

RESEARCH STATEMENT

Emily U. Schilling (euschilling@wustl.edu)

How do legislators make decisions and in particular how do do legislators influence one another's voting behavior? My research focuses on American politics, in particular Congress and state legislators, and the methods used to analyze these institutions. Legislating is a social process. Legislators coalesce, cajole, and conspire with one another to draft and pass bills. Decades of congressional research emphasizes how each legislator's decisions depend on those made by their colleagues, whether through logrolling, sharing information, or coalition formation. Yet extant empirical methods struggle to capture the resulting interdependent nature of legislators' actions such as votes and pre-vote position taking. My dissertation sought to address this gap and to attain a better understanding of how the relationships that legislators have with one another influence legislative decisions and implemented policies by using spatial econometrics. These relationships and interactions complicate the decision-making process in that legislators are not acting independently. The choices that MCs make in office are a result not only of their personal preferences and their constituency's preferences but they are also influenced by the expectations that they have for the rest of their colleagues.

One of the key problems in the study of legislative politics is how to control for the influence that legislative colleagues have on one another. Despite decades of theoretical work arguing that legislators act interdependent with one another, empirical methods have not captured these relationships. The use of standard empirics does not allow researchers to parse out when representatives are voting together because they are influencing one another or just simply because they have similar personal views. For example, one of the biggest debates in the literature involves the influence of parties on legislative behavior. The challenge lies in disentangling the role of common ideological leanings among party members and the role of party institutions in shaping members' behavior. Typically, researchers try to capture interconnectedness by controlling for the partisan composition of the chamber or legislators' party affiliation but this assumes that legislators make decisions independently. Through the use of spatial econometrics, I am able to more appropriately capture the simultaneous and interdependent nature of legislative decision making. I can better link the empirical analysis to the theory that argues for interconnectedness by breaking the restrictive assumption that legislative choices emerge independently. Most importantly, spatial analysis is not just restricted to looking at the influence of geography but can capture the interdependence that exists between legislators who have formed a coalition together or are from the same party. Legislators' choices can depend not only on their personal preferences but also those choices made by other legislators. I argue that the colleagues legislators turn most often to members with whom they agree on the issue under consideration. These relationships will come from their co-partisans and those legislators that are ideologically similar because legislators want to make decisions as if they were fully informed. The closest that they can get to this is to look to those colleagues who not only have information but also have similar opinions or voting records.

After discussing these theoretical mechanisms, in the first two empirical chapters of my dissertation I examined how legislators influence one another on roll call votes. In both of these chapters, I use spatial probit which is a new technique to political science. In the first chapter, I examine a series of individual roll call votes, varying the theoretical forces at play. Using individual roll call votes allows me to control for specific bill effects that I cannot control for when pooling votes together. I selected bills for this project on the basis of their complexity and saliency. Legislators will not always need to discuss their decision with one another. There are situations in which they will have clear signals as to how they should vote. For particular bills legislators may receive conflicting signals from their constituency and other outside influences. In order to capture this type of conflict, I looked only at salient bills. Legislators will also not have clear signals when

the bill is especially technical since their constituency is probably equally uninformed on what implications of the policy under consideration. Additionally, I chose different policy issues from different time periods. In my second chapter, I analyzed a single issue area over time. Focusing on a single issue area allowed me to examine how the specific forms of interdependence vary over time while holding constant the general features of the issue area. Comparing decisions over time allowed me to study how interdependence varies across Congresses. For example, in some periods party was especially influential while in other periods it was those legislators with similar ideological leanings that were the important actors. In order to capture this, I examine the reauthorization of the farm bill over time. The farm bill is the primary agricultural and food policy bill for the federal government. It not only regulates the agricultural industry in the U.S. but also manages food stamps and other nutritional programs. I examine the eleven farm bills, since the Agriculture Adjustment Act (AAA), passed in 1933 as a part of the New Deal. This is an especially valuable issue area to analyze because of the variety of coalitions that form as a result of the partisan and constituency interests that exist in this bill. Additionally, the farm bill is of particular interest because the issue does not fall along the general party lines and will allow the opportunity to parse out under what conditions party may or may not be influential.

In addition to studying the interdependence in voting behavior, my dissertation also analyzed the interdependence in the timing of position announcements. Legislators must be strategic in when they plan to announce their position and this decision likely depends on the announcement of their colleagues. There are competing risks in this project because legislators can announce their position in favor or in opposition of a bill. According to standard duration methods, the observations should be separated into the two categories, those that fail by announcing in favor and those that announce in opposition. After the observations are divided into these two groups, those observations that do not fail according to the specified model are treated as right censored. The traditional solutions for competing risks are not useful when dealing with spatial duration models.

The solution to the problem in my last empirical chapter led to an additional project with my coauthors, Jude Hays and Fred Boehmke, which was recently published in *Political Analysis*. We adapt an imputation algorithm for censored regression data to models of spatially interdependent durations. The process iterates between multiple imputation of the right censored cases and the estimation of the spatial model using the imputed values. I extended this algorithm to account for the competing risks in my project on the timing of legislative position announcements.

Additionally, I am interested in modeling spatial interdependence in a variety of settings, including the study of policy diffusion. Traditional studies of policy diffusion have been unable to capture the instantaneous diffusion that may occur when states are in competition with one another. In this paper, a fellow graduate student and I use spatial analysis to properly capture the competition that exists between states when it comes to the adoption of anti-abortion rights policies. This paper is currently under review.

My research interests extend beyond my dissertation and spatial interdependence. In particular, I have spent a lot of time researching how legislatures interact with other institutions and the characteristics of the legislators. In a forthcoming *Political Research Quarterly* paper with Fred Boehmke and Tracy Osborn, we break the standard assumption in spatial models of the initiative process that legislatures should be modeled as an individual actor (the median legislator). Through the use of formal modeling and empirical analysis, we look at how the inclusion of pivotal actors such as the veto and filibuster pivots alter the circumstances

where we will see the direct and indirect effects of the initiative. In a paper I have with Tracy Osborn, Jennifer Clark, and Rebecca Kreitzer, I expand the literature on how gender interacts with one's party identification. Specifically, we look at whether or not women in state legislatures are more polarized than their male colleagues. Finally, with Tracy Osborn, I look at how having the majority in a state legislature be women influences the agenda and the ability of female sponsors to be successful in passing their legislation.

In the future, I plan to continue with my research agenda of studying spatial interdependence and legislative interactions within and outside of the institution. With Fred Boehmke and Jude Hays, we are extending our research on right censoring with spatial duration models to solve problems of missing spatial data in general. By adapting our algorithm, spatial analysis can expand to areas of research where missing data is a problem because without this solution one cannot properly account for the interconnectedness that exists in the data since every observation cannot be tied to one another. I plan to work on adapting the traditional methods used to calculate ideal points for legislators (such as NOMINATE) in order to incorporate the influence of their colleagues. The intent behind ideal point measures is to provide a summary of how we would expect legislators to behave and to be able to compare legislators with one another. The traditional approach assumes that legislators are fully informed and act autonomously. These assumptions are known to be untrue. The measures assume the social interaction between members has no consequence on voting behavior which my dissertation refutes. I will do this by combining the NOMINATE calculation with a spatial probit model so that I can incorporate the relationships into the measure through the spatial weights matrix. The new scores will be included in the analysis of the other two empirical chapters of my dissertation. Additionally, I will extend my study of legislative interdependence to the American states. The variation provided by state legislatures will provide an interesting extension to dissertation work. My dissertation work can be extended to a variety of applications including the study of race and gender, interest group donations, and the variety of connections that exist between legislators we are just starting to understand.

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