Marginals, Mavericks, and Majorities: Elements of Legislative Behavior, Politics, and Elections.

DISSERTATION

submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in Political Science

by

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DEDICATION

This dissertation is dedicated to two people Emily: It is impossible to write a dissertation with inspiration and perspiration (although perhaps not literally in the latter case). I am forever indebted to Emily, who has shown me how to be a better scholar and worker, and every day inspires me to be a better person, husband, and friend. Without her support, kindness, humor, and love I would have never started, let alone completed, this work. Secondly, to Ada Ann. I have not even met you yet, but I cannot wait to see you learn and grow and tell you how I wrote this dissertation while walking in the snow uphill both ways.
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Legislators have the power to make, edit, and retract laws, but what motivates the individual legislator to behave in the way they do? Why do some legislators support their party, while others chose to strike their own path? Undoubtedly, no single explanatory behavior can account for the wildly different behavior of so many individuals, but do the actions of legislators reveal the menu of preferences that determine their actions? This dissertation attempts to account for three major issues facing legislators in both the United States and in a comparative context. Chapter 2 analyzes how electoral security impacts the behavior of U.S. Representatives. Chapter 3 examines how electoral security of U.S. Representatives has changed across time. Chapter 4 analyzes the impact of legislative design using a novel sample of British MPs who have also served in the European Parliament. Finally, in Chapter 5 I summarize these findings and provide implications for U.S. Politics.
Chapter 1

Introduction

A second flood, a simple famine, plagues of locusts everywhere, or a cataclysmic earthquake, I'd accept with some despair. But no, you sent us Congress, Good God, Sir, was that fair?

John Adams, 1776 (Musical)

Legislators are endowed with the ability to make (or retract) laws. But, what motivates them to engage (or not engage) in the legislative process remains an open question. Do they desire to grow their own influence? Do they have genuine policy ideals? Are they merely attempting to stay employed? Without a doubt, it is unlikely that a single explanatory factor adequately captures the desire of all (or any) legislators, but their actions do reveal a great deal about their underlying motivations. This dissertation attempts to shed light on these underlying motivations by focusing on three elements of legislative politics in a comparative context. In Chapter 2, I investigate the impact of electoral security on the behavior of US Representatives. In Chapter 3 investigates the changing patterns in U.S. House elections since 1952,
focusing on the changing levels of incumbent electoral security. Chapter 4 investigates the impacts of institutional arrangements on legislator behavior by comparing the behavior of legislators who served both in the UK and European Parliaments. Finally, in Chapter 5, I summarize these findings, provide avenues for future research, and discuss the implications of the findings for U.S. Politics. To begin with, this chapter introduces the previous academic literature on the motivations of legislator behavior, then it introduces the theoretical and empirical implications of the three questions addressed in the subsequent chapters.

1.1 Importance of Legislator Behavior

Major determinants of legislator behavior are unlikely to be tied to direct policy outcomes. We can speculate that the certain rules or traditions (e.g. the Hastert rule in the U.S. House) prevents certain policies from being passed, however the direct causal effect of these factors on policy outcomes can be hard to identify, reducing the ability of researchers to identify the causal linkages between institutional design, legislator behavior, and policy outcomes. For example, previous literature argues that legislators will display higher loyalty to their political party under parliamentary regimes compared to presidential arrangements due to the more party-centric electoral system. However, we have little to no direct evidence of this change; no UK MP has given up her seat to move to Texas and run for a Congressional seat. While we have theoretical evidence to suppose this hypothetical legislator would become less loyal to the same party in the U.S. House compared to Westminster, we have no empirical confirmation of this suspicion.

These issues, then, mean discussion of voting patterns or institutional design is typically limited to clarifying theoretical work, a problematic outcome. Legislator
behavior—who, how, and in what ways legislators participate in the law-making process, has real policy implications—both in terms of bills passed and the political climate in a state. Understanding these linkages represents a vital link in our attempts to understand public policy, however the path between design and policy output is cloudy at best. Institutional design is much like a seating chart at a wedding; seating the wrong two people together, or the wrong people next to the beverage station, can have major downstream consequences, however few people will point out the seating arrangements as a contributing factor to any issues, nor do easily testable hypotheses present themselves. This, I argue, is a major reason why the study of legislative behavior is often relegated to making theoretical contributions with little perceived impact on policy behavior.

1.2 Previous Academic Work

The difficulty in identifying causal relationships between institutional design and legislator behavior has not dissuaded academics. For the most part, previous academic literature identifies three broad explanatory factors of legislator behavior: the individual legislators desire for career or electoral motivations, legislator’s ideological beliefs, or broader institutional factors. This section discusses each of these three in turn, before discussing this dissertation’s key contribution to this vast literature, and then introducing the three substantive chapters in this dissertation.
1.2.1 Ideological Motivations of Legislator Behavior

The most prominent academic literature attributes most variation in legislator behavior to ideological motivations. Using scaling methods such as NOMINATE,\(^1\) these approaches attribute differences in voting behavior to ideological differences between parties. Poole and Rosenthal (1991) pioneered these techniques, finding clear dimensionality of voting in the history of the U.S. Congress, with further indications that ideological polarization in the United States has increased substantially in the latter part of the 20th Century. The NOMINATE/roll-call method has come to dominate the academic landscape; roll-call voting, and the implied underlying ideological linkage, is assumed to drive the individual behavior of U.S. Representatives and Congressmen. This method has been extended to the European Parliament (Hix, Noury, and Roland, 2007), and the UN general assembly (Poole and Rosenthal, 2001), however there have been questions on if NOMINATE methods are appropriate for parliamentary environments (Spirling and McLean, 2006); NOMINATE and roll call analysis in general cannot account for strategic voting, being pinned down by the “assumption that all legislators vote sincerely and proximately” (Spirling and McLean, 2006, p. 587). Although these critiques are aimed at the application of NOMINATE-related methods to the UK Parliament, they also apply to the U.S. Congress—strategic voting and behavior is widely observed and discussed, yet has little room in the analysis of roll calls.

However, in terms of the U.S. Congress, the NOMINATE/ideological argument has proven robust, especially in the face of party-based explanations of voting behavior (Krehbiel, 1998; Jackman, 2000). The underlying logic of the ideological approach

\(^1\)The NOMINATE procedure is a form of multi-dimensional scaling where legislators votes are presumed to occur on dimensions. The NOMINATE procedure, using the yea/nay votes, then assesses the likelihood any two legislators vote in the same way, and assesses the likelihood along dimensions often interpreted as ideological.
also has some merit; we should expect that parties attract a relatively ideologically homogenous group of candidates, but not completely homogenous groups—any party will have some disagreement, and the NOMINATE procedure derives the likelihood of each member voting with any other, thus giving a sense of the possible “map” of the voting habits of legislators. However, the roll-call approach only derives the likelihood that a member of a political party votes with a member of another political party—the dimensions have been interpreted as ideological differences, but lower likelihood of members of parties voting with one another does not automatically indicate ideological, and not partisan, differences are present, even with a lack of evidence of party discipline (McCarty, Poole, and Rosenthal, 2001)—as I discuss further in Chapter 2, polarized voting patterns could also be the result of strict majority control over the voting agenda.

1.2.2 Career/Electoral Motivations on Legislator Behavior

The underlying logic from the electoral perspective posits that the tighter the perceived correlation between a legislator’s and their party’s electoral prospects, the more likely the legislator is to toe the party line. In general Proportional Representation systems induce greater party loyalty, but this is not always the case (Jun and Hix, 2010). Elections where the candidate has motive to develop their own “personal vote” also reduce their dependence on the party (Hechter, 1987; Cain, Ferejohn, and Fiorina, 1984), reducing their loyalty in roll calls. In comparative studies, it has been shown that party loyalty in the legislature is decreased if the electoral system rewards a politicians personal reputation vis-a-vis the party (Carey and Shugart, 1995, p. 419).

Partisan primary elections also decrease overall party unity by incentivizing candi-
dates to either compete with co-partisans (Carroll and Nalepa, 2014) or focus on narrower constituencies un-beholden to the main party body (Canes-Wrone, Brady, and Cogan, 2002). Another key factor underlying electoral prospects is the methods of candidate selection: if parties have a high level of control over the candidate selection process (e.g. in a closed-list PR system), then legislators are unlikely to buck the party trends (Sieberer 2006, p. 163; Hix 2004). However even in systems where parties select their candidates, there may be a great deal of difference in incentives for loyalty if local parties organizations select candidates as opposed to national party bodies (Benedetto and Hix, 2007, p. 756). The increasing expense of individual elections (especially for marginal legislators (Kim and Leveck 2013)) gives marginal legislators more of a reason to ignore their party line, especially when influential outside interests disagree with party policy.

### 1.2.3 Institutional Effects on Legislator Behavior

Institutional arrangements have also been hypothesized as playing a role in legislator behavior. In short, we expect legislators to be just as impacted by the rules of the “game” as any other actor. For example, agenda control and procedures allow the majority party to limit the options of its members, indirectly dictating their behavior (see: Carey, 2007; Huber, 1996; Beer, 1966; Mezey, 1979; Ramseyer and Rosenbluth, 1993). Institutional arrangements such as the ability to call a confidence vote may also increase legislator loyalty, as it enables the majority to increase the costs (or potential costs) for rebellion amongst its members. However, the confidence vote may work against governments whose majority contains former cabinet members, to whom potential effects of election or loss of majority may not be so costly (Benedetto and Hix, 2007, p. 756). The logic underlying all of these arguments is that a party is able to impose (or threaten to impose) the ultimate cost on its members (in terms of
their political careers) to dissuade them from voicing dissent.

Institutional effects, in general, come down to the interaction between party discipline and cohesion—two separate concepts often merged in the literature (Hazan, 2003). In general, cohesion refers to norms or socialization within the party (Hazan 2003, p. 3; Kam 2008, Depauw and Martin 2008; Carroll and Nalepa 2014) whereas discipline refers to the “carrots and sticks” available to party leaders to give to legislators. The more “carrots” available to party leaders through institutional design, for example ability to place members in powerful committee positions, the less likely legislators are to rebel. Such advantages could also dissuade potentially rebellious legislators even in cases where the use of punishments is impossible (Norton, 2003; Waifan, 2013). In these situations, the framing of a debate and subsequent vote will play a great role in determining individual behavior, even if the party is unable to threaten or reward members for voting in a particular manner.

1.3 Contributions of the Dissertation

Few of the authors listed above would argue that only one element determines legislator behavior. A key assumption of this dissertation is that some combination of all three factors—ideological, electoral/professional, and institutional—play a role in determining legislator behavior. The logic behind this assumption is simple—it would be highly illogical for any individual to dictate their actions only on one set of criteria on relatively simple tasks, let alone on complex legislative issues. Focusing solely on ideological issues or policy issues may be helpful in some circumstances, however overly ideological candidates may find themselves out of touch with the electorate or isolated from their colleagues in the vein of Senator Ted Cruz (R-TX).²

²Although, some argue that Ted Cruz is actually being strategic by estranging all potential sources of support for his agenda.
The desire for re-election or career advancement may be a primary goal, however why would an individual run for office if not to further/alter policy? Other, better-paid, less stressful, more powerful positions are available for those seeking to have a long, stable career, so merely running to win does not have a great deal of explanatory power. Finally, institutional arrangements, such as Proportional Representation systems or floor rules may serve to limit the possible options for legislators, they do not eliminate them. Legislators have choices on whether to pursue a course of action or not, but the institution stacks the cards towards certain actions.

So what does this dissertation contribute to the academic literature? The major contribution is the diversity of approaches examining legislator behavior. Instead of focusing on just electoral prospects or voting history, the dissertation examines three key areas of legislative politics. By doing so, it casts a broader light on which explanatory factors impact legislator behavior in both the international and U.S. context. The next section highlights how the three substantive chapters make these contributions, beginning with the study of electoral victory margin on the cosponsorship and voting habits of US Members of Congress.

1.4 Substantive Chapter Summaries

1.4.1 Chapter 2: Electoral Victory Margins, Majority Status, and Legislator Behavior in the United States House of Representatives.

This chapter examines the role of electoral success on the cosponsorship habits of U.S. Representatives. Specifically, it seeks to understand if electoral security encourages
or inhibits bipartisanship in the House. Although bipartisanship is generally looked well-upon in theory, in practice many voters may actually discourage partisanship (Harbridge and Malhotra, 2011; Harbridge, Malhotra, and Harrison, 2014). This is especially problematic—given the expansion of the filibuster in the Senate, any bill required at least a modicum of bipartisan support in order to become law. A lack of bipartisanship, then, reduces the ability for the government to respond to challenges, or, in the worst case, keep itself functioning. Understanding the role of victory margins on this process is important: if larger victory margins decrease bipartisanship, then news of increasing incumbent electoral security presents a fundamental issue for U.S. politics.

Previous literature has invested much time into this question, with contradictory results. Some (e.g. Poole and Rosenthal, 1997, 2001; Krehbiel, 1998) argue victory margin plays no role in determining the behavior of legislators. Others have supported the idea that “marginal” legislators are more likely to be bipartisan as they are in greater need of support from the political center (Griffin, 2006; Miller, 1970), while another group has posited that vulnerable incumbents may be more likely to exhibit higher levels of partisanship.

What accounts for this confusion? I argue previous research has overlooked three key factors: the use of voting instead of cosponsorship, the non-linear relationship between victory margin and level of partisan cosponsorship, and the impact of majority or minority status on the incentives for bipartisan behavior. I argue roll call voting is a flawed approach to issues of legislator behavior: in the case of the U.S. House, the majority leadership has the ability to only introduce votes it chooses. The clearest example of this bias can be seen with Mark Meadow’s (R-NC) introduction of a Motion to Vacate the Chair, an attempt to remove John Boehner (R-OH) from the Speaker’s office. Under NOMINATE procedures, this vote would be taken as a
gauge of the ideological distances between the parties. In reality, Boehner resigned rather than face a vote—a clear example of how estimates drawn from NOMINATE procedures do not adequately reflect all possible policy positions.

Despite no one single vote playing a great role in determining NOMINATE scores, the approach, however, is deeply flawed for two reasons. Firstly, such an approach on a up or down vote would probably result in Democrats and Tea Party Republicans voting against the speaker being counted as ideologically similar, despite having wildly different motivations for agreeing with the motion to vacate. Although an extreme case, the last year of Boehner’s speakership were noted for regular rebellions by the House Freedom Caucus and a lack of support from Democrats. The other potential option would show Democrats and moderate Republicans taking up similar ideological positions due to Democrats voting for Boehner as Speaker in exchange for major concessions. Secondly, and more importantly, the example shows just how much the majority can stack the deck in its favor: the decision on whether or not to hold a vote to remove John Boehner from the House Speakership came down to John Boehner. Unless we are to believe that Boehner was ignorant of potential outcomes, then we can only assume that a vote would only have occurred if the Speaker was assured of a convincing victory. In either case, NOMINATE assumptions of free choice of alternatives over a multi-dimensional plane falls apart in the face of actual politics.

As a result, even in the absence of clear party discipline, we have to wonder if the differences NOMINATE procedures detect in voting behavior reflect the natural ideological differences between individuals (which, to be fair, do exist) or are artificially inflated to benefit the majority party—the majority has an incentive only to introduce votes which maximize the costs for defection amongst its members, just as the minority has an incentive to introduce anti-corruption members to embarrass the majority (Lee, 2009). Thus, the assumptions of NOMINATE methods (e.g. independence
amongst legislators and roll calls (Jackman, 2000)) must be called into question; the preferences revealed by voting are only the preferences revealed on a stacked deck, and the degree to which the deck is stacked increases the bias in the estimates.\footnote{I am not describing statistical bias in the procedure itself, but rather the differentiation between NOMINATE estimates and reality.}

The second flaw in previous studies is the assumption that any relationship between victory margin and partisan cosponsorship would be strictly linear, however this may not be the case. Those who are extremely electorally vulnerable may benefit from acts of bipartisanship however those who are comfortable in their re-election prospects, or only face a primary challenge do not have the same need to appeal to the median voter. These different motivations, then, require these legislators to respond to the same situations in a different way than their more vulnerable colleagues. The altering demands for bipartisanship, leading to the non-linear relationship.

Finally, vulnerable Members of Congress (MCs) in the minority and majority face a different set of issues when it comes to accessing the policy agenda: members of the majority are more likely to interact with committee chairs or members of the leadership, and thus do not need to alter their behavior if they are particularly vulnerable. However, members of the minority party do not have such access. In fact, if a member of the minority wishes to participate in the law-making process, they must cooperate with the majority in order to have any voice in the agenda.

Using data from the 103rd-110th Congresses, the findings reveal a small non-linear effect of victory margin on cosponsorship. As hypothesized, this effect only applies to members of the minority. Additional findings indicate that the patterns of cosponsorship vary substantially compared to roll call voting, and that roll call voting is less influenced by factors such as electoral vulnerability or majority status compared to cosponsorship, a function of the higher level of control the house majority exerts over...
the agenda. While these findings may seem limited to only methodological questions, I argue they reveal a key finding, that MCs are willing to adapt their behavior in order to appease multiple constituencies while “keeping the faith” with their ideological base on more visible roll call votes (Harbridge, 2015).

1.4.2 Chapter 3: The Marginals Never Vanished, But Their Seats Did!

This chapter seeks to identify the patterns of vulnerability and defeat rates of U.S. Representatives. Academic literature primarily consists of three viewpoints: some argue incumbent representatives are becoming more and more secure in their electoral prospects (e.g. Gross and Garand, 1984; Squire, 1989; Abramowitz, Alexander, and Gunning, 2006; Cox and Katz, 1996), others argue while victory margins may have increased, incumbents are not necessarily more secure since the 1950s (e.g. Jacobson, 1987, 1989; Buchler, 2011) while another group claims incumbents are facing higher levels of electoral uncertainty through a combination of redistricting (Ansolabehere and Snyder Jr, 2012; Bauer and Hibbing, 1989), electoral volatility (Lin and Stonecash, 2012), or a lack of direct relationship between incumbency advantage and electoral success (Wilkins, 2012). This chapter seeks to clarify this seeming ambiguity by utilizing the approach suggested by Erikson (1976) by applying viewing re-election (or defeat) in the House as a part of an absorbing Markov Chain.

Chapter 3 applies Absorbing Markov Chains to the population of US Representatives serving between the 84th and 112th Congresses (elected in 1952 and 2010, respectively). It begins by finding that increasing victory margins during the 1970s for Republicans and Northern Democrats was counteracted by the the collapse of the Southern Democrats. Between 1952 and 1980, the average victory margin for all
MCs grew by only 6%, however Republicans and Northern Democrats saw average increases of 12 and 14%, respectively. The typical Southern Democrat saw their average victory margin fall by 12% during this period, with a 42% reduction in victory margin for the median Southern Democrat. These findings indicate that previous research showing “growing” victory margins during the 1970s and 80s do not tell the entire story: increasing margins for Northern Democrats and Republicans were offset by the collapsing margins of Southern Democrats.

Next, it shows that the proportion of MCs serving in marginal (defined as victory margin of 5% or less) was at its lowest in the 2010s than it had been in 60 years, lending support to the “vanishing marginals” literature. The data also reveal limited support for the increasing volatility of elections literature, finding that the correlations of victory margins have not changed drastically across time. These results can serve as an alternative evaluation of baseline loss probability for MCs. Certainly, the Markov approach is highly susceptible to exogenous shocks to the political system. Finally, it also treats decidedly non-random events (e.g. retirement) as a part of a memoryless, random process, a problematic set of assumptions given what we know about strategic retirement (Stone et al., 2010; Groseclose and Krehbiel, 1994)

These findings paint a conflicted picture for the future of U.S. elections. Firstly, it shows that U.S. House elections are moving further away from the normative ideal of competitive elections—between 2002 and 2010, over 73% of all MCs won re-election by over 25% of the vote, the lowest total in over half a century. Additionally, MCs winning by larger margins in more recent times saw the greatest advantage in terms of time served compared to marginal incumbents. Combined, these findings would lead one to the gloomy picture of incumbents who win by large margins serving longer periods in Congress. However, the findings also show that marginal incumbents are more vulnerable now than they have been since WWII relative to those with
similar margins. Marginal incumbents now are fish in a drying watering hole, and fewer vulnerable incumbents to target in a given election would give an advantage to opposing parties, concentrating campaign funds and quality challengers into fewer districts, resulting in more frequent turnover in competitive districts. Combined with the findings in Chapter 2, the chapter concludes that the current electoral environment in the House is actively discouraging bipartisanship by providing fewer vulnerable members of the minority to serve as the demand for cosponsorships.

1.4.3 Chapter 4: The Impact of Legislative Institutions on Legislator Behavior: The Case of the European and UK Parliaments.

Which electoral and procedural arrangements encourage or dissuade legislators from showing loyalty to their political party? For example, it has been shown that legislatures where majorities have the ability to hold a confidence vote over the executive encourage higher levels of party unity amongst legislators (Carey, 2007). The patterns of legislator party loyalty and the theoretical motivations behind it, then, have been well-studied, producing both wide-ranging theoretical (Hechter, 1987) and empirical (Hix, Noury, and Roland, 2007) insight. In general, the previous literature has attributed three main factors as prime determinants of legislator behavior: agenda control and procedures (e.g. Hix and Noury, 2015; Cox, 2005; Huber, 1996; Beer, 1966; Mezey, 1979; Ramseyer and Rosenbluth, 1993), electoral institutions (e.g. Hechter, 1987; Cain, Ferejohn, and Fiorina, 1984; Jun and Hix, 2010; Hix, 2004; Sieberer, 2006), and party discipline and cohesiveness (e.g. Spirling and McLean, 2006; Depauw and Martin, 2008; Carroll and Nalepa, 2014; Kam, 2008; Norton, 2003; Waifan, 2013).
I argue the primary issue with previous literature is that we have relatively little information on the direct effects of institutional design on individuals: the studies above generally attribute differences in legislator behavior to different institutional arrangements in different countries, however we have no evidence that these differences are not endogenous to each country.

For example, if we were to move a British M.P. to Texas to become a U.S. Representative, we would expect her to become less loyal to her party due to the higher levels of incentives to follow individualistic behavior in the U.S. Congress. However, despite the appeal of this fictitious scenario as a sitcom, we have scant real-world evidence to confirm the hypothesis. I argue that the European Parliament presents an opportunity to measure the impact of institutional arrangements on legislators. Many MEPs go on to serve in their national parliaments, meaning we can observe the same people, representing the same parties, elected from similar constituencies, serving in two legislative environments. In short, we can observe the closest circumstance to experimental controls we could expect in legislative politics. In short, the only major differences between individual’s loyalty could only conceivable be a result of different incentives and pressures the two institutions place on their members.

To explore this possibility, I identified 25 UK MPs who also served in the European Parliament and gathered data on their loyalty to their party in both legislative environments. I then conduct a statistical analysis, which finds, contrary to many theoretical expectations, that legislators were more loyal to their party while serving in the European Parliament. To understand how legislators perceived the impacts of institutional arrangements, I reached out to interview the surviving 22 MPs who served in both parliaments. Of these, none responded to repeated requests for interviews. This setback aside, the findings provide evidence that the more visible, 4

4 2 emails and 1 hardcopy letter were sent, with 3 respondents declining and no other responses.
less numerous “divisions” in the UK Parliament provide greater loyalty that roll call votes in the EP. The paper also serves as a test of concept: it shows that the same individuals do change their behavior in different environments, and further research must proceed to test these findings against a broader array of European countries.

1.4.4 Linking the Chapters.

None of these studies are without their flaws. The study of cosponsorship has been criticized as only focusing on a minor element of legislative behavior and giving unstable estimates of true preferences (Aleman et al., 2009). Victory margin may not adequately reflect an MC’s true vulnerability in an election, and thus changes associated with victory margin may be only correlated with the true underlying motivations for behavior. In particular, and relevant to Chapter 3, victory margin may be only a single dimension of overall legislator vulnerability, and the changes in the relationship between victory margin and incumbency. The findings in Chapter 3 assume, but cannot show, that victory margin is an effective proxy for incumbency advantage, however this does not have to be the case; if particular segments of the population will vote for an MC no matter what then their true vulnerability (or lack thereof) will not be reflected in their victory margin. Secondly, although I claim that that the standard deviation for victory margin has increased, there is no reason to suspect this has increased homogeneously; in fact, research that shows that marginal legislators face even more expensive campaigns (Kim and Leveck, 2013), so we may expect the volatility in marginal elections to have increased more than less competitive ones. Finally, the study of British MPs, designed to identify institutional constraints on legislator behavior, can only point out that the British Parliament, the European Parliament most different from the European Parliament only produced a 1.35% of a difference between the levels of loyalty in roll call votes. We should not expect
larger differences between the EP and the very similar Italian Chamber of Deputies or Belgian Lower House, then, casting doubt on the relevance of the findings. These issues aside, the three following chapters provide an empirical basis for new ways to study legislative politics, both in and outside of American politics.
Chapter 2

Electoral Victory Margins, Majority Status, and Legislator Behavior in the United States House of Representatives.

2.1 Introduction

Melissa Bean (D-IL) defeated Philip Crane in the traditionally-Republican leaning 8th district in Illinois in 2004. Immediately targeted by national Republican groups, she became one of the most conservative Democrats in the 109th Congress, with only 44% of the bills she cosponsored authored by fellow Democrats, unusual for a freshman representative who would, presumably, need to begin building a network of Democrats to support her legislation and help her gain influential postings. Bean’s strategy, however, appeared to pay off–she was re-elected in 2006 by 7% of the vote,
by no means a large margin, but given the targeting by national Republican this represented a comfortable victory. In the next Congress, Bean appeared a changed woman, dedicating over 85% of her cosponsorships to other Democrats. What explains Bean’s sudden change in behavior in terms of the legislation she was willing to support? I argue two factors played a role in determining her change: newfound electoral security (which reduced her need to appeal to more moderate votes) and the fact the Democrats were now in the majority, meaning Bean faced no need to interact with Republicans if she wanted to claim credit for playing a role in successful legislation. This paper explores to what degree these two elements—electoral security and majority status—impact the cosponsorship behavior of U.S. Representatives, specifically what percentage of cosponsorships each Member of Congress (MC) dedicates to her own political party.

The impact of electoral vulnerability on legislators plays an important role in our understanding of how public preferences are translated (if at all) into political action. Much literature has discussed the impact of electoral victory margins on the behavior (defined as participation (or lack thereof) in the legislative process) of MCs, with fundamentally contradictory results. Some find that competitive districts (and thus narrower victory margins) encourage legislators to take up more ideologically moderate positions (e.g Griffin, 2006). Others argue that legislators from more moderate districts tend to show higher levels of ideological polarization relative to expectations (e.g Adams et al., 2010). Yet, another group of scholars argue electoral victory margin has little impact on legislator behavior (e.g Bartels, 1991). So, what impact does electoral victory margin have on legislator behavior? This chapter seeks to answer this question by focusing on the cosponsorship patterns of MCs between the 103rd and 110th Congresses.

In this chapter, I focus only on outwards cosponsorships, or cosponsorships each MC
gives to other MCs, as opposed to *inwards* cosponsorship, where MCs seek cosponsors for their own legislation. I make this distinction for two reasons. Firstly, many MCs sponsor relatively few pieces of legislation, limiting the analysis. Secondly, the ability to construct a coalition around bills, while a potential measure of the *effectiveness* of a legislator, does not necessarily indicate the preferences of legislator themselves. I conceive cosponsorship as potentially both a strategic *and* ideological act. Legislators will respond to a varying array of incentives when they make the relatively routine decision to cosponsor a bill. I argue that legislators under the greatest electoral threat are the *most* likely to cosponsor bills to achieve some strategic goal. For example, an MC facing a tight re-election contest may think more towards their immediate political gain when deciding to cosponsor legislation. However, one who faces little to no threat in a general election may place greater emphasis on the content of the legislation itself.

While many reasons may exist for an individual to cosponsor specific pieces of legislation (e.g. to curry favor, horse-trading, genuine interest in the bill, importance to constituency), I argue valuable insight emerges from the aggregation of these individual motivators. Simply put, if an MC only sponsors legislation with Party A, the likelihood she identifies with the ideology of Party B appear remote. In order to elucidate the utility of this conception of cosponsorship, this article first discusses the previous research on the impact of victory margins and the drivers of MCs cosponsorship behavior. Then, I develop hypotheses on the impact of electoral fortunes and majority service on the behavior of MCs and test these with a statistical analysis of the cosponsorship habits of MCs. Finally, as a key justification for analyzing cosponsorship, I compare these findings to similar models analyzing roll-call voting records. The findings reveal a small impact of victory margin on cosponsorship behavior with an “inverted U” shape for members of the minority, with little substantive effect on those serving in the majority. As electoral margins grow, members of the *minority*
become more partisan in their cosponsorship behavior, but this pattern reverses itself after victory margin surpasses approximately 40% of the vote. This finding contrasts with roll call votes, that show less sensitivity to changes in victory margin and no decrease in partisan behavior for MCs with extremely large victory margins.

But, why would the hypothesized and identified relationships matter in terms of policy or the broader political environment? Firstly, much literature overlooks the connection between an MC’s legislative and campaign activities, assuming (often incorrectly) the two possess little in the way of a relationship (Sulkin, 2005, p. 168). In all likelihood, any legislation will require at least some form of bipartisan support in order to become law. Bipartisan cosponsorship represents a clear signal of broad support for bills. Thus, low levels of bipartisan cosponsorship indicate lower likelihood of passable legislation. Secondly, a positive relationship between victory margin and in-party cosponsorship implies that individuals with lower victory margins co-sponsor legislation with members of the opposite party at higher rates than their more electorally secure colleagues. Such a pattern, if true, presents a troubling implication given the growth of electoral victory margins for MCs—the 2000s saw the lowest proportion of MCs winning by less than 25% of the vote in the past half century (See Chapter 3 for further details). Even if incumbency advantage alone does not necessarily predict the electoral security of the incumbent (Wilkins, 2012, p. 277), this pattern results in fewer incentives for MCs to sponsor bipartisan legislation, as well as fewer MCs who would see any benefit from doing so in the first place—a recipe for high levels of Congressional gridlock.
2.2 Electoral Victory Margins and Legislator Behavior

The idea that electoral victory margin impacts legislator behavior has roots back to the early 1960s (e.g. Miller and Stokes, 1963). Initially, scholars supported the “marginality” hypothesis, which proposed that legislators elected by narrower margins were more likely to pay attention to the needs and desires of their constituents compared to colleagues who were victorious by larger margins (Fiorina, 1973, p. 473), with some evidence finding “competitive districts induce greater responsiveness among elected officials” (Griffin, 2006, p. 919). Yet, others have claimed just the opposite; electorally vulnerable legislators may take up more ideologically-extreme positions. Scholars taking this position argue that smaller, more ideologically-extreme sub-constituencies, being more likely to vote, represent a greater return on investment for vulnerable MCs (Brunell and Buchler, 2009, p. 453). Because ideologically-extreme voters turnout to vote more frequently than moderates, a legislator has an incentive to mobilize a smaller number of ideological voters as opposed to potentially mobilizing a larger number of moderate voters. Thus, narrow elections can exhibit greater ideological divergence amongst legislators than contested elections in some circumstances (Adams et al., 2010).

A third group of scholars argues electoral victory margin plays no role in legislator behavior. Fiorina (1973, p. 495) finds “there is no necessary correlation between a representative’s relative positions in the legislative arena and the constituency arena.” Bartels (1991, p. 498) finds that “representatives who win with 100% of the vote appear to be about as responsive to constituency opinion as those who win with 51% of the vote.” This argument is also supported by those who argue a legislator’s own ideological preferences are the major driver of legislator behavior (Poole and Rosenthal,
1997, 2001). This approach, based on NOMINATE scaling methods, proves robust, especially compared to models that explain legislator behavior as a result of party membership (Krehbiel, 1998). Finally, Lee (2009) argues that increased “team play” (p.47), chances to score partisan victories (p. 75), and intra-party dealmaking (p.131) influence legislator voting behavior by providing incentives for partisan behavior outside of individual legislator’s electoral or ideological incentives, reducing the possible impact of victory margin.

### 2.3 The Path Forward

Previous research has established that voters may reward or punish incumbents for their behavior in Congress, both in terms of the ideological content of roll calls (Ansolabehere and Jones, 2010) and their levels of loyalty to their politically party (Carson et al., 2010). I argue, however, that the analysis of roll call voting represents a less than ideal avenue for investigating the impact of victory margin on legislator behavior. In addition to potential sources of biases originating in “granularity” in the data (Londregan, 1999, p. 35), roll calls do not happen in a legislative vacuum from the rest of the legislative process, such as chamber rules (Roberts, 2007, p. 356). MCs often recognize the power of the majority over floor votes—Ami Bera (D-CA) argues the departure from “regular order” gives the House majority far greater leeway in selecting floor votes, leading to many bills with broad bi-partisan support never reaching the floor (Bera, 2014), and recent academic work also details how the influence of the House majority selects and structures floor votes (Harbridge, 2015). As such, the general assumptions of NOMINATE or other roll call methods such as independence and homoscedasticity between legislators and roll calls (Jackman, 2000, p. 322), must be called into question.
Votes in the House do not represent a random subset of possible policy positions. Given the ability of the majority to control the agenda,\(^1\) we should expect to see higher levels of loyalty on votes than other kinds of legislator behavior for two reasons. First, the majority has clear incentives to only select votes where their members have few incentives to rebel. Secondly, final votes on bills, although not the entire subset of roll-calls, have received debate and editing throughout the process, thus clarifying for legislators the position of their co-partisans, voters, and supporters on each bill, providing clear cues on the action they are expected to take. Thus any analysis of roll calls will be biased towards finding large differences between the parties and less impact of other potentially important variables—the greater information leads to clearer choices between alternatives, and the clearer choices, when repeated, will reveal larger differences due to the rarity of “incorrect” votes.

In contrast to the roll-call approach, I focus on the cosponsorship habits of MCs, specifically their *outwards* cosponsorships: cosponsorships given to legislation authored by other MCs. Previous research has show that MCs may use cosponsorship as a means of controlling the legislative agenda (Schiller, 1995), to reflect their own policy preferences, (Krehbiel 1995, p. 906), as means of intra-legislative signaling (Kessler and Krehbiel, 1996, p. 555), or as a way of inexpensively signaling their preferences to their constituencies (Harbridge 2015, p. 9; Koger 2003; Harward and Moffett 2010, Mayhew 1974a, p. 63). Whatever the initial driver of cosponsorship behavior, I argue cosponsorship represents a more optimal approach in order to measure how MCs place themselves in the policy sphere for three reasons. Firstly, the House majority cannot censor or prevent the existence of bills, meaning MCs have a

\(^1\)For example, House Republicans are known for using the “Hastert Rule”, introduced under Dennis Hastert (R-IL), meaning majority Republicans will never introduce any bill to the floor that does not have the support of at least half of the Republican caucus. While the Hastert rule does not equate to a *de jure* policy, it serves to limit the choices of house members. The rule certainly impacts public policy when the House leadership refuses to bring certain funding bills to the floor without the support of their membership.
more diverse set of options than a simply yes/no vote, resulting in a greater ability to identify variation in the data. Secondly, MCs tend to cosponsor many bills ($\mu = 280$ per Congress) and are consistent in their in-party cosponsorship levels from Congress to Congress ($\Delta = .04\%$, $SD=12\%$), indicating that MCs do generally keep their cosponsorship habits consistent, but are not so intransigent to never alter their behavior. This fact provides a relatively consistent measure of a legislators preferences, meaning that we can be more certain any results in the model are not caused by random choices across Congressional terms.

Finally, it would make little sense for MCs to cosponsor legislation that they have no sincere interest in, as this would reduce the value of their endorsements of bills, reducing their influence (Campbell, 1982); the data appear to corroborate with low rates of withdrawal of cosponsorships (Harbridge 2015, p. 26, Fowler 2006a) indicating MCs rarely go back on their word. These findings indicate MCs do not chose to cosponsor on a whim: if cosponsorship were such a minor decision, then we would see higher levels of withdrawals of cosponsorship. Lower levels of withdrawn cosponsorships, then, indicate MCs (or their staffs) consider the consequences of cosponsoring legislation.

Some may argue that actually authoring legislation represents a better indicator of legislator preferences. However, I chose cosponsorship instead of strict sponsorship despite the fact that sponsorship allows for members to show both the direction and vigor of their beliefs on policy issues (Rocca and Gordon, 2010, p. 389). Sponsoring a piece of legislation gives may stake out a clear position for an MC, however the question of a metric of ideological position taking from sponsorship remains difficult—225 MCs sponsored less than 5 pieces of legislation in a single Congress, leaving little ability to generate accurate estimates.

The study of cosponsorship patterns does have its disadvantages. Cosponsoring legis-
lation represents a positive take on the bill in question, but not cosponsoring does not necessarily equate the opposite (Carrubba, Gabel, and Hug, 2008). Non-sponsorship potentially represents unfamiliarity with the subject matter, lack of interest, opposition to the bill’s content (Aleman et al., 2009, p. 88), a lack of commitment (Bernhard and Sulkin, 2013), or potential desire to strategically not state a position on legislation. Nonetheless, the purposes of this paper, cosponsorship behavior has one key advantage: the lack of majority control over what each MC may choose to cosponsor. While an MC’s party can disapprove of his decision to cosponsor bill X, the existence of bill X cannot be censored by the majority party, even if the majority refuses to schedule committee debates or votes on the bill. Without any direct interference by the majority party, MCs have a greater ability to express their own preferences for legislation.

The individual motivators for cosponsoring individual bills are significant, however I argue the overall pattern of cosponsorships given to legislation authored by members of one party or another captures the energy with which legislators pursue a particular platform, a key element of legislator performance (Hall, 1996, p. 3). Several studies find evidence linking electoral security and cosponsorship in regards to how victory margin, or electoral security more broadly, impacts participation in the legislative process (c.f. Harward and Moffett 2010, Konisky and Ueda 2011, p. 223) or its impact on electoral prospects as a whole (Sulkin, 2005, p. 140). Krehbiel (1995, p. 906) finds no relationship, tracing the roots of cosponsorship behavior to ideological motivators, however, this study suffers from similar flaws of many studies of victory margin by studying only one House session (e.g.: Bartels 1991; Hall 1987; Highton and Rocca 2005), in fact, only one bill in the 103rd House. Research designs such as these cannot to control for individual variation or the experience or skill of different legislators, an often-overlooked element of legislative politics (Zaller, 1998).
This section has discussed why cosponsorship patterns, due to the lack of influence by the House majority, represent an ideal avenue to examine the impact of electoral security on the behavior (whether it be cosponsorship or voting) of MCs. However, what does the relationship look like in practice? The next section discusses highlights two reasons I argue previous literature has failed to consistently find a connection between electoral security and legislator behavior. I then discuss and analyze data for all MCs serving between the 103rd and 110th Congresses.

2.4 Theory and Hypotheses

What explains the contradictory findings on the relationship between victory margin and legislator behavior? I argue two explanatory factors account for the relative lack of substantial findings in previous work; the assumption that victory margin impacts all MCs in a linear fashion, and the different abilities of members of the majority and minority to access the agenda and put forth their legislative preferences. I conceive the choice to cosponsor or vote on legislation as a balance between the legislator’s own ideological preferences and strategic considerations. In terms of the impact of victory margin, I argue MCs use cosponsorships as a way to supplement their political records to highlight their responsiveness to maintain a connection with their constituents (Carson et al., 2010; Canes-Wrone, Brady, and Cogan, 2002; Sulkin, 2011). Vulnerable MCs, then, will seek to maintain a connection with their moderate districts by appealing to moderates by sponsoring legislation authored by the opposite party.

Cosponsorship can be a valuable tool in this task; Harbridge (2015, p. 153) notes that, given the more heavily partisan slant of the voting agenda, “Members of Congress may have realized their voting behavior place them out-of-step with their districts…and
thus turned to other forms of legislative behavior to show their responsiveness.” In short, MCs chose to utilize different tools available to them rather than fight the heavily partisan voting agenda. The increasing responsiveness for cosponsorship indicate that electoral concerns do shape MC’s cosponsorship habits—MCs evaluate the need to appeal to a more diverse set of constituents and develop a cosponsorship record to counteract (or compliment) their voting record. However, the following analysis differs from Harbridge’s by analyzing the reasons why individual MCs cosponsor with their own (or the opposite) party, rather than focusing on the coalitions forming around bills.

But what accounts for the lack of agreement in previous research? I argue the previous literature has generally ignored two key elements. Firstly, previous scholars have generally assumed that the relationship between electoral security and partisan behavior will be linear. Secondly, the linkages between electoral security and behavior ignore the divergent incentives for bipartisan behavior between members of the House minority and majority. I now discuss each of these factors in turn and provide hypotheses designed to test the empirical implications of the theory.

Previous academic work has generally assumed a linear relationship between victory margins and partisan behavior. Given that MCs winning by less than 15% of the vote face opposition in the general election in 96% of subsequent elections compared to only 78% for those winning by 50% or more, those with higher victory margins have a greater need to appeal to the median voter in their partisan primary compared to the median voter in his or her district (Adams and Merrill, 2008; Adams et al., 2010; Burden, 2001). However, those with extremely large victory margins have little need to alter their behavior, as it is unlikely they will face any electoral punishment for

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2For example, Raul Ruiz (D-CA), running in a competitive race in a bad year for Democrats, highlighted bipartisan bills he cosponsored during his close re-election campaign in 2014, as opposed to his more liberal voting record.
their actions. Members who are consistently winning by large margins with little to no opposition will have to be wary of a primary challenge, and thus will not want to appear too amenable to the ideals of the opposition. Thus, Hypotheses 1a and 1b combine the pattern described above, predicting that, as victory margins grows, MCs will dedicate more of their cosponsorships to their own party (1a) but this effect will “level off”, showing no relationship between victory margin and in-party cosponsorships amongst MCs winning by large margins.

**Hypothesis 1a:** MCs with higher victory margins will dedicate more of their cosponsorships to members of their own party.

**Hypothesis 1b:** MCs with extremely high victory margins will not alter their cosponsorship behavior.

Secondly, and perhaps more significantly, the previous literature has generally assumed any relationship between victory margin and legislator behavior applies equally to members of the majority and members of the majority. Typical analyses of American politics differentiate mostly between Democrats and Republicans. However, in the case of cosponsorship, the largest differences in cosponsorship behavior may not occur between party identification, *but by membership in the majority or minority*. If cosponsorship is a means for members to place themselves on the political sphere, the needs of the minority and majority parties vary greatly. Members of the majority party have easier access to members of committee or sub-committee chairs, as well as the agenda as a whole, meaning they can rely on their co-partisans for influence in the legislative process, in turn meaning they dedicate more of their cosponsorships to co-partisans. However, members of the minority party do not enjoy such luxuries—they cannot hope to influence the agenda without support of members of the majority.

The need for support from the majority means members of the minority will give *fewer* of their cosponsorship to their party. But, I also argue that the need to give
cosponsorships to the other party means members of the minority will adjust their cosponsorship behavior more than members of the majority—the greater need induces greater variation in behavior. Such a finding would also explain why members of the minority sponsor on average 70 more bills per Congressional term; members of the minority require more cosponsorships with members of the majority party to increase their access to the agenda, but also have to be more active in general to also ensure they do not displease their own party by reaching too far across the aisle. Thus, given this increased need to participate in the legislative process with members of the majority, we should also expect that external factors (such as electoral security) to have a greater effect on members of the minority; the greater the incentives, the greater the unexplained variance.

**Hypothesis 2:** Victory margin will only play a major role in determining the behavior of members of the minority party.

These three hypotheses can be summarized in Figure 2.1 below. It shows the hypothesized percentages of cosponsorships dedicated to co-partisans for members of the minority and majority at hypothetical levels of electoral security. It shows that I expect vulnerable members of the minority to dedicate fewer of their cosponsorships to members of their own party compared to members of the majority. Then, as electoral security increases, I expect members of the minority to become more partisan in their cosponsorship behavior, indicating their greater need to a) ensure they are not seen as too close to the opposite party and b) enhance their chances of promotions within the party. I then expect little to no change as members of the minority gain further electoral security. Contrast these expectations with members of the majority, whom I expect to remain consistent in the levels of their in-party cosponsorship regardless of their electoral security. I do not believe this is due to members of the majority not
being strategic in needing to participate in the legislative process, but because *they do not need to appeal to members of the minority in order to be involved legislation.*

![Figure 2.1: Visualization of Hypothesized Relationships.](image)

2.4.1 Vignettes

Briefly, we can find evidence of MCs altering their behavior due to varying electoral environments. This brief subsection discusses the careers of Albert Wynn (D-MD), Greg Laughlin (D/R, TX), and Jon Fox (R-PA), whose stories, in addition to that of Melissa Bean above, provide evidence that electoral pressures prompted changes in cosponsorship behavior, without necessarily altering voting behavior.

**Jon Fox (R-PA)**

Jon Fox served in the 104th and 105th Congresses, representing Pennsylvania’s 13th district, which encompasses the north-western suburbs of Philadelphia. The district
leaned Republican, electing a Democrat only once in over forty years. Rep. Fox won the 1994 election by 40% over a Democratic incumbent as a part of the “Republican Revolution” that year. In some ways, Rep. Fox displayed high levels of bipartisanship in his first Congress, dedicating only 65% of his cosponsorships to other Republicans, placing him in the 16th percentile of all Republicans in the Congress, placing him firmly near point “II” in Figure 2.1. After winning re-election to the 105th Congress by a mere 84 votes, Rep Fox dedicated the same percentage of his outwards cosponsorships to other Republicans, however the average in-party cosponsorships for Republicans increased substantially, making Mr. Fox appear more bipartisan compared to his colleagues. This shift appears to mirror the expectations in Figure 2.1, however we should remember that Mr. Fox’s relative levels of partisan cosponsorship did drop significantly. This contrast highlights Mr. Fox’s electoral dilemma: running in the Republican 1994 wave gave him freedom, however the changing characteristics of his district meant he had to act in a more moderate fashion during his second term, despite facing a Republican primary challenge. The Republican leadership also showed great interest in holding his seat (Kolodny and Suarez, 2003), however the shifting demographics in his district meant even bipartisanship in Congress could not prevent Rep. Fox’s electoral defeat in 1998.

**Greg Laughlin (D/R, TX)**

Jon Fox may have found himself ultimately the victim of changing electoral fortunes due to changes in his district. The same cannot be said for Greg Laughlin’s district, Texas’ 14th, which was wholly conservative. Greg Laughlin, however, won as a Democrat. First elected in 1992 by 40% of the vote, this “conservative” Democrat dedicated 78% of his outwards cosponsorships to Democrat-sponsored legislation, placing him in the upper 25th percentile of all Democrats for that Congress, placing him in near
point III in Figure 2.1. In 1995, after winning re-election by a comfortable 11%, the promise of a seat on the House Ways and Means Committee prompted Laughlin to switch allegiance to the Republican party (Congressional Bibliography). His cosponsorship behavior subsequently shifted—in the entire 104th Congress, even accounting for 5 months of membership in the Democratic caucus, he gave 52% of his outwards cosponsorships to other Republicans—a reflection of his need to highlight his conservative credentials. The attempt, however, failed as Mr. Laughlin lost a tightly contested Republican primary to Ron Paul in a runoff, despite support from the entire Republican leadership.

Albert Wynn (D-MD)

Albert Wynn served the heavily Democratic-leaning 4th district in Maryland. Although he voted with Republicans to authorize the use of force in Iraq, he remained extremely popular with his Democratic district. In his career spanning the 102nd-110th Congresses, Wynn never won by less than 50% of the vote, with a maximum of 75% in 2000 to the 107th Congress, unsurprising for an electorally-secure member of the minority (point VI in Figure 2.1 above). His cosponsorship behavior between the 102nd and 109th Congresses reflected the lack of electoral challenge, as he never directed less than 65, or more than 78, percent of his cosponsorships to other Democrats. During his re-election bid for the 109th Congress, after dedicating 65% of this cosponsorships to Democrats, Wynn was challenged in the Democratic primary as too conservative and too tied to special interests. To compensate, in the 110th Congress Wynn attempted to “reconnect with his liberal roots” (McArdle, Feb. 12, 2008). This push can be seen in his cosponsorship behavior, both by increasing the

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3 Measuring changes in voting behavior is problematic here, as NOMINATE data lists Rep. Laughlin as a Democrat as a separate observation from that as a Republican (Carroll et al., 2009).

4 Excepting the 2000 election, when his estranged wife managed the campaign of his Republican opponent
number (418) and percentage (92) of bills Rep. Wynn dedicated to fellow Democrats. Despite assistance and support from the Democratic leadership, Wynn lost his primary rematch with Donna Edwards, who replaced Wynn after he resigned in May 2008.

Summary of Vignettes

What can we learn from these vignettes (including that of Melissa Bean in the introduction)? In three cases, a change in victory margin or electoral threat preceded a change in cosponsorship behavior. Another case, Greg Laughlin, shows a potential alternate hypothesis to the impact of victory margin on cosponsorship behavior; while Rep. Laughlin’s behavior undeniably changed, in this case his party switch presents a more likely explanatory factor. In the other cases, however, electoral security does appear to correlate with higher levels of partisan behavior. Albert Wynn rarely faced a major general election challenge, but growing concern from primary challenges encouraged him to appease his constituency with more partisan cosponsorship behavior. Both Melissa Bean and Jon Fox faced varying degrees of electoral challenges, and responded in a manner appealing to their more proximate constituents, placing them at points IV and I in Figure 2.1 above during their respective first terms. In Jon Fox’s case, increasing electoral vulnerability encouraged him to introduce and support more legislation with Democrats, whereas growing electoral dominance and membership in the new majority encouraged Bean to become more Democratic in her cosponsorship behavior. It should be noted here that no substantial change in voting behavior occurred in these cases; excepting Greg Laughlin, the other three members never changed their loyalty on roll call votes by over 5% from any one Congress to another. One should not expect member’s behavior to perfectly correlate with their electoral prospects, as intense policy concerns may lead a legislator to risk an electoral
backlash (Bianco, Spence, and Wilkerson, 1996, p. 151), however these four vignettes provide evidence that MCs do adjust their cosponsorship behavior depending on their electoral prospects.

2.5 Data Description and Measurement

This chapter utilizes data that lists the electoral victory margin and cosponsorship data for every MC between the 103rd and 110th Congress. The data on electoral victory margins come from the Congressional Historical Statistics database (Swift et al., 2009), the Biographical Dictionary of the United States Congress (Congressional Bibliography)\(^5\) and the Clerk of the House website (Clerk of the House), with cosponsorship information originating with Fowler (2006\(^a\); 2006\(^b\)). In order to account for within-legislator variation across time, I rely on a hierarchical linear mixed model with a random intercept for each MC.

My dependent variable is the percentage of outwards cosponsorships an MC dedicates to members of her/his own party. As discussed above, outwards cosponsorships are cosponsorships an MC gives on legislation authored by other MCs, as opposed to MCs soliciting MCs for their own legislation (inwards cosponsorship). Admittedly this measure treats all bill cosponsorship opportunities as equal, a potentially difficult assumption, as some cosponsors (e.g. a committee chair) are more valuable than others. Despite the value of individual acts of cosponsorships, the aggregate levels of an MC’s support for his party may match up to how voters view legislator behavior (Carson et al., 2010, p. 601). Moreover, given that not cosponsoring legislation does not necessarily equate to a lack of support for the bill, MCs have a relatively

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\(^5\) The Congressional Bibliography is the Library of Congress’ official record of current and former Members of Congress. For each member, it includes their Congresses of service and other basic biographical information, including their reasons for leaving Congress.
free choice on how to act, especially compared to the constrained yay/nay/abstain options on a roll-call vote. Thus, the aggregation of these choices should reveal a clear measure of the support each MC has for legislation introduced by either party. For example, if an MC chose to direct 95% of her cosponsorships towards Democrats, it seems highly unlikely she holds much support for the type of legislation Republicans introduce. This logic is also present in NOMINATE-type procedures, that calculate the probability of individuals voting together based on their previous discreet choices.

The key independent variable is victory margin, defined as the percentage of vote share between the winner and second-placed candidate, for each district in each year. If a member was unopposed, they still are credited as securing 100% of the vote, however in the models below I also include dichotomous variables indicating if the MC ran against no opposition or faced only third party opposition to moderate the effect of extremely large victory margins. In order to test Hypothesis 2, I include a quadratic term to control for the hypothesized non-linear relationship.

Clearly, an MC’s likelihood of sponsoring legislation with members of a particular party should be dependent on their overall ideological extremity. Typically, a NOMINATE or other related first-dimension is used to capture these differences. However, this measure, as well as interest-group ratings, are based upon roll call voting records, so including this measure would contradict the previous discussion on the censored nature of roll call voting. To compensate, I conducted a Principal Components Analysis (PCA) of cosponsorship behavior and generated predicted probabilities of each member being classified as a Republican or a Democrat. The absolute value of the difference between this measure and .5 indicates how ideologically extreme an MC during each Congress. However, such a measure, if not matched empirically, serves little purpose. As such, I tested how well my PCA analysis predicted each MC’s party membership. The predictive accuracy of this two-dimensional measure is quite high,
ranging from 91.6% for Democrats in the 106th Congress to 98.6% for both parties in the 110th Congress.\textsuperscript{67}

![Graph showing correctly classified percentage by Congress](image)

Note: Predictions based on logistic regression with the two dimensions of a PCA analysis as the independent variables, with assumption that liberals are Democrats and conservatives Republican.

Figure 2.2: PCA Correct Classifications by Congress

In addition to these measures, I also control for the number of terms each legislator had served up until each Congress, district partisanship, defined as Democratic Presidential vote share in each district. Derived from two sources: Levendusky et

\textsuperscript{6}To ease analysis of the subsequent estimates, this measure was then divided by .5, so the estimate gives an accurate reflection of the possible influence of ideological extremity. This measure is built on the assumption that, given the current political environment, Democrats are more likely to be liberal and Republicans conservative.

\textsuperscript{7}Some may also object to this measure as a use of cosponsorship on both sides of a statistical equation. I would counter with research that treats party unity scores (percentages of votes with particular parties) as distinct (but related) to revealed ideological preferences (roll-call measures) (Carson et al., 2010, e.g.).
al (2008) and the Swing State Project (Swing State Project). For non-Presidential years, the mean between the two adjacent Presidential elections was used. I am aware that this proxy contains issues, however other measures (see: Levendusky, Pope, and Jackman 2008) include Congressional election results in the calculation of district partisanship, which would introduce collinearity with my main independent variable. I also interact this variable with political party, based on the logic that a Republican will represent a heavily Democratic district differently than a Democrat would. Additionally, I include the percentage of inwards cosponsorships from the MC’s own political party to control for the impact of horse-trading. I also include a fixed effect for each of the seven Congresses for which I have full data to control for overarching political circumstances, which I expect to be especially relevant in the 104th and 110th Congresses, in which new majorities took over while a President of the opposite party occupied the White House. To control for the probability that high-ranking members receive more solicitations for assistance on legislation (Laband and Seals, 2014), I also include binary measures of whether the MC served as a committee chair or ranking member of a committee for that Congress as well as if they served in a leadership position. I also control for the possibility that an MC was unopposed or only opposed by an independent/third party, as a lack of opposition would clearly lower possible reasons to participate in bipartisan legislation. Finally, I control for the number of previous terms served in Congress for each MC, once again to account for the fact that more senior MCs may be more valuable cosponsors. Finally, I include the previous in-party cosponsorships for each MC to account for their previous behavior. Including this term, then, gives me the ability to view the effect of victory

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8Election data from the 102nd Congress is not included in this analysis, thus there are no previous values for the 103rd Congress.
9Defined as serving as Speaker, a Leader, Whip, or Caucus/Conference Chair.
10In the appendix, I also control for Gender, Ethnicity, and whether the MC represented a district in the South. Of these, only the fact that an MC was African American MCs gave, on average, a higher proportion of their cosponsorships to co-partisans.
margin while still accounting for the MC’s previous behavior.\textsuperscript{11}

2.6 Results

2.6.1 Bivariate Evidence

Figure 2.3 below shows the mean, 95% confidence interval, and 5th-95th percentiles of percentage of in-party cosponsorship by victory margin, aggregated into 10 categories. The plot shows some possible support for Hypotheses 1a and 1b: it shows that an MC winning by less than 10% of the vote would, on average, give 66.1\% (±0.07\%) of their cosponsorships to their own party, whereas a MC winning by between 60 and 70\% of the vote would dedicate 71.5\% (±1.05\%) of their cosponsorships to their own party. This growth is followed by a subsequent decrease in average in-party cosponsorship, however the difference is smaller than the previous growth and is not statistically significant. However, the effect of the growth of victory margin is minimal at best, with the only noteworthy changes occurring with the narrowing of the distribution between 50 and 80\% of victory margin.

\textsuperscript{11}Some may argue that such a design ignores the impact of redistricting on electoral outcomes. While I concede redistricting can clearly alter electoral prospects, I do not expect redistricting to impact my findings for two reasons. First, the theory does not imply the cause of the change in victory margin, only that legislators respond to their previous electoral experience. Secondly, the inclusion of a fixed effect for the 107th Congress controls for any possible interference from discontinuity surrounding redistricting cycles.
Figure 2.4 presents the density of in-party cosponsorships for the majority and minority parties across levels of victory margin. It shows that, broadly, members of the majority do not alter their in-party cosponsorships according to their victory margin. However, members of the minority do alter their behavior in a similar manner to the predictions in Hypotheses 1a and b; increasing their in-party cosponsorships as victory margin increases, with a substantial decrease after victory margin reaches approximately 80%. The different patterns also provide support for Hypothesis 2, showing a clear difference in both the level and slope in the cosponsorship behavior of members of the majority and members of the minority.
2.7 Model Results

Table 2.1 below illustrates the results of two hierarchical linear mixed models.\textsuperscript{12} In order to account for collinearity, victory margin and district partisanship were standardized, reducing the substantial collinearity present between these variables and their corresponding interactive terms.\textsuperscript{13} Model 1 on the left shows the model without

\textsuperscript{12}I am cognizant of the possibility that limited, but continuous, independent variables may cause heteroscedasticity amongst other issues (Paolino, 2001; Ferrari and Cribari-Neto, 2004). However, given the near perfect normality of the dependent variable, and the fact that the distribution does not show sever censoring at 0 or 100\%, I elect to use the simpler statistical model as opposed to a hierarchical beta regression.

\textsuperscript{13}The methods for collinearity diagnostics was authored by the Human Language Processing lab at University of Rochester, \url{http://hlplab.wordpress.com/2011/02/24/diagnosing-collinearity-in-lme4/}

\[\text{Figure 2.4: Victory Margin, Cosponsorship, and Party Status}\]

\textit{Note: Lines indicate median, shaded areas represent inter-quartile range.}
the interactions between district partisanship and political party, majority status and victory margin, as well as without the effect for squared victory margin. Model 2 on the right includes these theoretically-important distinctions. The District Partisanship interaction implies that Democrats and Republicans react differently to the Democratic sympathies of their district. In both models, an increase in victory margin leads to an increase in in-party cosponsorships, however this effect is small and leads to only relatively small changes in the behavior of legislators.

Table 2.1: HLMM of Victory Margin and Cosponsorship Behavior

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>Estimate</td>
<td>Std. Error</td>
</tr>
<tr>
<td>Intercept</td>
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<td>(0.01)</td>
</tr>
<tr>
<td>Victory Margin #</td>
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<td>(0.00)</td>
</tr>
<tr>
<td>Victory Margin Squared</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Majority</td>
<td>0.22</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Victory Margin * Majority</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Victory Margin Sq * Majority</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ideological Extremity #</td>
<td>0.03</td>
<td>(0.00)</td>
</tr>
<tr>
<td>District Partisanship</td>
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<td>(0.00)</td>
</tr>
<tr>
<td>Democrat</td>
<td>0.03</td>
<td>(0.01)</td>
</tr>
<tr>
<td>District Partisanship * Democrat #</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Inwards Co-sponsorship</td>
<td>0.02</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Chair/Ranking Member</td>
<td>-0.01</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Leadership</td>
<td>0.03</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Unopposed</td>
<td>-0.03</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Opposed by IND/Third Party</td>
<td>-0.01</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Term</td>
<td>0.00</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Lagged DV</td>
<td>0.03</td>
<td>(0.00)</td>
</tr>
<tr>
<td>105th Congress</td>
<td>0.01</td>
<td>(0.00)</td>
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<td>106th Congress</td>
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<td>(0.00)</td>
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<td>107th Congress</td>
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<td>(0.00)</td>
</tr>
<tr>
<td>108th Congress</td>
<td>0.02</td>
<td>(0.01)</td>
</tr>
<tr>
<td>109th Congress</td>
<td>0.03</td>
<td>(0.01)</td>
</tr>
<tr>
<td>110th Congress</td>
<td>0.08</td>
<td>(0.01)</td>
</tr>
<tr>
<td>N (MCs)</td>
<td>2320</td>
<td>(639)</td>
</tr>
<tr>
<td>AIC</td>
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<td></td>
</tr>
<tr>
<td>BIC</td>
<td>-5791.57</td>
<td></td>
</tr>
</tbody>
</table>

Note: * indicates p < .01. Additional models available in appendix. # indicates variable (or corresponding fixed effect) was mean-centered to account for collinearity.
2.7.1 Substantive Impacts

What is the substantive impact of these findings in terms of the number of bills receiving additional bipartisan cosponsorship? Figure 3 illustrates the relationship between victory margin and cosponsorship behavior taken from Model 2 above, interpreting the change in percentage of in-party cosponsorships as the number of cosponsorships offered, illustrating the substantive impact of the model’s predictions. The shaded area represents the inter-quartile range for the distribution of the number of cosponsorships MCs give out. The x-axis is victory margin, and the y-axis the predicted change in the number of in-party cosponsorships. The lines represent the effect, in terms of the number of cosponsorships given to co-partisans, for the MC giving the median number of cosponsorships in a single Congressional term between the expected number of in-party cosponsorships compared to the expected number for an MC winning an election by a single vote. The figure illustrates a classic interaction effect: electoral victory margin narrowly reduces in-party sponsorships for the majority, but has a larger, non-linear impact on members of the minority. The median member of the minority, ignoring the impact of any other factor, sponsors 280 bills per session. If she wins by a single vote, then we would expect her to give 153, or 54.8% cosponsorships to members of her own party. If she increases her victory margin to 60%, then this number increases to 167, or 61%. Then, if she wins with every vote in her district, we would expect her to give 159, or 57%, of her cosponsorships to co-partisans. These changes are relatively minor, especially compared to the effect of membership in the minority or majority, however they may be quite substantial for very active MCs.
However, as discussed above, these findings have an almost negligible impact on cosponsorship behavior as a whole. In terms of cosponsorship behavior, a 2% reduction in outwards cosponsorships equates to approximately 7 fewer cosponsorships dedicated to a member’s in-party per Congress. To illustrate the relative ineffectiveness of electoral victory margin to alter legislator behavior, Figure 2.5 below illustrates the relationship between Democratic Presidential vote share in a district on Democrats and Republicans. The figure illustrates clearly that district partisanship yields a large influence over cosponsorship behavior. It illustrates that a Democrat in an evenly-split district will typically dedicate 74% of their outwards cosponsorships to other Democrats. However, if that same Democrat served in a completely Democratic district, they would then dedicate approximately 95% of their cosponsorships
to fellow Democrats. Republicans undergo a less drastic change, only increasing their in-party cosponsorships by approximately 7% when moving from an evenly-split to completely Republican district. The fact the lines are not perfectly perpendicular indicates that political party affiliation does impact behavior; in this case, it shows that Republicans were less likely to alter their cosponsorship behavior based on the preferences of their constituents.

![Graph showing District Democratic Presidential Vote Share and In-Party Cosponsorships](image)

Note: Estimates derived from Model 2, Table 2.1. Shaded areas represent 95% confidence interval of predicted value.

**Figure 2.6: Democratic Presidential Vote Share and In-Party Cosponsorships**

14 Clearly, starting the comparisons at evenly split districts does not adequately convey the entirety of the variance presented in Figure 2.6 below, however the figures are given to provide a conservative estimate of the effect of victory margin. Prudence suggests that Democrats will struggle with win heavily Republican districts, and vice-versa, however this is not always the case. In both parties, MCs have managed to win their districts with low levels of Presidential support: Chet Edwards (D-TX) won election to the 107th Congress when Al Gore only won 22% support in his district two years prior, and Major Owens (R-NY) won his election in 2004 despite George W. Bush only carrying 14% support in the district.

15 I do not mean to claim Republicans are less representative, only that Democrats seem to sponsor a greater proportion of bills with Republicans while serving Republican districts comported to Republicans cosponsoring with Democrats in Democratic districts.
One may expect the relationship between victory margin and cosponsorship to be endogenous, however I do not believe this is the case for two reasons. First, the theory supposes that cosponsorship plays at least some role in determining re-election victory margin—otherwise MCs would have little incentive to alter their behavior. Yet, when the model is reversed, with victory margin as the dependent variable and cosponsorship information for the previous Congress as independent variables, very little correlation exists.\(^{16}\) Secondly, from a statistical point of view, the models show victory margin is not correlated with the error term, meaning the key statistical artifact of endogeneity is absent (Wooldridge, 2008, p. 82).\(^{17}\) Despite these encouraging robustness checks, further research will attempt to model this dynamic process, especially in light of research showing voters tending to reward (or punish) members for their actions (e.g. Ansolabehere and Jones, 2010).

### 2.8 Comparisons with Roll Call Behavior

The results presented provide a limited, yet relatively robust, impact of victory margin on the voting behavior of MCs. However, cosponsoring legislation may itself play a relatively minor role in the lives of MCs compared to votes, committee meetings, and floor speeches. As mentioned above, much previous literature on Congress has focused on the roll-call voting behavior. This section examines to what extent the above findings for cosponsorship behavior replicate themselves in the roll call voting using Congress-by-Congress roll call records (Nokken and Poole, 2004). From these data, I derive a measure of party loyalty, defined as the percentage of votes from MC \(i\) that match the majority of her party when MC \(i\) votes. I include all non-unanimous roll-calls, rather than only key issues (e.g. Poole and Rosenthal 2012), as

\(^{16}\)In a model replicating Model 2 above, only the squared term is significant.

\(^{17}\)Correlation between victory margin and the error term of the model: \(-1.13\times10^{-14}\), \(p \approx 1\)
this provides a better comparison to the results from cosponsorship models, which included all introduced bills.

This comparison also allows for the opportunity to present two additional hypotheses. I have previously argued that cosponsorships represent an ideal avenue of study due to House leadership control over the voting agenda. If the House majority uses this power, it should also follow that, *ceteris paribus*, members of congress vote with members of their own party *more frequently* than they cosponsor with them. The logic here is that the House majority has the ability to censor voting decisions, thus having the ability to select votes that provide fewer incentives for its members to rebel. However MCs possess a larger array of options when it comes to Cosponsorships, as cosponsorships do not rely on leadership support.

**Hypothesis 3:** MCs will tend to vote with their party *more often than they cosponsor with their party.*

If the House majority is able to censor the votes brought to the floor, it also follows that victory margin will play less of a role in determining the voting behavior of MCs. While the House majority cannot punish its members in the same way a parliamentary leadership could, they can choose to only introduce votes that increase the costs for the defection of their members or votes that guarantee their membership falls in line. Thus, we should expect victory margin to play an even smaller role in voting behavior as compared to cosponsorship behavior, as much of each MC’s decision on how to vote has been determined by the setting of the agenda.

**Hypothesis 4:** Victory margin will have a smaller *effect on voting behavior as compared to cosponsorship behavior.*

Figure 2.7 below presents a simple test of Hypothesis 3. It shows the mean and 95% confidence interval, for each behavior aggregated by Congress. It illustrates that
across the entirety of the period studied, MCs voted more with their fellow partisans than cosponsoring with fellow partisans. This pattern is consistent with the theory that the majority party can stack the deck in order to ensure its members toe the party line, or at least face high costs for rebellion, and thus drive up loyalty on floor votes.

Figure 2.7: Comparison of Cosponsorship and Roll Call Behavior

Table 2.2 below displays the results of two models testing Hypothesis 4. The first (left) is a repeat of Model 2, from Table 2.1 above. The second uses roll call loyalty as the dependent variable. For the most part, the findings using roll call voting behavior replicate those of cosponsorship. In both models, increases in victory margin lead to greater levels of in-party behaviors, however in the case of roll call voting does not return to levels seen for narrow victory margins. The models also illustrate that the independent variables in question influence cosponsorship have a more noticeable effect on cosponsorship than compared to roll call voting: for example, all else equal
serving in the majority increases an MC’s in-party cosponsorship by 22%, but only increases their voting loyalty by 4%. These findings indicate, as discussed above, that especially vulnerable MCs in the minority use the flexibility cosponsorships allow them to behave in a more bipartisan manner.

Table 2.2: HLMM Comparing Cosponsorship Behavior and Roll Call Voting

<table>
<thead>
<tr>
<th></th>
<th>Cosponsorship</th>
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<td>Std. Error</td>
</tr>
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<td>Intercept</td>
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<td>(0.01) *</td>
</tr>
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<td>Victory Margin #</td>
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<td>(0.00) *</td>
</tr>
<tr>
<td>Victory Margin Squared #</td>
<td>-0.01</td>
<td>(0.00) *</td>
</tr>
<tr>
<td>Majority</td>
<td>0.22</td>
<td>(0.00) *</td>
</tr>
<tr>
<td>Victory Margin * Majority</td>
<td>-0.02</td>
<td>(0.00) *</td>
</tr>
<tr>
<td>Victory Margin Sq * Majority</td>
<td>0.01</td>
<td>(0.00) *</td>
</tr>
<tr>
<td>Ideological Extremity #</td>
<td>0.03</td>
<td>(0.00) *</td>
</tr>
<tr>
<td>District Partisanship #</td>
<td>-0.03</td>
<td>(0.00) *</td>
</tr>
<tr>
<td>Democrat</td>
<td>0.05</td>
<td>(0.01) *</td>
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<tr>
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<td>(0.01) *</td>
</tr>
<tr>
<td>Inwards Co-sponsorship</td>
<td>0.02</td>
<td>(0.00) *</td>
</tr>
<tr>
<td>Chair/Ranking Member</td>
<td>-0.01</td>
<td>(0.01) *</td>
</tr>
<tr>
<td>Leadership</td>
<td>0.03</td>
<td>(0.01) *</td>
</tr>
<tr>
<td>Unopposed</td>
<td>-0.06</td>
<td>(0.01) *</td>
</tr>
<tr>
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<td>(0.01)</td>
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<tr>
<td>Term</td>
<td>-0.00</td>
<td>(0.00) *</td>
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<td>Lagged DV</td>
<td>0.02</td>
<td>(0.00) *</td>
</tr>
<tr>
<td>105th Congress</td>
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<td>106th Congress</td>
<td>0.01</td>
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<td>0.02</td>
<td>(0.00) *</td>
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<td>0.03</td>
<td>(0.01) *</td>
</tr>
<tr>
<td>110th Congress</td>
<td>0.08</td>
<td>(0.01) *</td>
</tr>
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Note: * indicates $p < .01$. Random intercept for each MC not shown.
# indicates variable (or corresponding fixed effect) was mean-centered to account for collinearity. Additional models available in Appendix A.
Figure 4 below illustrates strong support for Hypothesis 4. The figure shows predicted changes in party loyalty on voting versus in-party cosponsorships comparing two models: the first Model 2 in Table 2.1 above, and another replicating this model but including party loyalty on roll call votes as the dependent variable. The y-axis compares the percent change of in-party cosponsorships from the expected values when victory margin equals 0. The panel on the left clearly illustrates members of the minority a steeper incline, significant decline, and aggregate change for cosponsorship behavior compared to roll call voting, which shows smaller growth (≈ 1%) and no substantive decline. For members of the majority, MCs reduce their in-party cosponsorship by approximately 2% across the spectrum of victory margin, but increase their loyalty on voting by 1% across the same spectrum: smaller changes compared to the minority, but interestingly in the opposite direction.\textsuperscript{18} Additionally, voting behavior shows a very different relationship to cosponsorship, with both members of the minority and majority being more partisan than their more vulnerable colleagues.

\textsuperscript{18}This effect could be driven by the fact that these MCs make up the senior leadership of the party, and are thus more likely to support bills they have played a major role in producing, but could also be a result of the triple-interaction. Further research will investigate these possibilities.
These findings are reflective of the opposing motivations between both minority and majority status and over specific elements of the behavior of MCs. In some ways, these results are counter-intuitive. Voting is the most visible legislative act for MCs, meaning their voting record is the most likely to come under scrutiny during an election.\textsuperscript{19} Given the higher potential for electoral punishments, then, one would expect members to vote more consistently with their district preferences and gain favor with their party via cosponsorships. However, given that MCs change their cosponsorship more drastically, and, unlike voting, this behavior varies according to their party and district preferences, we must conclude the opposite. MCs appear

\textsuperscript{19}For example, Barack Obama (from Hillary Clinton) and John McCain (from both George W. Bush and Barack Obama) faced criticism for their voting records in recent Presidential campaigns.

---

Note: Estimates derived from Table 2.2. Shaded areas represent 95% confidence interval. Minimum prediction calculated for victory margin = 0

Figure 2.8: Predicted Change in Voting and Cosponsorship Behavior.
to tailor their voting patterns to their party, and then have the opportunity to use cosponsorships to demonstrate support for particular policy areas or constituencies, especially relevant when marginal legislators now face greater expenses to differentiate themselves from their party (Kim and Leveck, 2013).

2.9 Discussion

What impact does electoral victory margin have on legislator behavior? This chapter argued that increases in victory margins impacts how MCs alter their cosponsorship behavior. At the outset, I presented three hypotheses. Hypothesis 1a predicted that larger victory margins lead to a larger percentages of MC’s cosponsorship behavior being directed to members of their own party, while Hypothesis 1b predicted this effect would level off at extremely high levels of victory margin. The results indicate that MCs in the minority do increase their partisan cosponsorships until they win by approximately 55% of the vote, but this declines as victory margin approaches 100%, while members of the majority only see slight increases in their bipartisan cosponsorship behavior as their victory margin increases. Two possible explanations exist for why members with extremely large victory margins decrease their proportion of in-party cosponsorships, which seemingly runs counter to the possibility of primary electoral challenges. Firstly, they are so electorally secure that they feel relatively little need to alter their behavior to any other actor’s preferences, knowing the chance of electoral punishment is slim, even if some votes appreciate bipartisanship more in theory than in practice (Harbridge, Malhotra, and Harrison, 2014). Secondly, members with extremely large victory margins gain their votes from extremely heterogenous coalitions, and thus have a need to please all sides of the political spectrum, not just members of their own party, thus explaining participation in a diverse array of
In addition to the hypotheses on cosponsorship behavior, I also discussed the contrasting patterns of cosponsorship and roll call voting. Hypotheses 3 and 4 argued that victory margin plays a large role in determining cosponsorship behavior than it does roll call voting which is broadly confirmed in both raw data and in multi-variate models. Such findings, I argue, reflect the fact that the majority party can censor votes to ensure member’s loyalty, but parties are less able to prevent cosponsorships. Thus, MCs use less visible cosponsorships as a means to please a wider variety of constituencies, as their voting is more heavily constrained by agenda control. Another unexplored mechanism on the linkage between victory margin and cosponsorship behavior is that cosponsorships, while unlikely to get media attention, will be noticed by donors. As such, MCs may have incentives to please donors of all varieties by cosponsoring particular legislation, giving them additional freedom to vote with their party on roll calls. These findings, then, also cast doubt over the validity of ideological measures derived from roll call estimates, as they provide a limited picture of possible variance, and are clearly censored by the majority party.

Hypotheses should be compared to how well they explain the data (Lavine, 1999). The results presented above show that ideological extremity, district partisanship, and whether or not an individual MC serves in the majority party play a far greater role in determining both the cosponsorship and roll call behavior as compared to victory margin; in fact, serving in the majority appears to, for the most part, eliminate meaningful impact of electoral pressures on cosponsorship and voting behavior. However service in the minority does open up the possibly of electoral concerns influencing legislator decisions. Not only does a minority party has a clear incentive to bring issues such as anti-corruption measures to the floor in order to create problems for the majority (Lee, 2009), but members of the minority have little alternative
other than sponsoring with the majority if they are to have any voice in the legislative process. Thus, members the minority who are extremely vulnerable, and thus need to maintain a broader coalition of voters, have different incentives to engage in bipartisanship compared to more secure members of their own party.\textsuperscript{20} Given the uncompetitive nature of many House districts and the tendency for incumbents to increase their victory margin as they move through their career, these findings suggest the current electoral trends in American politics tend to \textit{exacerbate} increasing polarization in Congress, especially given the lower number, and shorter tenure, amongst marginal legislators, as the findings in Chapter 3 show.

\textsuperscript{20}These findings also hold in times of divided government where bipartisanship should lead to higher likelihood of bills becoming law.
Chapter 3

The Marginals Never Disappeared, but Their Seats Did!

3.1 Introduction

Just how electorally (in)vulnerable are U.S. Representatives? Popular media emphasizes high retention rates amongst representatives, and academic literature, while having previously examined this question, has largely ignored the patterns of victory and defeat of incumbents during the past two decades. This chapter presents data for all Representatives serving between 1952 and 2000, and performs a Markov analysis, finding that Members of Congress (MCs) in the 2000s were more vulnerable than any time in the past 60 years, contrary to public perception. However fewer MCs served in districts where electoral defeat represented a genuine concern—meaning MCs were more likely to lose given their previous electoral success but are actually losing less than in previous decades.

The debate on the electoral vulnerability of MCs began in earnest with Mayhew
(1974b), who found the first evidence of increasing incumbency advantage amongst Representatives. Subsequently, scholars continued to find increased incumbency advantage (and thus reduced likelihood of marginal seats) across time (e.g. Gross and Garand, 1984; Squire, 1989; Abramowitz, Alexander, and Gunning, 2006; Cox and Katz, 1996). The key arguments here revolved around the fact that either redistricting, the advantages of House membership (such as funding and lack of quality challengers), polarization, or a media profile lead to MCs enjoying larger and larger victory margins across time. However, other research has cautioned that these benefits, if they exist, do not carry to all incumbents equally Gelman and Huang (2008, p. 437).

However, other scholars contest the notion of increasing electoral security, showing that incumbent defeats were no more common or less common across time (Erikson, 1976). Jacobson (1987; 1989) argues that vote margins may have increased, but these increases do not necessarily increase incumbent security. Buchler (2011) also argues this point, arguing higher electoral volatility leads to incumbent losses, and thus larger victory margins do not always represent outcomes. Yet another group of scholars take this proposal to a more literal conclusion; they argue that no US representative is safe. Starting with Mann (1978), who argued that the local nature of Congressional elections meant no legislator could ignore possible threats based on constituency politics, several scholars have argued that incumbent advantage is either non-existent or plays a minor role in electoral results. Following this argument, scholars have argued that redistricting (Ansolabehere and Snyder Jr, 2012; Bauer and Hibbing, 1989), electoral volatility (Lin and Stonecash, 2012), or a lack of direct relationship between incumbency advantage and electoral success (Wilkins, 2012) means that no legislator is truly safe, only more or less likely to lose.

The Jacobson and Mann arguments are not completely exogenous. Rather, Jacobson
envisioned that moderate volatility made a “marginal” seat look more like a moderately safe seat in previous decades, while Mann envisioned volatility as being so prevalent that no seat would safe. In short, Mann and Jacobson both envisioned a growth in the standard deviation of incumbent vote share in each district, with Mann seeing a larger spread and Jacobson envisioning a slightly narrower distribution. On the other hand, those arguing that incumbent’s electoral security has increased generally interpret increasing expected vote shares as a signal of a lower likelihood of incumbent defeat.

I argue the question of how often, and by how much, US Representatives lose their seats merits re-examination for four reasons. First, much of the examination of the re-election prospects of MCs emerged by the late 1980s, meaning the changing political environment of the 1990s and 2000s is not adequately captured. Secondly, merely measuring the incumbent loss rate may be misleading in terms of analyzing the prospects of MCs; if there are fewer legislators in marginal districts, then overall incumbent losses may have decreased even if marginal legislators are losing at higher rates. Thirdly, many of the studies discussed above used the 1950s as a comparison for subsequent decades, which may lead to substantial period effects (e.g. post-Watergate landslide and the collapse of the Southern Democrats) to make one assume MCs were more vulnerable than they appeared. Finally, focus on outcomes as a percentage of vote share ignore the underlying logic of Buchler (2011); an incumbent’s victory margin represents a draw from a probability distribution, not a point estimate. Electoral volatility would increase the standard deviation of each MC’s victory margin, while not changing the mean. In short, an MC winning by 5% one year may be unlikely to lose, but find herself under threat during the next election if the electoral environment becomes more volatile.

This chapter utilizes the approach suggested by Erikson (1976) by applying an Ab-
sorbing Markov Chain analysis to the victory margins of all US Representatives serving between 1952 and 2010. The purpose of this approach is to derive estimates for the likelihood that an MC with a victory margin of $X$ at time $i$ is likely to lose (or leave Congress for another reason) at time $i + 1$, which can be derived both within redistricting cycles and for longer-term projections. This will give a clear estimate of expected attrition rates, which can then be compared to actual attrition. It asks four questions: are incumbents serving today more or less vulnerable than previously? How long are modern-day MCs expected to serve in the House? When incumbents do leave Congress, do they lose by large margins, in primary elections, or leave for other reasons? And finally, how well do Markov models replicate the real electoral careers of MCs?

This approach has a clear advantage over previous attempts. Much of the academic literature treats incumbent vote share as the point estimate and derives the probability of defeat based on a simple additive formula. The appropriate focus is to estimate the possibility of defeat based on the underlying sampling distribution of vote share within each Congressional district. However such an approach is impractical, as it would require multiple simulated elections with slight tweaks to be run in the same district. However, Absorbing Markov Chains can generate a proxy of this probability distribution by calculating the loss rate of MC’s with comparable victory margins to one other, thus giving a more realistic estimate, for example, of how often an MC with a victory margin of 5% “should” lose.

### 3.2 What do the Data Say?

Initial analysis of data from the previous 60 years of U.S. House elections provide mixed evidence for the three theories above. Figure 3.1 below shows the distribution of
incumbent vote margins for both victory and defeat for all years in the data. Clearly, defeat of incumbents is both highly rare, lending support to the non-existent marginals argument, as are extremely narrow victories. In fact, between the information in Table 3.1 and the histogram show a worrying fact for American democracy: since 1952, more MCs have been re-elected by 95% or more than have been defeated in general or primary elections combined.¹

But how have these patterns changed across time?

Figure 3.2 below shows the mean and 95% confidence interval of victory margin for Democrats, Republicans, and Southern Democrats, defined as the 11 states of the Confederacy as well as Kentucky and West Virginia. The findings reveal two key

¹Table shows 733 combined general or primary election defeats, while Figure shows over 800 incumbents winning by 95% or more.
points. Firstly, any discussion of increasing victory margins in the 1960s and 1970s must be discussed in the context of the collapse of the one party South: as late as 1960, the median Democrat in the south won by 98% of the vote, with a mean of 92%. However by 1980, the median Southern Democrat won by “only” 52% of the vote. Comparatively, these losses were counteracted by almost identical increases of 13% on behalf of Northern Democrats and Republicans. Secondly, the period after 1984 exhibits few differences amongst the three: only in 1986, 2006 and 2008 were the means of the groups meaningfully different, and in the latter period the difference only exists between Republicans and any Democrat, with Democrats from the South taking the look of their non-Confederate counterparts.²

<table>
<thead>
<tr>
<th>Year</th>
<th>Victory Margin (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
</tbody>
</table>

Note: Shaded areas represent 95% Confidence Intervals of Victory Margin.³

Note: Data gathered from U.S. Clerk of the House and ICPSR Congressional Elections Archive (Swift et al., 2009).

Figure 3.2: Mean Victory Margin by Time

But have these distributions changed drastically? Figure 3.3 below illustrates that

²This finding seems to match well with the fact that Democrats from the South now serve almost exclusively in urban or minority-based districts, as opposed the the rural white districts of prior decades.
between the 1950s and 2000s, the proportion of elections where the victor secured their seat by 5% or less has dropped by almost 50%: in the 1950s, approximately 48 seats per election were decided by less than 5% of the vote. By the 2000s, this figure had dropped to 25 seats. In contrast, during the 1950s an average of 193 seats (44%) were decided by 25% or more; by the 2000s, this figure had risen to 281, or almost two-thirds, of all seats. This statistic must also be put in context of the fact that the Southern Democrats were unopposed in almost half of all seats during the 1950s–so victory margins have increased, even accounting for this major shift in the party system.

On the surface, Figure 3.3 fits well with the “vanishing marginals” argument, with the 1950s and 60s having the higher proportion of low (<5%) victory margins and more recent decades seeing fewer competitive elections. However, this does not necessarily
equate to electoral *volatility*. Figure 3.4 below shows the results of Bayesian correlational analysis (Bååth, 2014) between victory margins in the first and subsequent elections in a redistricting cycle.\(^4\) The results show generally consistent correlations—the lines have little to no slope, indicating similar relationships across time. The exception here is for Southern Democrats, who, unsurprisingly, saw lower and lower correlations between their initial victory margin and their current victory margin during the latter half of the 20th Century.

\(^4\) Bayesian correlations here are appropriate given the comparison of apparent populations rendering tradition *p* values unhelpful (Berk, Western, and Weiss, 1995). However, results show similar estimates of the correlation coefficients, but with the Bayesian analysis having narrower margins of error.
This section has detailed an initial analysis of the results of U.S. House elections since 1952. It has shown MCs rarely lose, especially by large margins. Secondly, it has shown that the percentage of MCs by less than 25% of the vote was lower in the 2000s than any point in the previous years. Electoral volatility has seen at best minor changes, other than for Southern Democrats, evidenced by the lack of a consistent negative slope in the correlation plots in Figure 3.4. These findings,
then, provide evidence for all three aforementioned arguments, revealing the need for a fresh approach. Erikson (1976) initially argued for the use of Markov chains in analyzing Congressional elections, and the following analysis uses this methodology. Firstly I describe the mechanics behind Absorbing Markov Chains, then I analyze the likelihood of incumbent defeat in a single election cycle, then expected tenure in Congress. Next I analyze the likelihood of an incumbent leaving Congress for any reason. Finally, I compare the Markov predictions to the actual likelihood of defeat in general elections.

### 3.3 Absorbing Markov Chains

A regular Markov Chain represents a matrix of transition probabilities where the probability of transitioning from state $i$ to $j$ is always $< 1$. However absorbing Markov chains allow for states where the transition probability $P(i,j) = 1$, or every observation in cell $(i,j)$ at time $t$ is also in cell $(i,j)$ at time $t + 1$ and all subsequent times. In the case of Congress, this allows for the possibility that Members leave Congress for reasons such as death, resignation, or retirement (from which they never return) while still analyzing the probability of transitioning from victory margin $p$ to either victory or defeat. It should be noted here that it is possible for a member to lose, resign, or seek higher office and then return to Congress. For the purposes of this chapter, all departures from Congress are counted as absorbing states. If an MC does, however, re-join Congress after an absence, they are then re-entered in the data, but the number of terms served is reset, representing a loss of incumbency advantage gained. I admit that former MCs may have greater recognition in the media, and thus do not completely lose this advantage, however without any specific priors on to what degree they lose their advantage the assumption of a reset appeared logical.
Each cell in a transition matrix, $P_t(i, j)$ is the probability that an observation in state (row) $i \in I$ at time 0 will transition to state $j \in J$ in period $t$. Canonically, the matrix takes the form in Matrix 1 below. Here, $D$ represents an identity matrix representing the transitions between possible absorbing states. $\theta$ a matrix of zeroes representing the possibility of transitioning from an absorbing state to any other state. $R$ represents a rectangular matrix showing the probability of transitioning from non-absorbing state $i \in I$ to absorbing state $d \in D$. $Q$ is a square matrix showing the probability of transitioning from non-absorbing state $r \in R$ to non-absorbing state $r \in R$ at time $t + 1$.

Matrix 1: Canonical Markov Transition Matrix

$$P^t = \begin{bmatrix} D & 0 \\ R & Q \end{bmatrix}$$

The probability of any observation being in state $j$ at time $t$ is equal to Matrix 2 below.

Matrix 2: Transition Probability at time $t$

$$P^t = \begin{bmatrix} D & 0 \\ (D + \sum_{i=1}^{t-1} Q^i) * R & Q^t \end{bmatrix}$$

As $t$ approaches infinity, $P$ equals the following.
Matrix 3: Transition Probability as time approaches $\infty$

$$P^\infty = \begin{bmatrix} D & 0 \\ FR & 0 \end{bmatrix}$$

where matrix $F$ is the fundamental matrix $(D-Q)^{-1}$. In Matrix 3, each cell $F(i, j)$ can thus be interpreted as the number of periods an observation in non-absorbing state $i \in I$ spends in non-absorbing state $j \in J$. Taking the sums of each non-absorbing state (row) in $F$ reveals the expected number of periods an observation from state $i$ at time 0 spends in any non-absorbing state. In terms of Congressional tenure, the sum of each row in $F$ gives the number of terms that an MC with victory margin $i$, assuming no redistricting, whereas the values in $P^4$ give the probability that an MC with victory margin $i$ would end a redistricting cycle in state $j$ given election in the first year of a redistricting cycle. Summing the values for all non-absorbing states $i \in I$ thus gives the probability that the MC remained in Congress throughout the redistricting decade.

### 3.3.1 Markov Chain Example

Matrix 4 below shows the probability of transitioning between four states: general election defeat, primary election defeat, winning by less than 50% and winning by greater than 50%. Each cell is the probability of transition from state $i$ to the same state after the next election.

Matrix 4: Hypothetical Transition Probabilities
Matrix 5 below shows the likelihood of a candidate being in any given state given their starting state for the second election in a sequence. It shows that an individual winning by more than 50% of the vote at time 0 has a 22% chance of being defeated before the second election in the sequence, compared to a 55% chance for those winning by less than 50%.


\[
\begin{bmatrix}
\text{GeneralDefeat} & \text{PrimaryDefeat} & \text{Win}>50\% & \text{Win}<50\% \\
\text{GeneralDefeat} & 1 & 0 & 0 & 0 \\
\text{PrimaryDefeat} & 0 & 1 & 0 & 0 \\
\text{Win}>50\% & .10 & .20 & .55 & .15 \\
\text{Win}<50\% & .40 & .15 & .10 & .35 \\
\end{bmatrix}
\]

Matrix 6 below shows the probability of being at each state after five elections.


\[
\begin{bmatrix}
\text{GeneralDefeat} & \text{PrimaryDefeat} & \text{Win}>50\% & \text{Win}<50\% \\
\text{GeneralDefeat} & 1 & 0 & 0 & 0 \\
\text{PrimaryDefeat} & 0 & 1 & 0 & 0 \\
\text{Win}>50\% & .22 & .33 & .32 & .14 \\
\text{Win}<50\% & .55 & .22 & .09 & .14 \\
\end{bmatrix}
\]
If we let the chain run for infinite trials, we get two results. Firstly, we get the probabilities of transitioning from each state at time 0 to each absorbing state.

Matrix 7: Transition Probabilities when $t = \infty$.

\[
\begin{bmatrix}
GeneralDefeat & PrimaryDefeat & Win>50\% & Win<50\% \\
GeneralDefeat & 1 & 0 & 0 & 0 \\
PrimaryDefeat & 0 & 1 & 0 & 0 \\
Win>50\% & .42 & .52 & .04 & .02 \\
Win<50\% & .67 & .30 & .02 & .01 \\
\end{bmatrix}
\]

And finally, the number of elections until transition until any non-absorbing state. This indicates that winning by 50% or more in the first election gives a representative approximately 2.9 “terms” before exiting, whereas winning by less than 50% results in an expected tenure of slightly less than two terms.
Matrix 8: Expected Time to Absorption

\[
\begin{bmatrix}
    & \text{Elections} \\
\text{Win>50\%} & 2.88 \\
\text{Win<50\%} & 1.98
\end{bmatrix}
\]

Markov Chains, then, seem to give an ideal solution to adjudicate between the three theoretical and empirical findings in the academic literature. I argue the ability to estimate the probabilities of defeat in similar circumstances allows us to estimate, at least roughly, the underlying probability distributions of an MC with a given victory margin being defeated within a single redistricting cycle. Before describing this process in detail, next I describe how data on U.S. House elections between 1952 and 2010 were converted for the purpose of analysis with Absorbing Markov Chains.

### 3.4 Data

This chapter utilizes data from all US Representatives serving for at least 1 full term between 1950 and 2010. The data were gathered from two sources: before 1990 the data were selected from The Database of U.S. Congressional Historical Statistics (Swift et al., 2009), while 1990-2010 were gathered directly from the Clerk of the House Website (United States Election Statistics, 1990-2008). I define victory margin as the percentage of the vote between the winning candidate and their closest opponent, with those facing no opposition having a victory margin of 100%. I utilize victory margin as opposed to vote share as it more accurately represents electoral threat to a member, as it shows how far away an MC is from defeat while also accounting for strong independent challenges. Much previous research uses percent of two-party
vote share, which does not accurately capture this possibility. I do not believe using victory margin will lead to any problematic estimates; for the Markov analysis victory margin is group, with the highest level containing representatives who win by 45% or more, meaning the distinction between, for example, 75% and 100% does not impact the analysis—in these cases, using 2-party vote share OR victory margin would lead to the election in question being classified as the same non-absorbing state.

I chose victory margin as opposed to underlying district fundamentals due to the needs of the Markov analysis: if, for example, I used underlying district partisanship, the transitions would not measure the likelihood of incumbent defeat, rather the likelihood of transitions between varying levels of district partisanship. Additionally, this measure would require a greater amount of non-absorbing states, which would create issues with the Markov analysis, as transition values of “0” in non-absorbing states lead to inaccurate predictions of absorption times. The Markov process cannot distinguish between a transition between two non-absorbing states that never occurred and a transition between an absorbing state and any other state that cannot occur.

Using these data described above, I then identified all cases of incumbent departures from Congress. Using information from the Congressional Biographical Directory (Congressional Biography), I ascertained if the MC in question departed Congress for one of the causes described in Table 3.1 below. Causes 1 and 2 (general and primary defeats, respectively) are kept in their own categories, while the other causes were combined to form their own category. Some may argue grouping potentially strategic (retirement, e.g. Stone et al. 2010; Groseclose and Krehbiel 1994) causes of departure with decidedly non-strategic (death, expulsion) may lead to this category

5Unopposed seats, then, are recorded as 100% victories. For some years, particular states did not report the number of votes for a candidate who was unopposed (e.g. Florida before the 1990s). In these cases, I coded these MCs as winning 100% of the vote as opposed to only including major-party opposition in many other studies (e.g. Jacobson 1987).

6I assume no strategic value in death or expulsion.
being of little use. I argue that this “other” absorbing state allows for clear analysis of the likelihood of general or primary defeats while not undermining any explanatory potential of narrower categories; the motivations behind the pursuit of a Senate seat, Governorship, cabinet position or retiring to pursue a more lucrative career are so idiosyncratic that attaching a probability to any individual categories will have little value.\footnote{I acknowledge that many representatives either lose or seek statewide office only to return to the House later. For the purposes of this paper, every time a legislator misses an election, they are no longer considered an incumbent. Thus an MC serving in Congress \(i\) who fails in their re-election bid for Congress \(i + 1\) but returns in \(i + 2\) is not counted as an incumbent, and length of incumbency is counted from the most recent Congress following a Congress where the MC was not previously win an election.}

Table 3.1: Reasons for Departure from Congress

<table>
<thead>
<tr>
<th>Cause of Departure</th>
<th>Definition</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) General Election Defeat</td>
<td>Incumbent loses general election in district</td>
<td>631</td>
</tr>
<tr>
<td>(2) Primary Election Defeat</td>
<td>Incumbent is unsuccessful candidate for renomination</td>
<td>141</td>
</tr>
<tr>
<td>(3) Retired</td>
<td>Incumbent does not run for re-election and leaves Congress for another career or retires</td>
<td>510</td>
</tr>
<tr>
<td>(4) Resigned</td>
<td>Incumbent leaves Congress during their term for a position not described in (5)</td>
<td>96</td>
</tr>
<tr>
<td>(5) Promotion or Attempted Promotion</td>
<td>Incumbent leaves to pursue state-wide elected office, Senate, Presidential ticket, or Cabinet-level Position</td>
<td>394</td>
</tr>
<tr>
<td>(6) Died</td>
<td>Incumbent dies in office</td>
<td>150</td>
</tr>
<tr>
<td>(7) District Change</td>
<td>Incumbent ran for re-election in different district than previously served</td>
<td>471</td>
</tr>
<tr>
<td>(8) Expelled or Impeached</td>
<td>Incumbent impeached or expelled</td>
<td>2</td>
</tr>
<tr>
<td>Total Departures:</td>
<td></td>
<td>2333</td>
</tr>
</tbody>
</table>

For this paper, I generally equate a “marginal” seat as a seat where an incumbent wins by less than 5% of the vote. I justify this (admittedly arbitrary) level by analyzing incumbent losses based on previous victory margins seen in Figure 3.5. In this case, almost 32%\footnote{Actual: 31.68\%} of all incumbent defeats occurred in the election after an incumbent
won by less than 5% of the vote, with 50% of all defeats coming in the election after the incumbent won by less than 10% of the vote. I do not mean to claim that incumbents with large victory margins are invulnerable, however given the preponderance of defeats that occur in these seats, the definition represents a practical means of discussing the probability an incumbent is defeated.

Figure 3.5: Percentages of General Losses by Previous Victory Margin

3.5 Markov Chain Analysis Results

3.5.1 Full Markov Probabilities

Figure 3.6 below analyzes the survival probability for each victory margin across 4 subsequent elections, simulating the likelihood that an MC is defeated within a
single election cycle. The plot reveals that incumbents serving in the 2000’s were most likely to be defeated across all victory margins below 30%. Additionally, MCs serving during the 1980s and 90s were almost always the least likely to be defeated within an election cycle, a part of substantial variation across time. For example, legislators winning an election by less than 5% in the 2000s had a 40% chance of losing in or before 4th election in a redistricting cycle, whereas members serving in the 1990s in a similar situation had only a 22% chance.
A) Victory Margins Between 0 and 25%
B) Victory Margins Between 25 and 100%

Figure 3.6: Defeat Probabilities Across Time
3.5.2 Markov Probabilities: One Redistricting Cycle

Figure 3.7 below illustrates the likelihood of an MC. It shows the predicted loss probabilities for a single election cycle for each victory margin. The solid line illustrates that the 2000s saw the highest loss probabilities over the past 60 years. However, it also shows the the 2000s also have the lowest proportion of MCs at lower election margins. In short, MCs serving in the 2000s, no matter their previous victory margin, were more likely to lose within a single redistricting cycle compared to any previous decade, however fewer MCs were in a position where their seat is under threat.
Note: Figure displays defeat probability within a single redistricting cycle, victory margin rounded to nearest 5%.

Figure 3.7: Defeat Probability for Previous Victory Margin
3.5.3 Tenure

But what is the impact of fewer close elections in terms of the tenure of legislators? Figure 3.8 below shows the predicted time to defeat (in Congressional terms served) for MCs in each decade. Ignoring redistricting, MCs serving in the 1970s had by far the shortest expected tenure before defeat in a general election, ranging between 4 and 4.5 Congressional terms, with no major increase (≈ .5 of a Congressional term) between winning by a single vote and running unopposed. On the other hand, in the first decade of the 21st Century, members winning by over 25% of the vote expected to serve between 6.5 and 7.2 Congressional terms before experiencing defeat in general election, giving them an additional 4-6 years in Congress compared to their counterparts in the 1970s.

![Figure 3.8: Expected Tenure for Incumbents by Victory Margin and Decade](image)

Figure 3.8: Expected Tenure for Incumbents by Victory Margin and Decade
3.5.4 Leaving Congress

Up until now, this chapter has only focused on the probability MCs are defeated in general elections. However, this does not cover the possibility that members succumb to a primary election challenge or leaving Congress for another reason. Figure 3.9 below shows that Members of Congress in all decades, regardless of their victory margin, were more likely to leave Congress, or be moved to another district, due to non-electoral, rather than electoral, causes—the exception being marginal legislators serving in the 2000s, who were more likely to lose than to depart Congress for other reasons. It also shows that, despite theory suggesting Members in safe districts are most susceptible to defeat in primaries, no consistent pattern between victory margin and primary (here defined as loss of re-nomination process) emerges. Thus, MC’s in extremely safe (and thus more ideologically-homogenous) districts are not any more likely to succumb to primary challenges. I would hypothesize two possible mechanisms for this outcome.

First, it may be that MCs in marginal districts face fewer primary challenges but face heavy attrition when they do, compared to members serving in safe districts frequently face relatively poor-quality challenges in primaries. Second, I would propose that party polarization and sorting has made primary election voters, who are more ideologically-extreme, more homogenous across districts. If this were the case, MCs serving in moderate districts may still see challenges from ideologically-extreme opponents at similar rates to safe districts. In terms of other departures, across time, MCs have typically been more likely to retire or resign rather than lose, however marginal legislators serving in the 2000s were, for the first time since the 1950s, more likely to lose a general election than leave Congress, or be moved to another district, by their own volition. Combined with the information in Figure 3.8, we can conclude the growth in expected terms served is due to the lower number of general election defeats: retirements or other departures amongst current legislators are at their
lowest levels since the 1950s, with no noticeable change in primary election defeat rates. Thus, the general increase in victory margins is resulting in longer tenures, despite heightened loss probabilities for MCs in the 2000s, as shown in Figure 3.7.

![Graph showing incumbent departures by type](image)

Figure 3.9: Incumbent Departures by Type

### 3.6 Predictive Accuracy of the Markov Model

Any model must be tested against how accurately it describes the data. In terms of the Markov model, predictive accuracy would mean that predicted rate defeats would correlate well with actual rate of defeats. To measure this, I correlated the
predictions of defeat in the next election from the full Markov model using a sample of 50% of individual MCs. I then compared these predicted loss rates to the rest of the population, ensuring my predictions were not endogenous. Figure 3.10 below illustrates these results, showing the mean and 95% Confidence Interval for the “out” sample as well as the predicted loss rates from the “in” sample. The figure reveals two key findings. Firstly, the Markov model seems to over predict incumbent general defeats. For example, in the 2000s (bottom right), those winning an election by between 5 and 10% was expected to lose in approximately 28% of the cases, however they lose in only 12% of the cases. This may be an indicator of incumbency advantage; the incumbents should be more vulnerable given their previous victory, but can use the power of their office to ensure they are not defeated. However, the second finding is the remarkable correlation, given the low (10 in each decade) number of observations between actual and predicted loss rates. All correlations show the probability of the true correlation being less than 0 is below .03, and in many cases much smaller than that. However, further research must examine how these findings compare across longer (e.g. 2, 3, and 4 elections) to fully validate the Markov model.
1950s, Cor = 0.96 p = 0.000
1960s, Cor = 0.82 p = 0.001
1970s, Cor = 0.73 p = 0.006
1980s, Cor = 0.64 p = 0.02
1990s, Cor = 0.58 p = 0.025
2000s, Cor = 0.8 p = 0.002

Note: Bayesian Correlation Estimates given.
Victory Margin Percentages rounded down to previous 5%
Figure 3.10: Predicted Accuracy of Markov Model
3.7 Summary

These data lead to several possible hypotheses. Firstly, the high vulnerability of marginal incumbents in the 2000s may be a function of the distinct lack of marginal seats. In short, fewer marginal seats means that “out” parties focus more of their attention (and fundraising) on a fewer number of seats, leading to greater attrition (Jacobson, 2009). Second, increasing demographic differences between the Presidential and Congressional electorates may lead to greater shifts in candidate vote share year-on-year, increasing vulnerability over MCs who win in marginal seats (e.g. Democrats winning in Republican districts in 2006 and 2008). Finally, increased media scrutiny and “horse-race” coverage (Prior, 2007) may weaken the ability of vulnerable members to stay out of the spotlight during controversial bills, thus seeing reduced vote shares in subsequent elections (Carson et al., 2010).

This chapter began by discussing three schools of thought on the electoral safety of U.S. Representatives. One argued that “marginal” legislators have all but vanished from the political landscape, another argued increasing electoral volatility actually meant legislators were more likely to lose at higher victory margins, while another argued that no legislator is safe from electoral punishment. However, no one argument can explain all of the evidence: victory margins may have increased slightly, primarily for only one party, meaning the “no safety” argument does not hold given the lack of major increases in volatility. The number of “marginal” (victory margin of <5%) MCs has decreased, but only by approximately 8 seats per each election, meaning the “vanishing marginals” argument faces issues in explaining major changes, especially when we consider that marginal seats change hands more often than safe ones, meaning that many of the 8 seats per Congress will change back to the other party
Two key questions, however, still remain. Firstly, a measure of district similarity across redistricting cycles must be developed, which will enable across-cycle estimates. These additional data will first allow improvements in terms of accuracy of predictions due to the censoring of estimates at the end of brief (relative to expected tenure) redistricting cycles. Secondly, these data must be expanded to investigate if the key finding, that legislators are now more vulnerable but losing less is just a function of the 2000s, which saw at least 2, if not 3, “wave” elections (2006, 2010, and perhaps 2008) in the House. This comparison is essential given the stark contrasts between the 1980s and 1990s, and combined with the additional data described above, will allow for longer-term Markov predictions that can serve as baseline comparisons, and an eventual method to adjudicate between the potential causes of the patterns of elections we have observed in the last decade.

In short, much like previous attempts to characterize House elections, this work has shown that incumbency advantage, redistricting, and shrinking marginals may all play a role in determining how safe US Representatives are in their office, but these approaches, as they did almost 40 years ago, “still leave considerable variance unexplained” (Erikson, 1976, p. 632). Further research, then, must identify the precise impact of these variables, as well as identify what causal mechanisms can drive the paradoxically higher vulnerability amongst some incumbents in an era of progressively more comfortable margins of victory and what, if any, impact the changing electoral environment has on how MCs represent their constituents.

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9In fact, almost 60% of all incumbent defeats took place in seats that were held by the opposite party at the beginning of the redistricting cycle. Figure calculated by finding the proportion of defeats for all decades in Figure 3.10 and comparing to the number of general election defeats in Table 3.1.
Chapter 4

The Impact of Legislative Institutions on Legislator Behavior: The Case of the European and UK Parliaments.

*You tell me it’s the institution, well, you know...*

*The Beatles (The White Album)*

4.1 Introduction

Ann Clwyd (Labour, Cynon Valley), despite a long parliamentary career, has always been known as a rebel. After continuous rejections for Labour Parliamentary seats in the 1970s, she “got her foot in the door” (The Independent, April 4, 1992) by taking a position as a Member of the European Parliament for Mid and West Wales
in 1979. Clwyd “loved” the EP, later commenting on how it was “easier” to get things done in Brussels and Strasbourg than Westminster.\footnote{Her experience appears to run contrary to the opinions of many other MEP’s assertions (e.g. Nick Clegg, The Times, June 5, 2004).} Mrs. Clwyd may have found this to be the case because of her relative disloyalty to her party on roll call votes placing her in the bottom 10% of all MEPs for that Parliament: disloyalty to her national party meant she was working more with MEPs from other countries or political parties. Despite her reputation for rebelliousness, Clwyd won a by-election to serve in Westminster in 1984. By 1994 she was the foreign policy spokesperson for the Shadow Cabinet. In many ways this position seemed to have made Clwyd a more “typical” MP in terms of her voting behavior—in a rebellious parliament she was in the 48th percentile for loyalty on roll call votes. However, after a trip to Iraq to observe the conflict in Kurdistan and missing key votes, she was sacked by Tony Blair (The Guardian, April 4, 1994). In the subsequent Parliament (elected in 1997) with Labour in power, she once again rebelled against her party frequently compared to her colleagues. However, after a reconciliation with Tony Blair over their joint support of the Iraq War, (The Guardian, February 27, 2003) and her appointment as a civil rights envoy for Iraq (The Guardian, May 27, 2003), Ms Clwyd became a solid supporter of the PM, only to once again reduce her overall loyalty after her close ally left office.

Ann Clwyd’s often varied career trajectory shows an important element of the study of legislative institutions: individuals do not have fixed attitudes, or “ideal points” in terms of loyalty to their party—their opinions and desires change and are shaped by the institutional and political environment. The extent to which particular institutional arrangements contribute, for example, to a party’s ability to offer “carrots” and sticks to their members has received much academic debate, but relatively little research has sought to identify a clear set of parameters that increase (or decrease) the likelihood
of a legislator following the party line.

This chapter seeks to answer the following question: What are the impacts of institutional design on the behavior of legislators? Specifically, how do institutions impact the loyalty (defined as voting with the rest of their party) legislators show to their parties in roll call votes? A large literature has identified key elements of electoral, procedural, and executive systems and the corresponding patterns of legislator behavior. The patterns of legislator party loyalty and the theoretical motivations behind them, then, have been well-studied, producing both wide-ranging theoretical (Hechter, 1987) and empirical (Hix, Noury, and Roland, 2007) insight. However the findings presented in previous literature are lacking in key areas in terms of genuine ability to identify causality in generally cross-sectional studies.

This chapter proposes an analysis of the voting habits of legislators who have served in both the European and UK Parliaments. These individuals provide an opportunity for empirical leverage on the specific aspects of institutional design that impact legislator behavior. Cross-sectional designs or analyses of changes in electoral systems, I argue, have no way to escape the possible endogeneity of each country’s legislators given the potentially endogenous nature of electoral systems (Lin, 2011). In order to do so, this paper begins with a discussion of previous literature on the motivations behind legislator behavior, before arguing for the use of the European Parliament as a basis of comparison to national legislatures. Finally it presents a Bayesian analysis on data gathered the 1st-6th European Parliaments and the 1992 to 2015 UK Parliaments, finding that legislators were more loyal to their party while serving in the European Parliament. To begin, however, it discusses the previously researched motivators of legislator behavior, as well as identifying weaknesses in previous approaches.
4.2 Previous Literature

4.2.1 Agenda Control and Procedures

The use of the legislative agenda to control legislators has clear benefits for the party, especially as much conflict in legislatures can be reduced to clashes between the government and the opposition (Hix and Noury, 2015). Cox (2005, p. 56) argues that in the British House of Commons, procedural changes removed the power of MPs to insert themselves into debates, handing greater agenda-setting power to the parties. Under the new system, MPs were dependent on the Cabinet for press coverage, resulting in a membership beholden to Cabinet demands in order for any advancement (or continuation) of his/her career. The ultimate expression of agenda control, the use of the confidence vote, also has been noted as a way for parties to encourage legislators to toe the line (Carey, 2007; Huber, 1996; Beer, 1966; Mezey, 1979; Ramseyer and Rosenbluth, 1993). A confidence vote increases the costs of rebellion for legislators, both in the short term (through the uncertainty of re-election) but also in the long term (if a legislator’s party is not in power, they are unlikely to become a cabinet member). However this effect may be tempered if the party has been in government for a long time, which would increase the number of ex-cabinet members of un-promoted backbenchers for whom these possibilities are not so costly (Benedetto and Hix, 2007, p. 756).

4.2.2 Electoral Institutions

The underlying logic from the electoral perspective posits that the tighter the perceived correlation between a legislator’s and their party’s electoral prospects, the more likely the legislator is to follow the party line. The means by which members
are elected to the legislature can also have a major impact on their behavior. PR systems, in general, induce greater party loyalty but this is not always the case (Jun and Hix, 2010). Elections in systems where the candidate has the motive to develop their own “personal vote” also reduce their dependence on the party (Hechter, 1987; Cain, Ferejohn, and Fiorina, 1984). In comparative studies, it has been shown that party loyalty in the legislature is decreased if the electoral system rewards a politician’s personal reputation vis-a-vis the party (Carey and Shugart, 1995, p. 419). Partisan primary elections also decrease overall party unity by incentivizing candidates to either compete with co-partisans (Carroll and Nalepa, 2014), or focus on narrower constituencies un-beholden to the main party body (Canes-Wrone, Brady, and Cogan, 2002). Another key factor underlying electoral prospects is the methods of candidate selection: if parties have a high level of control (e.g. in a closed-list PR system), then legislators are unlikely to buck the party trends (Sieberer 2006, p. 163; Hix 2004). However even in systems where parties select their candidates, governments often have issues convincing (or coercing) un-promoted or demoted legislators from agreeing with the party. (Benedetto and Hix, 2007, p. 756).

4.2.3 Party Discipline and Cohesiveness

The final driver of legislator loyalty is the relative measure of party discipline and cohesion—two separate concepts often merged in the literature (Hazan, 2003). In general, cohesion refers to norms or socialization within the party (Hazan 2003, p. 3; Kam 2008) whereas discipline refers to the “carrots and sticks” available to party leaders to give to legislators. Cohesion is far less common in larger parties with ideologically heterogeneity (Benedetto and Hix, 2007) but may be present in circumstances where discipline is impossible (Norton, 2003; Waifan, 2013) if a party is relatively homogenous. Discipline is centered around the ability of the party leadership to induce
cooperation form MPs through formal punishments or controls (Depauw and Martin, 2008; Carroll and Nalepa, 2014). The line between cohesion and discipline is blurry, as discipline “begins when cohesion falters” (Hazan, 2003, p. 3). It is difficult for scholars to isolate whether a legislator is voting with her party because she believes in the policies, is being rewarded for doing so, or has been threatened to do so. This issue represents one of the major issues with the study of roll call voting: the output—a yea or nay—could have multiple causal explanations, which are only known to the actor and are rarely discussed honestly. For example, NOMINATE or Optimal Classification procedures cannot account for, nor cope with, strategic voting (Spirling and McLean, 2006), a real possibility when legislators have to weigh opposing pressures from their constituency and party.

4.2.4 Unity in the Literature

I do not mean to claim that the scholars above claim only a single element, whether it be agenda and procedural control, electoral institutions, or party discipline/cohesiveness, plays a role in determining legislator loyalty. Nor do I mean to claim the three are not related. Clearly, a legislator in a situation where the national party leadership selects positions on the party list can be disciplined by being placed lower on the list, thus losing their seat, just the same way that party may induce cooperation through the promise of promotion. The most comprehensive theoretical discussion of these arguments comes from Hechter (1987) who argues that formal controls and the degree to which members are dependent on groups are key drivers of behavior. In the case of legislatures, he argues, party control over the electoral system, how well a legislator’s district matches up to party ideology, and promises of promotion all increase legislator loyalty. This process is driven both by selection mechanisms, if a party has close control over the selection process they are not likely to place rebels on the list,
and through the ability to reward or punish legislators for their actions. For example, when the U.S. Senate changed rules for committee leadership to be based on seniority, legislators had fewer incentives to follow the party leadership, as they could not be promised any significant benefits. As a result, party loyalty for the Senate dropped by 8 percent between 1970 and 1980 (Hechter, 1987).

This section has discussed the three prime motivators of legislator behavior according to previous literature: agenda control, electoral institutions, and discipline and cohesion. These three explanations are not independent and play off of each other. This fact reveals two issues in the current literature. Firstly, studying any of the three drivers in isolation will be difficult. Secondly, and more importantly, any explanation of why one institutional arrangement or another induces or coerces cooperation must account for potential endogeneity within a country. The next section details this argument, then I continue to discuss how the European Parliament presents a solution to this issue.

4.3 The Puzzle of Endogeneity

Hechter’s work may have preceded much of the empirical findings discussed here, but this does not mean any one side is inaccurate. In fact, scholars appear to have a fairly solid grasp on what forces drive levels of legislator loyalty. So what is wrong with this picture? In this section I discuss the underlying assumptions present in the literature, and the casual inference problems it creates, before proposing a research design to overcome these issues.

To begin with, let us imagine a legislator serving in a unicameral, party-centered, multi-member district PR system. Her party is in government, and given the rules
of the chamber has tight agenda control as well as the ability to call a confidence vote. According to the literature above, this legislator should be extremely unlikely to rebel. Her electoral prospects are wholly dependent on her party and she cannot gain any policy reputation without gaining access to the agenda, for which she is also dependent on her party. If she does disagree with her party, she may be forced to vote to bring down the government, which will result in electoral uncertainty. Not only may her party punish her by placing her lower on the party list or neglecting to re-nominate her, but her party may face the real possibility of losing the election, potentially ensuring she does not win a seat in a general election no matter what her party’s punishment.

Now let us imagine a legislator serving in the U.S. House of Representatives. Committee chairs are designated by seniority, campaigns are based around individual candidates, primary elections are frequent and expensive, and campaign funding is mostly derived from outside groups. In the House, then, a legislator has relatively little incentive to follow the party over his own personal goals, ambitions, or interests. If he does chose to ignore his local constituency, he faces electoral threats due to both the local nature of US politics either in his party primary (if he is too centrist for his district) or in the general election (if he is too extreme).

These two hypothetical scenarios illustrate the fundamental issue with the previous literature: if the two hypothetical legislators were to change places, previous work would suggest they would adopt the behavior expected of them in their new environment. The first legislator, finding herself liberated from the need to ensure support from her party, would be empowered to pursue her own policy agenda, and vote how she feels, without worry of retaliation from her party. On the other hand, the former U.S. Representative would soon discover that he has little chance of connecting to voters or interests without agenda access or individualized campaigns, and should
thus become more loyal to his party.

The issue here is that we have very little evidence to confirm or deny such underlying assumptions: legislators from a country never serve in the legislature of another.² Cross-sectional designs comparing behavior across countries can show important differences but cannot provide evidence that the patterns are anything other than endogenous to the countries. Research has shown that, for example, changes in electoral systems may well be endogenous (Lin, 2011). Such endogeneity may also impact the outputs of the electoral system, namely legislator behavior. Short of an unrealistic experimental design or rare discontinuities in electoral procedures, the solution to this question requires circumstances where the same individuals have served in multiple legislative environments. If a legislator has served in different environments, then any changes in their behavior must be in large part to the different institutional constraints placed on the actors.

Using within country comparisons, such as those between U.S. state and national legislatures may provide some insight. However in this case there is insufficient variation in electoral institutions, procedures, and party systems; in the U.S., the system by which members are elected to state legislatures are wholly similar, if not identical, to that of the national legislature. Cases where the electoral system has been overhauled (such as New Zealand) may prove useful and provide an equivalent to a regression discontinuity design, but the number of observations and potential comparisons is limited, and would again be unable to escape the initial potential for endogeneity. Additionally, the New Zealand case could only focus on the impact of a single transition between single-member districts and the new multi-member mixed districts utilized since 1996.

This section has discussed the major issue with previous literature—the inability to

²I have found no record of something doing this, however there may be instances.
confirm theoretically-sound hypotheses in a cross-sectional or within-country design due to potentially endogeneity issues. In the next section, I propose a solution to this issue by leveraging legislators who have served in both the European and their national parliaments, before discussing the selection of the United Kingdom as a test case and presenting two hypotheses on the impacts of institutional design on the behavior of legislators.

4.4 The Path Forward

I propose that the European Parliament (EP) represents the best possible test for isolating the impact of electoral institutions, party discipline, and institutional variation. I do not propose that the institution itself is the ideal test bed, but that its unique placement in the political world presents an opportunity to infer the impact of institutional design on legislators. The EP is a super-national legislature and MEPs also often serve in their own national parliaments before or after service in the EP. Electoral rules to the EP are left to each country, but since 1999 all states must use some variation of PR. The EP, while seeing a growth in its power to initiate and veto legislation across time, is limited in its scope compared to national parliaments. Not only are majorities rare in the EP, national political parties never hold a majority. Rather, national parties form Party Groups with like-minded parties from other countries (such as other Christian Democrats), and these Party Groups then forming broader coalitions (if necessary) in order to attain a majority. From the standpoint of this paper, then, the EP is an environment where national parties should be relatively weak, given the limited power and agenda control. However, I argue just the opposite: national parties are strong in the EP as they still form the basis of day-to-day politics (Hix, Noury, and Roland, 2007), but also the MEPs themselves cannot hope to either
advance their careers or gain access to the agenda without strict party approval.

Examples of the need to please the national party are abundant. Veronica Hardstaff (Labour, Yorkshire and the Humber) served as the vice-chairman of the European Parliament Labour Party, a powerful position (Scunthorpe Evening Telegraph, Aug 29th 1998). However, this did not stop her from being placed 6th out of 7 possible places in the Party List for the 1999 elections due to her disagreements with New Labour and Tony Blair, meaning Labour would have to gain approximately 80% of the regional vote for her to retain a seat (Grimsby Evening Telegraph, October 14, 1998). David Curry, on the other hand, survived a late 1980s “purge” of MEPs due to his close support of Margaret Thatcher (The Guardian, September 17, 1988) and quickly rose from the back bench to a ministerial position upon his arrival in Westminster (The Independent, July 26, 1989). The national parties also have a clear interest in how their legislators are selected. The head of the European Parliament Labour Party, Wayne David (Labour, Wales) supported a ban on MEPs discussing selection methods (The Independent, October 23, 1997), effectively limiting the voice of MEPs who did not agree to argue in their own interest—a clear indicator that parties prefer to wield control over their MEPs.

As a comparison to the European Parliament, I have selected the UK Parliament (UKP). The UKP provides an ideal test bed for comparing the behavior of legislators in different environments as it is almost diametrically opposite in its institutional and electoral design to the EP; it uses a majoritarian, first-past-the-post single-member district system with tight agenda control by a clear majority party (coalitions are rare), and has domain over all policy areas. Unlike the EP, then, the UKP provides parties with clear formal controls, but MPs are far less dependent on the party than those serving in the EP. As such, if institution-level factors have any influence over legislator behavior, then we would observed these differences most easily in a compar-
ison between the EP the UK Parliament, as the institutional arrangements are the most dissimilar possible from each other compared to other European legislatures.

From an inference perspective, such a situation is ideal: legislators who have served in both the UKP and the EP were elected to serve the same party (mostly),\(^3\) from the same country, and have similar constituencies. By comparing the behavior of legislators who have served in both the EP and their national parliament, I control for almost all possible sources of variance, meaning the difference in loyalty to party is extremely likely to come from the differences in institutional arrangements.\(^4\)

### 4.4.1 Hypotheses

The literature presents conflicting hypotheses on what to expect in terms of differences in behavior between the European and UK Parliaments. There are four reasons to expect party loyalty in the UK Parliament to be lower than the European Parliament. Firstly, the UK parliament has the most individualistic elections in European, especially compared to the closed-list PR systems used in the EP. An individualistic election incentivizes legislators to pursue their own policy and media agendas, especially in districts where their party may struggle (Hechter, 1987). Secondly, previous research has shown that UK MPs benefit greatly from their own local “surgeries”, or local constituency services (Cain, Ferejohn, and Fiorina, 1984). These surgeries provide an opportunity for MPs to gain support and media coverage without relying on their party—Anne McIntosh (Con, Vale of York) was initially censured for having few surgeries, but went on to frequently announce times for her constituents to meet

\(^3\)The single exception being Robert Jackson, Con/Lab, Wantage, who switched parties due to his opinion of the “dangerous” anti-European views of the Conservatives (The Sun, January 17, 2005).

\(^4\)The drawback of this approach is there is no way to prove that legislators from the UK are not just merely more loyal to their parties in the EP due to Britain’s history of Euroskepticism. Future research will expand this design to other European nations to give a full sense of the impact of various institutional designs on legislators from many countries.
her (The Times, September 30, 1998). In contrast, MEPs, while having their own surgeries, dedicated time to letters to the editor of local or national newspapers (e.g. The Independent, February 15, 1994; The Guardian, May 27, 2003; The Guardian, May 7, 2002) or taking up locally-relevant positions, such as Neil Parish (Con, South East England), who began a weekly column in a local newspaper (Western Morning News (Plymouth), May 21, 2008). Additionally, MPs with European Parliament experience are often placed on major committees involving the European Union (e.g. Theresa Villiers (Con) and Wayne David (Lab))–prime policy placements, and thus key roles in determining party policy–if an MP has played a major role in determining policy, we should thus expect them to be relatively loyal.

Third, despite their higher media profile, UK MPs are by no means free to pursue their own agenda: the majority has extremely tight agenda control, and an MP’s local party must select any candidate to sit on the ballot. Additionally, an MP who refuses to take the party whip can not be re-nominated by a local party, lest that local party lose its voting rights in the national party.\footnote{This development for the Conservatives is relatively recent, coming in the aftermath of the mass rebellions against the Major government.} Finally, party whips, especially under Tony Blair and Margaret Thatcher, were notorious for intense pressure on their members (The Independent, July 21, 1996). Despite these motivations for more loyal behavior, my first hypothesis states that higher incentives for individualistic behavior in the UK Parliament will drive MPs to be less loyal to their party while serving in Westminster.

**Hypothesis 1:** Legislators will be less loyal to their party while serving in the UK Parliament.

However the hypothesis against which to test Hypothesis 1 is not immediately clear: traditionally a null hypothesis would suffice, however an equally likely alternative
exists: that legislators were less loyal to their party in the European Parliament. On the surface, this hypothesis seems unlikely: MEPs have a far lower media profile, meaning they must try harder to reach voters and would benefit from varying policy positions. The national, not local, parties select each MEPs position on the party list. Typically legislators serving in the EP are younger and earlier in their careers, and thus more likely to have a need to display their loyalty to the national party line. Additionally, the European Parliament has limited policy discretion, and while it is power in some areas (e.g. agriculture (The Bristol Post, September 9, 2003)) MEPs in areas without these benefits may struggle to gain any policy profile—meaning an even higher reliance on their party. However this assumption may not hold in all cases—in the European Parliament, national parties have little to no agenda control, owing to the super-national makeup of the European Party Group system and the complicated arena in which the EP may operate. This provides incentives for individual MEPs to pursue cooperation with their continental counterparts, especially as reform is viewed as extremely difficult (The Times, June 5, 2004). Greater cooperation with Europe-wide coalitions, then, may reduce party loyalty in cases where the national party disagrees (an issue especially relevant when discussion Britain and the EU).

Secondly, although national party groups may make up the core of day-to-day life (Hix, Noury, and Roland, 2007), national parties may not spend time directly controlling their members; In the case of Labour MEPs being barred from participating mentioned above (The Independent, October 23, 1997), the national party denied any involvement or punishment for those members. Additionally, given MEPs have relatively little media pressure, the lower profile of the average MEP means that they are also less likely to face major repercussions from the public or their party for rebellious acts—Ann Clwyd was notoriously rebellious, but still managed to gain a seat in Westminster.
Finally, roll call votes in the European Parliament are far more common than their equivalent, Divisions, in the UK Parliament. Greater numbers of roll calls indicates two key factors: the average roll call is, on average, less critical to policy, which increases the likelihood that individual legislators have agreed to the policy in advance. The less critical the roll call, the less likely parties will attempt to force their members to vote “correctly”, as the resources spent (both economic and political) will be out-weighed by the benefits. Secondly, more roll call votes gives legislators more opportunities to appeal to broader constituencies with their voting records, especially on less important votes. By doing so, legislators may risk voting against their party on some issues, but will still be able to claim loyalty to their party on major votes—a common tactic in more individualistic environments such as the U.S. House. A parallel to these motivations can be seen in the high levels of bipartisanship in cosponsorship (a less visible act) compared to roll call voting in the U.S. Congress: in the previous chapter, I argued the less visible elements of lawmaking allows legislators to pursue legislation less desirable to their own party, but still allow the legislator to toe the party line when required.

**Hypothesis 2:** Legislators will be less loyal to their party while serving in the European Parliament.

Finally, much research has shown that electoral competition reduces legislator loyalty across several institutional settings. The logic being highly vulnerable legislators will benefit mostly from the support of voters who not make up their party’s key demographic. This need, the argument goes, encourages legislators to buck their party line in order to advertise themselves to alternative blocs of voters, whether by making populist “outsider” campaign pitches. Thus, I present a third hypothesis, which states that higher electoral competition will lead legislators to be less loyal to their party, regardless of the environment.
Hypothesis 3: Higher levels of electoral competition makes legislators less loyal to their party.

4.5 Data and Methods

To analyze the differences between legislator behavior in the European and UK Parliaments, I gathered data from the UK’s HANSARD database, The Public Whip, and Voteview.eu. Between 1992 and 2010, 25 MPs served in both Westminster having also served in the EP, with a total of 112 terms served in both Parliaments (40 in the EP, 72 in the UK). I have chosen to utilize roll call records primarily as they are the only identical acts in both parliaments; other methods, such as cosponsorship, are not used in the European Parliament or severely curtailed (MP’s private bills may only be introduced 13 times a year) in the UK Parliament. Additionally, the previous literature discussed focuses exclusively on roll calls.\(^6\) Some may object that many roll calls are “whipped” or shaped by the rules of the chamber, and thus are of little use. This may be the case, however, this project is aiming to ascertain the magnitude of these impacts, not the particular opinions of each MP. As such, a highly-controlled act such as roll call voting is an ideal avenue for estimating the differences of the behavior across two institutions. Figure 4.1 below illustrates the number of MPs that have also served in the EP for each Parliament for the Conservatives, Labour, and all other parties, showing that Labour had a maximum of 11 MPs with European Parliament experience in Tony Blair’s second term, and that the two most recent (2005 and 2010) Parliaments had the fewest (13) MPs with European Parliament experience.

To test Hypothesis 1 and 2, I found the proportion of votes, per parliamentary session, where each legislator voted with the position of her party, defined as the party’s modal

\(^6\)Data on Divisions before 1992 for the UK Parliament is spotty and of limited availability. As such, the 1992 Parliament was chosen as the starting point for this analysis.
yes/no vote on each roll call in which the individual voted. This qualification could prove controversial: Ann Clwyd, mentioned above, was fired from a Shadow Cabinet position for not voting on a bill. However, the alternative to this approach would be to identify the source of every missed vote throughout each session for each legislator, a task complicated by the fact that, in the European Parliament, MEPs were simply less likely to vote on Mondays and Fridays (Hix, Noury, and Roland, 2007). Figure below shows the mean, median, and standard deviation for the population of legislators who served in both Parliaments for each of the parliamentary sessions covered. It shows that, overall, the patterns between the two parliaments and over time, except for the 1992-1997 UK Parliament, which shows significantly lower levels of loyalty.

The explanation as to why this particular session saw lower loyalty has received widespread discussion (see: Berrington and Hague, 1998; Cowley and Norton, 1999).
The Major government’s assent to the Treaty on the European Union led to most of their backbenchers to regularly rebel against the Government, lowering loyalty rates. Exacerbating this reduction in loyalty was the fact that while “old” Labour was also opposed to the EC/U, New Labour was pro-Europe, meaning members of the opposition could not agree with themselves on particular policies, enhancing the relative lack of loyalty. In short, the Treaty on the European Union exposed a cross-cutting cleavage in both parties. As such, in the models below I also include a dichotomous variable isolating the effects of this Parliament from the general population, as events specific to that session, and not directly applicable to the UK Parliament in any other time, caused the lower loyalty rates.\(^7\)

![Figure 4.3: Distribution of Legislator Loyalty by Parliamentary Session](image)

Note: Points indicate mean, lines indicate inter-quartile range

Figure 4.3: Distribution of Legislator Loyalty by Parliamentary Session

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\(^7\)The European Union, to be sure, remains a controversial topic in Britain, with the Conservative backbench pushing for a referendum on membership. However, this particular session saw the most vitriolic, and dynamic, shift in opinion of the parties.
Figure 4.3 also illustrates that the population of legislators who served in both parliaments match the loyalty of their colleagues who did not serve in both Parliaments quite well: in every session the inter-quartile ranges (the lines) overlap for members who served in both Parliaments (dashed) and those who only served in that particular parliament. In all parliamentary sessions, those who served in both parliaments do not differ statistically or substantially from their colleagues: the inter-quartile ranges never fail to overlap. This finding, especially for the European Parliament, is surprising: one would expect younger MEPs looking to advance their career would be more loyal to their party in order to secure promotion. However the data indicate this is not the case.

Testing Hypothesis 3, which predicts that more competitive elections will create a motivation for disloyalty, requires a more fine-tuned measure than a simple vote percentage, as the EP and UK elections occur under different rules. Since 1994, MEPs have been elected in multi-member, PR districts in contrast to election methods prior to 1994 or elections to the UK Parliament. As such, typical approximations of vote share or victory margin do not translate to all elections covered (Selb, 2009). Therefore, I use the competitiveness index developed by Grofman and Selb (2009). This index allows the comparison of multi-and single-member districts by evaluating the incentives for members of each party to turn out to a) win an additional seat or b) prevent a loss of their last seat. In cases where the district contain only one seat, this calculation simplifies to the percentage of the vote between the winner and the losing party (Grofman and Selb, 2009, p. 2). Figure 4.4 below shows the distributions of party competition in each parliament. Lower scores indicate less competitive seats, while higher scores indicate more competition. The figure also shows the median and inter-quartile range for each election in the study. It illustrates that, on average, elections in the European Parliament after 1994 were the most competitive, while UK Parliament elections in the 1990s (1992 and 1997) were the least. However, for the
most part all of the elections occupy a similar range of levels of competition.

Note: Points indicate mean, lines indicate inter-quartile range

Figure 4.4: District Competitiveness by Election, All Legislators

4.5.1 Methods

Typical statistical inference relies on a $p$ value, giving the probability that the attained test statistic (e.g. $\chi^2$, $z$) would attain that value with another sample of that size drawn from a population. A reliance on a $p$ value, then, does not make sense in terms of this investigation: the 25 MPs who served in both the EP and UKP represent the population of possible subjects for this study.\footnote{Even if the data are missing one or two observations, they would still not constitute a random sample of the population.} Thus, any test based on how the 25 MPs compare to a hypothetical population would provide no use in this situation. To alleviate this issue, this paper below utilizes a Bayesian approach. Bayesian approaches do not test hypotheses based on $p$ values to a null hypothesis, rather
Bayesian analyses focus on the likelihood of attaining a posterior distribution based on prior information and the data provided (Berk, Western, and Weiss, 1995). The probability of the posterior is then evaluated without assumptions of the replicability of the sample.

### 4.6 Results

Figure 4.5 below shows the data points for all legislative sessions in the data. The x-axis shows the value for each individual's district for the given election from the Grofman and Selb index. The dotted lines represent the means for each sample one each axis, illustrating that, on average, the UK Parliament elections were less competitive and engendered less loyalty, however this effect was mostly driven by the extreme disloyalty during the 1992 UK Parliament—all values below 90% loyalty occurred under the Major Government, signified by the crosses. Overall, however, the plots show relatively little difference between the two parliaments. This should not be a surprising finding for two reasons. Firstly, we should not expect elected officials to disagree with their political party often, especially in a system where the party represents the fundamental core of political life. Secondly, voting on particular bills is highly censored by the majority party, artificially increasing the loyalty of any given legislator, thus reducing the possible variation in loyalty.
Table 4.1 below shows the result of a Bayesian Hierarchical generalized linear model, including a random effect for each legislator. The table below can be interpreted in a similar manner to a logistic regression, with two key exceptions. Firstly, the table, instead of showing coefficient estimates, is showing the mean and standard deviation of the posterior distribution, or the distribution of the value of each variable at each MCMC trial—i.e., short, instead of providing a point estimate (a coefficient) that we assume is the mean in a frequentist approach, the Bayesian approach provides a description of the most likely values of each variable. Secondly, the Bayesian p values provided, instead of the probability of the coefficients having that value assuming the null hypothesis is true, instead reflect the proportion of the posterior distribution that covers the “null” value of no effect: in short, a Bayesian p-value of .01 indicates a 1% chance that the true value of the posterior is equal to (or less/greater than) zero, given the prior distribution and the data.

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9 The random effect for each legislator is appropriate here as the differences between individual legislators are drawn from the same probability distribution.

10 Given the uninformative prior, much of these findings can be attributed to the data.
The evidence shows that, apart from the 1992-1997 Parliament, legislators were more loyal to their party while serving in the UK, and not EU, Parliament, providing support for Hypothesis 2. The findings also provide marginal support for Hypothesis 3, that higher levels of district competition decrease loyalty; the model indicates that the probability that the true value of the posterior distribution being less than zero is .86. The effect for both of these variables, however, is extremely small: service in the UK Parliament brought, on average, 1.35% higher loyalty from legislators compared to the European Parliament. While this is a small difference, this finding presents a source of interest, as the bulk of the academic literature would suggest that the UK Parliament, with its more individualistic elections, would see lower levels of loyalty compared to the PR-based European Parliament. However, other than the 1992-97 Parliament, this was not the case. The data also provide support for institutional factors driving behavior, as no substantive differences between Conservative, Labour, or other minor parties exist.

Table 4.1: Summary Statistics for Posterior Distributions

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<th></th>
<th>Mean</th>
<th>Std. Dev</th>
<th>P</th>
</tr>
</thead>
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<td>UK Parliament</td>
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<td>0.005</td>
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<td>0.024</td>
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</tr>
<tr>
<td>1992-1997 UKP</td>
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<td>0.007</td>
<td>0.000</td>
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</tr>
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<td>Chains</td>
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<tr>
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<tr>
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</tr>
<tr>
<td>N. Legislators</td>
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<td></td>
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</tr>
</tbody>
</table>

Note: Bayesian P Values shown
4.6.1 Convergence Diagnostics

Figure below shows the trace plots (L) and posterior densities (R) of district competition and the dichotomous variable for the UK Parliament. The posterior densities represent the posterior distribution of the Bayesian model, in effect the distribution of possible values for each distribution based on each MCMC iteration. The trace plots show good levels of mixing, seen in the almost random pattern of the plots, and Proportional Scale Reduction Factors close to one (1.0000574 and .9999752, respectively) together mean that the model is likely to have converged on the “true” value of each variable. The trace plots follow the MCMC routine as it iterates across 1 million iterations (the x-axis) and gives the value for each variable (the y-axis). The complete randomness of the pattern indicates the routine was memoryless, meaning that the previous value of the routine did not determine the next value, a key element of proper convergence. The density plots on the right show the density of the underlying probability distributions for the variables, with the x-axis being the estimated value of the variable for a given iteration and the y-axis being the frequency. The relative normality of the distributions indicates higher likelihood of convergence of the model, again indicating that the model reveals an estimate of the true shape and location of the posterior distribution.
Figure 4.6: Diagnostic Plots of Bayesian HLM
4.7 Conclusion

In addition to these findings, I also attempted to contact all living MPs who also served in the European Parliament via email and regular mail, however I received no acceptances for interviews. This step was seen as crucial, as it would give additional depth and perspective on the findings. Additionally, most European countries do not regularly grant access to roll call data from their respective Parliaments. This paper serves as a proof-of-concept, however with more time, and extensive research funding, the question posed in this project could be more adequately addressed by gathering data on a wider array of EU member states. That way, the model in the design could control for institutional factors common across countries, without the need for country-specific effects, in a similar way, but more likely to deliver accurate results, as Hix and Noury (2015).

Despite these disappointments, this paper has shown the potential for the European Parliament as a testing bed for the analysis of the impact of institutional design on legislators. It has showed statistically-significant, and not unimportant, differences in loyalty to the same political party by the same individuals serving in different environments. Additionally, and surprisingly, it has shown that, apart from the aberration of the 1992-97 UK Parliament, average loyalty of MPs was higher while serving in Westminster compared to the European Parliament. This finding leads to interesting additional hypotheses as to the exact mechanism responsible for this finding. One could conclude that the relatively low level of media and public awareness of the activities of the European Parliament, or the lack of national party control over the agenda, result in higher levels of loyalty in the European Parliament. To conduct additional tests, future research must gather additional voting records from additional national parliaments, allowing greater investigation into the impact of particular elements of institutional design.
Chapter 5

The Ties That Bind...

The three preceding chapters have discussed key elements of legislator behavior. Firstly, in Chapter 2, I find that partisan cosponsorship levels in the U.S. House were impacted by victory margin, but only for members of the minority. These findings also confirm that roll-call voting shows less variance (due to censoring of votes) compared to cosponsorship, providing evidence against the further use of roll calls to ascertain the impact of outside factors on legislator behavior.\(^1\) Chapter 3 found that, contrary to 40 years of academic research and recent media perception, Members of Congress are in fact more vulnerable than they have ever been, despite fewer MCs having low victory margins. Finally, in Chapter 4, I leverage the population of British MPs who also served in the European Parliament, finding that the more individual-centered, politically-important House of Commons actually engendered higher levels of loyalty on roll call votes compared to the European Parliament. But, what is the common tie between these findings, and what are the implications for U.S. politics? This chapter discusses each of these factors, as well as directions required in future research, starting with the common link between the papers and how the findings

\(^1\)One may point out that I perform just this kind of analysis in Chapter 4, however, as I discuss, Chapter 4 focuses on the impact of institutional effects on roll-call votes.
inform one another.

Although all three of these papers relate to legislative politics, the question remains what common thread they share. I argue the findings shed light on recent public and scholarly debate on the impacts and solutions to increasing polarization. Firstly, the findings in Chapter 3 indicate MCs are being elected by margins of 25-50% more frequently now than at any other point since WWII. These margins, Chapter 2 shows, encourage members of the minority party to become more partisan in their cosponsorship behavior. This is caused, I argue, by the fact that these members are less likely to face major electoral consequences, and thus are more able to attempt to further their career in Congress by enhancing their reputation amongst their fellow partisans.

My findings also support those of Harbridge (2015), who finds that increasing majority control over the voting agenda, and subsequent increase in vote polarization have forced MCs to find other ways of pursuing a bipartisan agenda, namely by focusing more of their time and energy on cosponsorships. Some may point out, correctly, that cosponsoring individual pieces of legislation can be a relatively meaningless act. However, MCs have little choice if they seek to influence the agenda, especially members of the minority. I would also counter that many votes can be seen as relatively meaningless, either in terms of likelihood (knowing the bill will never become law) or in terms of actual policy impact. While neither roll call or cosponsorship behavior represent the ideal way to gauge the opinion and thoughts of legislators, I argue that combined they do illustrate the varying pressures placed on legislators.

The second major thread between these three chapters is the need to account for institutional incentives when discussing legislator behavior. Legislators surely do not act only on one impulse or dimension when making decisions: a pure ideologue would find themselves isolated from their party and the electorate, and thus unable
to impact policy. To be sure, *strategic* ideological campaigns in Congress can be of a huge benefit, but the findings of some literature that only ideological concerns drive legislator behavior strain credulity; to assume a group of well-educated, intelligent (in theory), wealthy (almost entirely) and diverse (in terms of geographic origin within the U.S.) group of individuals such as U.S. Representatives all respond to problems by using the same single cue is at least highly questionable. Further, NOMINATE measures are interpreted as differences on ideological spectra, however this is just the interpretation, and could be entirely the result of increasing partisan control and manipulation of the agenda causing individual MCs to vote differently from one another.

Underlying the NOMINATE method is a scaling method that evaluates the likelihood of any legislator voting the same (or differently) than any other. Such an approach is also incapable of differentiating sincere ideological preferences from tactical ones. For example, Kyrsten Sinema (D-AZ) has repeatedly bucked the Democratic leadership, including voting for the Paul Ryan budget and to disapprove of the Iranian nuclear accord. According to a NOMINATE score, this would make her conservative. However, although serving in a liberal district, Sinema represents Arizona, one of the most Tea Party-heavy states. If she ever hopes to have a chance at election to the Senate or state-wide office, or wishes to avoid a major Tea-Party backed challenger, she must account for these pressures. Thus, we have good reason to suspect her votes in favor of the Ryan budget were at least in part strategic in nature, even if she claims to agree with the policies: if she is voting strategically, she would never admit to this, as it would defeat the purpose of the strategy as a whole.


5.1 Future Research

Like any research, the chapters above are neither perfect nor do they adequately capture the original intention of the questions at hand. In this section, I briefly discuss what future research should accomplish, as well as improvements that I believe would enhance the findings.

In terms of Chapter 2, I believe the research as is requires two modifications. Firstly, the current assumption of all cosponsorships being equal appears tenuous. The theory even supposes that MCs utilize cosponsorships to enhance their own prospects, so a member of the minority giving a cosponsorship to a powerful member of the majority would serve as an indication of my theory. Secondly, and more significantly, the current analysis makes no distinction between the policy areas of cosponsorship behavior. This may be a problematic assumption. A liberal Democrat may be able to cosponsor across the aisle on deficit reduction or local issues, but would face major repercussions from their party leadership or primary voters if they cosponsor a bill revoking funding for Planned Parenthood. Thus, the aggregate pattern of cosponsorship may be mask-ing MC’s tendency to cosponsor across the aisle on “easy” issues while reserving more partisan behavior for more core or politically-sensitive topics. Secondly, although the statistical analysis shows potential endogeneity does not bias the findings, the current analysis has no way of observing the (presumed) bi-directional relationship between victory margin and partisan cosponsorship. The theory and hypotheses presume that MCs alter their behavior, with the presumed goal of increasing their electoral security. If this is true, then the pattern should be reflected in different electoral support. This suspicion does have support in previous academic literature (e.g. Ansolabehere and Jones, 2010), however the impact of this effect is unknown.

In terms of Chapter 3, the most pressing additions to the model would focus on devel-
oping a measure of district similarity from cycle-to-cycle, meaning the analysis could be performed across redistricting decades. Gathering Census data for the geographic areas each individual represents, and the extent to which they differ, would thus enable longer-term predictions. These new data will allow for identification of not only vulnerable incumbents but also potential strategic retirements. As is, the model does not attempt to predict retirement, but the use of Markov probabilities of defeat may serve as a novel way of identifying potential cases of strategic retirement. However, akin to the use of underlying district fundamentals as non-absorbing states, careful examination of the impact of null transitions between non-absorbing states (a result of relatively few retirements each year) may reduce the effectiveness of the method.

Chapter 4 is perhaps the chapter with the most to gain from additional funding and time. An obvious limitation of the study is that it only examines British MPs, however the chapter originally sought to compare multiple institutional arrangements. In some cases, the data for roll calls in other countries are available, but were not shared (e.g. France, Germany). In the case of Italy, the existing data only account for final passage of bills, which would inflate the levels of loyalty shown. In other countries, data are not widely available. A true test of the theoretical use of the European Parliament, then, would require archival research in each country to gather domestic roll call data to compliment the European Parliament data. As an additional improvement, I would also want to complete interviews with MEPs, as this would give me an insight into how legislators perceived any differences between the institutions. Several news reports (e.g. Reformer MEPs quit Brussels, 2004) suggest MPs do perceive differences, but these reports, especially in the context of the U.K., could be casting the EP in a negative light for political gain.
5.2 Implications for U.S. Politics

The findings in the preceding chapters paint a worrying picture for U.S. Politics. Much discussion, both academic and popular, has focused on the ideological polarization both of the elite (e.g Dalton, 1987; Levendusky, 2010; Hetherington, 2001) and the broader electorate (e.g Abramowitz and Saunders, 2008; Carmines, Ensley, and Wagner, 2012). The findings in the preceding chapters have three areas of relevance to this discussion. Firstly, the evidence in Chapter 2 indicates that polarization amongst MCs may not be solely political, but rather may be a function of clearer partisan incentives; the evidence shows that members of the minority party, who have less access to the agenda, tend to dedicate more of their time and energy to sponsoring across the aisle. Second, IF polarization is caused by gerrymandered districts, as some have claimed (e.g Carson et al., 2007; Fiorina, Abrams, and Pope, 2005; Issacharoff, 2004), then the fact that electoral victory margins (and thus reliance on a shrinking pool of moderate voters) are increasing presents further cause for concern. Third, the combined findings of Chapters 2 and 3 present further relevance for combined polarization, as the current generation of MCs win by margins that make them less likely to engage in bipartisan cosponsorship.

Finally, many suggest that altering American institutions, such as adopting PR or mandatory voting, would ease partisan tensions in Washington. I admit, I count myself amongst these individuals. However, the evidence from Chapter 4 shows that even two vastly different institutions such as the European Parliament and the UK Parliament, even major overhauls of the electoral and legislative system would not result in major changes. The difference between the UK Parliament and the European Parliament only resulted in a 1.36% change in voting loyalty—although the institutional arrangements placed on legislators also apply to the way the majority chooses which proposals receive a vote, meaning raw vote differences may not tell the
complete story of the impact of institutional design, it seems unlikely that switching to PR system would cure all of the ailments in American politics. Issues and controversies surrounding legislative politics are both a *symptom* of political issues and a *cause* of the same issues, and making drastic change to the system with no guaranteed benefit.

The study of legislative politics is often criticized as being a strictly theoretical exercise, unable to predict discuss/narrow policy outcomes but only broad theoretical analyses of who is likely to vote with whom. Political science, especially in the last two decades, has taken a similar tack, especially after the predominance of the NOMINATE-heavy methodological approaches starting in the 1990s—although this approach surely does provide empirical results, the results are often so attributed to ideology that little “on the ground” information can be leveraged from their predictions. This preponderance of a similar methodological interpretation has led to two distinct failings. Firstly, interpreting roll call votes in such abstract terms only serves to remove the politics from the study of legislative systems. Secondly, focusing on such a narrow, and often theatrical, element of legislative behavior, we fail to understand the day-to-day drivers of legislative behavior and the potentially differing underlying the choices individual legislators make. These two issues create the need for new approaches to investigate the impact of victory margins, electoral security, and legislator behavior.
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Appendices
A Victory Margins and Cosponsorship In the U.S. House: Additional Data and Evidence

A.1 Additional Data Analysis

Likelihood of Opposition Given Victory Margin

Figure A1 below illustrates that an MC winning by less than 15% of the vote will face opposition in the subsequent election 96% of the time, whereas winning by 49% or more results in opposition in the subsequent election only 77.9% of the time. In fact, over 64% of all MCs who did not face a challenge from a member of a major party won the previous election by at least 37%. Fewer potential opponents, and thus a lower need to mobilize moderate voters, provides disincentives for partaking in acts of bipartisan cosponsorship and, in some cases, may limit participation by legislators in order to decrease intra-party conflict (Carroll and Eichorst, 2013).\(^2\)

\(^2\)I do not claim that electoral victory margin is the only incentive to cosponsor across the aisle, however the lack of electoral threat certainly reduces the utility of a bipartisan relationship for MCs.
Note: Opposition defined as facing member of a major party (Democrat or Republican) in the general election.

Figure A.1: Previous Victory Margin and Opposition

Distribution of In-Party Cosponsorships

Figure A3 below illustrates the distribution of in-party cosponsorships across the 8 Congressional terms measured. The white dot represents the median, the black bar the interquartile range, and the shaded area represents the density. The plot shows that relatively little change in terms of percentage of cosponsorships dedicated to the opposite party has occurred over time: other than the 110th Congress, all of the medians lie within 3.5% of the others. The 110th Congress, the first Democratic-controlled House since the 103rd Congress, shows a substantially higher median, as well as a substantially concentration of Members giving over 80% of their cosponsorships to
the opposite party.

Figure A.2: Distribution of In-Party Cosponsorships by Congress
Additional Statistical Models

Table A1 below replicates the models in Table , including additional controls for gender, race, and if the MC represents a district from the South, defined as the 13 states of the Confederacy.

Table A.1: HLMM of Victory Margin and Cosponsorship Behavior

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<tr>
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<th>Std. Error</th>
<th>Model 2 Estimate</th>
<th>Std. Error</th>
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Note: * indicates $p < .01$. Random intercept for each MC not shown
# indicates variable was mean-centered to account for collinearity.
A.2 Comparison of ANOVA and Bayesian Analyses of Difference between Voting and Cosponsorship Records

Tables A.2 and A.3 below show the results from an Analysis of Variance and Bayesian general linear model testing the difference between voting and cosponsorships. Together, they provide clear evidence that MCs vote with their party more than they cosponsor.

Table A.2: Analysis of Variance of Voting and Cosponsorship

<table>
<thead>
<tr>
<th></th>
<th>Df</th>
<th>Sum Sq</th>
<th>Mean Sq</th>
<th>F value</th>
<th>Pr(&gt;F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>1</td>
<td>85.59</td>
<td>85.59</td>
<td>7403.59</td>
<td>0.0000</td>
</tr>
<tr>
<td>Residuals</td>
<td>6507</td>
<td>75.23</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Results show difference in “loyalty” of roll call voting and cosponsorship across 103rd-110th Congress

Table A.3: Bayesian General Linear Model

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Naive SE</th>
<th>Time-series SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>0.68</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Voting</td>
<td>0.23</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>σ²</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Note: Results show posterior density for Bayesian general linear model with uninformative priors.
B The Marginals Never Vanished: Additional Data Analysis

B.1 Vulnerability by Seniority

The data above provides evidence that the relationship between victory margin and incumbent success has varied across time. But how does the likelihood of electoral success (or failure) change across an MC’s career? Figure B.3 below shows the likelihood of an MC being defeated during a general election campaign (solid line) and during a primary election (dashed line) based on the previous terms served served in the same Congressional district.\(^3\) In general, MCs see the likelihood of general election defeat drop until the end of their 7th term, after which the odds of defeat stay generally consistent around 4%. In terms of primary elections, the data reveal that the longer an incumbent serves, the more likely they are to succumb to a primary challenge: incumbents serving their 14th Term are equally likely (3.748%) to lose a general election or a primary election.\(^4\)

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\(^3\)The distinction between this service and total number of terms served in Congress is important: MCs who begin service in a new district after a round of redistricting may lose the advantages of incumbency, or, alternatively, incumbents who serve for long tenures in the same district may become more susceptible to an “outsider” candidate. The data reveal that MCs serving in their first term in a Congressional district see defeat rates for MCs in their first term of around 9% and around 10% for all first terms. This difference indicates that MCs who change districts fare slightly better than those who enter Congress for the first time.

\(^4\)These patterns are broadly repeated when differentiating between political parties.
B.2 Expected Terms Remaining

Figure B.4 below shows the accuracy in terms of the number of terms each MC serving in the first year of a redistricting cycle between the 1950s and 1990s. The 2000s are excluded from this analysis, as 53% of the MCs elected in 2002 were still serving in Congress during the 111th Congress elected in 2010. The figure shows the predicted number of terms remaining (dashed line) and the median (solid line) and inter-quartile range of actual terms remaining. For the majority of the years in question, the predicted terms remaining fell within the inter-quartile range of the actual terms served. However, the figure also shows that the Markov chain tends to
over-predict the actual number of terms served. Unlike the correlation between actual and predicted victory margins in Figure 3.10 above, the actual and predicted number of terms served do not correlate well, with a maximum of $r = .11$ in the 1990s and one decade, the 1980s, showing no statistically distinguishable correlation ($p=.27$).
Note: 2000s excluded from analysis due to high proportion of MCs still in Congress at end of redistricting cycle

Figure B.4: Predicted Versus Actual Loss Rates by Decade