges of support. There is some disagreement on the extent of executive influence and the importance of parties as allies for the president, but all scholars agree that the executive's control of pork is a powerful tool for influencing deputies.

Summary

Federal institutions create and are countered by a complex set of actors and incentives that may influence legislative parties. Federalism may simply institutionalize existing differences in electorates—perhaps the same differences that gave rise to the federal forms of government in the first place. They also create new state-level actors and interests with potential for interstate and state-versus-federal conflict.

In the next section, I examine legislative roll-call voting in the Brazilian Chamber of Deputies and Senate for evidence of federal effects on national party cohesion. First, I revisit previous work on federalism and party cohesion in Brazil and discuss its limitations. Second, I compare national and state-delegation party cohesion. If federalism reduces party cohesion through state-level politics, then state-delegation cohesion should be significantly greater than national party cohesion.

II. Evidence

Although the notion of federalism as a key inhibitor of the institutionalization of Brazil's party system is common among scholars, there is little direct evidence of federalism's impact on party cohesion. State governors are powerful in Brazil, so most previous research has focused on their influence. For example, Ames (2001) tested for the impact of governors on deputies' propensity to vote with their party's majority, but he found no systematic pattern across parties. In an earlier work (Desposato 2001), I showed that governors and local elites had impressive influence over legislators during the military regime, but I did not examine party cohesion or examine the postmilitary period.

More recently, Carey and Reinhardt (2004), tested for systematic variance in state party delegations that corresponds with party control of state governorships and district magnitude. They found that state-party delegation cohesion is lower in large states than in small states but uncovered no evidence that governor's delegations are different from opposition delegations. These findings illuminate the impact of electoral rules and gubernatorial pressure on legislative behavior, but they do not address the broader question posed by this study, namely, does federalism reduce party cohesion?

Mainwaring and Perez-Liñan (1997) and Samuels (1996) sought a direct answer to this question by examining a sample of roll-call votes from Brazil's Constituent Assembly (1987–88). Both studies found federal effects, but these analyses had three important shortcomings. First, the methodology was shown to be biased toward Type I error,

virtually guaranteeing finding a "federal effect" even if there is none.⁶ Second, the analyses relied on a narrow snapshot of Brazilian legislative politics: a nonrandom sample of bills from the 1988–89 Constituent Assembly. This period was a unique and uncertain phase of democratic transition and institution building, reducing its usefulness for understanding democratic Brazil. Third, both studies attempted to measure a federal effect but failed to isolate its origin in governors, state parties, or state electorates.

I seek to address these issues and enrich our understanding of federalism in Brazil by testing for federal effects on party cohesion during two legislative periods, from 1991 to 1998, in both the Chamber of Deputies and the Senate. This approach uses all available votes during a period of routine democratic governance—not a period of democratic transition and constitution making. I also look at federalism's impact in the Senate—the first look at roll-call data from that institution. I test for federalist effects using two alternative approaches: nonparametric permutation analysis that eliminates the bias problem associated with previous work and a spatial model that includes separate indicators for each of the state actors that may reduce party cohesion.

Federal Effects in Roll-call Vote Cohesion

I investigate federal effects on party cohesion by comparing average national party cohesion with average state party cohesion. First, I calculate national party j's cohesion on vote k, C_{jk} , by using the familiar Rice index.

$$C_{jk} = \frac{|Y_{jk} - N_{jk}|}{Y_{jk} + N_{jk}},$$

where Y_{jk} is the number of "yes" votes and N_{jk} is the number of "no" votes cast by party j's members on vote k.

State party cohesion is calculated in a very similar manner. The cohesion of party j's delegation from state l on vote k is

$$C_{jkl} = \frac{\left| Y_{jkl} - N_{jkl} \right|}{Y_{ikl} + N_{ikl}},$$

where l indexes the states.⁷

Finally, overall national party cohesion, \overline{C}_P , and state party cohesion, \overline{C}_{SP} , are calculated as the weighted average of cohesion on all bills. The weight,

$$W_{jk} = \left[1 - \frac{|Y_{jk} - N_{jk}|}{Y_{jk} + N_{jk}}\right] * (Y_{jk} + N_{jk}),$$

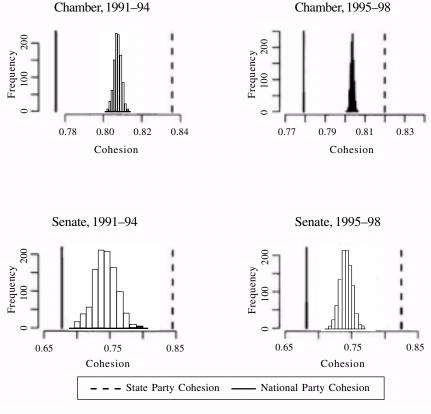
adjusts for the contentiousness of the bill and the size of the group voting. The first part of the weight is maximized when the legislature is equally divided (1) and minimized (0) on unanimous votes. The second part of the weight varies directly with party size.⁸

The key test for a federal effect in the national legislature is thus to compare average national party cohesion with average state party cohesion. If state party cohesion is significantly greater than national party cohesion, then we have found evidence of federal effects that divide national parties into state blocks.

Unfortunately, as discussed earlier, national and state party cohesion cannot be compared directly because subgroup cohesion is biased upward. Consequently, if state party cohesion is greater than national party cohesion, then we cannot be sure whether this difference is due to artificial inflation—a "false federalism"—or real party-splitting state pressures. The correct approach for inference is to use a permutation analysis, proceeding as follows:

- 1. Within each national party vote combination, randomly reorder all the votes cast as a new variable. In other words, on each bill, randomly shuffle the Worker's Party deputies' votes and redeal them to that party. Then do the same for the Liberal Front Party, the Brazilian Social Democratic Party, and all other parties. The shuffled votes are random permutations of the original data.
- 2. Calculate state party cohesion scores from this new vote variable as described above. Save the result, called a "permuted cohesion score."
- 3. Repeat this process many times, saving all the permuted results. The permuted results simulate the "normal" range of state party cohesion when there are no federal effects—that is, when state parties are not significant voting blocks within national parties.
- 4. Test: Is actual state party cohesion greater than $1-\alpha\%$ of the permuted values, where α is the significance level? If so, then reject the null hypothesis with an achieved significance level of α . If not, then the null hypothesis that there are no federal effects cannot be rejected.

FIGURE 1
Permutation Analysis of State Party Cohesion Scores



Note: Distribution shows permuted state party cohesion.

Figure 1 shows the results of a test of state party cohesion based on 1,000 permutations of the original dataset. The solid line shows national party cohesion; the dashed line shows state party cohesion. The distribution shows the permuted values of state party cohesion under the null hypothesis. When there are no federal effects on roll-call votes, we will observe state party cohesion values in the range defined by the distribution. If actual state party cohesion (the dashed line) falls in that range, then state parties do not divide national parties. If the dashed line is well above that range, then state parties do form significant sub-blocs and lower overall national party cohesion.

			State		
	\overline{C}_P	Permuted	Observed	Difference	99% CI
Chamber					
1991–94	0.78	0.81	0.84	-0.03	0.026 - 0.034
1995–98	0.78	0.80	0.82	-0.02	0.014 - 0.018
Senate					
1991–94	0.68	0.74	0.85	-0.1	0.058 - 0.149
1995-98	0.68	0.74	0.83	-0.08	0.061 - 0.104

TABLE 2 National vs. State Parties, Chamber and Senate, 1991–98

Several patterns stand out. First, the figures all clearly show the bias in state party cohesion scores. The distribution of permuted state party cohesion values is always well above the national party score. Even when there are no federalism effects, we expect to find differences between national party and state party cohesion.

Second, even so, there *are* consistent federalist effects observable in the data. The observed state-party cohesion scores are well above what we would expect to observe under the null hypothesis. In fact, in every case, the empirical values are above *all* the permuted values. The difference and the effect of federalism hold for both the Chamber and the Senate and are consistent over two legislative sessions.

The magnitude of the effect varies across time and institution. Table 2 summarizes the permutation analysis, showing average party cohesion (\overline{C}_P) , permuted state party cohesion (\overline{C}_{SPPERM}) , observed state party cohesion (\overline{C}_{SP}) , and a confidence interval for federalism's impact. For the Chamber, the effects are significant but not large for both periods studied. During the 49th legislature, the effect of state blocs was about .03; during the 50th, it was .02. One way to interpret this result is to imagine that in a party of 100 members, on average, state pressures increased defection by 1 or 2 deputies. In the Senate, the effects are substantially larger. Observed state party cohesion is .10 above its expected value under the null hypothesis during the 49th legislature and .08 during the 50th legislature.

The larger impact of state blocs on voting in the Senate is consistent with conventional understandings of Brazil. Senators are more powerful politicians in their home states and should be less subject to national influence. Unlike deputies, senators are not guaranteed

renomination, further strengthening their ties to state-level parties. And the Brazilian Senate, like senates in many countries, is explicitly designed to represent states. Inference about the Senate requires some caution, however. State party cohesion scores can only be calculated for states in which one party elects two or more senators of the same party and each state only elects three senators. Consequently, more fragmented states where senators are all elected from different parties must be excluded from the analysis.

Variance in Federal Effects across Parties

The preceding discussion analyzed the impact of federalism on Brazilian party cohesion at the system level. Within Brazil, however, there is substantial variation across parties in terms of ideological coherency, cohesion, and institutionalization (Ames 2001; Amorim Neto and Santos 2001; Mainwaring 1997). Is there similar variance in parties' susceptibility to the demands of state-level actors?

We can test for federal forces' influence on individual parties using the same methods. In this case, instead of comparing overall average party and state party cohesion, we compare each party's cohesion with that of its state delegations. Figures 2 and 3 show the results of 1,000 permutations for the seven largest parties in the 49th and 50th Chamber of Deputies. ¹⁰ The solid horizontal lines mark average national party cohesion for that party. The dashed horizontal lines represent the observed state party cohesion for that party. The shaded rectangle shows the distribution of 1,000 permuted state party cohesion scores.

The graphs show significant variation in party cohesion. As found previously, the Worker's Party (PT) stands out as the most cohesive, with a Rice score consistently above .95. The Democratic Worker's Party (PDT) is the next-most cohesive party, with national party cohesion averaging .87. The other large parties—the Brazilian Social Democratic Party (PSDB), Brazilian Democratic Movement Party (PMDB), Brazilian Progressive Party (PPB), and Brazilian Worker's Party (PTB)—vary across period. From 1991 to 1994, their average cohesion is about .75. From 1995 to 1998, cohesion rises significantly for the Liberal Front Party (PFL), PSDB, and PTB but falls for the PPB and PMDB.

In terms of internal state divisions, however, almost all parties share a common result: significant and consistent internal state divisions on roll-call votes. For both periods, state party cohesion values are greater than all permuted values for all national parties except the PT and the PTB. State parties do form blocs within national parties and do reduce national party cohesion, significant at the .001 level.

FIGURE 2
Permutation Analysis of State Party Divisions, 1991–94

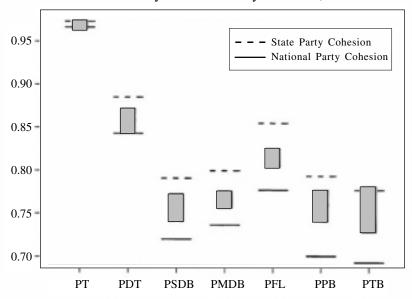
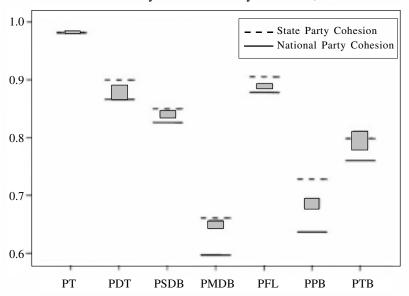


FIGURE 3
Permutation Analysis of State Party Divisions, 1995–98



 $\it Note:$ The shaded boxes indicate the range of permuted state party cohesion.

TABLE 3
National vs. State Parties, Chamber of Deputies

		C_{S}	tate		
Party	\overline{C}_P	Permuted	Observed	Difference	99% CI
1991–94					
PT	0.97	0.97	0.97	0.01	-0.001 - 0.010
PDT	0.84	0.86	0.89	0.03	0.013 - 0.042
PSDB	0.72	0.76	0.79	0.04	0.018 - 0.051
PMDB	0.74	0.77	0.8	0.03	0.024 - 0.044
PFL	0.78	0.81	0.85	0.04	0.029 - 0.051
PPB	0.7	0.76	0.8	0.03	0.016 - 0.053
PTB	0.69	0.75	0.78	0.02	-0.004 - 0.049
1995–98					
PT	0.98	0.98	0.98	0.000	-0.002 - 0.002
PDT	0.87	0.88	0.9	0.022	0.010 - 0.033
PSDB	0.83	0.84	0.85	0.009	0.003 - 0.013
PMDB	0.6	0.65	0.66	0.011	0.004 - 0.01
PFL	0.88	0.89	0.9	0.016	0.012 - 0.020
PPB	0.64	0.69	0.73	0.042	0.033 - 0.050
PTB	0.76	0.8	0.8	0.003	-0.012 - 0.013

Table 3 summarizes the key statistics from the permutation analysis. Again, the key columns are those labeled "Difference," showing the mean federal effect, and "99% CI," which provides a confidence interval for the difference. During both periods, federalism has its largest impact on the PFL, PPB, and PDT, and smaller but still significant effects on the PSDB and PMDB. The impact of state divisions falls in the second period by about 50% for most parties, perhaps reflecting the greater success of President Cardoso in organizing a stable legislative coalition after the unstable and frequently changing coalitions during the Collor (1990–92) and Franco (1992–94) administrations. Fernando Collor was elected without a strong partisan backing and had unstable coalition partnerships until his impeachment in 1992. Similarly, Itamar Franco's administration struggled for direction and cycled through several coalitions. The coalition instability and inflation may have given state actors a greater voice in Congress.

Isolating the Influence of State Actors through Ideal Point Analysis

The permutation tests showed that federalism does reduce national party cohesion, but this analysis does not shed any light on the specific mechanisms at work in Brazil. That is, we now know there are significant federal effects that lower party cohesion in the Brazilian Chamber and Senate, but it is not clear if these effects are due to state party institutions, pressure from the state governor, or variance in public opinion between states.

We can further our understanding of federalism using a spatial model of legislators' ideal points. In the case of Brazil, most previous work has focused on governors as the primary state-level actors with influence over national legislators, but state parties and state electorates might also affect legislators' voting decisions. We can test for each actor's influence by looking at the variance in ideal points. The basic idea is that legislators under pressure from the same subnational actors should be more likely to vote together. This shared pressure should be reflected in smaller variance or shorter distance between legislators of the same group.

The previous discussion of state actors suggests three hypotheses to explain the state divisions within parties.

Hypothesis 1: State governors exert influence over legislators in their state delegations. Thus, we should observe lower variance between legislators in each governor's coalition, ceterus paribus.

Hypothesis 2: State parties exert influence over their national representatives. Thus, we should find lower variance between legislators from the same state party, ceterus paribus.

Hypothesis 3: State electorates exert influence over their national representatives. Thus, we should find lower variance between legislators from the same state, regardless of party or coalition affiliation, ceterus paribus.

I test these hypotheses using the following model:

$$\sigma_{ij} = G_{ij} + S_{ij} + E_{ij} + \varepsilon_{ij}.$$

The dependent variable, σ_{ij} , is the distance between legislator i and legislator j, $i \neq j$, or a "dyad" of legislators i and j. This approach is common in international relations conflict and trade studies (Barbieri 2002; Diehl and Goertz 2000; Dixon 1998; Dixon and Goertz 2003;

	1991–94		1995–98	
	Dimension 1	Dimension 2	Dimension 1	Dimension 2
Mean	0.42	0.48	0.5	0.49
Max	1.68	1.86	1.77	1.87
Min	0	0	0	0
Std. Deviation	0.34	0.34	0.45	0.36
n	260,817	260,817	324,199	324,199

TABLE 4
Descriptive Statistics of Dyad Distances

Mousseau 1997; Russett and O'Neal 2001). To calculate σ_{ij} , I estimated ideal points and distances using the Poole and Rosenthal (1997) WNOMINATE method. For each unique deputy-pair, I separately calculated the distance between their estimated first-dimension locations and their estimated second-dimension locations, producing two measures of dyad distance. These statistics are summarized in Table 4.¹¹

There are three key independent variables of interest, one for each hypothesis. The first, G_{ii} is a dummy variable for membership in the same state governor's electoral coalition. In other words, if deputy i and deputy j are from the same state and are both in parties that formed part of their governor's electoral coalition, then this variable is coded as 1. When the dyad's members do not share both state and coalition membership, the variable is coded as 0. The second key variable is S_{ii} , a dummy variable for membership in the same state party delegation. If both deputies in the dyad are from the same state and same party, then this variable is coded as 1. For all other dyads, it is coded as 0. Finally, E_{ii} is a dummy variable for state, coded as 1 if the two deputies are from the same state and as 0 if they are not. If governors, state parties, or state electorates explain the divisions within national parties, then their respective coefficients should be negative and significant. If these variables do not provide an explanation, then we should not be able to reject the hypothesis that they are equal to or greater than zero.

The fixed effect, I_{PiPj} , is a set of dummy variables for all possible party dyads. The fixed effect controls for the natural ideological differences between parties; whatever is left is variance that remains after controlling for party affiliation. For example, consider two deputies from Bahia, one from the PL and the other from the PFL. The fixed

TABLE 5
The Impact of State Actors on Brazilian Legislators

Dependent Variable =	dd.			
	Dimension 1		Dimension 2	
	Coefficient	SE	Coefficient	SE
Chamber, 1991–94				
State	-0.005	0.002*	-0.009	0.003*
Governor	-0.021	0.005*	0.003	0.009
State Party	-0.008	0.005	-0.041	0.009*
•	n = 260,817		n = 260,817	
Covariates	F = 21*		F = 18*	
Fixed Effects	F = 2,426*		F = 243*	
Chamber, 1995–98				
State	-0.0004	0.002	0.021	0.003*
Governor	-0.035	0.005*	-0.008	0.007
State Party	0.002	0.006	-0.036	0.007*
·	n = 324,199		n = 324,199	
Covariates	F = 2	5*	F = 27*	
Fixed Effects	F = 2,235*		F = 234*	

Note: Fixed effects not shown.

effect controls for the average distance between the national PL and PFL. The remaining variance is left for the state-effects variables to explain.

Table 5 shows results for the Chamber, 1991–94 and 1995–98. Because of the small state-party delegation sizes in the Senate, that legislature was excluded. The results show that federal effects in the Brazilian legislature can be linked to multiple state actors. In the first period, 1991–94, governors, state parties, and state interests all exerted influence on legislators' ideal points. On the first dimension, all three indicators are negative, although only *Governor* and *State* are significant. On the second dimension, both *State* and *State Party* are negative and significant.

The pattern changes slightly during the second period. Gubernatorial influences dominate on the first dimension, reducing dyad distances by .035. On the second dimension, state and state party are both significant, although only state party has the hypothesized negative effect. State has the opposite of intended effects, *increasing* the distance between dyads.

^{*}p < .001

TABLE 6
The Impact of State Actors on Brazilian Legislators, 1991–98
(mean percentage change in distance)

	1991–94		1995–98	
	Dimension 1	Dimension 2	Dimension 1	Dimension 2
State	-1.2%*	-1.9%*	-0.1%	4.3%*
Governor	-5.0%*	0.6%	-7.0%*	-1.6%
State Party	-1.9%	-8.5%*	0.4%	-7.3%*

^{*}p < .001.

Table 6 shows the mean percentage change in dyad distance caused by each state actor, by period and dimension. For the 49th and 50th legislatures, state governors' influence on coalition members has the biggest impact on the first dimension, reducing mean distance by 5% and 7%, respectively. State parties have their biggest effect on the second dimension, reducing distance by about 8% in both periods.

This finding confirms the influence of governors over members of their coalitions but also suggests that scholars need to focus on state parties as well. State party indicators have a consistent, negative, and significant impact on dyad distances, showing that, even after we control for gubernatorial influence, members of state party coalitions tend to vote together in the national legislature.

The state variable is less consistent. During the first period, it has a negative and significant impact on distance for both dimensions. During the second period, its impact is not significant on Dimension 1 and is positive and significant on Dimension 2. Again, this inconsistency may reflect the differences between the Collor/Franco period and the Cardoso administration. 12

III. Discussion

In this article, I built a framework explaining how federalism can reduce national party cohesion. I used a rational-choice framework to suggest that we focus on influential subnational actors, moving beyond simple findings that "federalism matters" to zero in on the mechanisms and explanations through which it matters. I applied this framework to Brazil, where previous research suggested that federalism weakened national parties. Several findings emerged from my analysis.

First, I showed that federalism does affect party cohesion. I found evidence that Brazilian federalism consistently reduces national party cohesion. The finding is robust across time period and institution, persisting in both the 49th and 50th Chamber of Deputies and in the Senate. Although scholars working in various countries have predicted these results, this is the first empirical evidence of the relationship. Further, my model and set of methods for studying the impact of subnational actors on political parties can easily be applied to other countries. I demonstrated a simple and robust nonparametric permutation analysis that corrects for bias in previous approaches, and I suggested a spatial model that can isolate the influence of various subnational actors.

Second, I found that Brazilian federalism is more complex than the literature implies. Previous work has hypothesized, and this article confirmed, that governors have significant influence over federal legislators in Brazil. During both periods studied, governors had the biggest impact on first-dimension votes. But my results also showed that scholars should expand their research on federalism to include other state actors. Specifically, state parties have significant effects above and beyond those of governors. With the exception of Mainwaring's (1997) important work, these actors have been largely overlooked, but my findings suggest a need to include them in future work on Brazilian federalism.

The most surprising finding, however, is that federalism has so little substantive impact on legislative behavior. Existing literature on Brazilian politics suggests that subnational actors dominate in the national legislature. Some authors have even suggested that the Congress is made up not of party delegations, but of state delegations. But although I did find the predicted federal effects, their magnitude was quite small. The majority of legislators' voting behavior can be explained by national actors: presidents and national political parties. This finding suggests that the Brazilian party system has stabilized, that legislators are largely innoculated from state-level influences, and that the case for party-weakening federalism has been overstated.

This finding does require qualification. Federalism does not have a major impact on national party cohesion or legislators' ideal points in Brazil, but state-level actors may have other effects on national political decisions. The legislative agenda and presidential legislative strategy might both mask important federal effects. Many votes deal with national and administrative questions that should not mobilize pressure from state interests. I found that, on average, state effects only increase defections by 1% or 2%. It might be that state effects are nonexistent on most bills but powerful and substantively significant on a handful of especially important votes.

Further, the president's legislative strategy could also attentuate observed federal effects. Brazilian presidents frequently try to negotiate support from regional actors before introducing legislation. As a recent example, President Lula da Silva negotiated a set of Social Security and taxation reforms with governors before introducing them to the Congress, and, in a symbolic gesture, delivered the reforms to Congress with all 27 governors in tow! In other words, subnational actors might exert most of their influence at the proposal stage instead of the roll-call stage.

Additional research in two areas will clarify the nature of subnational actors' influence in Brazil. First, scholarship should examine the influence of state-level actors on the legislative agenda in Brazil. Ames (2001) measured executive influence by tracing the progress, or lack thereof, of major executive proposals during the last several administrations. Roll-call votes would suggest that the president is very powerful; most executive-supported bills pass easily. But Ames's analysis of agenda formation and the legislative process showed that many presidential initiatives were dropped for lack of support and never made it to the floor for a vote. A similar approach could be used to test for federal effects in agenda formation, by identifying the kinds of legislation most likely to mobilize state-level actors and then testing these actors' impact on bills' likelihoods of reaching the floor of the Chamber or Senate intact. Scholars might also examine voting on such bills, testing for state influence on a subset of especially controversial proposals.

The second avenue for future research is an application of the methods developed herein to legislatures in other federal systems to compare the extent of state actors' influence on roll-call votes across systems. Comparative work will place my findings from Brazil in a broader perspective and will also provide more leverage on the specific federal mechanisms at work by allowing us to compare parties in different kinds of federal systems. Two candidates for study are Mexico and Argentina. Observers of both countries note party-weakening federal pressures, but these countries have quite different kinds of federalism. Argentinean federalism is institutionally strong, with significant resources allocated to subnational governments but only moderate cross-state cultural differences. Mexican federalism provides fewer resources to regional governments but, like Brazil, has substantial societal diversity across states. Comparing federalism in these two cases will help clarify the mechanisms of influence, as well as place Brazil's surprisingly small federal effects in comparative perspective. Both approaches—studies of Brazil's agenda process and cross-national work—will help shed additional light on the impact of federalism on party systems.

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NOTES

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- 1. Chandler's (1987, 152) comments typify this perspective: "federalism may also stimulate divergent pressures on national parties, undermining internal cohesion and inhibiting the establishment of coherent national organizations." See also Mainwaring 1997, Ross 2000, Scharpf 1995, and Suberu 2001.
- 2. "No proposal of amendment shall be considered which is aimed at abolishing ... the federative form of State...." (Constitution of the Federative Republic of Brazil, Article 60, Paragraph 4).
- All parties are allocated free media access in proportion to their share of the vote in previous elections. Parties then decide how to distribute this time among their candidates.
- 4. The *candidato nato* provision was recently eliminated in a court ruling but was in place for the Chamber of Deputies during the period examined herein. The Senate does not and did not use *candidato nato*; renomination is required to run for reelection.
- 5. Decree laws have expiration dates unless approved by Congress. Decree-law authority has been recently restricted but was available during the period covered by this study.
- 6. This approach falls in the category of group-subgroup cohesion score comparisons. Previous work has shown that expected subgroup cohesion will always be greater than expected group cohesion (Desposato 2003).
- 7. I validated my findings by comparing them with two other versions of cohesion scores. Both measures produced results that were virtually identical to those presented here. One measure did not weight votes by overall divisiveness, instead just dropping all votes with 5% or fewer legislators taking a minority position. The other score, called the Index of Absolute Cohesion, included absences in the calculation of cohesion scores (Anderson et al. 1966).
- 8. Some scholars have suggested coding absences as "no" votes (Anderson et al. 1966; Carey 2002). In my own previous work (Desposato 2001), I have coded nonvotes as a third voting alternative between "nay" and "yea" but only in cases where I could verify that nonvotes were strategic and nonrandom positions. Simply assuming that *all* nonvotes are "no" votes would be especially problematic in this application and would likely bias the observed "federal effects" upward. A solution might use a mixture model, in which some nonvotes are strategic and others are random, but such an undertaking is beyond the scope of this project.
 - 9. This method and its properties are fully discussed in Desposato 2003.
- 10. The parties are arranged roughly from left to right. The Worker's Party (PT) and Democratic Worker's Party (PDT) are both considered leftist parties. The Brazilian Social Democratic Party (PSDB) and Brazilian Democratic Movement Party (PMDB)

are both centrist movements. Finally, the Brazilian Worker's Party (PTB), Liberal Front Party (PFL), and Brazilian Progressive Party (PPB) are all considered conservative. Note as well that there are too few Senate parties with state delegations of size two or more to make this exercise useful for analyzing that institution.

- 11. What are dimensions one and two? Fully exploring the spatial distribution of votes warrants an additional research project, but several observations can be made. The first dimension reflects the government-opposition divide, with legislators in government-aligned parties concentrated in a large cloud on the right and legislators in opposition parties concentrated in a cloud on the left. This division explains the great majority of all votes—about 90% of roll calls can be correctly predicted using only first-dimension ideal point coordinates. The second dimension distinguishes between parties in each coalition. The PT and the PSDB are in the upper half of the graph; the PDT, PPB, and PFL are in the lower half of the graph.
- 12. I verified the robustness of my results with two additional tests. First, since the PT stands out visually as a disciplined, extreme group on the spatial maps of the legislature, I compared these results with models excluding that party. Excluding the PT had virtually no impact on the coefficients or their significance. Second, the legislator dyads risk violating a key assumption of basic regression: independence across observations. To deal with this potential problem, I ran a nonparametric analysis of the data, permuting ideal points, forming dyads, running regressions, and saving results 5,000 times. I then compared the empirical results with the distribution of randomly permuted results for basic hypothesis testing, as described in Effron and Tibshirani 1993 and Afshartous and Bishin 2003. The conservative nonparametric test reduced significance levels but left all conclusions unchanged.

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