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Constituency Congruency and Candidate Competition in U.S. House Elections

Research on candidate competition has focused on how much context matters in emergence decisions and election outcomes. If a candidate has previously held elected office, one additional consideration that may influence entry decisions is the relative degree of overlap between the candidate's current constituency and the "new" set of voters she is seeking to represent. Using GIS software, we derive a measure of the *challenger's* personal vote by focusing on constituency congruency between state legislative and congressional districts. Results suggest state legislators are more likely to run for a seat in the U.S. House if constituency congruency is relatively high.

In 2004, Democrat Jim Costa and Republican Roy Ashburn emerged to run for the open seat in California's 20th District in the U.S. House of Representatives. Although we can label Costa and Ashburn "quality" challengers due to their prior service in the California State Senate (Jacobson 2009), Costa possessed an additional advantage over Ashburn from the outset. As a state senator, Costa had already represented 98.7% of the constituents who lived in the House district he was hoping to win. Ashburn's senate district, on the other hand, only shared 0.3% of the same geographic constituency. Even though both candidates spent over \$1 million in this highly competitive race, it was Costa who went on to serve in the U.S. House, while Ashburn remains a California State Senator. One reason why Costa was able to win was that he only had to get the same set of voters who elected him previously for the state senate to vote for him again at the congressional level. Ashburn, in contrast, had to appeal to an almost entirely new set of constituents. This example illustrates that some candidates enjoy certain advantages (e.g.,

greater familiarity with voters) over others which can only arise from serving the same set of voters in a representative capacity.

The preceding anecdote offers us some insight into how one ambitious candidate was able to move up from the state senate to the U.S. House. More generally, it drives home an important point—i.e., state legislators frequently emerge to run for higher office and win. In fact, just over half of the representatives serving in the 111th Congress are former state legislators. This raises an interesting question. Why do state legislatures frequently serve as the primary “breeding” ground for those who seek to win seats in the U.S. Congress? Jacobson (1989) tells us these candidates should do better since they have previously won elective office. An additional reason why state legislators make good candidates for Congress is due to the high levels of shared population between state legislative and congressional districts. Indeed, when candidates start with a strong voter base, they also perform better since they do not have to convince an entirely new set of voters to support them.

In this article, we seek to understand in greater detail how different characteristics of quality candidates can influence their emergence calculus and eventual electoral success or failure. Given the enormous costs associated with candidate entry decisions, when and under what conditions should we expect to see experienced candidates emerge? Although there is a well-developed literature examining strategic candidate emergence (see, e.g., Jacobson 1989; Jacobson and Kernell 1983), we are left with an important and unanswered question pertaining to representation and electoral accountability. In particular, are quality candidates more likely to win because they have a stronger link with the voters than political amateurs or are they simply better at the art of electioneering? While some might contend that it is actually a combination of both factors that determines victory in congressional races, we simply do not know if each of these related explanations independently contributes to electoral success. Indeed, it could be the case that a candidate’s existing connection with voters is far more valuable than electioneering in determining who wins an election, especially if both candidates running for a particular seat in Congress have roughly the same financial resources. We seek to disentangle two of the elements that comprise candidate quality—the linkages between candidates and voters and electioneering via campaign fundraising. To be clear, we are not trying to create a new measure of candidate quality or simply list another indicator of electoral prospects. Rather, we are interested in unpacking the various theoretical components associated with this constituency congruency.

Specifically, we use GIS software to measure the relative degree of constituency congruency between a candidate’s current constituency and

the “new” set of voters who she is seeking to represent if elected. Then, we determine if these types of candidates are more likely to emerge when congruency is high and if these same candidates earn a higher share of the vote, all else equal. If we find that state legislators with higher congruency rates are more likely to run for a seat in the House, then this offers additional insights into a candidate’s emergence calculus and suggests that their ability to win is a function of more than simply prior elective experience.

The organization of the article is as follows. In the next section, we discuss the theoretical considerations that motivate candidates when deciding whether to run for Congress and examine how constituency congruency can help us understand why quality candidates are more likely to win than political amateurs. From there, we examine the data used in the analysis, especially as it pertains to constituency intersection between state legislative and congressional districts before shifting the focus of attention to our results. In the conclusion, we discuss the implications of our findings and explore possible extensions of the analysis in future work.

Theories of Candidate Competition in Congressional Elections

Scholars interested in the subject of candidate competition in congressional elections have spent considerable energy examining this issue. Several early studies redirected attention away from an exclusive emphasis on the incumbent to focus on the role of the challenger in explaining election outcomes (see, e.g., Hinckley 1980a, 1980b; Kazee 1980, 1983; Mann 1978; Mann and Wolfinger 1980).¹ In their classic study of challenger emergence, Jacobson and Kernell (1983) examine whether political candidates make strategic choices when deciding to run for office. They argue that experienced candidates are more likely to run for the House when national and partisan conditions are more favorable in terms of their likelihood of success or an incumbent decides not to seek reelection (see also Jacobson 1989). As a result, strategic politicians base their decisions on factors such as likelihood of victory, value of the seat, and opportunity costs, which both reflect and enhance national partisan tides.

Building on this previous work, Maisel and Stone (1997) employ an innovative analysis to identify *potential* candidates for elective office in an attempt to ascertain factors influencing their emergence calculus in congressional races. Consistent with earlier studies, Maisel and Stone find that potential challengers make decisions about emergence based on their perceived chance of success. More recently, Maestas et al. (2006)

show how the costs and benefits of running for and holding office can influence candidate entry decisions among state legislators running for the House.

What other factors do potential candidates normally consider when evaluating their chances of running a successful campaign for the House? Jacobson and Kernell (1983) and Jacobson (1989) have shown that the incumbent's previous margin of victory and the political preferences of the district influence a potential challenger's decision calculus. The decision by an incumbent to forgo an additional term is another issue of consequence for potential candidates as evidence suggests that experienced candidates are more likely to emerge in open seats, especially in an election following a redistricting cycle (Bianco 1984; Banks and Kiewiet 1989; Carson 2005; Gaddie and Bullock 2000; Hetherington, Larson, and Globetti 2003; Wrighton and Squire 1997). Jacobson (2009) also demonstrates that how much money candidates can raise and spend relative to their opponents can influence candidate emergence decisions.

Challengers and Constituency Intersection

One additional consideration that may factor into this calculus of emergence is the degree of intersection between the candidate's current constituency and the set of voters who she is seeking to represent in the new position.² For instance, state legislators may be more likely to run for a seat in the U.S. House if the degree of constituency congruency is relatively high between the state and congressional district. These candidates with greater congruency may also do better in the election because they do not have to convince an entirely new set of voters to support them since they are already starting with a strong voter base. In particular, voters with an established connection to previous state legislators are more likely to continue to support those individuals seeking a House seat as a result of their personal "homestyle" or unique style of representation (Desposato and Petrocik 2003; Fenno 1978).

We recognize that the level of congruency between state legislative and congressional districts and the resulting candidate's homestyle is just one of many factors that might influence candidate emergence decisions. Indeed, the co-partisanship among voters in overlapping districts might also be a contributing factor in this relationship as well. Although disentangling these separate effects would be quite difficult and is beyond the scope of this article, we believe that a candidate's connection with voters does represent an important influence in emergence decisions above and beyond any shared partisanship. To illustrate this, consider members of the House representing "moderate" districts as reflected by presidential

vote at the district level. If co-partisanship was the only factor accounting for incumbent vote shares, we should expect to see little or no difference between how well a House member and a presidential candidate of the same party performs in that district. The fact that a substantial number of House members *outperform* presidential candidates suggests that it is more than simply co-partisanship that accounts for the additional incumbent votes at the polls.

In studying redistricting and U.S. House races, McKee (2008) finds that constituents of a redrawn district are less likely to recall or recognize the name of the incumbent in comparison to constituents whose congressional district remained the same. As such, it appears that the more familiar voters are with a particular candidate, the more likely they are to turn out to vote and support them. Voters who are unaware of the names of particular candidates, however, face higher information costs when deciding whether or not to vote (Hayes and McKee 2009). Given that voter familiarity with a candidate can play an important role in a candidate's ability to win an election, candidates who emerge from the state legislature with significant constituency congruency may be the strongest challengers an incumbent member of Congress could face.

Our theory is analogous to research examining members of the House of Representatives who choose to run for the Senate (see, e.g., Adams and Squire 1997; Kiewiet and Zeng 1993; Lublin 1994; Squire 1989, 1992). Much of this research takes note of the impact intersecting constituencies between the House district and the desired Senate seat may have on a legislator's success in obtaining a seat in the upper chamber. For example, a representative from a smaller state has a greater chance of winning a Senate seat compared to a representative from a larger state because most, if not all, of her current House district's constituency is the same as the Senate district. A representative from a larger state has the potential for more competition, as his district is one of many that overlaps with the Senate district. Additionally, a smaller percentage of overlap indicates a lower likelihood of success, as there is greater competition among more representatives and a smaller percentage of his potential Senate constituents would be familiar with his particular homestyle (Squire 1989, 1992).

Studies of the movement of representatives to the U.S. Senate frequently highlight the different degrees of constituency overlap between different states. However, no one member of the House has a greater advantage over any other representative also considering a run for the Senate within her state. This is a function of the equal population of House districts within a state. Our research design differs from this largely because of the variation present within and across different states.

As the example from California at the outset of this article illustrates, one state legislator's existing district may have a very high degree of congruency with a U.S. House district, while his opponent may represent a state legislative district with significantly smaller constituency intersection. As a result, our research seeks to make an additional and important contribution to the candidate emergence literature, addressing and analyzing the differences inherent in studying movement from state legislatures to the U.S. House.

How else can a high degree of constituency intersection help a challenger? For one, it brings knowledge of the congressional district to the state legislator, a greater understanding of voter preferences, information about political elites, and forming electoral coalitions. Consistent with Fenno (1978), a state legislator with a large portion of her state reelection constituency overlapping with her new congressional geographic constituency should have an advantage over other candidates who have to build their group of supporters from scratch. As Fenno maintains, the reelection constituency are "those people in the district who he thinks vote for him" (1978, 8). If a candidate with greater constituent congruency can get her state reelection constituency who supported her "last time," to vote for her "next time" at the congressional level, then she has a built-in base of support that her opponents probably do not have. Additionally, when Fenno asked a member of the House to describe his strongest supporters, he answered "... And the people who were in my state legislative district, of course" (1978, 20). This tells us that a state representative with a district that significantly intersects with the congressional district should be more likely to emerge and do well at the national level.

Our approach has analogs to a study conducted by Ansolabehere, Snyder, and Stewart (2000) with respect to the incumbency advantage. In their analysis, they take advantage of the "quasi-experiment" associated with congressional redistricting to determine the extent to which the advantage incumbents enjoy stems from their personal vote (the vote that incumbents receive as a result of the connection legislators maintain with their constituents). All else equal, they argue that incumbents should do better within the counties of their district that they represented before since voters are already familiar with them and their policies, which positively shapes their personal vote.³ As expected, Ansolabehere, Snyder, and Stewart (2000) find that a significant portion of the advantage incumbents retain stems from a legislator's personal vote—in fact, they conclude that the personal vote comprises anywhere from one-half to two-thirds of the overall incumbency advantage on average. In lieu of generating a measure of the incumbency advantage, we derive a measure that taps, in part, the challenger's "personal vote" based on the

degree of constituency congruency between state and congressional districts. However, as we mention above, the concept of constituency congruency includes more than the personal vote, narrowly defined.

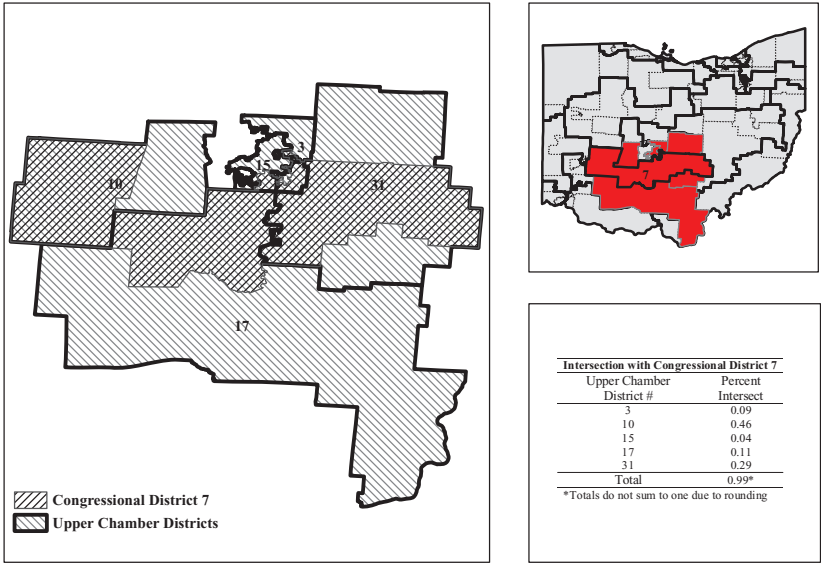
Measuring Constituency Congruency

The main variable of interest in our analysis of candidate competition is the constituency congruency between a state legislative district and a congressional district for the 2004 and 2006 congressional election cycles.⁴ To illustrate our measure, consider a hypothetical congressional district made up of 100 residents and four 50-constituent state legislative districts A, B, C, and D that partially intersect with the congressional district. Assume that out of the 100 residents in the congressional district, 40 came from state legislative district A, 30 from B, 25 from C, and 5 from D. We would then say that the intersection (or congruency) between district A and the congressional district is 40%, between district B and the district is 30% and so on.

In order to generate this variable for our study, we turn to geographic information systems (GIS) technology. Political scientists have recently started to use GIS techniques to study political phenomenon. Some examples include studies of interstate conflict (Berry and Baybeck 2005), electoral competition (Crespin 2005), turnout (Darmofal 2006; Hayes and McKee 2009), redistricting and the personal vote (Desposato and Petrocik 2003; Sekhon and Titiunik 2009), and campaign finance (Gimpel, Lee, and Kaminski 2006; Gimpel, Lee, and Pearson-Merkowitz 2008). It is likely that a study such as ours would be impossible without GIS.⁵ Previous work that attempted to tap into the concept of constituency congruency relied on the candidate pool (Canon 1990) or tried to match district boundaries without the aid of GIS. These studies relied on large geographic units such as the county or precinct (Carson et al. 2007; Engstrom 2006; Hood and McKee 2009; Rush 1992, 1993, 2000) and were only able to provide a rough measure of congruency. By using GIS, we can use small geographic units to obtain a measure of intersection with minimal measurement error.

In terms borrowed from geography (see, e.g., Bolstad 2002), we wish to measure the spatial intersection of separate polygons—the congressional district and the state legislative districts for both the upper and lower chamber. To create our measure, we took advantage of the Geographic Correspondence Engine, which allows us to select “source” and “target” geocodes to produce a file that lists the percentage constituency intersection between the state and congressional districts.⁶ To better illustrate our measure, we have created Figures 1 and 2, which provide two

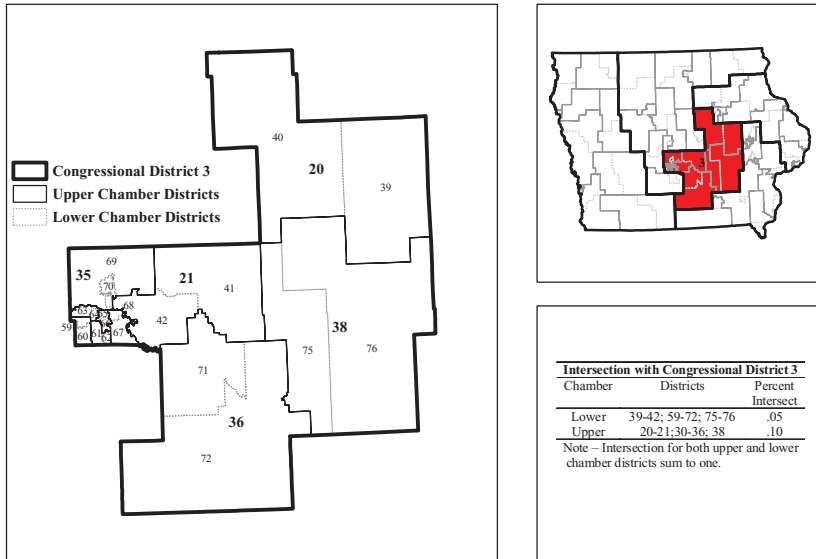
FIGURE 1
Example of High Variation Constituency Congruency:
Ohio's 7th Congressional District



examples of varying degrees of district congruency. Figure 1 illustrates the intersection between Ohio's 7th Congressional District and five state senate districts (3, 10, 15, 17, and 31).⁷ We picked this example to demonstrate a relatively large amount of variation in constituency congruency. State Senate District 10 (containing the city of Springfield), for instance, makes up the largest share of the congressional district as 46% of the population in the congressional district also resides in Senate District 10. In contrast, only 9% of the population in the congressional district is from Senate District 3. Our theory would predict that if a state legislator were to run within this House district, the state legislator who represents the 10th Senate District is most likely to emerge and should be able to carry a substantial portion of her reelection constituency over to the congressional district. As this map illustrates, simply counting the number of state legislators might not adequately give us a clear picture of who is most likely to emerge and run for a House seat.

Figure 2, which displays state house and senate districts, highlights the case of Iowa where the state legislative boundaries are contained entirely within the U.S. congressional districts. There are exactly 10 state senate districts and 20 state house districts in each of Iowa's five congres-

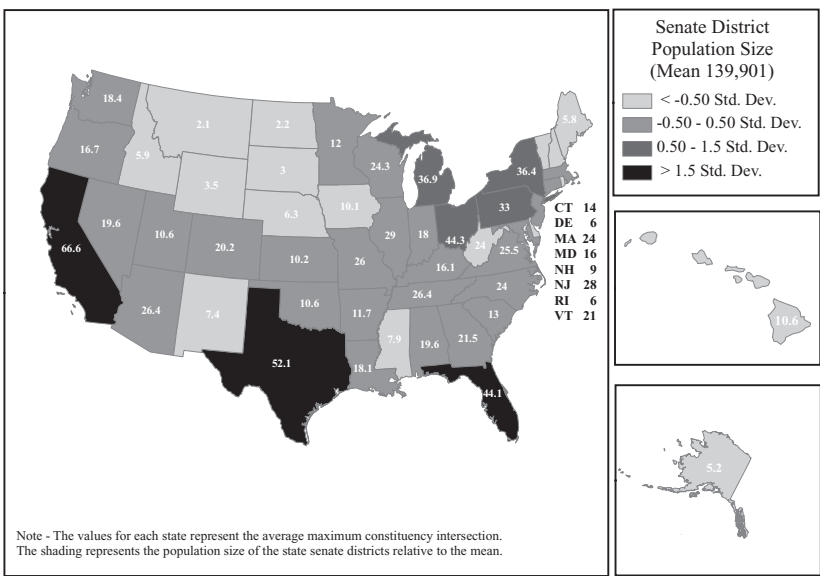
FIGURE 2
Example of Low Variation Constituency Congruency:
Iowa's 3rd Congressional District



sional districts so each senate district has a 10% constituent intersection and each house district has a 5% intersection. This implies that while state senators might be more inclined to emerge than state house members, no state legislator has an advantage over any other member from their state legislative chamber in low variation states like Iowa. Taken together, Figures 1 and 2 demonstrate that choices made at the state level clearly impact national elections. In Iowa, the state legislature made the decision to employ a nonpartisan commission to configure district boundaries and also “nest” state districts inside congressional districts. In contrast, Ohio followed the more traditional redistricting standards.

In order to get a firmer grasp of the variation in the intersection variable by state, we created Figure 3. This map displays two sets of statistics. The first is a measure of population size for state senate districts, which should have the largest amount of congruency with congressional districts.⁸ We simply provide this as reference but note that the average state senate district contains fewer than 140,000 constituents, while members of Congress represent roughly 712,000 people. The state legislative district population is important to acknowledge as it depicts the number of potential constituents who are included when we discuss

FIGURE 3
Average Maximum Constituency Intersection and Senate District Size



intersection percentages. Even though we have no state legislative districts with 100% intersection, each person previously supporting the state legislator who is apportioned to the congressional district is one less person the legislator must worry about appealing to, easing her bid for higher office.⁹

The second statistic is a measure we call the “state average maximum intersection.” To create this measure, we first determined which state legislative districts (upper or lower chamber) had the highest intersection with each congressional district within a state. Then we averaged the maximum percentage intersection over each of the congressional districts in the state. For example, referring back to Ohio in Figure 1, we determined that the legislative district with the maximum intersection with Ohio’s 7th Congressional District is State Senate District 10 with 46%. We repeat this step to find the legislative district with the maximum intersection for each of Ohio’s 18 congressional districts and then averaged those numbers to get an average maximum intersection of 44.3. We repeat this routine for all 50 states. We feel this measure is superior to just a simple average of population intersection because parts of some state legislative districts may only intersect with some

congressional districts by tiny slivers whereas other parts of the district intersect by a larger amount. Since our hypothesis predicts that challengers will emerge and compete successfully when constituency intersection is high, the maximum intersection makes for a better statistic to explore differences across states.¹⁰

As Figure 3 depicts, there is quite a bit of variation in intersection across the country. Not surprisingly, some of the smaller, less populous states tend to have lower average levels of constituency intersection while in larger, more populous states the maximum intersection is quite large. This is likely a function of the fact that larger states do not generally have proportionally larger legislatures (Squire and Hamm 2005). In California, for example, the average maximum intersection is 66.6%. This means that for each of California's congressional districts there is one state legislator with a substantial built-in advantage over the other possible challengers. To put this into perspective, if half of the carry-over population already supported a state legislator with 66.6% constituency intersection, they would only need to earn the votes from an additional 17.7% of the congressional district to receive 51% of the vote. In contrast, potential quality challengers (i.e., state legislators) in states such as Montana and the Dakotas only bring a small portion of their old geographic constituency up to the congressional district. In those states, a challenger who could bring their entire carryover population with them to the congressional district, at most 3% of the congressional district, would still have to earn the votes of over 47% of the new district. Taken as a whole, these figures demonstrate that state-level choices, such as the number of seats in state legislatures, have the potential to alter the prospects for competition by allowing certain quality challengers to start with stronger electoral bases.

To test our hypotheses about candidate emergence and candidate competition, we fit two models in the ensuing analysis. The first model examines candidate emergence among state legislators. In this model, we focus on the degree of constituency intersection between the congressional and state legislative districts for all state legislators as well as any differences related to open versus incumbent-contested races. We estimate a probit for the emergence model since our dependent variable is dichotomous—coded 1 if a state legislator decides to run in a congressional district and 0 otherwise. To be clear, each state legislative district may show up in the dataset multiple times, once for every time it intersects with a House district. If the state district only intersects with one congressional district, it will only be in the data once; if it intersects with two, it will appear twice and so forth. For this reason, we cluster the standard errors on the state legislative districts.¹¹

In the outcome model we examine incumbent-contested House election results once experienced candidates have made their entry decisions, thus our unit of analysis is now at the congressional district level. Since we believe that emergence and outcomes are related, we model this process using a Heckman selection regression where the initial stage is the same as the emergence model described above, thereby accounting for any correlation that may exist in the errors (Heckman 1979). Our dependent variable for the outcome stage is the challenger's share of the two-party vote.

Following the lead of Jacobson (1989), we include several explanatory variables in our models in addition to the intersection measure to control for important contextual factors affecting candidate competition in these House races. These include a variable controlling for open seats, the congressional district's partisanship measured independently of the candidate's vote, incumbent and challenger spending, and challenger quality. For our measure of district partisanship, we include the district-level two-party vote share for the presidential candidate from the congressional incumbent's party in the most recent presidential election (see, e.g., Ansolabehere, Snyder, and Stewart 2000; Jacobson 2009). Following Jacobson's (1980) seminal work on money in elections, we include both challenger and incumbent spending as separate covariates in the model.¹² Specifically, we divide the total spending for each candidate by 10,000. We measure challenger quality as a dummy variable coded 1 if the candidate has previously held elected office, 0 otherwise. This coding also follows Jacobson's classic study that views a successful campaign for another public office as a proxy for candidate quality.

Additionally, we control for other factors that vary by state such as the presence of term limits and the level of professionalism of the legislature. All else equal, we might expect state legislators from states with term limits to be more likely to run for a seat in the U.S. House if they are progressively ambitious (see, e.g., Lazarus 2006; Powell 2000; Steen 2006). Since the degree of legislative professionalism can influence career choices, we include a measure derived by Squire (2007) as a control variable. Legislators from more professional legislatures (those with higher pay, better staffs, greater retirement benefits, etc.) are giving up more if they decide to run for higher office so their decision calculus may differ from those members running from less professionalized state legislatures. We also include a variable in the outcome model that accounts for the challenger's previous vote share in the most recent state-level race. We expect that a challenger who did well in their state elections can carry more voters to the congressional election, *ceteris paribus*. Finally, to control for any year-to-year differences that might

otherwise bias the results we include an election-specific fixed effect, a party dummy (1 = Democrat) and an interaction between these two variables.

Candidate Emergence Results

If a prospective challenger has a strong connection with her state legislative constituency, then we should expect it to influence both entry decisions and election outcomes. For our initial model, we hypothesize that state legislators with greater constituency intersection will be more likely to emerge as quality challengers. The first column of Table 1 displays the results for the emergence model. As expected, we find that as constituency intersection increases, a state legislator is more likely to emerge to run for office. Consistent with previous literature (Carson 2005; Jacobson 1989), we find that if the underlying political preferences of the district are in the incumbent party's favor, then a state legislator is less likely to run. We also find that challengers are less likely to emerge when there is an incumbent in the race. Taking these results together, we see that a challenger's emergence calculus operates through previously examined factors such as partisan anticipation and the presence of an incumbent, *and* through the qualities measured with the intersection variable.¹³ Additionally, we find that members from more professional legislatures are less likely to run, most likely because they are giving up a secure job for the small probability of winning a seat in Congress. Finally, we find no influence on emergence for states with term limits, no differences between the 2004 and 2006 election cycles or any partisan differences.

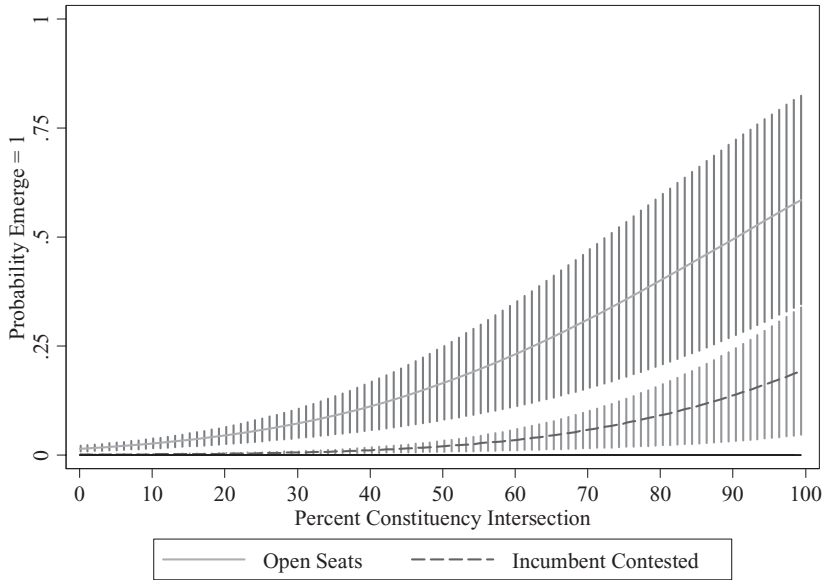
To understand the substantive effect of district congruency on candidate entry decisions for different open-seat and incumbent-contested races, Figure 4 plots the predicted probability of a state legislator emerging on the y-axis as district intersection increases on the x-axis. The solid sloping lines display the probability of emergence for open seats and the dashed line is for incumbent-contested races. In both cases, the horizontal lines represent 95% confidence intervals to determine if there is a significant difference across the two types of races. Although it is difficult to see for incumbent-contested races, constituency congruency is a significant predictor of challenger emergence over the full range of the variable. We also find that the probability of emerging against an incumbent remains lower than for open-seat races at all times. This is what we should expect since most quality challengers will only emerge when the context is in their favor (Banks and Kiewiet 1989; Gaddie and Bullock 2000; Jacobson 1989).

TABLE 1
Effect of Overlap on Emergence and Challenger’s Vote Share

Variable	Probit			Heckman [†]	
	Coefficient	Standard Error	Change +/- 1/2 s.d. [‡]	Coefficient	Standard Error
Emergence					
Intersection	0.0242*	(0.003)	0.0009	0.0238*	(0.003)
Incumbent Presidential Vote	-0.0149*	(0.005)	-0.0006	-0.0134*	(0.006)
Term Limit	-0.0729	(0.109)	-0.0003	-0.0269	(0.077)
Professionalism	-1.416*	(0.420)	-0.0008	-1.422*	(0.416)
Open Seat	1.085*	(0.096)	0.0249	1.088*	(0.092)
Party (1 = Democrat)	-0.106	(0.097)	-0.0004	-0.0827	(0.098)
2004	0.0037	(0.094)	-0.0000	-0.0007	(0.093)
Constant	-2.030*	(0.321)		-2.131*	(0.359)
Outcome					
Intersection				0.501*	(0.127)
				[.127]	
State District Vote				0.003	(0.034)
Challenger’s Pres. Vote				0.341*	(0.092)
Challenger Spending				0.044*	(0.013)
Incumbent Spending				-0.011	(0.012)
Professionalism				-33.19	(18.81)
				[-10.81]	
Open Seat				23.93*	(4.30)
				[6.81]	
Party (1 = Democrat)				-2.10*	(2.12)
				[-.802]	
2004				1.23*	(2.01)
				[1.24]	
Constant				-30.33*	(-9.31)
N	18972			18972	
Censored N				18909	
Number of clusters	7541			7541	
Wald χ^2	163.46*			226.36*	
% Correctly Classified	99.67				
ρ				.978*	

Note: Adjusted coefficients are reported in brackets in the Heckman model.
* $p < 0.05$ two-tailed test.
[†]Selection dependent variable is emergence, second stage is challenger’s two-party congressional election vote share.
[‡]Continuous variables set to their mean, rest set to zero except for open seat. Transformed marginal effects in brackets.

FIGURE 4
Predicted Probability of Candidate Emergence



In incumbent-contested races, there is only a slight increase in the probability of emergence as district intersection increases. For open seats, there is a substantial difference as congruency increases. When district congruency is low, so is the probability of a quality candidate emerging. If a member of Congress retires in a state like Iowa where the average intersection is only 10.1%, for instance, the chance of any particular state legislator emerging is quite small, around 2.5%. Once the degree of constituency intersection reaches upwards of 67%, as it does for some California state senate districts, the probability that the state senator from the high intersection district will emerge in an open seat is over 27%. This suggests that state legislators take into account their personal connections with voters when making entry decisions and this effect is strongest in open-seat races, when quality challengers have the greatest chance of winning.

Evaluating Election Outcomes

In the next regression, we estimate the effect of district constituency intersection on election outcomes using a Heckman selection

model. According to our theory, we expect to find an increase in the challenger's vote share as the congruency between a challenger's state district and congressional district increases. Our congruency measure for the outcome stage of the Heckman model is the same as the one used in the emergence models. We present these results in the bottom portion of Table 1.

As expected, the coefficient on the intersection variable is positive and significant. However, since we include intersection and several other variables in the emergence and outcome stage of the Heckman model, we cannot directly interpret the marginal effects of the reported coefficients. Instead, we follow the formula from Sigelman and Zeng (1999) and also report the adjusted coefficients where appropriate. After the transformation, the marginal effect for intersection is now 0.127. This means that for a state like New Hampshire where the average maximum intersection is 9%, a challenger can expect to receive an extra percentage point of the vote compared to a candidate with no intersection. For a state like California, where an intersection of 67% is not unheard of, the increase is over 8 percentage points. So, for low intersection states, the effect is relatively small, but for other states like California or Texas, the effect can be substantial.

For our controls, we find that a challenger does better as district partisanship increases in their favor. For every 1% change in district presidential vote, the challenger's vote share increases by .34. Challengers also do better as they spend more, however the coefficient on incumbent spending is not statistically significant. As expected, challengers do significantly better in open seats compared to incumbent-contested races. Finally, we show that challengers were slightly more successful in 2004 compared to 2006. We fail to find significant effects for state district vote or the level of professionalism for the challenger's state legislature. Moreover, the estimated ρ is significant, indicating that the two stages are related and the Heckman model was an appropriate estimation technique.

In sum, we find evidence that the degree of intersection between a candidate's state legislative constituency and a congressional district is an important predictor in determining when candidates decide to run and whether they are able to compete successfully for higher office. Due to the variation in congruency between different states, the effects are larger in some states compared to others. In states with small legislatures relative to the population size, we find that the effects are substantial. In other cases, the effects are not nearly as pronounced. This confirms our initial conjecture that constituency congruency is contributing to varying degrees of electoral competition across states.

Conclusion

This article set out to add to the literature on representation and democratic accountability in congressional elections by taking advantage of a distinctive aspect of our electoral system—namely, the intersection of multiple districts within our federalist system. Looking beyond congressional district-specific factors and national trends, we argue that certain institutional features not exclusively related to the congressional district can influence elections as well. In particular, we consider the degree of population congruency between state legislative and U.S. congressional district boundaries in seeking to understand candidate emergence and election outcomes. We examine the effects of district congruency in two stages—candidate emergence and its impact on election outcomes. For entry decisions, we find that candidates with previous state legislative experience are more likely to emerge in the House seat that intersects largely with their legislative district. This effect is especially pronounced in open-seat contests where there is no incumbent seeking reelection. Once state legislators commit to run in a House race, how effective are their personal connections with voters in getting elected? Our results indicate that when constituency congruency is high, there is a significant return on Election Day.

Previous research has focused almost exclusively on context regarding the decision to run for higher office. Our research takes the next step by differentiating between *which* candidates within the pool of qualified challengers should opt to run for a seat in the U.S. House. As such, we find that the challenger's personal connection with voters exerts an effect on electoral success independent of factors such as campaign spending. In these circumstances then, it appears that challengers can seek to offset an incumbency advantage by relying on their "homestyle" with their shared constituents (Fenno 1978), which has obvious implications for representation and electoral accountability. Until now, the idea that previous elected experience and a candidate's knowledge of their constituency would separately influence elections has been purely conjecture. However, our results confirm this independent influence.

Although our results focus on congressional elections in the United States, there are larger implications to our findings that can apply to any political system with overlapping constituencies. In electoral systems where different elected officials represent overlapping sets of constituents at multiple levels of government, there are greater opportunities for ambitious politicians to advance through the ranks and pursue their policy goals. However, federal governments like ours also offer the possibility of variation across the lower governmental

units. This, in turn, means that the levels of competition will not be the same for every state. In some states with high levels of congruency, there is a small set of potential challengers who stand a good chance of winning a congressional election. In other states, with less congruency, there is a larger pool of “quality” challengers, which makes it difficult for any one candidate to gain an electoral advantage. Ultimately, both of these scenarios have consequences for the relative safety of incumbent office holders.

The next step and a logical extension of this analysis would be to analyze candidate entry patterns at the primary election stage—especially for open-seat electoral contests. Relatively few incumbent members of Congress face a serious challenge during the primaries. However, when they retire and their seat opens up, many state legislators jump into the race and we witness where most of the real competition for congressional seats occurs. An analysis akin to this one will help us to predict which candidates should decide to run and then who will earn the right to carry their party’s banner in the general election. Additionally, a separate but related question would be to examine why there is so much variation in population congruency across states. Is this a function of how states elect to draw their district boundaries, or are there other contextual factors driving these choices? In conjunction with the results reported here, examining these questions will serve to enrich further our understanding of candidate entry behavior and the politics of congressional elections.

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NOTES

This is a substantially revised version of the paper presented at the 2008 annual meeting of the Midwest Political Science Association. We thank Gary Jacobson for the congressional elections data used in this analysis as well as Ryan Bakker, Tony Bertelli, Damon Cann, Jim Gimple, John Patty, and the anonymous reviewers for helpful comments and suggestions.

1. For a general discussion of ambition theory that examines the *motivations* for why individuals choose to run for office or make a career out of politics, see Schlesinger (1966) and Rohde (1979).

2. For this article, we use the terms “intersection,” “overlap,” and “congruency” interchangeably. Geographically speaking, intersection is the proper term for our measure, however for stylistic reasons we alternate between the various terms.

3. For a related example of the incumbency advantage in California, see Desposato and Petrocik (2003).

4. In the 109th Congress, 236 House members were former state legislators. This number decreased to 233 in the 110th Congress (CRS Profiles of the U.S. Congress Report No. RS22007 and RS22555).

5. One potential drawback to our measure of overlap is that it does not include demographic or political measures such as party registration. However, to include these variables, and to apportion them correctly among the state legislative and congressional districts, we would have to measure them at very small geographic units. As such, while our population-based measure is coarse, we retain the advantage of being able to examine our theory across all states and districts for multiple elections.

6. See <http://mcdb2.missouri.edu/websas/geocorr2k.html>. This engine uses the block group data from the 2000 Census as the geographic unit for measuring population. For an application of this technique, see Crespin (2005).

7. For clarity, we do not show the intersection for the lower chamber but it is included in our statistical models.

8. We obtained the data from: <http://www.ncsl.org/LegislaturesElections/Redistricting/ConstituentsperStateLegislativeDistrict/tabid/16643/Default.aspx>. [Last accessed on November 9, 2009].

9. An alternative way of studying the impact of constituency congruency would be to measure congruency from the opposite perspective, the vantage of the state legislator. Under this analysis, the explanatory variable is the percentage of a state legislator's constituency that intersects with the congressional districts. It could be holding a majority of their current district within a particular congressional district will motivate a state legislator to run for that specific seat. While this analysis is surely interesting and worthwhile, we believe it to be outside the scope of this article. However, we have run two Heckman selection models to test this alternative perspective and the results are available from the authors upon request.

10. To be clear, we do not employ this measure in our regression analysis; rather we use this measure to illustrate the variation across states.

11. A plurality of state legislative districts appeared only once in the data and a majority of the candidates who ran emerged in these single-observation districts. We reestimated a model on this subset of data where each state district only appeared once and continued to find a significant relationship between intersection and emergence. Since there are relatively few cases of emergence in comparison to the number of opportunities to emerge, we also estimated the models using rare events logit (King and Zeng 2001) and we continued to find a significant effect for overlap on emergence decisions. Finally, we note that the population size of legislative districts does not act as a proxy for intersection.

12. Following Jacobson (1980), we employ the convention in assuming a minimum of \$5,000 spent by each candidate.

13. We estimated the emergence model separately for incumbent-contested and open seats and found intersection significant in both cases.

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