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Legislative Instability and Party Power in Paraguay

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ABSTRACT

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Social choice theories of legislative politics often expect legislatures to function in a somewhat chaotic and unstable manner (Arrow, 1951; Riker, 1988). However, this unstable nature of legislatures has often not been directly observed in legislatures (Tullock, 1967). While some authors have argued that this instability is unobserved because legislative behavior is constrained by institutions (Shepsle and Weingast, 1981), most other authors have instead focused on analyzing the extent to which legislative outcomes were partisan or non-partisan, while taking legislative stability for granted—through the assumption of unidimensional preferences of legislators (Krehbiel, 1999; Cox and McCubbins, 1993, 2005; Krehbiel, 1998). Paraguay provides an exciting opportunity to model the extent to which political parties have effects on legislative outcomes in a situation where legislative instability is more directly observable. In Paraguay, 1) the executive is extremely weak meaning that legislators are capable of behaving sincerely, 2) legislators have weak ideologies, 3) legislators display dynamic preferences, and 4) constitutional, legislative, and partisan institutions provide weak agenda-setting powers to legislative actors. All in all, this means that legislators behave in a way that is more akin to the instability predictions of Arrow (1951) and Riker (1988). However, theories of political parties under these conditions do not currently exist. Therefore, in this book I generalize unidimensional theories of political parties to conditions of multidimensional, dynamic, legislative preferences using Paraguay as an instrument of this generalization. The main findings of this book is that despite a somewhat unstable
policymaking process, majority parties in Paraguay are able to produce non-centrist, partisan policy outcomes from the legislature. That being said, parties and intra-party factions at times have competing interests. Intra-party factions prefer most of the concentration of benefits the party can accomplish to be centered on the preferences of the intra-party faction itself—but this may lead to a weaker party overall as it foments intra-party divisions. In contrast, political parties as a whole are more capable at concentrating benefits in themselves when these benefits are equally distributed among all intra-party factions. The theory of fractious parties developed in this book allow for the exploration of these hierarchical intra-party dilemmas in a way that is not fully possible using unidimensional models of legislative outcomes.
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Chapter 1

Introduction

In 2017, Paraguay was experiencing a political crisis over whether it should modify its constitution in order to allow for the reelection of the president. The main reason why this discussion led to such conflict was because President Horacio Cartes, of the Colorado party, and his legislative coalition attempted to allow for the reelection through a “constitutional amendment,” because an amendment is easier to approve, even though the correct constitutional mechanism through which this change should be made is through the “constitutional reform” which requires a 2/3 majority from both chambers. While there was much resistance to this amendment in the Senate, in the end it was not the legislature that stifled this amendment attempt; it was a mass protest against this modification of the constitution which impeded the bill from moving from the Senate to the Chamber of Deputies, and which then motivated President Cartes to abandon the amendment project (Carrizosa, 2018).

An outsider that happens upon this story may interpret it through a default lens applied to most transitioning democratic systems. That default interpretation may go something like this. Paraguay was under a dictatorship supported by the Colorado party for 35 years, and the Colorado party continues to dominate politics in the democratic period. So while legislatures exist, perhaps the division of power is not substantial because a common party has dominated both branches of government for most of the democratic period. For outsiders, then, observing that a Colorado president attempted to change the constitution in an unconstitutional manner through the legislature may not be surprising at all. The ability of the president—and his party—to trample institutions may simply signal a legacy of Paraguay’s authoritarian past, which is enabled through the concentration of inter-branch power in a single party that has an overwhelming level of control over its members.
This interpretation, however, is incorrect, and the most important reason why is because it assumes that the Colorado party is a single, cohesive entity. In fact, if we look at the events that took place in 2017 in detail, we would see that the strongest opposition to the amendment process to allow for the president to be reelected came from a faction of the Colorado party itself. Mario Abdo Benítez, and the Añetete faction of the Colorado party opposed the amendment, while President Horacio Cartes, and his Honor Colorado faction, supported the amendment. Similarly the Liberal party, the largest party in the opposition, was also divided with Blas Llano and the Equipo Jóven faction supporting the amendment and Efraín Alegre, the party president, opposing the amendment. In other words, both of the largest political parties were split internally on this issue.

A second particularity about this crisis was that several legislators seemed to change their minds constantly about the issue. For example, on August 24, 2016 a group of Colorado and Liberal senators that were opposed to the amendment project, proposed the amendment project in the Senate. This may seem odd, since often legislators that wish to block a piece of legislation will fight tooth-and-nail to prevent it from being scheduled for a floor vote. However, these legislators intentionally brought the bill forward in order to be able to vote against it, because rejected bills cannot be considered again for a year according to Article 290 of the constitution. One year later, however, the majority that rejected the amendment was replaced by a new majority that was intent on passing the amendment—even though no legislators were replaced between 2016 and 2017 meaning that at least some legislators switched sides.

A third particularity was how necessary this vote to reject the amendment was for those that wanted to prevent it from passing. Thanks to this maneuver, the president of the Senate was able to declare any new amendment proposals as out-of-order, and he could refuse to schedule any amendment proposals for floor votes—granting the Senate President an agenda-setting power he otherwise would not have had. Had it not been for this maneuver, the majority of Senators that wanted to pass the amendment in 2017 could have forced him
to call an extraordinary session to treat this issue, and they could have used a motion to create a committee of the whole on the Senate floor, and they could have approved the amendment in a single day—without sending the bill to any committee. Therefore, while this constitutional requirement to wait a year before reconsidering a bill was blatantly ignored by this new majority in 2017, it did provide an additional hurdle that those intent on passing the amendment would have to jump over. This blatant flouting of the rules also served as motivation for the mass protests to take place.

While the example provided above may seem like a very specific issue, this example does seem to be representative of a larger pattern of legislative behavior in Paraguay. The three characteristics highlighted by the events of 2017 detailed above—of intra-party fragmentation, changing legislative majorities and weak legislative institutions that assign few agenda-setting powers to legislative leaders—create a situation where a coalition of factions that exists in one moment to pass a policy, may dissipate and be replaced by another which is willing to pass a policy that directly contradicts the previous one. Because of the fractionalization of political parties, it does not seem like one party can consistently command a majority of the legislature. Sometimes a party is unified, with all its internal factions in line, and other days a party is divided, with certain factions of the majority party cooperating with factions of the minority parties in order to get its agenda passed. These shifting, cyclical, and changing alliances seem to be an enduring part of Paraguayan politics. These unstable characteristics of Paraguayan politics are evident to legislators themselves as well. In 2019, for example, a Senator for the Colorado party colorfully described Paraguayan politics by saying that “like a rotisserie chicken, politics also goes around and around.”

1.1 The Cemetery of Theories

These contradictory and cycling policy outputs from the legislature, understandably, make Paraguayan citizens unenthusiastic about their political system. Paraguayans often capture this sentiment of bewilderment—about how one party behaves as two, and about how some-
thing that was rejected in one moment is approved in the next by the same set of legislators through blatant violations of legislative procedures—with a saying that goes: “Paraguay is the cemetery of theories.” The idea behind this phrase is that in Paraguayan politics, the regular laws of politics do not apply. An interpretation that may make perfect sense in more established democracies does not hold water in Paraguay. It is as if the political laws of physics that exist elsewhere are absent in Paraguay, and therefore any attempt to systematically comprehend the Paraguayan political system is folly.

In this book I will argue that this incredulity about political science’s usefulness to understanding Paraguayan politics is not warranted. However, in this book I will argue that existing theories of legislative behavior are a bit rigid in their ability to understand Paraguayan politics. This does not mean that existing theories of legislative behavior must be abandoned completely. Quite to the contrary, I will argue that because of the peculiar characteristics of the Paraguayan political systems, questions that have been foundational to the study of legislative politics can be re-explored under a new context and under a new light. My hope is that through this exercise of applying existing theories to new contexts, some of these long-standing questions can find new answers.

1.2 The Long-Standing Questions

Specifically, this book will be focusing on re-analyzing three questions that have been foundational to the analysis of legislative politics. The first question was asked by Tullock (1967) in his article titled “Why so Much Stability?” The second question was asked by Aldrich (2011) in his book titled “Why Parties?” And the third question was asked by Krehbiel (1993) in his article titled “Where’s The Party?” In answering these questions in the context of Paraguay, we can both explore the effectiveness of old answers to these questions in capturing legislative dynamics in Paraguay, and, where necessary, we can provide new adaptations to old theories in order to make them more generalizable—and thus more capable of functioning both in Paraguay and their original contexts.
1.2.1 Why So Much Stability?

The first question of “Why so Much Stability?” was developed in the context of the United States, and it asked why legislative stability was so common in the House of Representatives despite the fact that formal models of legislative behavior often expected legislative outcomes to be more erratic and chaotic—produced by “cycling majorities” (Arrow, 1951; Riker, 1988). As the stories that began this introduction suggest, however, in Paraguay it is not clear in an ex-ante fashion whether this stability actually exists. In Part I of this book I therefore analyze whether we can empirically observe legislative stability in Paraguay, or whether, in fact, the legislative process is more like the “rotisserie chicken” described by Paraguayan legislators.

In order to analyze whether stability exists in Paraguay, Part I of this book explores three explanations the literature on political science has proposed for why legislative stability might exist: dictatorships, strong legislator ideologies, or strong legislative institutions. In Chapters 3, 4, 5, and 6 I explore whether any of these three plausible causes of stability exist in Paraguay. I find that in Paraguay legislative stability does not seem to be caused by a dictator (or strong executive), by the ideologies of legislators, or by the strength of legislative institutions. The conclusion of Part I of this book is that it seems that legislative outcomes in Paraguay are, in fact, more prone to instability than what is usually observed elsewhere.

This finding, of course, does not prove that Paraguay is in fact a “cemetery of theories,” but rather it shows that in order to understand legislative outcomes in Paraguay it may be necessary to bring back some older theories of legislative behavior that attempted to model legislative instability more directly rather than simply assuming away the possibility of legislative instability. Assuming away legislative instability may be acceptable in a legislature that does not display substantial amounts of instability. However, modeling instability directly would be vital in a country such as Paraguay, where legislative instability seems to be more common.
1.2.2 Why Parties and Where’s the Party?

The second and third long-standing questions of “Why Parties?” and “Where’s the Party?” are both similar in the sense that they deal with the role of political parties in the legislative process. For this reason, both these questions are addressed in Part II of this book. Despite the similarities of these questions they are in a sense a bit distinct.

The first question deals mainly with why political parties were developed, what role they perform, and who they perform that role for. In order to explore this question of “Why Parties?” I review the historical work that others have created about the process through which political parties were formed in Paraguay. Interestingly, although democracy in Paraguay was first seen around 1989, the two largest political party organizations—the Colorado and Liberal parties—were founded in 1887. In Chapter 7 I argue that although party organizations served the purpose of concentrating power in their members—even outside of a democratic structure—these parties were unable to provide the political stability that they sought to create because of the high levels of intra-party fragmentation both political parties had. This fragmentation, at the expense of the party as a whole, also shows that the main beneficiaries of the political parties were not the politicians that made it up, but rather the narrow-interest groups that exploited parties in an attempt to amass particularistic benefits.

To answer the second question of “Where’s the Party?” I focus in on the legislative dynamics of party politics in Paraguay’s Chamber of Deputies during the democratic period. In order to do this, in Chapter 8 I first modify existing theories of legislative parties in order to take into account higher levels of intra-party factionalization, and the instability that this fragmentation can cause. In Chapter 8 I argue that even with factionalization and instability, and even if legislative leaders have weak agenda-setting powers, it is possible for political parties to concentrate powers in themselves as long as 1) party institutions make it difficult for the party to eject partisans from its ranks, and 2) party institutions implement at least some supermajoritarian, consensus-building rules.

Finally, in Chapter 9 I empirically analyze expectations derived from the fractious theory
of parties, developed in Chapter 8, to see the extent to which this theory stacks up against more traditional theories of legislative parties. In traditional legislative theories, the assumption that legislators have stable, unidimensional legislative preferences allows researchers to assume away the problem of legislative instability because legislative instability is not likely to exist under these conditions (Black, 1948). In Paraguay, however, since we find evidence of dynamic multidimensional preferences of legislators, then legislative instability should be modeled directly. After comparing and contrasting the findings of unidimensional models relative to those of multidimensional models, I find that they are both generally good at finding where legislative outcomes are more likely—that is, they are good at exploring whether legislative outcomes are partisan or non-partisan. However, multidimensional models can explore the relative strength of these outcomes by modeling both where and how stable legislative outcomes are simultaneously, while unidimensional models have no way of capturing this second concept of importance.

1.3 Objectives of this Book

With a few notable exceptions, such as Molinas et al. (2008), Molinas, Pérez-Liñán and Hallerberg (2009) and Saiegh (2009), very little has been written about legislative politics and legislator behavior in Paraguay. In general, as well, Paraguay is one of the most understudied countries by political science in Latin America (Alemán, 2013). The first objective of this book is to provide a broad framework under which outside researchers can understand and expand the analysis of Paraguayan politics. In order to do this it was necessary to modify existing theories of legislative behavior in order to better account for legislative outcomes, but it was also necessary to systematize and order a large scale of data—mostly roll-call data—from the Paraguayan legislature.

In terms of data, the large amount of roll-call data available in Paraguay also makes it possible to analyze legislative outcomes relying heavily on spatial models. While other researchers have certainly analyzed Latin American legislative outcomes using spatial models—
such as Alemán et al. (2009), Calvo (2012), Calvo and Sagarzazu (2010), Alemán and Calvo (2013), Saiegh (2009), Saiegh (2014) and Saiegh (2015), among others—most of these works have not relied on roll-call votes directly, because the practice of recording legislator votes in Latin American legislatures is not widespread (Morgenstern, 2003; Ainsley et al., 2020). In contrast, roll-call voting studies have been widespread in the United States—the most studied presidential system in the world. Therefore, at times it seems like the legislative literature of Latin America and the United States have been using different data and different approaches to construct legislative theory because of the varying availability of roll-call data in Latin America. For example, in perhaps the most comprehensive analysis of roll-call data in Latin America, Morgenstern (2003) had a grand total of 1,787 roll-call votes for the combined lower and upper chambers of Brazil, Argentina, Chile and Uruguay for a time period that ranged from 1989 to 2001. In contrast, on average the United States produces 1,915 every four years (Morgenstern, 2003).

Analyzing the Paraguayan Chamber of Deputies is therefore useful even in the context of a wider Latin American legislature because it has a large amount of roll-call data, which is comparable to the levels observed in the United States. Paraguay has been electronically recording roll-call votes for the legislators of the Chamber of Deputies since 1995, and legislators routinely use this electronic voting system for every-day legislative procedures. In total, from 1995-2020 the Chamber of Deputies recorded 6,957 non-lopsided votes, which provides an average of 278.28 non-lopsided votes per legislative year. This substantial amount of data makes it possible for the Paraguayan legislature to be analyzed using roll-call vote scaling methods that are so predominant in the analysis of the United States legislature, allowing us to apply a wide range of roll-call scaling methodologies that have been painstakingly developed for the most studied presidential system of the world—the United States—to one of the least studied presidential systems of the worlds.

The challenge of this book has been to both be able to cover an acceptable region of the wide ground of analysis available for study in attempting to understand Paraguay’s legislative
politics, while still being able to provide a considerable amount of depth in those areas of legislative politics chosen. In order to balance these two competing desires, this book has been framed around the three questions I mentioned above: 1) Why so Much Stability? 2) Why Parties? and 3) Where’s the Party? These questions have historically been relevant to the development and maturement of the study of legislative politics in most presidential systems of the world. However, in answering these questions, researchers still disagree about several aspects of legislative politics and legislative theory. I hope that using these three questions as a guide for the analysis of Paraguay will allow us to explore and answer these questions in a way that can generalize previous theory to account for the Paraguayan context, but I also hope that this exercise will allow us to understand legislative politics in general under a new light.

While I have briefly discussed the bases of each of these three questions in this chapter, for me to be able to construct on existing theory it will be necessary for us to fully understand the previous theories that we are building on. In order to make sure we do that, Chapter 2 will review what these three questions meant historically in the development of political science theory on legislative politics. In doing so, Chapter 2 will not discuss the Paraguayan context at all, and it will focus mostly on reviewing important aspects of legislative theory in an abstract fashion. Once we are armed with a deep understanding of these legislative concepts, Part I and Part II of this book will provide empirical analyses and results derived from the Paraguayan case. To reiterate, Part I will focus on exploring whether legislative stability exists in the Paraguayan Chamber of Deputies, and Part II will explore the role of political parties in the lawmaking process of Paraguay.
Before analyzing the Paraguayan legislature, it is necessary to have an adequate understanding of how previous theories of legislative behavior function, and what assumptions these theories are constructed on. Consequently, this introductory chapter will provide very little information about Paraguay to the reader and it will focus mostly on what political science literature has said about legislative behavior in the past. Readers that have a deep understanding of legislative theory may wish to skip this chapter and move on to the empirical chapters, which begin in Chapter 3. However, practitioners that do not have a deep understanding of the historical development of political science literature would be well served by reading this chapter as the arguments developed in the rest of the book are grounded on these theoretical arguments.

In order to organize my discussion, I will be focusing the literature review on three questions that have guided the development of the study of legislative behavior in presidential systems. The first question that has been central to the understanding of legislative behavior was asked by Tullock and Brennan (1981), with the paper titled “Why so much stability?” As we will see, an original expectation derived from rational-choice theories was that legislatures would be prone to producing unstable legislative outcomes. However, most researchers that observed legislative outcomes in several rich countries found that this instability was not the case in real-world situations. Therefore, one broad strand of the literature on legislative behavior focused on understanding and explaining what factors may be leading to more legislative stability than would have been expected otherwise.

The second foundational question was developed by Aldrich (2011), who asked “Why Parties?” Researchers attempting to answer the “Why so Much Stability?” question I discussed
in the previous paragraph mostly created solutions to the legislative stability problem that
did not include any room or mention of political parties. In response to these non-partisan
models, several researchers argued that this state of affairs was inadequate because political
parties were obviously very important for understanding legislative outcomes. The “Why
Parties?” research agenda was therefore developed to help us understand why political par-
ties came to be, what roles they play in the policymaking process, and who benefits from
the existence of political parties.

The third foundational question was asked by Krehbiel (1993) in his paper titled “Where’s
the Party?” This question is also a response to the “Why Parties?” research agenda, and it
focuses specifically on legislative politics. As we will discuss, one of the main reasons why
Aldrich (2011) argued that political parties are formed is because they allow majority party
members to concentrate the benefits of legislating in the majority party and concentrate the
costs of legislating in the minority legislators. With his question of “Where’s the Party?”
however, Krehbiel (1993) argues that political parties are not the cause of this concentration
of benefits, and he argues that this concentration of benefits would have taken place even
without political parties. That is, Krehbiel argues that legislators have policy preferences,
and that these policy preferences are what determine legislative outcomes. When these policy
preferences are taken into account, Krehbiel argued, political parties have no additional
effects on legislative outcomes. As we will discuss in more detail, the main question this
research agenda asks is whether legislative outcomes are explained by political parties, or
whether legislative outcomes are explained by the preferences of legislators who behave as
if they were non-partisan. In other words, we will explore whether legislative outcomes are
partisan or non-partisan.

In short, the main questions that research on legislative behavior has historically focused
on answering are:

1. How can we produce stable legislative outcomes? (Why so much stability?)

2. Why are political parties developed and what/whose purpose do they serve? (Why
parties?)

3. Are legislative outcomes partisan or nonpartisan? (Where’s the party?)

This chapter will therefore review the literature that developed around each one of these questions, and the assumptions that resulting models had to adopt in order to function to addressing these questions.

2.1 Why so Much Stability?

In order to understand the problem of legislative stability, it is useful to focus in on the most basic function of the legislature. The most basic function of any legislature is to choose among a menu of policies to decide which policy is to be implemented. In order to choose a policy, legislators have to aggregate their individual preferences into a collective legislative choice that represents the chamber’s preferred policy.

However, social choice theories have argued that the aggregation of preferences is quite complicated. Researchers have found that even when people express their individual preferences in a rational way, there is no mechanism through which to aggregate individual preferences into a rational, non-arbitrary collective choice. Furthermore, researchers have found that even the simplest of voting conditions—such as three legislators choosing among three policy options—can lead to cycling majorities, which produce policy instability, randomness and “chaos” (Arrow, 1951).

The simplest way to demonstrate that unrestricted legislative voting can produce legislative instability is through Condorcet’s Paradox. Imagine there are three players—Legislator 1, Legislator 2, and Legislator 3—voting on three policies—policy A, policy B, and policy C. Imagine as well that these three players have the order of policy preferences depicted in Table 2.1.

The task is to choose the option that beats all other options in a pairwise comparison. However, in this situation, arriving at a coherent collective choice is impossible. To see how,
first imagine that Legislator 1 proposes a pairwise competition between A and B. Given their preferences, Legislator 1 votes for A, Legislator 2 votes for B, and Legislator 3 votes for A—so A wins. Unhappy with this result, Legislator 2 proposes a pairwise competition between B and C. Legislator 2 votes for B, Legislator 3 votes for C, and Legislator 1 votes for B—leading to a victory for B. Finally, Legislator 3 proposes a pairwise competition between C and A. Legislator 3 votes for C, Legislator 1 votes for A, and Legislator 2 votes for C—leading C to win. Therefore, A beats B, B beats C, but C also beats A, meaning that there is no single policy option that will beat all others in a pairwise competition. Left in this state, then, the three players would infinitely cycle around policy options, unable to reach a stable collective choice (Condorcet, 1785).

Even thought this example seems quite specific, Arrow (1951) found that it can be generalized to almost all voting situations. He generalized this problem by assuming a minimum amount of normatively desirable characteristics of elections, and by showing that with these assumptions it is impossible to arrive at a single, rational collective choice. Arrow’s normative assumptions were of: 1) Rationality (individual preferences are complete and transitive), 2) Universal Domain (no policy alternative is restricted beforehand), 3) Pareto Optimality or Unanimity (if every member of the group chooses a single option that option should win), and 4) Nondictatorship (an individual cannot choose for the group as a whole). The Arrovian finding is that at least one of these assumptions has to be sacrificed in order to prevent legislative instability, randomness and “chaos.” That is, unrestricted, and purely democratic voting may make it quite difficult for legislatures to perform their most basic function: to choose which policy is to be implemented among a menu of policies.
This problem of legislative instability has been addressed in four ways. The first “solution” to the problem of legislative instability is simply to sacrifice the assumption of Nondictatorship, and to have a dictator choose the outcomes of the collective body—which is, of course, not much of a solution. Two more “solutions” were developed that attempted to create legislative stability through sacrificing the assumption of Universal Domain. One “solution,” called Preference-Induced Equilibrium (PIE) sacrifices universal domain by restricting the structure that legislative preferences can take. Another family of “solutions,” called Structure-Induced Equilibriums (SIE) or Structure-Induced Stable Outcomes (SISO), sacrifice universal domain by concentrating powers in certain legislators through the use of legislative institutions. Finally, the last approach utilizes a concept called the “yolk” and the “uncovered set” to show that although instability is inherent to legislatures, under certain conditions this problem is not as bad as it may initially seem. As we will see, however, a dictatorship is an unacceptable solution for legislative instability, the two other “solutions” to the problem of legislative instability can only create equilibriums under very specific conditions, and the final approach does not in fact do anything to solve our predictions of instability but it only moderates our predictions of instability to an extent.

2.1.1 Dictatorship

The first “solution” to the problem of legislative instability can be found by simply sacrificing the Nondictatorship assumption embedded in Arrow’s (1951) theoretical exercise. This “solves” the collective choice by making it match the preferences of a single individual. Of course, sacrificing the Nondictatorship assumption leads to decisions that are not really collective choices, and producing legislative stability through dictatorship does not conform to democratic norms. Therefore, political scientists do not often consider a dictatorship an acceptable solution for the problem of legislative instability.

While political scientists have not advocated a dictatorship as a solution to legislative instability, several political scientists have argued that strong executives might have an effect
on how legislatures function—and these effects may have a somewhat stabilizing effect. For example, Cox and Morgenstern (2001) argued that in Latin America the executive branches that were formed after a period of dictatorships in the region tended to have a wide range of powers. These powers, they argued, gave executives an advantage in policymaking relative to Latin American legislatures. Because of these powerful executives, Cox and Morgenstern (2001) argued that legislators tended to be “reactive” chambers rather than “proactive” policymakers. Furthermore, Amorim Neto and Santos (2001) also argued that legislative parties may form as a reaction to “presidentially defined factions.” Finally, executive powers such as the veto, if matched with a high threshold for override, may also provide a stabilizing effect on legislative outcomes (Krehbiel, 1998; Tsebelis, 2002).

Therefore, while a pure dictatorship is not something that is really considered a “solution” to the problem of legislative stability, it is clear that a powerful executive, which still falls short of a dictator, can clearly have a stabilizing effect on legislative outcomes. These effects will vary depending on whether executive powers are reactive—such as vetoes—or whether they are proactive—like urgency powers—but they are likely to have an effect. Therefore, the powers of the executive are always something that must be considered when analyzing legislative behavior.

When choosing among which of the four of Arrow’s assumptions to sacrifice in the name of legislative stability—Rationality, Pareto Optimality or Unanimity, Nondictatorship and Universal Domain—rather than choosing to sacrifice Nondictatorship, most authors of legislative politics instead have focused on sacrificing the assumption of Universal Domain. The Universal Domain assumption states that legislators choosing among policies to implement are not restricted about which policies they can and cannot consider beforehand. That is, Universal Domain assumes that legislators can choose to implement any policy extracted from an infinite policy space. However, some have argued that by limiting the policy space to an extent it is possible for legislatures to make Rational, Pareto Optimal and Nondictatorship decisions. The next two “solutions” to legislative instability I will discuss do
just that. The first limits the preferences that legislators can assume—preference-induced equilibriums—and the second uses institutions to limit the powers of certain legislators and enhance the powers of others—structure-induced equilibriums.

2.1.2 Preference-Induced Equilibriums

The second “solution” I had discussed to the problem of legislative instability is the preference-induced equilibrium (PIE). PIEs work by restricting Universal Domain to a single dimension of policy decisions from which legislators can choose from. To understand how PIEs work, we first have to understand spatial models. To do so, I will re-formulate the problem of legislative instability we saw above into a spatial-model framework. Figure 2.1 shows an example of the preferences of three legislators on a two-dimensional issue space. Although the exact content of the dimensions is not important, for this example we could consider the x-axis to be an economic left-right dimension and the y-axis to be a social liberalism-conservative dimension. Our three legislators are represented as points on this two-dimensional space, and the status quo is represented as the filled-in point in the middle of the figure. The main characteristic of these models is that legislator preferences are single-peaked, which means that the further away a policy is from the legislator’s ideal point, the less the legislator likes that policy (lower utility), and the closer the policy is to the legislator’s ideal point the more the legislator likes it (higher utility).

Under the spatial framework depicted in Figure 2.1, it is easy to see how instability can be conceptualized. For example, to maximize their utility, L1 and L2 may propose to move the status quo upwards, to a point between the two of them. Being closer to L1 and L2, they would vote for it, and the new policy, say P1, would pass despite L3’s objections. However, L3 could then propose an alternative to P1, say P2, between L1 and L3. L3, being strategic, would place P2 closer to L1 than P1 was in order to gain L1’s support, but L3 would also

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1The most common ways to model preferences are with a linear, quadratic or normal utility functions. While different, these functions share the property of being single-peaked.
Figure 2.1: Multidimensional Preferences

bring P2 closer to itself than P1 was. This would move policy away from L2, but closer to L1 and L3, so it would pass as well. Having lost in that round, L2 could repeat the process by proposing P3, an alternative between L2 and L3, and so on. Theoretically, these cycles could be continued indefinitely, producing rounds and rounds of instability. This example shows instability in two dimensions, but this same procedure could be generalized to more dimensions as well, and as the dimensionality of the policy space gets higher, we would also expect more and more instability (Riker, 1988).

Of course, Arrow’s assumption of Universal Domain implies that the multidimensionality of the policy space should not be restricted. Undeterred by this, Black (1948) found that if legislators have preferences that are distributed in a unidimensional policy space, and if these preferences continue to be single-peaked, then a policy equilibrium does exist at the preferences of the median legislator. Intuitively, this means that if all policy issues are “packaged” into a single left-right ideological spectrum, then policy equilibriums can exist due to the structure of legislative preferences—hence, a Preference-Induced Equilibrium
Figure 2.2 collapses the preferences we saw in Figure 2.1 onto a single dimension. In this situation, it is easy to see that the equilibrium is located at the preferences of the median legislator (L3) because anything that moves towards it will gain a majority, but anything that moves away from it would be rejected by L3 and someone else. For example, if a policy is located at the ideal point of L3, and L2 proposes a policy closer to itself, then L3 and L1 would vote against it and it would be rejected. If L1 tried to move policy away from L3, then L2 and L3 would reject it as well. In sum, as long as legislator utility functions are single-peaked and preferences are unidimensional, then policy can only move towards the median legislator, and not away from it, and all policy is expected to collapse onto the preferences of the median legislator, producing stability of legislative outputs.

The reason some have been comfortable making the assumption of unidimensionality of the policy space can be attributed to the supposed role of ideology on legislative behavior. Converse (1964) conceptualized ideology as a “belief system” subject to “constraints,” and Noel (2012) has conceptualized ideology as “coalitions of ideas.” Intuitively, what these authors argue is that the role of ideology is to take a large amount of disparate policy positions that seemingly have nothing to do with each other (say for example positions on taxes, gun regulation, reproductive rights, border policy, etc.) and create a coherent story that binds them together so that ceding in any of them is equally damaging to one’s overall values. The stronger ideologies are, the more adequate they are at “packaging” a wide variety of policy
positions onto a single ideological dimension. Furthermore, people who are more interested in politics are more likely to have stronger, and more coherent ideologies. Therefore, even if the population as a whole does not have strong ideologies, the expectation that legislators, who practice politics, would have strong ideologies that structure their behavior seems like a benign assumption (Zaller, 1992; Converse, 1964; Poole, 2005). That being said, the exact contents of these packages of ideas can vary from country to country.

For example, according to Marks et al. (2006), in Europe, Eastern European countries have packaged policy issues in a way that is quite different from Western European countries. In Eastern Europe, economically left-wing parties descend from former communist parties, so they tend to be more socially conservative, while economically right-wing parties tend to be more socially liberal. On the other hand, in Western Europe the opposite is true, where economically right-wing parties tend to be more socially conservative while economically left-wing parties tend to be more socially liberal. It may be that within each country a single dimension of policy concerns exists (for example a single economic left/social liberals versus economic right/social conservatives dimension), but across countries more than one dimension exists. If each individual country were able to collapse policy decisions onto a single dimension, whatever the content of that dimension, then PIEs could provide stability to each system, but the contents of each single dimension could still vary from country to country.

In sum, if the policy space is unidimensional because of strong issue-packaging ideologies, then PIEs are likely to exist. That being said, the limitation of PIEs in producing legislative stability is that Riker (1988) found that strategic politicians are likely to manufacture more, even artificial, dimensions in order to be able to compete more effectively. Intuitively, if one legislator is not the median legislator, as most legislators are bound to not be, they may decide to amplify the dimensionality of the policy space in order to undermine an unfavorable equilibrium in hopes of creating a more favorable disequilibrium or a more favorable alternative equilibrium. Therefore, Riker predicted that unidimensional policy
spaces were not likely to be common. In short, PIEs could theoretically produce legislative stability, but because legislators have an incentive to increase the dimensionality of the policy space to compete more effectively, PIEs are not expected to exist very frequently. PIEs, then, are unlikely to fully explain legislative stability.

2.1.3 Structure-Induced Equilibriums

The third rational-choice approach has been to explore how institutions can be used to minimize instability despite the multidimensional preferences of legislators. Theoretically, institutions can reduce instability by either creating an equilibrium despite multidimensional preferences—this would be called a structure-induced equilibrium (SIE)—or by simply making it more difficult to change the status quo under certain conditions without necessarily creating a new equilibrium—this would be called a structure-induced stable outcome (SISO). The main feature of SIEs and SISOs is that they reduce instability by concentrating powers in the hands of certain actors within the legislature (Aldrich, 1989; Shepsle and Weingast, 1981).

A simple way to see how a SISO can create policy stability is by reanalyzing Condorcet’s problem, as shown with Table 2.1, but by giving one of the three legislators slightly more power than the others. Imagine, for example, that Legislator 1 is the only player with the power to propose policy alternatives. In this case, Legislator 1 would propose the pairwise competition between policy A and B. Given legislative preferences, policy A would win, and given that policy A is Legislator 1’s preferred policy, and that only Legislator 1 has proposal powers, no new policies would be proposed, leaving A as the final decision.

The example shows how agenda-setting powers—which limit Universal Domain—can create legislative stability. However, more than a single solution, SIEs are a family of solutions that can create equilibriums by concentrating powers in different institutions. The most prominent institutional explanations have been that that committees, chamber presidents or party leaders, and bicameral legislatures have the ability to produce SIEs (Aldrich, 1989;
As we will see when discussing legislative theories in the “Where’s the party?” section, concentrating powers in different institutions can alter the extent to which we would expect the stability produced by SIEs to be partisan or nonpartisan.

The problem with SIEs and SISOs is that they can create “frustrated majorities.” That is, because SIEs and SISOs maintain the multidimensionality of legislative preferences, which tends to lead to cycling majorities, there can be situations where a given majority is opposed to the equilibrium or stable outcome created by SIEs and SISOs. Furthermore, the institutions that create SIEs and SISOs tend to be chamber rules that can be modified by a simple majority of legislators as well. Therefore, if a majority of legislators opposes the outcome produced by a SIE or a SISO, then a majority of legislators will have incentives to throw out those institutions in order to produce new ones that create different outcomes closer to their preferences. In short, the problem with SIEs and SISOs is that if legislative institutions can be modified by frustrated majorities, then it is unclear how institutions that are vulnerable to majority instabilities can produce any additional policy stability (Aldrich, 1989). This problem has also been called the “inheritability” problem by Riker (1988), who argued that legislative institutions, because they are subject to majority rule, “inherit” the instabilities of majority rule rather than solving them.

As we have seen up to this point then, unrestricted legislative behavior has a high potential to be vulnerable to instability, cycling majorities and “chaos.” Formal theorists have attempted to solve this problem of legislative instability by restricting the universal domain in two ways. First, they have restricted legislator preferences to a unidimensional policy space and they found that if preferences are unidimensional, then an equilibrium can be created at the ideal point of the median legislator—creating a PIE. Second, they have found that even under multidimensional preferences, equilibriums or stable outcomes can be created with the use of certain institutions—creating a SIE. However, both these solutions are limited because strategic politicians are likely to create more dimensions if a PIE is not
advantageous to them, and cycling majorities are likely to undermine institutions that produce SIEs that are unfavorable to them. Are we therefore doomed to completely erratic and unpredictable behavior?

2.1.4 Centripetal Outcomes Around the “Yolk” and “Uncovered Sets”

A last rational-choice approach has been to utilize a concepts called the “yolks”, “uncovered sets” and “median lines” to moderate our expectations about legislative instability. Figure 2.3 shows two examples of estimated yolks and uncovered sets given legislator ideal points on two dimensions. The black lines shown in the two panels of Figure 2.3 are called “median lines.” A median line is a line passing through two individuals’ ideal points and dividing the remaining ideal points in either two equal halves or, if the number of ideal points is odd, into two groups, one of which has one more ideal point than the other (Tullock, 1967). The yolk, in turn, is the smallest circle possible that touches all of the median lines (Tsebelis, 2002; Feld, Grofman and Miller, 1988).

Figure 2.3: Yolks, Uncovered Sets and Median Lines Examples

The yolk tells us two things. First of all, the size of the yolk tells us the extent to which
we should expect policy stability. All else equal, the smaller the yolk, the more we should expect policy stability (Feld, Grofman and Miller, 1988). The second thing the yolk tells us is the “center” of legislator preferences. Although policy instability is never eliminated, the center of the yolk could be considered a fictitious actor that represents the preferences of the chamber as a whole. That is, although strictly speaking the center of the yolk is not an equilibrium of policy outcomes, it is much more likely for policy to move towards the center of the yolk than away from the center of the yolk. Therefore, instability persists, but this instability is “centripetal” to the center of the yolk, and this instability can be predicted to be less prevalent the smaller the size of the yolk (Tsebelis, 2002).

The second concept represented in the figure are the gray stars that map the “uncovered sets” of each set of ideal points. Point A is said to be covered by point B when any point that beats B also beats A (Bianco et al., 2006). The uncovered set is therefore the set of points that cannot be covered by any other point. Similar to the yolks, uncovered sets are not strictly equilibriums, and each point inside the uncovered set can still be defeated by alternatives, but the uncovered set shows a region where bills are likely to move towards and not away from.

In sum, with the concepts of yolks, uncovered sets and median lines, though still a little unstable, policy outcomes from collective bodies can become more predictable, especially if the configuration of ideal points lead to small yolks and uncovered sets. Yolks and uncovered sets do nothing to “create” legislative stability like dictatorships, PIEs and SIEs do, but what these concepts can do is describe legislative stability and the position of legislative outcomes. Stability is described by the size of the yolk and/or the uncovered set and the position of yolks and uncovered sets describe where we might expect legislative outcomes to be more likely.
2.1.5 Summary of Stability Literature

Rational-choice theories of legislative behavior have focused on explaining legislative policy stability. Arrow (1951) found that without restricting legislative behavior or preferences, legislative instability was likely to take place because of the potential of cycling majorities. Black (1948) argued that if preferences were unidimensional, then an equilibrium could be found at the preferences of the median legislator—forming a PIE—but Riker (1988) argued that the unidimensionality of legislator preferences was unlikely if politicians act strategically. Other authors have argued that even in the absence of a PIE, a SIE might be able to be constructed with the use of legislative institutions (Shepsle and Weingast, 1981; Aldrich, 1989). However, many times institutions themselves are vulnerable to cycling majorities, so it is unclear how institutions that are vulnerable simple majorities can create any additional stability if they can be changed by these majorities at any point. Finally, the concept of the yolk and the uncovered set do not solve legislative instability, but at least they can give us some way to understand tendencies about policy outcomes in multiple dimensions. The smaller the yolks and the uncovered sets the less unstable policies will be, and the center of the yolk and the locations of uncovered sets, while not equilibriums, should have a centripetal effect on policy outcomes—even in multiple dimensions.

2.2 Why Parties?

One very important thing to notice about the literature that deals with legislative stability is that none of the solutions to instability—dictatorship, PIEs, SIEs or yolks and uncovered sets—include political parties. Largely, all of these theoretical models were constructed under the assumption that legislatures were made up of individuals with preferences, and that none of these individuals within the legislature functioned like a party. Of course, most if not all legislatures contain political parties and they are often regarded as quite important actors for the functioning of politics. In response to this observation researchers began to work to try to understand how political parties are developed and maintained, why they are
created in the first place, and who benefits from the existence of political parties.

The three prominent theories of party development to be reviewed in this chapter are 1) the “cleavage” theory of parties, 2) John Aldrich’s theory of parties, and 3) the “UCLA School” theory of parties (Lipset and Rokkan, 1967; Aldrich, 2011; Bawn et al., 2012). The cleavage and UCLA School theories are group-centered models for how political parties develop. In contrast, the Aldrich theory of parties is a more politician-centered understanding of how political parties developed. The details of each of these models will be covered in the following subsections.

2.2.1 The “Cleavage” Theory of Political Parties

The “cleavage” model of political parties was originally developed to explain political parties in Western Europe, and this theory originated in Lipset and Rokkan (1967). This sociological model argues that common historical events that took place across Europe left a wide range of ethnic, religious, and sociological divisions—or cleavages—within each country. According to the authors, the number of cleavages that existed within a given country depended on how this country responded to these large historical events. For example, in Spain, Catholicism was maintained as the dominant religion well after the Reformation of the Church. In contrast, in the Netherlands, Catholicism and Calvinism are both politically salient divisions in society, meaning that the reformation produced two politically salient religious cleavages in the Netherlands (Lijphart, 1976).

The cleavage theory also has implications for the selection of electoral rules. Lipset and Rokkan (1967) for example argued that electoral rules would have very little effects on the party system, because different electoral rules would be chosen by countries with different numbers of cleavages within them. That is, for example, if a country has a wide number of cleavages then it might be more likely to choose proportional representation (PR) electoral systems, whereas if a country only has two salient cleavages then it might be more likely to select single-member district (SMD) electoral systems—which tend to favor two-party
systems (Duverger, 1954). In that sense, they argued that electoral rules would be less important than cleavages in understanding political party systems because electoral rules would be endogenous to the given cleavages of a country.

Several researchers have explored how changes in the cleavage structure of certain countries led to changes in electoral rules. Boix (1999) for example argued that enfranchisement of working-class people led many European countries to shift from SMD electoral systems to PR systems. This especially happened, Boix argued, in countries where conservative parties were fractured, and they were faced with a consolidated labor-movement threat. When these conditions took place, conservative parties implemented PR in order to not be completely wiped out by a united labor-movement, strengthened by the majoritarian effects of SMD systems. In a similar vein, but with a different argument, Calvo (2009) argued that the reason why European countries moved from SMD to PR was not so much because conservative parties were threatened by the incipient labor movement, but he argued that the change happened because the creation of new labor-movement parties under SMD created new “partisan biases” in electoral results that did not exist before. In places where SMD was mostly proportional before, but disproportional after, the rise of the labor-movement parties, politicians decided to adopt PR in order to reestablish the proportionality that existed before labor-movement parties existed. In short, this theory argues that the most relevant cleavages of a society will choose the electoral systems that benefit themselves the most.

While prominent in the European literature, the cleavage theory for political parties in Latin America has received less support. Dix (1989) for example argued that the patterns of party creation in Latin America tended to have a strong propensity for factionalism and fragmentation, often centered around particular individuals, families or regions. According to Dix, political parties in Latin America were less geared around particular cleavages, and he argued that they were more likely to develop as catch-all parties, that seek to incorporate many sectors of society. By catch-all, he meant that they tend to be pragmatic or eclectic in program and ideology, multiclass in support, and oriented to broad-based appeals. In
short, Dix argued that the cleavage literature on partisan development may be less relevant in Latin America than it has been in Europe.

A final paper to consider is Negretto and Visconti (2018), which does not directly fit under the cleavage literature, but it considers the question: in the absences of cleavages that were present in Europe, what caused Latin American countries to change electoral systems from SMD to PR? This paper is interesting because it argues that Latin America did not experience the surge in enfranchisement that Europe experienced, and furthermore, there was not a strong socialist threat to existing conservative parties. Despite these differences, most Latin American countries also adopted PR. Negretto and Visconti (2018) argues that what changed in Latin America was not so much the level of enfranchisement, which was universal at least on paper even during dictatorships, but what changed was the implementation of the secret ballot in free elections. Because democratization processes were often led by a single party, the adoption of PR was easing for the dominant faction of the majority party, because if necessary, with PR, an intra-party faction of the majority party could continue to compete on their own if it decided to leave the dominant party. That is, PR allowed intra-party factions to be comfortable with the idea of democracy because even if a faction is excluded from the dominant party, it can continue to receive independent representation in the legislature.

In summary, however, the cleavage theory of the creation and development of political parties assumes that political parties arise to reflect certain politically salient social groups or coherent social identities. These groups, or cleavages, that formed and organized around certain historical conflicts or difficulties, then mobilize to form parties. Once mobilized, these cleavages also affect the electoral institutions that are chosen, and those that have the ability to do so tend to choose the electoral institutions that are most beneficial for themselves. This, in broad strokes, is the argument made by the cleavage theory of party development.
2.2.2 John Aldrich’s Theory of Parties

John Aldrich’s theory of parties was created to explain how political parties developed in the United States. In contrast to cleavages, which focused on divisions in society that then were reflected in the legislature in the form of political parties, Aldrich takes a more top-down approach to the creation of political parties. That is, Aldrich starts with the reelection motivated politician, and then argues that political parties were created by politicians in order to serve their own purposes. The main purpose of political parties, according to Aldrich, is to create an institutional framework through which politicians can resolve collective action problems (Aldrich, 2011). In spite of being created by and for politicians, Aldrich’s conception of parties is quite broad, and his formulation of parties encompasses the three main dimensions that Key (1949) argued were important to the understanding of political parties: parties in government, parties in the electorate and parties as an organization.

Parties in Government

The party in government is perhaps the central linchpin to Aldrich’s theory of political parties. In this dimension parties are developed by legislators so that they can overcome a collective action problem which is very similar to the “Condorcet’s Paradox” collective problem, which we discussed in Section 2.1 of this chapter. Below in Table 2.2, we can see the legislative collective action problems as detailed by Aldrich (2011).

Table 2.2: Long Term Legislative Coalitions

<table>
<thead>
<tr>
<th></th>
<th>Policy A</th>
<th>Policy B</th>
<th>Policy C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislator 1</td>
<td>3</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>Legislator 2</td>
<td>-1</td>
<td>3</td>
<td>-1</td>
</tr>
<tr>
<td>Legislator 3</td>
<td>-1</td>
<td>-1</td>
<td>3</td>
</tr>
</tbody>
</table>

In this example we, again, see legislators 1, 2 and 3 voting on policies A, B, and C. However, in this situation we can see that, as it stands, all three policies would be rejected,
because legislators 2 and 3 would vote against policy A, legislators 1 and 3 would vote against policy B, and legislators 1 and 2 would vote against policy C. That is, if left to their own devices, all three policies would be rejected and no legislator would gain or lose anything in terms of payoffs.

However, imagine for example that legislators 1 and 2 decide to form a political party. If this were the case, they could both agree to pass policy A and policy B. By doing this as a party, they would receive 6 utility units, subtracted by 2 utility units, leading to a net gain of 4 utility units for the party as a whole, which divided by two is 2 utility units per party member. This overall gain, then, is achieved by concentrating all the costs in legislator 3, which receives a payoff of -2 since both policy A (-1) and B (-1) were passed. In short, by forming “long-term legislative coalitions,” legislators can effectively legislate by concentrating gains in majority party members while concentrating the costs of legislating into minority party members. These long-term legislative coalitions also resolve collective action problems of the majority party members, making them better off than they would have been had the party not existed. In other words, by creating long-term legislative coalitions, legislators can gain advantage over non-party members because partisans can coordinate in order to minimize their costs and concentrate costs in opposition legislators (Aldrich, 2011).

**Parties in the Electorate**

Continuing from the assumption that parties originally form in government in order to be able to legislate, Aldrich argues that political parties also served the purpose of politicians attempting win elections—either to gain or maintain their offices. The collective action problem, in this scenario, is that most voters have an incentive to not vote. The formal model for why citizens have very few incentives to vote can be conceptualized with the following model:

\[ U(V) = PB - C + D \]

In this model \( U(V) \) is the utility of voting \( PB \) is the probability that one’s single vote
will be decisive in affecting the outcome of the election, $C$ is the cost of voting and $D$ is the positive feeling one may receive when fulfilling their “civic duty” of voting. The main reason why it is generally costly for individuals to vote is because since the probability that a single vote will sway an election is often extremely small, then the cost of voting is almost always likely to be higher than the benefit of voting, at least for the individual. Therefore, an instrumentally rational individual would almost always decide to not vote, and if a population were composed solely of instrumentally rational individuals, then turnout for elections would often be near or at 0% (Aldrich, 2011).

In contrast, politicians do have a strong incentive in having people vote (when it’s for them), because this will allow them to maintain their jobs, personal incomes and political powers. Therefore, the second purpose that political parties serve for politicians, according to Aldrich’s account, is that it allows them to pool resources in their efforts to mobilize the electorate. In this sense, then, parties in the electorate serve as being campaign and mobilization machines that maximize the electoral prospects of politicians that compete under party labels and minimize the electoral prospects of politicians that compete outside of party labels.

**Parties as Organization**

The last dimension of political parties, as detailed by Aldrich, concerns the legal, institutional structure of political parties, and the actors that function within these institutional structures of political parties. In this dimension, Aldrich assumes that parties are made up, as organizations, by what he calls “activists,” “benefit-seekers” or “policy seekers.” Politicians need the support of these activists to appeal to voters, but these activists—as parts of the party—also can affect which politicians are chosen through the nomination process. It is often modeled that voters are the most centrist actors, followed by politicians who are less centrist than voters, and activists who are the least centrist of all (Aldrich, 2011).

That being said, the “Parties as Organization” aspect of Aldrich’s theory is the least clear
because the definition of activists. Take for example the difference between “benefit-seekers” and “policy-seekers.” It may be for example that both these groups of people are less centrist than voters and politicians, but the nature of preferences benefit-seekers and policy-seekers are likely to be quite distinct. Benefit-seekers are likely to have sharp, well-defined, usually distributive, preferences in a very narrow issue, but afterwards they are likely to show high levels of indifference on issues that do not affect them directly. In contrast, policy-seekers, also considered “ideologues” are likely to have strong ideologies. Overall, multiple ideologues may still have multidimensional preferences if they construct their ideologies distinctly from each other, but in contrast to benefit-seekers each of these ideologues are likely to have broad issue preferences that encompass a high number of policy issues, with very few areas of indifference. Finally, it is unclear whether “activists” are always individuals or whether they are at times also organizations and interest groups which, may also behave like benefit-seekers and/or policy-seekers. In short, the definition of activists, interest-groups and benefit seekers, and the way these actors construct their policy preferences is not fully defined (Baumgartner and Leech, 1998; Aldrich, 2011).

While the actors that make up parties as organizations are a bit unclear in Aldrich’s model, the institutional design of parties as organizations is quite clear as these party institutions are legally codified. Going through the actual institutions of American political parties is beyond the scope of this book, but it is sufficient to say that the argument Aldrich makes about partisan institutions is that they are in large part supermajoritarian institutions that seek to build consensus within political parties. This is especially important when the preferences of activists are multidimensional because, according to Aldrich (2011)[223]:

the problem is that, if there is no PIE in the legislature as a whole [when preferences are multidimensional], there is also no PIE in the party caucuses. More generally there is no game theoretic ‘core’ in either party or on the floor, at least when simple majority rule is used to choose outcomes... within the party caucuses, however, a core may exist because of the use of extraordinary major-
ity rule... As the size of the majority needed increases from a bare majority, however, the core exists for more and more dimensions.

That is, because parties in government need long-term legislative coalitions in order to be able to legislate effectively, while concentrating costs in the opposition, parties as organizations are centered on creating supermajoritarian institutions that maintain the long-term legislative coalitions. Without supermajoritarian institutions in parties as organizations, it may be more difficult for parties in government to be maintained for the concentration of legislative benefits in the majority party. This, in Aldrich’s model, is the main reason why parties exist, so creating consensus within parties is quite important to the model.

2.2.3 UCLA School Theory of Parties

The final prominent theory of the formation of political parties that I will be discussing was also the theory that was most recently developed. Mainly conceived in Bawn et al. (2012), and referred to as the “UCLA School” of political parties by others (McCarty and Schickler, 2018), the UCLA School theory of parties is most directly a response to Aldrich’s theory of political parties. They broadly accept the party in government, party in the electorate and party as an organization framework, but what they contest with Aldrich’s account is the centrality of politicians to the creation of political parties. According to the UCLA School, the central actors of political parties are interest groups and activists. This difference may seem small, but considering activists and interest groups the main actors of political parties substantially modifies the expectations we should have about the outputs of government.

Since at least the 1950’s, academics in the United States have feared that if politicians are only accountable to activists and interest groups, then that would be detrimental for democratic representation. This was because, if only organized groups had effects on governmental outputs, then well-funded interests would be more likely to have an undue influence in policy. In Schattschneider’s (1975) words, “the flaw in the pluralist heaven [of interest-group democracy] is that the heavenly chorus sings with a strong upper-class accent.”
In 1950 the American Political Science Association argued that strong, internally consistent, political parties were necessary for individuals to be able to hold politicians accountable. If strong political parties exist, they argued, then political parties can actually make policy promises and follow through with those policy promises if chosen to hold government (APSR, 1950). This allows citizens to have a direct link to policy outcomes, because by choosing among proposals and holding parties accountable for implementing or failing to implement those proposals, then citizens can affect political outcomes. In contrast, fractious parties may make promises but cannot necessarily deliver on those promises because internal factions may prevent promised legislation from going through. It was therefore necessary for “Responsible Party Governments” to be created, that could make promises to citizens and then could force its party members to deliver on those promises once in office. The UCLA School acknowledges that in theory:

It is easy to see how such parties might serve democracy. Voters can give more effective direction to government by supporting a team’s program rather than an individual’s. By holding entire parties rather than individual politicians accountable for what government does, voters create an incentive for responsible governance that might not otherwise exist (Bawn et al., 2012, 2).

However, the UCLA School responds to Aldrich’s conception of political parties, and to the concept of responsible party government in general, in the following way:

We contest the view of party that supports this rosy assessment. We argue that parties in the United States are best understood as coalitions of interest groups and activists seeking to capture and use government for their particular goals, which range from material self-interest to high-minded idealism. The coalition of policy-demanding groups develops an agenda of mutually acceptable policies, insists on the nomination of candidates with a demonstrated commitment to its program, and works to elect these candidates to office... In our account, parties
are no great friends of popular sovereignty. Electoral competition does constrain
group-centric parties to be somewhat responsive to citizen preferences, but they
cede as little policy to voters as possible. Parties mainly push their own agendas
and aim to get voters to go along (Bawn et al., 2012, 2).

This theory shifts the focus of political parties away from politicians and towards interest-
groups and activists. These interest groups hold politicians accountable principally through
the nomination process, and often times they co-opt the nomination process because “they
can never be sure they are getting what they bargain for” unless “a genuine friend [is] nom-
inated and elected in office” (Bawn et al., 2012). Thus, the main mechanism through which
interest groups dominate political parties is through controlling the nomination process.

Similarly to Aldrich’s model, the UCLA School also maintains that political parties are,
in a sense, long-term coalitions, but they claim that “long coalitions... are also valuable for
policy demanders nominating candidates.” Therefore, rather than being long-term legislative
coalitions, which in Aldrich’s account then spill over into electoral parties, the UCLA School
believes that political parties are long-term group-interest coalitions, which join forces be-
cause “acting alone, a policy demanding group has little hope of electing a majority of its
friends to the legislature” (Bawn et al., 2012).

Finally, under the UCLA School the relationship between politicians and voters changes
a bit as well. In contrast to Aldrich’s model, where politicians attempt to anticipate the
preference of voters in order to gain or maintain their political offices, in the UCLA School
politicians are mainly concerned in gaining policy outcomes that benefit the interest-groups
that maintain them. Voters are conceptualized by the UCLA School as having weak, mul-
tidimensional, ideological preferences, but they are also modeled as disliking radical policy
proposals. Therefore, the task for politicians, according to the UCLA School, is to extract as
much benefit for the interest groups that support them as possible, without being so radical
that the electorate notices what they are doing and punishes them electorally.

Specifically, Bawn et al. (2012) argue that the relationship between interest groups, po-
itical parties and the voters work in the way depicted in Figure 2.4. Because voters are such low-information actors, Bawn et al. (2012) argue that voters have an “electoral blind spot” about most of the policies that politicians choose to implement, and about who these policies actually benefit—society as a whole or narrow groups. In Figure 2.4, there are interest groups (points A, B, C, D and E), and these interest groups formed two parties—with Party 1 being composed in this example of groups A, E and D and Party 2 being composed of groups B and C. Also, the figure shows four examples of possible positions the parties may take (p1’, p1”, p2’, p2”). The dark-gray circle in the middle of the figure is the electoral “blind spot” of voters, and the white circle is an “equivalence class” circle (Bawn et al., 2012). The idea of this model is that electors have a blind spot where they consider all options within this blind spot as equal and as acceptable. That being said, not all options are equally acceptable for political parties and interest groups. Therefore, for voters p1’ would be equally acceptable as p2’, but for Party 1 p1’ is preferable than p2’ and vice-versa. In the equivalence class—the white circle—are policy positions that voters also cannot distinguish between—for voters p1” would equal p2”—but voters do know that everything in the equivalence class is less desirable than everything that is in the electoral blind spot. That is, according to this model voters are likely to vote against both p1” and p2” because they find both these models to be too radical, but they will not vote against p1’ and p2’ because they fall inside of the blind spot of electors. Therefore, according to this model, what interest groups try to do is maximize their individual benefits by proposing policy that is as close to them as possible, without leaving the electoral blind spot and being punished by voters. Obviously, the limits of the electoral blind spot are not as clear in real life as they are in the Figure 2.4, so there will be many situations in which interest groups fail to anticipate the limits of the electoral blind spot, and therefore there are many situations in which voters choose to punish politicians.

In sum, in contrast to Aldrich’s model, the UCLA School is centered on interest groups, activists and “policy demanders.” These interest groups and activists dominate politicians
Figure 2.4: UCLA School “Electoral Blind Spot”

through the nomination process, and these politicians are usually friends of particular interest groups so that these interest groups can be sure that they will be looking out for their own interests. Finally, this model also considers voters low-information actors that dislike extremism but other than that are mostly unable to hold politicians to account over they highly technical, murky and difficult to follow policymaking process.

There are still some aspects of this model that are left unclear. Whereas Aldrich’s model was clear about the effect of institutional structures of the Party as Organization dimension of political parties, the UCLA School “sidesteps the ways in which institutions shape the translation of group interests into party decisions” (McCarty and Schickler, 2018). That is, the UCLA School is unclear about how the formal institutions of political parties affect the coordination process among interest groups within a particular political party. Furthermore, the UCLA School is also unclear about how long-term coalitions are maintained. Being explicitly multidimensional, we may expect a substantial amount of infighting among groups even within political parties—given Condorcet’s Paradox and social-choice “chaos” predictions. According to McCarty and Schickler (2018) the standard solution to this intra-party infighting would be that groups within a party would centralize some power to a party au-
thority so that this authority may maintain discipline and make defection costly. However, according to McCarty and Schickler (2018), “the UCLA School resists the idea that there is a centralized authority structure that possesses any substantial measure of autonomy and control over the constituent groups” (178). Under that construction, it is difficult to understand how the UCLA School expects intra-party discipline to be maintained.

2.2.4 Summary of Arguments for Why Parties Exist

We have discussed three prominent models that attempt to account for the development and functioning of political parties. The cleavage model assumes that historical events create social cleavages or groups that then organize into creating political parties. These cleavages create electoral institutions in their own image, and they modify or maintain electoral rules that are useful for their own efforts in maintaining political power. In contrast to the cleavage model, Aldrich’s model assumes that political parties are created by politicians and for politicians. These politicians create political parties in order to be able to legislate, in order to be able to mobilize the electorate, and in order to create intra-party unity among interest-groups, activists and benefit-seekers that need supermajoritarian institutions in order to be able to resolve their intra-party disputes that mainly arise in response to the multidimensional, yet strong, preferences of these political actors. Finally, the UCLA School assumes that political parties are created by interest groups and activists for interest groups and activists. In this conception, political parties are little more than instruments that interest groups use to maximize their political power. In order to carry out this task, interest groups dominate the nomination process, and they only nominate actors that are friendly to their interests. Furthermore, this model assumes that voters are low-information actors, that mostly are unaware about politics, but that if policy outcomes are too extreme they may punish incumbents.

It is interesting to note that both the cleavage model and the UCLA School are group-centric theories of political parties. The main difference between these models, however,
is whether the given groups that are created are historically-relevant long-term “cleavages” or whether these groups are narrow-interest groups. These two conceptions of groups do seem to be somewhat distinct. Cleavages seem to entail common characteristics among parts of the electorate—such as religion or economic interest—that then form into political organizations. Interest-groups, in contrast to cleavages, seem narrower, less concerned with the all-encompassing identities of individuals within these groups, and more interested with narrow policies that benefit themselves. That being said both cleavages and interest groups have unclear meanings (Baumgartner and Leech, 1998; Deegan-Krause, 2007). The main distinction I will make among these theories, therefore, will focus mainly on the quality of groups that are acting in a certain way. That is, if group and party formation are the response to large-scale historical events, then it may be more useful to regard them as cleavages. In contrast, if groups respond mainly to individual actors or narrow economic interests, then I shall simply refer to them as interest groups.

2.3 Where’s the Party?

Up to this point, we first discussed that legislatures are prone to producing unstable outcomes, and because of this expected instability, political scientists began to create models for how this instability may be resolved. Through this exercise they proposed that legislative stability may be constructed through dictatorships, preference-induced equilibriums (PIEs) and structure-induced equilibriums (SIEs), and political scientists also created expectations for where legislative outcomes may be more likely (with the yolk and uncovered set) even if instability is left unresolved. However, these solutions to legislative instability did not include any room for the effects of political parties. Therefore, researchers created the cleavage theory of political parties to show how political parties may result from historical events which create social-identity groups, or they created theories that argued that political parties were created in order to maximize the benefits of policymaking for either politicians (Aldrich, 2011) or narrow-benefit interest-groups (Bawn et al., 2012).
Since both Aldrich (2011) and Bawn et al. (2012) argued that political parties are made to concentrate the benefits of policymaking in the majority party—whether the main actors of those parties are politicians or interest-groups—the “Where’s the Party?” question, originally proposed by Krehbiel (1993) focuses in on whether majority political parties are actually able to concentrate the benefits of legislating in themselves, or whether outcomes of the legislature are always centrist regardless of whether political parties exist or not. That is, the discussion quickly became about whether political parties matter for understanding legislative outcomes.

The four most prominent theories that developed out of this discussion about whether political parties matter for understanding legislative outcomes or not were the “Pivotal” model, the “Cartel” model, the “Conditional Party Government” model and the “Distributive” model. These models vary in how partisan they expect legislative outcomes to be, but they also vary in how they conceptualize the dimensionality of preferences of legislators. In the rest of this section, I will describe each of these models in turn, and I will also explain theoretical gaps that remain despite the existence of all these models.

### 2.3.1 Pivotal Theory

The author that called into question the importance of political parties for understanding legislative outcomes was Krehbiel (1993) and the basis of his argument later developed into a unidimensional theory of legislative behavior called the “Pivotal Theory” (Krehbiel, 1998). This model essentially predicts that legislative outputs will match the preferences of the “pivotal” legislator. In conditions of simple majority rule, the pivotal player is the median legislator, as the median is the last vote needed to gain a majority of the floor, but in situations with higher thresholds, like the 2/3 veto-override threshold of the United States, the pivotal player would be the last vote necessary to overcome that higher threshold. In short, pivotal theory argues that PIEs exist, but it further develops the PIE model to take into account higher thresholds and multiple chambers, and Krehbiel’s analysis also includes
empirical observations.

Figure 2.5: Observational Equivalence

The Pivotal model did not include any room for the effects of political parties, however, because the main object of importance for this model is the preferences of legislators. To see why, in his paper “Where’s the Party?” Krehbiel (1993) made the observation that—in a two-party system—the majority party always contained the median legislator among its ranks. Because of this it may appear like the majority party is controlling legislative outcomes, but in fact the only thing that is happening is that the median legislator is controlling legislative outcomes, and this median legislator simply happens to be in the majority party. A visualization of this argument can be found in Figure 2.5, which shows five legislators on a unidimensional space that either belong to party A or B. The idea here is that the non-partisan outcome—at the point of the median legislator—is observationally equivalent to the partisan outcome because the median legislator is a part of the majority party. In other words, legislator A3 dominates the policymaking process because he is the median legislator and not because he is part of the majority party. Therefore, independent from the preferences of legislators, political parties are doing no extra work. Krehbiel argued that in order for a truly partisan outcome to exist, political parties had to have an effect on legislative outcomes that were independent from the preferences of legislators. If this partisan effect that is independent from preferences cannot be uncovered, Krehbiel argued, then there is not really a partisan outcome to speak of, even if the centrist outcomes around the preferences of the median legislator happen to benefit one party over another. The “Where’s the Party?”
question, then, was somewhat of a challenge for researchers to find how political parties might be able to affect outcomes independent of the preferences of legislators.

This argument is also, to an extent, an argument against Aldrich’s and the UCLA School’s theories of the development of political parties. That is, both these models argued that political parties were created in order to concentrate legislative benefits for the majority party and concentrate legislative costs in the minority party. However, if like Krehbiel argues political parties have no independent effects on legislative outcomes, then they clearly cannot serve the purpose that Aldrich and the UCLA School assumed parties were developed for. In a sense, then, the “Where’s the Party?” question is intricately related to “Why Parties?” because if the effects of political parties on legislative outcomes cannot be determined, then the main reason they purportedly exist would vanish. In other words, if we find that political parties have no effects on legislation, then we have no reason to study or really care about political parties at all, and we might as well just focus on individual legislators.

2.3.2 Cartel Theory

The creators of Cartel Theory, Cox and McCubbins (1993, 2005), took the task of finding the effects of political parties on legislative outcomes upon themselves, and they argued that the effects of parties were difficult to see because political parties used negative agenda-setting powers in order to hide their intra-party divisions. The main argument of Cartel Theory is that if political parties show their internal divisions to the electorate, then the electorate is more likely to believe that parties are disorganized and contradictory, and the electorate may choose to vote against such a party. Because legislators of a given party have tied fortunes, as voters may vote by party rather than considering the characteristics of each individual legislator, legislators have an interest in protecting their party label. In order to protect their party label, then, legislators may be willing to delegate some powers to the leadership of the political party, and with this delegated power the leaders can prevent their party from voting in a divided way, protecting the party label.
In order for party leaders to carry out these tasks, they are given “procedural legislative cartels” (Cox and McCubbins, 1993, 2005). The idea here is that party leaders do not need to tell their party members how to vote, but they can prevent the majority party from being divided simply by being able to use legislative procedures in order to decide what their legislators vote on. Through these negative agenda-setting powers alone, party leaders can prevent their party from being divided and they can facilitate the divisions of the majority party. A visual representation of how this works is shown in Figure 2.6.

Figure 2.6 : Cartel Theory

In Figure 2.6 we can again see five legislators that belong to either party A or B. According to Cartel theory, however, the three legislators in party A should be able to create a cartel, and they should be able to prevent bills that divide the party from reaching the floor. In figure 2.6 we can see two status quo policies that the legislature may choose to change: \( p_1 \) and \( p_2 \). We can also see a “majority block-out zone.” The idea of the majority block-out zone is that status quo policies that are in this region will never be proposed for a vote. Take for example the status quo policy \( p_1 \). If legislators were allowed to consider \( p_1 \) and vote on it however they would like, a simple PIE would lead outcomes towards the median legislator A3, and if the ideal point of A3 was proposed as an alternative to \( p_1 \), then B1, B2 and A3 would vote for that proposal and A1, and A2 would vote against that proposal. That is, the vote would divide the majority party. However, if power to schedule votes was given to A2, then A2 could block the consideration of \( p_1 \). A2 would, however, allow the consideration of
as a vote on that bill would lead A1, A2, and A3 to vote together, and it would move $p^2$ towards the preferences of the majority party.

In short, Cartel Theory argues that legislators are likely to delegate powers to a legislator that is close to the median of the majority party—such as A2 is in Figure 2.6. The purpose of this delegation is for the party leaders to prevent their majority party from looking divided. Leaders are able to accomplish this, not by telling legislators how to vote, but by deciding what legislators can vote on. Through this censoring of votes, party leaders can ensure that any policy changes that are enacted benefit the party, and they can prevent their parties from being divided by the opposition in order to move policy away from the majority party. Finally, in this model the median legislator is willing to sacrifice powers to party leaders because they tend to receive side-payments in the form of pork or prestigious offices from party leaders to make up for the policy losses they may incur in benefit of the party label (Carroll and Kim, 2010; Cox and McCubbins, 2005).

### 2.3.3 Conditional Party Government (CPG)

Another prominent theory of legislative behavior takes a middle road between Pivotal theory and Cartel theory. The “Conditional Party Government” model, or CPG for short, moderates the claims of Cartel theory to an extent. The main component that CPG adds is the idea that “party government” can only exist once “the conditions” are met for party government to exist. Aldrich (2011) and Rohde (2013) argued that these conditions are:

1) **homogeneous preferences within parties**, and 2) **polarization between parties**. Therefore, when the conditions are present, CPG predicts outcomes similar to those proposed by Cartel theory, but when the conditions are not present CPG predicts outcomes similar to those proposed by Pivotal theory.

Figure 2.7 shows how CPG theoretically functions in one dimension. Both lines show five legislators that either belong to party A or party B. In the top line of the figure, the conditions of homogeneity of preferences within parties and polarization across parties are
Figure 2.7: CPG In One Dimension

not met, because party preferences overlap. In this case, the equilibrium prediction would be the median legislator, as in a unidimensional space that is the PIE. In the second, lower line we can see an example of the conditions being met. In this situation the preferences of both parties are homogeneous, and they are polarized because none of the party preferences overlap and there is distance between the parties. Note that when the conditions are met, the median legislator (A2) is not assumed to be the equilibrium outcome, but the median of the majority party is assumed to be the equilibrium outcome (A3). This is because CPG argues that when the conditions are met then legislators of the majority party will find it in their interest to delegate powers to their leaders, but when the conditions are not met then the majority party legislators will be less willing to delegate powers to their leaders, making centrist policy outcomes more likely. That is, when the conditions are met, CPG makes the same prediction as cartel theory, but when the conditions are not met, and the policy space is unidimensional, then CPG makes the same prediction as pivotal theory.
2.3.4 Distributive Theory

Something to notice about the previous three theories I discussed is that they were all originally constructed as unidimensional models. For this reason they are able to rely on concepts such as the “median legislator” or the “median legislator of the majority party,” because in unidimensional spaces these actors unambiguously exist. However, in multidimensional spaces multidimensional medians almost never exist. Furthermore, in multidimensional spaces preferences alone cannot create outcome equilibriums (Riker, 1988). Therefore, how does the “Where’s the Party?” question play out when multiple policy dimensions are assumed? The main theory that deals with legislative outcomes in multiple dimensions is Distributive Theory, which creates a non-partisan model of legislative outcomes on the basis of the assumption of multiple dimensions of legislative preferences.

Distributive theory is based on Mayhew’s (1974) argument that legislators are likely to behave in a way that maximizes their probability of getting reelected. In contrast to Converse (1964), “preferences” in this regard are conceptualized as electoral incentives and not ideological preferences. That is, the main motivation behind legislative behavior is assumed to be the gaining and keeping of office, and not ideological purity or cohesion. Furthermore, because the United States uses single-member districts in the House of Representatives—where this theory was developed—, electoral preferences were aggregated at the individual—not the collective—level in Mayhew’s conception. That is to say, they were particularistic benefits. This distinction is important because “preferences” defined in an ideological manner would tend towards unidimensionality, whereas “preferences” in terms of particularistic electoral incentives would tend towards multidimensionality in systems with individual accountability (Converse, 1964; Noel, 2012; Aldrich, 2011).

Building on Mayhew’s “electoral connection” idea, Shepsle and Weingast (1981, 1994) argued that one way that legislators create stability is through “gains from trade,” where legislators trade particularistic benefits for their constituencies in order to maximize their reelection probabilities. Here, a multidimensional policy space is assumed. For example,
a legislator that represents a rural community may be willing to sacrifice on the military spending dimension—which is irrelevant to her district—for more power on the agricultural spending—which is important to her district. In this theory, the key institutions through which this trade was organized was the committee system, with legislators self-selecting into committees given their constituencies’ preferences, and with a strong seniority system within committees to create hierarchy. Legislative stability was created through “closed rules,” where policies that exited these committees were not allowed to be modified with amendments by the floor—limiting universal domain.

In short, distributive theory is a SIE model that shows that legislators pursuing particularistic, multidimensional, electoral preferences can create legislative institutions that produce stability. With overall multidimensional preferences, along with unidimensional preferences within committees, closed amendment rules, and a seniority system that establishes hierarchy within committees, Shepsle and Weingast (1981) were able to show that an equilibrium could be created in the legislature. Furthermore, the “gains from trade” conceptualized by the model created a plausible explanation for why legislators would be willing to delegate powers to legislative institutions instead of tolerating policy instability.

In terms of partisanship, however the Distributive Theory model is centrist and non-partisan although committees, similar to party leaders in the Cartel Theory formulation, also hold agenda-setting powers in the Distributive Theory model. It is through this limitation of Universal Domain that committees are able to contribute stability to a multidimensional legislature. However, because committees are organized through a seniority system—rather than a partisan system—then legislative outcomes under this model cannot be assumed to be “partisan” in the sense established by Krehbiel’s “Where’s the Party?” question.

2.3.5 The Missing Multidimensional Theory of Parties

While a comprehensive theory of political parties that explicitly assumes and models multidimensionality of legislative preferences does not currently exist, there are certain authors
that have started moving in a more multidimensional direction, and some of the previous theories I have discussed have some contradictory expectations about the dimensionality of legislative preferences. Cartel Theory, for example, assumes that preferences are unidimensional, but also includes concepts that seemingly contradict with that assumption of unidimensionality—such as the fact that preferences are mainly about electoral incentives, and the concept of “side payments.” Furthermore, CPG, although it developed as a unidimensional model (Aldrich, Berger and Rohde, 2002), more recently has also been reformulated as a multidimensional model (Aldrich, Rohde and Tofias, 2007). Finally, new models have also been developed that model legislative outcomes without assuming equilibrium outcomes, and they do this using mainly the concept of the “uncovered set” to produce expectations of legislative outcomes (Bianco, Jelizakov and Sened, 2004; Bianco and Sened, 2005; Bianco et al., 2006, 2008).

The way Cartel Theory deals with the issue of dimensionality is at points a bit contradictory. In all the models, such as the one I showed in Figure 2.6, the preferences of legislators are modeled as being unidimensional. That being said, Cartel Theory also conceptualizes the concepts of “preferences” as being “electoral” preferences, by which the main concern of legislators is to gain reelection. Because of these electoral preferences, which can be harmed if the party label is not taken care of, then legislators decide to delegate powers to the leadership. However, as we had seen while discussing Mayhew (1974), Shepsle and Weingast (1981) and Riker (1988), particularistic electoral preferences tend to be multidimensional. Furthermore, in a strictly unidimensional model, the equilibrium of the model must be the median legislator, but in Cartel Theory’s model the median legislator cedes power to the median of the majority party because this median legislator receives “side payments” in order to protect the party label and make up for the policy losses the median legislator incurs in doing so (Carroll and Kim, 2010; Cox and McCubbins, 2005). However, in a strictly unidimensional universe these “side payments” should not be possible as in a unidimensional universe there is no “side” through which to pay. In short, Cartel Theory presents itself as
a unidimensional model of legislative behavior, but strictly it still holds some characteristics that would more aptly fit under assumptions of multidimensionality.

More recently, CPG did make explicit movements from unidimensionality to multidimensionality of preferences. This has been simpler for this model as neither of the “conditions” specifically require unidimensionality of preferences. Both polarization between parties and homogeneity within parties can be easily calculated in one or multiple dimensions, and multidimensional operationalizations of these concepts have been developed by (Aldrich, Rohde and Tofias, 2007). The issue with CPG is that the mechanism through which partisan and non-partisan outcomes are created when the conditions are or are not met in multiple dimensions is not exactly clear. For example, if Cartel Theory is unidimensional, and CPG makes predictions identical to Cartel Theory when the conditions are met, then what happens when the conditions are met under assumptions of multidimensionality? How exactly does Cartel Theory function in multiple dimensions when medians do not exist? Furthermore, what happens, in multiple dimensions, when the conditions of CPG are not met. Pivotal Theory was also a strictly unidimensional model that heavily relied on median legislators as equilibriums. In short, while CPG argues that it can and should function in multiple dimensions, it is still not clear through which mechanisms CPG creates partisan or non-partisan outcomes when the conditions are or are not met, respectively.

Finally, the last approach to understanding legislative outcomes in multiple dimensions has entailed abandoning the idea of searching for equilibriums in multidimensional spaces, and focusing instead on using the uncovered set as an expectation for legislative outcomes in multiple dimensions (Bianco, Jelizakov and Sened, 2004; Bianco and Sened, 2005; Bianco et al., 2006, 2008). The issue with using the uncovered set as an area where legislative outcomes are to be predicted is that the uncovered set suffers a bit from the observational equivalence issues that floor medians suffered from in unidimensional models. That is, uncovered sets often seem to be closer to the majority party (Bianco and Sened, 2005), but if that alone is used as a predictor of legislative outcomes that would mean that legislative
preferences alone are affecting legislative outcomes and that parties are having no independent effect. That being said, Bianco and Sened (2005) argue that the effect of parties may exist through agenda-setting in deciding which legislative outcomes *within the uncovered set of the floor as a whole* are more likely. That is, the effect of the party, in this case, would be to make a sub-region of the uncovered set of the floor as a whole more likely than the rest of the uncovered set.

Still there are some questions that remain about the approach of using the uncovered set of the floor as the prediction of legislative outcomes. First, if the only possible effect of parties on legislative outcomes happens through agenda-setting, then ironically smaller uncovered sets may reduce the effects of parties on outcomes while maximizing the extent to which party members benefit from outcomes. That is, if the uncovered set is small, then there is less room for agenda-setting to modify legislative outcomes, and if this small uncovered set is close to the majority party then that would lead to high levels of benefit for the majority party despite a small or non-existent effect on legislative outcomes from agenda setting. Second, a limitation of this approach is that the partisan prediction is not quite as clear. In contrast to Cartel Theory, for example, where the benefits received by the median legislator of the floor can be contrasted to the benefits received by the median legislator of the majority party, in Bianco and Sened’s (2005) model there is only a single prediction that counts as both the partisan and non-partisan prediction of legislative outcomes. A clearer theory would require multidimensional expectations for *both* outcomes if the legislature functions as a bunch of independent legislators and *another* prediction for outcomes if the legislature functions as a set of partisan legislators.

In sum, while some advances have been made in conceptualizing and modeling how legislative outcomes may be concentrated in political parties if preferences are distributed in multiple dimensions, these models are still not fully specified. Specifying these models with a higher level of detail would be necessary because the primary consequence that multidimensionality has on legislative outcomes is that it makes them less stable, as we had seen in
section 2.1 of this chapter. Theories that conceptualize partisan outcomes under conditions of legislative instability currently do not exist.

2.3.6 Summary of Theories about Legislative Parties

<table>
<thead>
<tr>
<th></th>
<th>Partisan</th>
<th>Non-Partisan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unidimensional</td>
<td>Cartel or CPG (meeting cond.)</td>
<td>Pivotal or CPG (failing cond.)</td>
</tr>
<tr>
<td>Multidimensional</td>
<td>None</td>
<td>Distributive, Chaos or CPG (failing cond.)</td>
</tr>
</tbody>
</table>

Table 2.3 summarizes the models that were developed in response to the research agenda created by the “Where’s the Party?” question. Conditional party government is the most flexible of them all, as variance in “the conditions” can lead to different kinds of legislative outcomes. When the condition is strongly met, CPG can provide both positive and negative powers to the majority party. When the condition is weakly met, cartel theory argues that negative powers will continue to exist for the majority party, but positive powers will wane. Finally, if the conditions are not met at all we would expect party government to fall apart. Although CPG has not always been clear about what it expects happens when the conditions are not met, the pivotal and distributive models, and social choice expectations about chaos, may be useful in filling this gap in CPG. That is, if party government falls apart, but unidimensionality is maintained, then we would expect the pivotal model to explain legislative behavior. However, if unidimensionality falls apart as well, then either the distributive model should produce stability, or we would expect to see policy instability around the yolk. In sum, CPG seems to be able to behave as a generalization of most other models, collapsing onto them according to the extent to which the conditions are met.
2.4 Plan for the Rest of The Book

What this chapter has highlighted is that there have been three questions that most of the literature on legislative behavior has attempted to answer:

1. How can legislative stability be created? (Why so much stability?)

2. Why are political parties developed and what/whose purpose do they serve? (Why parties?)

3. Is this stability necessarily partisan? (Where’s the party?)

The analysis of the Paraguayan legislature that I will carry out in this book will follow the structure I laid out in this chapter. This book will be divided in two parts. Part I will focus on the topic of legislative stability in the Paraguayan legislature, and whether it exists or not. Part II will focus on why political parties were historically developed in Paraguay, and how they may affect lawmaking in the Paraguayan Chamber of Deputies.

Part I will focus exclusively on the question of whether we can find evidence for legislative stability in Paraguay. In order to do this Chapter 3 will analyze whether the Paraguayan executive is so strong that executive powers alone are likely to produce legislative stability. This chapter finds that in fact the Paraguayan president is one of the weakest presidents in Latin America—and consequently in the world—and that therefore the executive is not likely to be a source of legislative stability. Chapter 4 and 5 will analyze whether the preferences of legislators conform to what we would expect if a preference-induced equilibrium explained legislative stability. Namely, Chapter 4 analyzes the dimensionality of legislator preferences and Chapter 5 analyzes whether legislative preferences are static or dynamic. Both these chapters show that preference-induced equilibriums are unlikely in Paraguay because legislator preferences are at times multidimensional, and they also seem to change substantially from one legislative year to another even when the composition of the Chamber of Deputies as a whole remains constant. Finally, Chapter 6 analyzes whether a structure-induced equilibrium is likely to create legislative stability in the Paraguayan legislature...
through analyzing existing institutions of both chambers and through empirical analysis of who occupies leadership positions in the Chamber of Deputies. I find that agenda-setting powers assigned to legislative leaders are very weak, and that overwhelming legislative power is given to simple floor majorities. This, paired with empirical analyses that show how leadership positions inherit the instabilities of the legislative floor, indicate that structure-induced equilibriums also fail to create legislative stability in the Paraguayan Chamber of Deputies.

Part II of this book begins on the assumption that legislative preferences in Paraguay are multidimensional and dynamic, and from this standpoint I try to design a multidimensional theory of parties which can account for legislative outcomes in Paraguay’s Chamber of Deputies. In order to do this Chapter 7 traces the historical development of political parties to attempt to understand how and why they were developed. Through this exercise I find that although political parties were developed long before democracy took hold in Paraguay,\(^2\) these political parties have had intra-party factions for almost their entire history. These factionalized political parties carried over into the current democratic period and it is this intra-party factionalization that mainly accounts for the second dimension of legislative politics. The first dimension is dominated by inter-party competition, while the second dimension is dominated by intra-party competition. Chapter 8 uses this understanding about intra-party factionalism to create a theory of fractious parties. This theory of fractious parties argues that political parties in Paraguay mainly persist, not because they are able to use agenda-setting powers to limit Universal Domain and create legislative stability, but rather because they use partisan supermajoritarian institutions to create intra-party consensus, which then carries over to the legislature. At times, however, the creation of intra-party consensus fails, but political parties remain intact because of power-sharing proportional-representation institutions that “fuse” these intra-party factions into

\(^2\)The Paraguayan democratic period began in 1989, but the two largest political parties were founded in 1887.
all partisan and national representative bodies. Finally, Chapter 9 analyzes whether these fractious parties are nevertheless able to concentrate benefits in themselves, despite their limited agenda-setting powers, despite their intra-party factions, and despite their inability to censure legislators for defecting from the party. I find that despite all these limitations to political party power, legislative outcomes still seem to be markedly partisan.
Part I

Is there Legislative Stability In Paraguay?
Chapter 3

Dictatorship: Does the Executive Dominate the Legislative Process?

3.1 Introduction: Is the Paraguayan President a Dictator?

As discussed in Chapter 2, Arrow argued that legislative stability would not be likely under conditions of 1) Rationality (individual preferences are complete and transitive), 2) Universal Domain (no policy alternative is restricted beforehand), 3) Pareto Optimality or Unanimity (if every member of the group chooses a single option that option should win), and 4) Nondictatorship (an individual cannot choose for the group as a whole). In order to produce legislative stability consistently, Arrow argued that one of these assumptions must be sacrificed. In this chapter we will be analyzing whether the powers of the Paraguayan executive are sufficiently strong that they sacrifice Arrow’s assumptions of either Nondictatorship or of Universal Domain. In other words, we will be analyzing whether the powers of the Paraguayan executive are strong enough so that legislative behavior is fundamentally altered and stabilized by these executive powers.

Having strong executive powers, of course, is not the same as having a full-blown dictatorship, but analyzing whether the executive has substantial influence over legislative behavior has a strong tradition in the political science literature on Latin America. Because most democratic constitutions in the region were written under authoritarianism, some authors have argued that most Latin American countries granted extensive powers to the executive, which in turn rendered legislatures “reactive” in the policymaking process in contrast to the “proactive” executives of the region (Cox and Morgenstern, 2001). However, other authors have analyzed executive powers and they found that the extent to which presidents are
granted extensive or restrictive powers by the constitution varies from country to country (Shugart and Carey, 1992; Mainwaring and Shugart, 2012). Analyzing the executive therefore makes sense for understanding the powers of the Paraguayan legislature, because if the president has extensive powers, then the legislature might be subservient to the executive, but if the president has few powers, then the legislature may be equal to or dominant over the executive.

In response to the 35 years of dictatorship that Paraguay experienced from 1954 to 1989 under Gen. Alfredo Stroessner, Paraguay is one of the countries that decided to grant very restrictive powers to the president upon democratization. With the ratification of the new constitution in 1992, the Paraguayan executive passed from being an extremely strong executive (Shugart and Carey, 1992), to being one of the weakest executives in Latin America (Mainwaring and Shugart, 2012; Saiegh, 2010). According to the constitution, the president has no decree powers. The president can only declare three bills as “urgent” per year, and while a 2/3 majority is needed to remove the urgency of the bill, any bill can be effectively killed because there are no restrictions on the modifications legislators can place on urgent bills, and legislators can also simply vote down the bill—rendering this power “toothless” (Molinas et al., 2008). The president can place partial and total vetoes on bills, but these vetoes can be overridden by an absolute majority of each chamber—only slightly higher than the majority needed to pass a bill in the first place. Finally, the president does not have exclusive initiative powers on anything other than the budget. Even with the budget, though, presidential powers are weak as Paraguay is one of the few South American countries where the constitution allows the legislature to modify the budget in any way it sees as fit—the other two are Argentina and Bolivia—and if the budget fails the reversion point is the budget of the previous year (Molinas, Pérez-Liñán and Hallerberg, 2009).

In order to exemplify the weakness of executive powers, we can analyze bill initiatives and bill passages by the executive and the legislature to see which branch is more prominent in the lawmaking process. Since 2008, Paraguayan bill histories have been made available
online, and they contain rich information about the legislative process. In total, for the 2008-2018 time period, I had information about 12,696 bills, and the 167,843 procedures that were carried out on these bills.

Table 3.1 shows where bills were initiated in the 2008-2013 (Lugo.Franco) and 2013-2018 (Cartes) legislative/executive periods. Bills in Paraguay can be initiated by the president, by the senate, by the chamber of deputies, by citizens and by the supreme court, but because the court and the citizens virtually never initiate bills I have excluded them from the table. When initiated, bills must have a chamber of origin. When the chamber of deputies or the senate initiate a bill, they automatically become the chamber of origin as well, but when the executive initiates a bill it can decide which chamber it wants to be the chamber of origin. Table 3.1 shows a cross table of the proportion of initiatives and origins of bills by each branch and in each chamber of the legislature.

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Origin</th>
<th>Lugo.Franco</th>
<th>Cartes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislative</td>
<td>Chamber of Deputies</td>
<td>0.639</td>
<td>0.723</td>
</tr>
<tr>
<td>Legislative</td>
<td>Senate</td>
<td>0.224</td>
<td>0.206</td>
</tr>
<tr>
<td>Executive</td>
<td>Chamber of Deputies</td>
<td>0.074</td>
<td>0.028</td>
</tr>
<tr>
<td>Executive</td>
<td>Senate</td>
<td>0.064</td>
<td>0.044</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.000</td>
<td>1.000</td>
</tr>
</tbody>
</table>

As the table shows, in Paraguay the policymaking process is clearly driven by the legislative branch. During the Cartes presidency over 92% of bills were initiated by the legislative branch, and in the Lugo/Franco era around 86% of bills were initiated by the legislative branch. Within the legislative branch, it is also clear that the Chamber of Deputies initiates more policies than the Senate in both periods.

However, in terms of actually passing policy, the president may not be as weak as we would expect. Both Cartes and the Lugo/Franco presidencies initiated around 30% of laws that were finally passed, whereas legislative initiative of passed laws was around 60% for both periods. This might imply that despite the weak formal powers of the executive, they
Table 3.2: Share of Passed Laws

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Origin</th>
<th>Lugo.Franco</th>
<th>Cartes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislative</td>
<td>Chamber of Deputies</td>
<td>0.449</td>
<td>0.457</td>
</tr>
<tr>
<td>Legislative</td>
<td>Senate</td>
<td>0.259</td>
<td>0.194</td>
</tr>
<tr>
<td>Executive</td>
<td>Chamber of Deputies</td>
<td>0.149</td>
<td>0.177</td>
</tr>
<tr>
<td>Executive</td>
<td>Senate</td>
<td>0.143</td>
<td>0.171</td>
</tr>
</tbody>
</table>

Overall, then, the Paraguayan president is constitutionally one of the weakest presidents in the world. According to Mainwaring and Shugart (2012), of four categories—potentially dominant, proactive, reactive and potentially marginal—Paraguayan executive powers fall in the “potentially marginal” category. Furthermore, an index of the overall legislative powers of the Paraguayan president finds it to be the weakest president in Latin America—tied in last place to Nicaragua (Saiegh, 2010, 56).

At this point it seems quite apparent that the Paraguayan executive is not a dictator, given the weak powers the executive possesses. Therefore, it is unlikely that Arrow’s assumption of Nondictatorship is violated by the Paraguayan executive. That being said, might executive powers still be a source of legislative stability in the Paraguayan legislature? Can the executive powers restrict the Universal Domain available to legislators?

3.2 Can Weak Executive Powers create Legislative Stability?

In order to explore this question, in the rest of this chapter I will be analyzing the effects of one of the few powers that the Paraguayan executive unambiguously does possess: the veto. The power of the veto could be argued to have a strong effect on legislative stability,
because if the threshold for override of the veto is high, then that would effectively limit
the Universal Domain of policies available to legislators. That is, previous research has
found that high-threshold vetoes, even when not used, have an effect on legislative behavior
because legislators anticipate the preferences of the executive (Cameron and McCarty, 2004;
Cameron, 2010). Through this anticipation, a qualified majority required for overriding a
veto may have a stabilizing effect on legislative behavior, because it creates a restriction
to the Universal Domain available to legislators by limiting the options that legislators are
willing to consider. In Paraguay, however, the threshold for override of a presidential veto
is quite low—only an absolute majority is needed, which is barely higher than the simple
majority needed in order to pass a bill in the first place. Can this low threshold for veto
overrides still produce any legislative stability?

Very little theory exists about how vetoes function in systems with low thresholds for
override. This is unfortunate because systems with weak vetoes are quite common. For exam-
ple, Alemán and Schwartz (2006) identified seven Latin American countries with weak vetoes
that can be overridden by an absolute majority: Brasil, Colombia, El Salvador, Nicaragua,
Panamá, Paraguay, Perú and Venezuela. Similarly, Magar (2012) identified six states in
the United States where the vetoes of governors can be overridden by an absolute majority:
Alabama, Arkansa, Kentucky Tennessee, West Virginia and Indiana. Therefore exploring
executive-legislative relations in systems with vetoes with low thresholds for override should
be useful for understanding a wide variety of separation-of-power democratic systems.

In this chapter I will look into two mechanisms through which weak vetoes may still
be useful for stopping legislation—absences and vote buying—and one mechanism through
which it may be rational for the executive to veto bills even if she knows her vetoes will be
overridden—the “blame-game” mechanism. Absences can create situations where a veto can
be effective because there might be some cases where a simple majority is not representative
of the absolute majority. In these cases a veto could fail to be overridden because the veto
gives all legislators a second chance to be present, where the absolute majority—including
formerly absent legislators—can now vote down the bill. On the other hand, side payments may avoid an override if the executive essentially **buys marginal yea votes** to flip them into being nay votes. Finally, “blame-game” vetoes are situations where the president decides to veto a bill that is unpopular to the electorate, even if she knows her veto will be overridden, for the president to be able to signal to the electorate that she is “fighting the good fight” against the unpopular congressional action.

This chapter concludes by arguing that presidents are more likely to veto bills when they believe those vetoes will not be overridden. However, I do not find any evidence for the absences mechanism of veto behavior. There is evidence for vote-buying behavior, but interestingly this vote-buying behavior also happens in a partisan manner. That is, bills that were passed with marginal minorities are only more likely to be vetoed when these bills were supported by the opposition party. This means that presidents do not vote-buy or play the blame game, but they are in fact very likely to vote-buy and play the blame game. Presidents place vetoes on bills when overrides are unlikely, but when unsure about whether their veto will be overridden or not, they are more likely to take a gamble on opposition bills.

The main implication of the findings of this chapter for the rest of the book is that because the executive is so weak in the Paraguayan system, the legislature is proactive and the executive occupies a more reactive role. Since in systems with strong executives we should expect legislators to strategically anticipate executive preferences by incorporating executive preferences into their behavior, in systems with weak executives we can expect the president to hold most of the burden of anticipating legislative preferences, while legislators are more free to behave sincerely. In other words, because the executive veto is so weak, we would not expect this presidential power to fundamentally limit Universal Domain for Paraguayan legislators, and presidential power is therefore an unlikely source of legislative stability in Paraguay.

In what follows, I will first describe how political science has previously described the
relationship between executives and legislatures under high thresholds for override. Then, I will describe how these models must be modified in order to account low thresholds for override of executive vetoes. From these theoretical expectations I derive empirical expectations, and I proceed to test these expectations through empirical analysis using data derived from the 2008-2013 and 2013-2018 executive/legislative periods in Paraguay.

3.3 Veto Models in High Thresholds for Override: Anticipating Executive Preferences

Before considering veto behavior to situations of low thresholds for override, it may be useful to review how existing models account for vetoes in situations of high thresholds for override. The simplest way to model the informational dynamics of veto situations in systems with high thresholds for override is by assuming a unidimensional policy space and by considering only three actors—the President (P), the median legislator (C) and the veto-override player (O)—that have their respective ideal points—p, c and o. Furthermore, we only consider two policy options: the status quo q and a policy alternative b. These actors are also modeled as having linear utility functions so that, for example, congress’ (C’s) extracted utility from policy b would be written as \( u(b; c) = -|b - c| \). From these assumptions we can extract an acceptability range. For example, Figure 3.1 below shows the acceptability range of the median legislator, C, considering alternatives to the status quo q. Acceptable alternatives will be found within the range of \((q, 2c - q)\), and anything out of that range will be considered unacceptable to that player. This spatial decision rule applies to all players when considering all alternatives to the status quo (Cameron and McCarty, 2004; Cameron, 2010).

Under assumptions of perfect information, this model predicts that vetoes should never take place. If actors can perfectly anticipate the preferences of others, they can incorporate the preferences of others into their proposals so that only proposals that will be approved are put forward. Furthermore, with perfect information proposals that will be rejected are never initiated in the first place. Assuming for a second that vetoes cannot be overridden, Figure
Figure 3.1: Acceptability Range

3.2 shows how this anticipation process would take place. Given that $q$ in Figure 3.2 is very far away from $c$, a proposal placed in almost the entire region shown would be acceptable to the median legislator $C$ as an alternative to $q$. However, given that $q$ is not that far away from $p$ only the smaller range of $(q, 2p - q)$ is acceptable to the president. Despite this small acceptable range $C$ can still make proposals that improve its utility considerably. If the veto did not exist, $C$ would simply propose $c$ and it would pass without an issue. But because the veto exists, $C$ would prefer to propose policy $b$, which is within the president’s $(q, 2p - q)$ range, but is also as close as possible to $C$’s ideal point, $c$.

In sum, this example shows two things. First, under circumstances of perfect information vetoes should never take place because actors anticipate the preferences of others. Second, even if vetoes never take place, they can still modify the behavior of other players. This is because $C$ had to propose $b$ rather than his/her preferred policy $c$ in order to prevent a veto, and $P$ did not have to do anything to ensure that concession. That is, strong vetoes are powerful even when they are not used (Cameron and McCarty, 2004; Cameron, 2010).

Figure 3.2: Anticipation of Preferences
However, the assumption of perfect information is unrealistic because vetoes do take place in real life. Consequently, this model attributes vetoes to the fact that legislators often do not have perfect information about presidential preferences. This informational problem is especially salient because bargaining models of this sort often show that actors have strong incentives to misrepresent their preferences (Miller, 1992). In any case, Figure 3.3 shows how imperfect information can be modeled. This figure shows two ideal points for the president, one that represents the president’s true preferences $p_t$ and one that represents the president’s false preferences $p_f$. Given these two preferences, two acceptability ranges can exist. One that ranges $(q, 2p_f - q)$ and another that ranges from $(q, 2p_t - q)$. If $C$ anticipates presidential preferences incorrectly, then it would propose the closest policy to $2p_f - q$ possible that falls within the (false) acceptability range of the president. This would result in the passage of bill $b_r$, which would be rejected by the president. In contrast, if $C$ correctly identifies $P$’s preferences, then it would propose the accepted policy $b_a$, which falls within the $(q, 2p_t - q)$ range and would not be vetoed by the president. In short, in these models it is the failure to correctly anticipate executive preferences that leads to vetoes actually taking place.

![Figure 3.3: Vetoes under Imperfect Information](image)

Although I have, as most of the literature on vetoes, focused mainly on veto dynamics of congress anticipating presidential preferences, this model also includes the possibility of the president anticipating the preferences of the veto-override player. This latter dynamic has received so little attention because in situations of high thresholds for override the acceptability range of the veto override player is often absorbed by the acceptability range of the president. To show why, Figure 3.4 shows a situation where $O$’s acceptability range
is absorbed by $P$’s. In this case, which is common in situations of high veto for override, $O$’s ideal point is actually closer to $q$ than $P$’s, which means that $O$’s acceptability range is smaller than $P$’s, and completely contained by $P$’s acceptability range. Substantively this means that in this situation, there is nothing that $P$ would veto that $O$ would find desirable to override.

Figure 3.4 : Vetoes under Imperfect Information

In contrast, in Figure 3.5 we can see an example of what the dynamic should look like when the acceptability range of the veto override player is not absorbed by the acceptability range of the president. In this case, $C$ is able to successfully propose policy $b$. Because policy $b$ is not inside of the acceptability range of the executive, the executive would prefer to veto proposal $b$ rather than to let it pass. However, because it is inside the acceptability range of $O$, if $P$ vetoed this bill it would be overridden. In a situation of perfect information, $C$ would pass $b$, and $P$ would not veto it, even though he would prefer to veto it, because he would anticipate that $O$ would override any veto attempts. In short, in this situation vetoes do not take place because the president anticipates the preferences of the override player. This exercise shows that the weaker the veto, then, the more important it will be for the executive to anticipate legislative preferences, while the stronger the veto the more important it is for the legislature to anticipate executive preferences.

In summary, strong vetoes can influence policy outcomes even if they are not used. In situations of high thresholds for override, this usually takes place in the form of congress anticipating executive preferences because the acceptability range of the veto override player is oftentimes absorbed by the acceptability range of the president. However, when the ac-
ceptability range of the veto override player is larger than the acceptability range of the president, then presidential vetoes could be overridden successfully. The more vetoes can be overridden successfully, the more important it becomes for executives to anticipate legislative preferences in order to avoid vetoing bills that will be overridden. Finally, the more information actors have about each other, the more they will be able to anticipate each others’ behavior, and the less likely vetoes will be. This is true both with vetoes and overrides (Cameron and McCarty, 2004; Cameron, 2010).

3.4 Modeling Veto Dynamics Under Weak Thresholds for Override

To an extent, Figure 3.5 already represents what happens to veto dynamics when the threshold of the veto override begins to decline. That is, as the veto override threshold gets lower and lower the distance between $O$ and $C$ gets smaller, and this leads to the higher likelihood that $O$’s acceptability region will not be absorbed by $P$’s acceptability region. However, when the override threshold gets small enough, the model shown in Figure 3.5 ceases to be useful because the median legislator of the floor $C$ essentially becomes the override player $O$.

In Paraguay the distance between $O$ and $C$ is nonexistent because given that vetoes can be overridden by an absolute majority, then $C \equiv O$. Furthermore, because $C \equiv O$, there effectively ceases to be an informational problem between the executive and the legislature.
That is, if legislators have constant, unidimensional preferences, then the preferences of the executive are effectively irrelevant to the policymaking process. Anything congress wants to pass cannot be vetoed because anything that is vetoed can be overridden by congress, and at first sight it seems like congress has no incentive to misrepresent its preferences to the executive because it has no need to bargain with the executive at all.

However, perfect information is unlikely because vetoes do happen in Paraguay. Therefore, some informational problem must be taking place which leads to bargaining problems between the legislature and the executive. I propose three mechanisms through which this bargaining problem may take place: vote buying, absences and “blame-game” vetoes.

The **vote buying mechanism** takes place when the executive subsidizes the cost of the status quo to the median legislator through a side payment. In Figure 3.6 we can see the “cost” of maintaining the status quo would be $|q - c| + i$, which adds an infinitesimal amount $i$ to the policy cost $|q - c|$ to make it worthwhile for $C$ to prefer that payment to the benefit $C$ receives from displacing the status quo, $q$. However, set up in this manner it is not rational for the executive to ever find it worthwhile to give $C$ a side payment because the cost of the side payment would be larger than the policy cost of changing the status quo. That is, if $|q - c| < |q - c| + i$, why would the president prefer to pay *more* to prevent a policy change than the policy change is worth?

**Figure 3.6 : Payment Mechanism of Vetoes**

There may be two reasons why. First, although $c$ is the equilibrium of the chamber,
there may be some internal dynamics in the chamber that lead to outcomes that are not exactly at \( c \), but that are still preferable by \( C \) than \( q \). For example, in Figure 3.7 we can see a chamber of ideal points for three legislators, \( a, c, d \), with \( c \) continuing to be the median of the floor. However, imagine that for some reason \( C \)’s agenda-setting powers are constrained, and \( d \) is approved and sent to the executive rather than \( c \). If this were the case, \( d \) would still be preferable by \( C \) to \( q \), but it would \textit{not} be the equilibrium output of the floor—because it is a non-median outcome. Furthermore, if \( d \) is accidentally approved, the cost of making a side payment becomes affordable for the president because \( |q-c| + i < |q-d| \). In other words, the distance between \( q \) and \( d \) is larger than the distance between \( q \) and \( c \), making it affordable for \( P \) to pay \( |q-c| + i \). In short, if non-centrist outcomes are common from the legislature, then side-payments may be a mechanism the executive could use to strengthen—and subsidize—the median legislator into preventing changes to the status quo. Therefore, if legislative leaders have agenda-setting powers which can produce non-centrist outcomes, as argued by Cartel Theory, then vetoes may still be likely.

Figure 3.7: Payment Mechanism of Vetoes

The second reason why this side payment may take place follows the same logic as the previous example, but rather than “mistakenly” approving non-centrist outcomes, \( C \) may purposely misrepresent her preferences in order to receive a side payment that is larger than the policy benefit she would have received had she represented her preferences truthfully. That is, \( C \) may purposely pass a policy that is closer to \( d \) than to \( c \), just so that \( P \) has an incentive to pay \( |q-c| + i \). This is rational from \( C \)’s point of view because \( |q-c| < |q-c| + i \). By misrepresenting her preferences \( C \) can get \( P \) to give her a higher payoff than she would
have had by representing her preferences accurately. This can be an extension of the “veto threat” model depicted by Cameron and McCarty (2004); Cameron (2010), but because the veto is so weak the actor that misrepresents her preferences in this context would be the median legislator and not the president—essentially making an “override threat” in order to extract a side-payment from the president. In our case, the median legislator may threaten to pass a bill that is not her ideal policy in order to simply extract a higher payoff from the executive.

The second mechanism I propose is called the **absences mechanism**, and it can be seen in Figure 3.8. In this example, the legislature is made up of legislators A, B, C, D and E. The black circles represent present legislators, and the white circles represent absent legislators. Finally, $P$ represents the preferences of the executive. Here we can see that although $C$ is the median legislator of the chamber, when absences are taken into account, $B$ becomes the *median present* legislator of the chamber. This absence configuration can lead to the approval of an outcome that is not ideally preferred by the median legislator. Therefore, if the preferences of the median legislator ($C$) are closer to the preferences of the president than the preferences of the median present legislator are ($B$), as they are in the top line, then the president would veto that bill in order to give the median legislator the ability to remedy that mistake. However, if the president is closer in preferences to the median present
legislator than she is to the median legislator of the floor, then the president would not veto the bill, because the mistake benefits the president. For the absences mechanism, then, absences are vital because they may lead to situations where the median present legislator is not the same person as the median legislator of the floor as a whole, thus rendering \( O \neq C \).

Finally, a last option may be that presidents in these situations are simply more likely to veto bills that are supported by the opposition. These vetoes follow the “blame-game” mechanism, and the purpose is not to attempt to impede policy from passing, but rather the purpose is to make a player’s antagonist look bad in the eyes of another player which has up to this point not been included in the models: the electorate. In systems with high thresholds for override, the blame game is often modeled such that \( C \) is close to the median voter (\( V \)) on a given issue, and the president is further away from both \( C \) and \( V \). In this case, \( C \) may decide to pass a policy that it knows \( P \) will veto, simply so that action serves as a signal to \( V \) that the president does not support a policy that they do (Groseclose and McCarty, 2001).

In systems with low thresholds for override, however, this setup seems less likely because if \( C \) wanted to pass something despite the wishes of \( P \) it could. The “blame-game” in situations of low thresholds for override are probably reversed. For example, imagine that \( P \) and \( V \) are opposed to a policy that is proposed by \( C \). In this case, \( P \) may decide to veto the proposed policy even if \( C \) is going to override it because in that way \( P \) can signal to \( V \) that she, like the electorate, is opposed to the policy, but that the policy is passing anyway despite her wishes—creating a clear “blame” signal for the voters about the behavior of the legislature.

### 3.5 Deriving Observable Implications from Theories

Having described the vote-buying, absences and blame-game mechanisms for explaining vetoes in situations of low thresholds for override, it is now necessary to identify observable implications that would allow us to differentiate between them. The largest distinction is
between blame-game vetoes on one hand, and the absences and vote-buying mechanisms on the other. That is because the way blame-game vetoes use information is fundamentally different. Blame-game vetoes are not concerned with avoiding overrides, but rather they are concerned with sending a clear signal to voters. Therefore, the first observable implication that would suggest that blame-game vetoes take place is if presidents are more likely to veto bills supported by the opposition, whether those bills are likely to be overridden or not.

Hypothesis 1: Presidents are more likely to veto opposition-supported bills, regardless of whether those vetoes will be overridden or not.

In contrast to blame-game vetoes, both vote-buying and absences mechanisms are concerned with avoiding overrides. Therefore, our first hypothesis, which is somewhat contrary to the previous hypothesis, would be:

Hypothesis 2: Presidents are more likely to veto bills when they suspect that these vetoes will not be overridden.

However, this hypothesis does not allow us to distinguish between the absences and vote-buying mechanism. The main differentiation between these two mechanisms is that in the absences mechanism a veto is used because the president expects to convert absences into nay votes. In contrast, the vote-buying mechanism is aimed at converting yea votes for a bill into nay votes for a bill through side payments. Therefore, the main observable distinction between these two theories would be whether there tend to be high levels of absences before vetoes or not. High levels of absences in the legislature before vetoes take place would lend support to the absences mechanism, but if absences are not related to veto behavior then that would lend support to the vote-buying mechanism.

Hypothesis 3: If the absences mechanism is taking place, then we should expect high levels of absent legislators in the vote immediately preceding the veto.
Finally, it may be possible that the president is both trying to avoid overrides and trying to play the blame-game. That is, the president may attempt to avoid overrides as much as possible, but because she has imperfect information, when she is unsure about whether a bill will be overridden or not, she may be more likely to veto a bill supported by the opposition than by her own party. This interactive expectation makes sense because blame-game vetoes are more likely to be useful for the president when they are placed on opposition-supported bills than when they are placed on bills supported by their own parties. Furthermore, absences and vote-buying mechanisms to an extent depend on the legislature “mistakenly” passing non-centrist policies. The partisanship of these non-centrist policies therefore becomes important because if policies are non-centrist to the benefit of the president, then the president is unlikely to “remedy” these non-centrist outcomes with a veto. Therefore, our last hypothesis is:

Hypothesis 4: Presidents are more likely to veto bills when they believe their vetoes will not be overridden and when these bills they believe will not be overridden are supported by the opposition.

3.6 Data

In order to analyze veto behavior in Paraguay, I am relying on two separate data sources—bill histories and roll-call votes—for the 2008-2018 time-period. Presidents and legislatures are chosen concurrently in Paraguay for 5 years, so this time period includes two executive/legislative periods: 2008-2013 and 2013-2018. These two periods are particularly interesting because the 2008-2013 period had an extremely weak executive, and the 2013-2018 period had one of the stronger executives the Paraguayan system can produce.

2008 was the first time since 1948 that a president that was not from the National Republican Association party (ANR or Colorado Party\(^1\) for short) won the presidency. This feat

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\(^1\)“Colorado” in Spanish simply means “red”. Because the color of the flag of this party is red, then it is popularly known as the Colorado Party.
was achieved by an outsider, former-bishop, that was affiliated to a small left-wing party but entered into an alliance with Paraguay’s second largest party, the Authentic Radical Liberal Party (PLRA or Liberal Party\(^2\) for short). However, being an outsider, Lugo was unable to maintain the full support of the Liberal Party, and in 2012 he was impeached and removed from office, leaving Federico Franco, his Liberal vice president, in the executive position. Therefore, the Lugo/Franco period was characterized as a period of relative executive weakness.

In contrast, Horacio Cartes, in 2013, represented the return of the Colorado Party to power after its first experience of being in opposition. Although also an outsider, Cartes was able to build a large amount of support inside the Colorado Party, and the party as a whole was initially strongly unified behind him. In short, in these two presidential periods we can have an idea of the full range of strength that presidential powers in Paraguay can assume under democratic institutions—from one of the weakest presidents to one of the strongest. The fact that these two periods are so diverse provide a relatively stringent test for our theoretical models, because if our models can continue to function despite this diversity, they are probably capturing an underlying systematic feature of executive/legislative relations in Paraguay.

In terms of bill history data, I was able to retrieve data from the “System of Legislative Information” of the Paraguayan legislature, which includes bill history data from 2008 to the present.\(^3\) These bill histories include every single procedure carried out on a bill—including entries and exits from commissions, movement from one chamber to another, vetoes, etc. In total, I was able to get information about 167,843 procedures carried out on 12,696 bill projects. From this constructed database I was able to extract the dependent variable of interest which is whether a bill received a partial or a total veto.

A second dataset of interest is roll-call data. This data is particularly useful because

\(^{2}\)The flag of the Liberal Party is blue.
\(^{3}\)see: http://silpy.congreso.gov.py/
the models developed above rely heavily on the president having information about the preferences of legislators. Roll-call data is useful for creating estimates of preferences for legislators through ideal point estimation (Poole and Rosenthal, 1997; Clinton, Jackman and Rivers, 2004). Paraguay has been consistently recording the electronic votes of legislators in the Chamber of Deputies since 1995 to the present. This includes 1,238 non-lopsided votes for the 2008-2013 period and 1,088 non-lopsided votes for the 2013-2018 legislative period for a total of 2,326. Because we are interested in seeing the extent to which the executive is able to anticipate legislative preferences when placing a veto, measures of legislative preferences derived from roll-call data will be extremely useful. Roll-call data for the Senate is not available for this time period.

Unfortunately, merging these two datasets has been challenging because bill histories and roll-call data are stored in separate formats and they have no common id to link the cases from these different datasets. I was however, able to link a subset of bills and bill histories using the dates of each bill history procedure, the dates of each roll-call vote, and the title of each bill. In the appendix of this chapter, I go into more detail about what this “soft merge” procedure entailed, and I show that although this merging procedure resulted in considerable loss of data, the selection of cases was essentially carried out on the basis of an independent variable, which is the number of procedures a bill underwent. The more procedures a bill underwent, the more likely it was to match with a roll-call vote, and the more likely the titles of roll-call votes and bill histories were to match as well. In the appendix I show that these selected cases do seem to capture the range of variance available to these—and all independent and dependent variables— and therefore although the selection of cases cannot be expected to be random, we do not have a reason to expect analyses on these data to produce biased estimates (King, Keohane and Verba, 1994). Finally, sometimes multiple roll-call votes repeatedly matched with a single bill history, and this may simply be because bills can be voted on multiple times. Because we are interested in veto behavior of the

\footnote{See: www.diputados.gov.py/ww5/index.php/sesiones/sesion-digital}
executive, when multiple roll-calls matched with a single bill history, I only kept the last roll-call that happened in the Chamber of Deputies before the bill reached the executive. This way, the maintained roll-call behavior contains the last vote-behavior information the president would have had available before considering whether to veto a bill or not.

After this merging procedure, I was left with 187 bill/roll-calls for the 2008-2013 legislative period and 147 bill/roll-calls for the 2013-2018 legislative period. In terms of the dependent variable, for 2008-2013 this includes 19 vetoes—15 total vetoes, 4 partial vetoes. For the 2013-2018 this includes 23 vetoes—19 total vetoes and 4 partial vetoes. In sum, my bill/roll-call database includes 330 bill/roll-calls and 42 vetoes—34 total vetoes and 8 partial vetoes.

3.7 Dependent Variable

The dependent variable of interest is the veto. However, the Paraguayan executive can place total vetoes and partial vetoes on legislation, although both can be overridden with only an absolute majority. Partial vetoes are directed at a single article of the bill, while total vetoes are directed at the package as a whole, and when partial vetoes take place, the legislature can decide whether to pass the bill without the vetoed item, to annul the bill as a whole, or to pass the bill as a whole. Any of these three outcomes can be approved by an absolute majority. Therefore, maybe a partial veto is less costly to the president because it does not entail a complete rejection of the bill. However, because the vetoes of all sorts are so weak perhaps the distinction between partial and total vetoes is not very salient. This is because both partial and total vetoes essentially return the bill to the legislature, where the legislature can decide to do whatever it wants with the bill. A partial veto may nudge the legislature into modifying the bill, and the total veto may nudge the legislature into rejecting the bill, but in actuality what both these vetoes do is little more than force an additional consideration of the bill.

That being said, in order to explore alternatives, the dependent variable will be considered in three different ways. First, I will operationalize the dependent variable as an ordinal
variable with three categories: no veto, followed by partial veto, followed by total veto. In this case, I am modeling the costliness of vetoing a bill for the executive, and I consider no veto to be the less costly action and total veto as the most costly action, with a partial veto as a middle category in terms of costliness for the president. In my second operationalization of the dependent variable, I model total vetoes and partial vetoes separately, with one indicator dependent variable for partial vetoes and another for total vetoes. In my third operationalization of the dependent variable, I model both total vetoes and partial vetoes as a single category of “objections”, without distinguishing between total and partial objections. For the first approach I will be using a multinomial logit model, and for the latter two I will be using rare-events logit models. As we will see, because partial vetoes are so infrequent, most of the conclusions of this chapter will only apply to total vetoes. Although the causal mechanisms described above may or may not apply to partial vetoes in addition to total vetoes, unfortunately in the Paraguayan legislature we do not have sufficient data on partial vetoes to uncover a significant effect of any independent variables of interest. That being said, as we will see, effects for total vetoes can be uncovered in a reliable way.

3.8 Independent Variables

As we saw in the theoretical portion of this chapter, a key ingredient to the absences and vote-buying mechanisms is the ability of the president to be able to anticipate the preferences of legislators. In order to anticipate these preferences, the president can rely on two kinds of information. Presidents can rely on information about how legislators behaved relative to a particular bill—which I will refer to as retrospective information—, and presidents can rely on information about how legislators they expect legislators to behave in future rounds of voting—which I will refer to as prospective information. In what follows I will discuss the retrospective and prospective information that is available to presidents when they are choosing whether to veto a bill.
3.8.1 Retrospective Information Useful to Avoid Override

For both the absences mechanism and the vote buying mechanism we would expect executives to only veto bills when they were likely to believe that their veto would not be overridden. There are several reasons to expect bills to be less likely to be overridden. First, because in order to override a bill it is necessary to have an absolute majority in both the Chamber of Deputies and the Senate, one piece of information that may be useful for the executive anticipating whether a veto will survive override or not is assessing the extent to which the chambers of the legislature are divided on an issue. This concept is operationalized with the variable *Chamber Jumps*, which is simply a count variable that counts the number of times a bill moved from one chamber to another. The higher the number of times a bill jumps from one bill to another, the more that would signal that chambers are having problems with reaching an agreement on the issue, and all else equal we would expect executives to be more likely to veto these bills if the executive is behaving in a strategic manner.

Similarly, another piece of information that may be useful is the number of procedures a bill underwent overall. Entries and exits from committee, modifications, extensions of deadlines, may all symbolize more resistance to bill. Legislators often tend to drag their feet on legislation by saying that a bill needs to undergo more procedures before being “ready” for consideration. Therefore, counting the number of procedures a bill underwent may also be information useful for the executive in discerning whether there is resistance to a bill in the Chamber of Deputies. *Num. Procedures* should thus also be considered an independent variable of interest.

Another piece of retrospective information that may be useful for presidents to decide whether to veto a bill or not is to observe the level of support that a bill had. For this, I take the number of “yeas” that the bill received in the Chamber of Deputies right before reaching the executive. However, yeas should not simply have a linear relationship with vetoes, but we may expect there to be a squared effect on the probability of the president placing a veto on a bill. That is, at first we would expect the higher the number of yeas placed on a bill
the higher the probability of vetoes, because a certain number of yeas is necessary for the bill to reach the executive in the first place. If bills do not have a certain amount of support those bills would never pass and they would never reach the executive office, precluding the ability of the president to veto the bill. After a while, however, as the number of yeas becomes overwhelming, we would expect the probability of vetoing bills with higher numbers of yeas to be lower, because with overwhelming support overrides are more likely. I therefore include the independent variables Yeas and Yeas Sq., where we would expect the former to have a positive relationship to the probability of a bill being vetoed, and the latter to have a negative relationship to the probability of a bill being vetoed.

Finally, a last piece of retrospective information that may be useful for deciding whether to veto a bill or not may be the extent to which legislators were present at the time to vote for the bill. This variable is especially important for distinguishing between the absences and the vote-buying mechanisms. If absences are the mechanism through which presidents are choosing to veto bills, then we might expect bills that were passed with high levels of absences to be more likely to be vetoed. In contrast, if bills that are vetoed do not seem to have higher than usual levels of absences than non-vetoed bills, then that would provide evidence for the absences mechanism of veto behavior in low thresholds for override. Therefore the independent variable Absences, which is simply a count variable of how many legislators were not voting at the moment, is also a retrospective piece of information which may be relevant to the president’s decision to veto.

3.8.2 Prospective Information Useful to Avoid Overrides

Prospective information about legislators is particularly important because this kind of information helps us answer the question, how might legislators behave in the future if I ask for an additional vote on this bill? Other than the retrospective, case-by-case information available to presidents about the popularity of a given bill, presidents may also know quite a bit about the way certain legislators tend to behave, and this knowledge is vital because
when deciding whether to issue a veto or not presidents are essentially trying to anticipate how legislators will react to that veto in a subsequent round of voting. Fortunately, because I have access to roll-call data for these time periods we can use this to make estimates of their general voting tendencies. This information can be used to see whether presidents behave in a way that accurately predicts how legislators might behave in a subsequent round of voting for a bill. These estimates are therefore prospective because they are educated, forward-looking guesses that the president might make.

Using a Bayesian Item-Response Theory (IRT) estimation procedure, I created estimates of legislative preferences for the Paraguayan deputies (Clinton, Jackman and Rivers, 2004). Figure 3.9 contains the one-dimensional estimates of ideal points for the 2008-2013 and 2013-2018 legislative periods extracted from the roll-call voting behavior of legislators. I coded these ideal points in such a way that higher ideal point values indicate more “pro-government” positions and lower ideal point values indicate more “anti-government” positions. Therefore, we can see that in the 2008-2013 period the Liberals and left-wing parties are on the right, whereas in the 2013-2018 period they are on the left and the Colorado Party is on the right, responding to the change of who was in the presidency in each of these periods.

Importantly, this Bayesian IRT estimation procedure creates bill-level parameters for each bill in addition to creating estimates of overall preferences of legislators. These bill-level parameters are important because they can tell us, given the overall behavioral tendencies of legislators, how might have we expected legislators to vote on a particular piece of legislation given these overall preferences?

To see how these bill-level parameters help us answer that question, one can look at Figure 3.10. The leftmost panel shows points and an S-Curve. The points plot legislator ideal points on the x-axis, and they plot a single vote decision on the y-axis, with “yeas” coded as 1 and “nays” coded as 0. The S-Curve then creates a prediction for how legislators may have voted given their general tendencies. For this particular bill, the opposition is more likely to vote “nay” and pro-government legislators are more likely to vote “yea” — pro-
Figure 3.9: Legislator Ideal Points in One Dimension
government legislators are coded as having higher ideal points. The straight, vertical line indicates where the probability of voting “yea” is 50%. In this case it seems like classifications were perfect—that is all those that voted yea are above the 50% line and those that voted nay are below.

This line can give us two kinds of information about how a legislator may vote if the vote is re-played. The first, is that it can give us errors of classification. That is, sometimes the S-Curve will predict that someone “should have” voted in a certain way given their overall voting tendencies, but in this particular vote they did not vote in that way. When this happens, the S-Curve mis-classifies someone as having voted in a certain way. However, when errors of classification do take place, our best guess of what might happen if we re-ran the vote would be that a legislator would vote as estimated by the S-Curve. That is, although some errors of classification may happen in a particular vote relative to the overall voting tendencies of legislators, if we were to re-run a vote, our best guess of how legislators would vote given their general voting tendencies would imply that they would behave as predicted by the S-Curve. In other words, even if legislators sometimes behave in an unexpected fashion, if we were to consider how they might behave in the future we would do so using information about how they usually tend to behave rather than how they behaved in one particular vote. The S-Curve allows us to estimate how they may change their behavior to conform to their “normal” voting tendencies, then, should we re-run a vote.

The second piece of information that the S-Curve can give us is information about how to impute voting values for legislators that were not present for a given vote. If a legislator did not vote, we have no retrospective information about the preferences of that legislator on a given vote. However, if we can factor in the general voting tendencies of a legislator, we can use these models to create our best guess about how a legislator might have voted had they been present at the time of voting. Because this is essentially what the president would have to do in the absences model I described above, these S-Curves for each bill are especially relevant for modeling the prospective information a president might be considering.
before vetoing a bill.

Figure 3.10: Legislator Ideal Points in One Dimension

The center and rightmost panels of Figure 3.10 show that the bill-level S-Curves are actually constructed by two parameters derived from the Bayesian Item-Response estimation: the discrimination parameter and the difficulty parameter. The discrimination parameter determines the slope of the S-Curve. When discrimination parameters are negative the probability of voting yea goes down as the ideal point of legislators rises and when discrimination parameters are positive the probability of voting yea rises as ideal point values rise, and higher discrimination parameters create steeper curves, whereas smaller discrimination parameters create smoother curves. The central panel shows an example of how varying negative discrimination parameters varies the steepness of the curve.

Difficulty parameters regulate the intercepts of the S-Curve. The larger the discrimination parameters, the more the curves move outwards towards the edges. In the rightmost panel of Figure 3.10 we can see what happens to a positive-discrimination curve when we increase the difficulty parameter of the curve. The slope of the curve remains the same, but the curve as a whole moves towards the edges of the panel—rightward if the slope is positive and leftwards if the slope is negative.

\[5\] Remember that rising ideal points mean more pro-government legislators according to my coding.
These two parameters are useful for two reasons. The discrimination parameters are useful because they indicate whether bills are more likely to be supported by government legislators—if the slope is positive—or whether bills are more likely to be supported by opposition legislators—if the slope is negative. Therefore, with this parameter I create the Pro-Government binary variable that takes on a 1 variable if the discrimination parameter is positive and a 0 otherwise. This information is useful if the president is carrying out a “blame-game” veto because presidents are more likely to credit-claim on their vetoes when they are vetoing the opposition than when they are vetoing their own party.

The difficulty parameter is useful because it can give us a plausible expectation the president may hold about what might happen if she decides to ask the legislature to reconsider the bill. If the difficulty parameter is large, then the president might expect low support for the bill in the following round of voting. If the difficulty parameter is small, then the president might expect higher support for the bill in the following round of voting. The main difference between the difficulty parameter and the Yea variables included above is that Yea variables are narrow information that the president has about past behavior before a bill reaches his desk. With the inclusion of difficulty parameters I intend to capture how presidents incorporate information about how legislators tend to behave into their projections of what might happen in the future—should they choose to veto a bill.

3.9 Results: Ordinal Dependent Variable

Table 10.2 shows the first set of results from all the dependent variables listed in predicting the ordinal dependent variable of “no veto”, “partial veto” and “total veto” for the 2008-2013 legislative and executive period. All models include a Franco independent variable, which is simply a dummy variable that indicates whether the no/partial/total veto took place during the time Lugo was president or during the time Franco was president in this 2008-2013 period.6

6Recall that Lugo was impeached and removed from office in 2012.
Table 3.3: 08-13 Period: Ordered Logit

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chamber Jumps</td>
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<td>0.27</td>
<td>0.29</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.17)</td>
<td>(0.18)</td>
<td>(0.18)</td>
</tr>
<tr>
<td>Num. Procedures</td>
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<td>0.22***</td>
<td>0.23***</td>
<td>0.24***</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
<td>(0.06)</td>
<td>(0.06)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Yeas</td>
<td>0.00</td>
<td>0.05</td>
<td>−0.01</td>
<td>−0.01</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
<td>(0.06)</td>
<td>(0.07)</td>
<td>(0.07)</td>
</tr>
<tr>
<td>Yeas Sq.</td>
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<td>−0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
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<td>(0.00)</td>
<td>(0.00)</td>
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</tr>
<tr>
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<td>0.45*</td>
<td>0.46</td>
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<tr>
<td></td>
<td>(0.20)</td>
<td>(0.21)</td>
<td>(0.26)</td>
<td></td>
</tr>
<tr>
<td>Pro. Gov.</td>
<td>0.96</td>
<td>0.52</td>
<td>0.52</td>
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</tr>
<tr>
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<td>(0.58)</td>
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<td>(0.79)</td>
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</tr>
<tr>
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<td>−0.83*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.36)</td>
<td>(0.37)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attendance</td>
<td>−0.00</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Franco</td>
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<td>0.99</td>
<td>0.98</td>
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<td>(0.73)</td>
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<td>Num. obs.</td>
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<td>187</td>
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</tr>
</tbody>
</table>

***p < 0.001; **p < 0.01; *p < 0.05

The first model shows only retrospective independent variables predicting vetoes. Here we can see, that on their own, the only independent variable that is significant is the number of procedures that a bill underwent. This suggests that the more procedures a bill underwent the more likely the president is to veto a bill, and as mentioned above I argued that this might be the case because more procedures indicate more disagreement among legislators about whether the bill should be passed or not.

In the second model we add two prospective independent variables: Pro. Gov. and Difficulty. As mentioned in the previous sections, Pro. Gov. takes on a 1 when the difficulty parameter is positive, indicating that a given bill was supported by pro-government legislators. The Difficulty parameter is a continuous variable where higher values indicate an expectation that a bill is less likely to be supported in a future round—it is more “difficult”
to support a bill for legislators. If the blame-game hypothesis was correct we might have expected this independent variable to predict vetoes, regardless of how likely it would be that a given veto would be overridden. However, that does not seem to be the case since this independent variable was not significant. Similarly, this model also seems to imply that presidents do not behave prospectively in anticipating to what extent legislators will vote for or against a bill if the bill was voted on again because the difficulty parameter does not seem to predict vetoes very well.

However, in Hypothesis 4 I had argued that presidents may be more likely to veto a bill when they think a veto will work and when a given bill is supported by the opposition party. Therefore Model 3 in Table 10.2 interacts Difficulty and Pro. Gov. and with this interaction we can see that the coefficient does become significant. This implies that rather than working in a partisan or strategic manner, the president tended to act in a strategic and partisan manner.

Finally, although we can see that presidents behave in a strategic and partisan manner, we still do not know if the strategic portion of the executive’s behavior is due to absences leading to less than optimal outcomes for legislators that can then be remedied by the president, or whether the vote-buying mechanism is more useful for understanding when the executive chooses to veto. Therefore in Model 4 I include the Absences independent variable which counts the number of absences that existed in the last vote performed on the bill in Chamber of Deputies preceding the bill reaching the executive’s office. Here we can see that the number of absences was not significant, therefore giving more credence to the vote-buying mechanism rather than the absences mechanism.

I then repeated these analyses for the 2013-2018 legislative period. Interestingly in this period, Chamber Jumps, or the number of times a bill moved from one chamber to another, was significant in all models in the 2013-2018 period, and this implies that inter-chamber competition was probably a strong signal for the president deciding when to veto a bill. However the number of procedures was, similarly to the previous table, also significant.
Table 3.4: 13-18 Period: Ordered Logit

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
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<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chamber Jumps</td>
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<td>1.37**</td>
<td>1.43***</td>
<td>1.45***</td>
</tr>
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<td>(0.42)</td>
<td>(0.38)</td>
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<td>0.11*</td>
<td>0.10*</td>
<td>0.10*</td>
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<tr>
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<tr>
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<td>0.39***</td>
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<td>(0.13)</td>
<td>(0.09)</td>
<td>(0.08)</td>
</tr>
<tr>
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<td>-0.00</td>
<td>-0.01***</td>
<td>-0.01***</td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Difficulty</td>
<td>0.03</td>
<td>1.87**</td>
<td>1.80***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.24)</td>
<td>(0.65)</td>
<td>(0.42)</td>
<td></td>
</tr>
<tr>
<td>Pro. Gov.</td>
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<td>-1.68***</td>
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<td>-1.95***</td>
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<tr>
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<td>(0.66)</td>
<td>(0.42)</td>
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<tr>
<td>Attendance</td>
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<td>(0.04)</td>
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<td>147</td>
<td>147</td>
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</tbody>
</table>

***p < 0.001; **p < 0.01; *p < 0.05

Similar to the previous table, Model 2 in 2013-2018 did not have any prospective independent variables as significant, but when we interact these variables with each other, the interaction between Difficulty and Pro. Gov. again becomes significant. In addition to these prospective variables, however, in this model the yeas and yeas squared also become significant. However in 2013-2018 the Attendance independent variable continues to be insignificant in Model 4.

In short, the 2013-2018 models show a very similar picture in terms of the prospective variables. In these models as well the president behaves in both a strategic and a partisan manner—as shown by the significant interaction of Difficulty and Pro. Gov. However, because the Yeas, Yeas Sq., and Chamber Jumps retrospective variables were also significant that may indicate that 1) there were more situations in which both chambers were divided in opinion in this legislative period leading, and 2) that the president may have been working with more reliable retrospective information overall in this period as more aspects of
retrospective bill information seem to be significant in explaining veto behavior. On its face this assertion seems to make sense because taking into account that Lugo was impeached in 2012, it makes sense to assume that legislative preferences were more predictable under the Cartes presidency than they were in the 2008-2013 legislative period.

Finally, in Table 10.3 I pooled all the data from the entire 2008-2018 period I had available and run the same models as I had in the two periods separately. As we can see, even though the number of observations in the 2013-2018 period was slightly smaller than the number of observations in the 2008-2018 period, the dynamics of the 2013-2018 period seem to be more closely matched by the pooled models. That is, overall, presidents seem to behave in a strategic and partisan manner when deciding when to veto. In short, the two period models and the pooled models all show strong support for Hypothesis 4, which predicted that presidents would behave in both a strategic and a partisan manner.

In order to see what these interactive and squared terms mean substantively, I have calculated the substantive effects of the Yeas and Yeas Sq. using Model 4 of Table 10.3. Figure 3.11 shows the substantive effects of these independent variables. In total there are 80 legislators, so I have estimated how the predicted probability of vetoing a bill changes as we change the number of Yeas a bill received in the Chamber of Deputies before reaching the executive. As we can see, and as we would have expected, the probability of vetoing a bill rises before reaching the median of the chamber, but before reaching 40 the probability of vetoing a bill peaks and starts to fall. This functions in this manner because the probability of vetoing a bill at first rises with the Yeas of the bill because a certain number of yeas are necessary to reach the executive in the first place, but as more yeas accumulate, the support for the bill becomes overwhelming and it becomes less strategic for the president to veto the bill because the likelihood of an override rises. Interestingly, the peak takes place in the region we would have expected the peak to be in, below the absolute majority line of 40 votes.

Finally, in Figure 3.12 I include the estimated substantive effects of the interaction term
Table 3.5: Pooled Periods: Ordered Logit

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
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<tr>
<td>Chamber Jumps</td>
<td>0.59***</td>
<td>0.60***</td>
<td>0.63***</td>
<td>0.64***</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.14)</td>
<td>(0.14)</td>
<td>(0.15)</td>
</tr>
<tr>
<td>Num. Procedures</td>
<td>0.16***</td>
<td>0.17***</td>
<td>0.17***</td>
<td>0.17***</td>
</tr>
<tr>
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<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.04)</td>
<td>(0.04)</td>
</tr>
<tr>
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<tr>
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<td>(0.05)</td>
<td>(0.05)</td>
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</tr>
<tr>
<td>Yeas Sq.</td>
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<td>−0.00</td>
<td>−0.00*</td>
<td>−0.00*</td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Difficulty</td>
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<td>0.47**</td>
<td>0.45*</td>
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<tr>
<td></td>
<td>(0.16)</td>
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<td></td>
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<tr>
<td>Pro. Gov.</td>
<td>0.88</td>
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<td>0.52</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.48)</td>
<td>(0.53)</td>
<td>(0.53)</td>
<td></td>
</tr>
<tr>
<td>Diff. * Pro. Gov.</td>
<td>−0.69**</td>
<td>−0.68**</td>
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<tr>
<td></td>
<td>(0.24)</td>
<td>(0.24)</td>
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<td>(0.02)</td>
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<tr>
<td>Franco</td>
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<td>0.95</td>
<td>0.97</td>
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<td>(0.62)</td>
<td>(0.64)</td>
<td>(0.65)</td>
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<td>Cartes</td>
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<td>0.12</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>(0.44)</td>
<td>(0.55)</td>
<td>(0.56)</td>
<td>(0.56)</td>
</tr>
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<td>Num. obs.</td>
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<td>334</td>
<td>334</td>
<td>334</td>
</tr>
</tbody>
</table>

***p < 0.001; **p < 0.01; *p < 0.05

between Difficulty and Pro. Gov. Again, to create these substantive effects I used Model 4 in Table 10.3. What this figure shows is that the effect of a rise in the difficulty parameter on veto probability depends on whether that bill was supported by the government or the opposition. When the bill is supported by the government, an increase in the difficulty parameter reduces the probability of a veto, while when the bill is supported by the opposition, the difficulty parameter increases the probability of a veto. That is, when it is strategic to do so because the likelihood of an override is low, the president is only likely to veto a bill if it is supported by the opposition.
3.10 Results: Binary Dependent Variable

In the previous models I made an assumption about the structure of the dependent variable which some academics may not agree with. I assumed an ordinal variable with three
categories: no veto, partial veto and total veto. I argued this order made sense because it ranks the costliness of each action that the president may wish to undertake. However, what happens if we consider the dependent variable as a set of binary variables, rather than a single ordinal dependent variable? Do our conclusions change much?

The appendix to this chapter includes replications of each model for each of the two legislative periods, but for concision of space I am only including the pooled results here. Table 10.4 shows the same model specification I had carried out for Model 3 and Model 4 in Table 10.3, but instead of using an ordinal dependent variable I consider a series of binary dependent variables. The first model only predicts partial vetoes, the second and third models predict total vetoes and the final model predicts all executive objections—whether they are partial or total vetoes. All models were implemented using rare-events logit models to provide a more stringent test, but simple logit models produce similar results.

Overall, what we can see is that the main driver of the effects that we saw in the ordered-logit models was the significant effects that independent variables have in predicting total vetoes, but our independent variables of interest do not perform well in significantly estimating partial vetoes. This is probably due to the fact that partial vetoes are very uncommon, and therefore more power may be needed in order to uncover any effects. The main meaning of these findings is that, while the rare-event logits provide similar conclusions to the ordinal-logit models we had applied in the previous section, the findings seem to only apply to total vetoes and not to partial vetoes.

If we take the specification of Model 3 of Table 10.4 and we calculate first differences for each independent variable—from 2 standard deviations below and above the mean for continuous variables and from 0 to 1 in binary variables—we can see the effect size of each independent variable. I took this model specification for the 2008-2013 period, the 2013-2018 period, and for all pooled data. The dependent variable for the calculation of all first differences below is only the total veto. In Figure 3.13 we can see that the findings for the first differences of all the variables of these three models. In short, we can see that the
findings of the rare-events logit models that only predict total vetoes are very similar to the findings of the ordered-logit models that predicted both partial and total vetoes. This implies that what is driving most of my findings is the effect that the independent variables have on total vetoes is what is mainly driving the results we saw from the ordered-logit models.

### 3.11 Conclusion

I began this chapter questioning whether executive powers may be a source of legislative stability. I have shown that the Paraguayan president is extremely weak, and therefore the
idea that Arrow’s Nondictatorship assumption is sacrificed by the executive powers of the Paraguayan president is extremely unlikely. I then turned to analyzing whether the veto powers of the executive restricted the Universal Domain of the legislature in such a way that it might create legislative stability. I first developed theoretical expectations of what we would see in systems with low thresholds for override. The main conclusions we were able to derive from these models is that in systems with low thresholds for override it becomes more important for the president to anticipate the preferences of the legislature than for the legislature to anticipate the preferences of the executive. This is in direct contrast to what we expect to see in systems with high thresholds for override.

Finally, I found that presidents behave in both a strategic and partisan manner. That is, presidents attempt to veto bills when they think their veto will not be overridden and when the bill is supported by the opposition. Furthermore, I analyzed the mechanisms through which strategic vetoes may be placed. I found that absences were not particularly useful for understanding when a president chooses to veto bills. Therefore, instead of converting an absence into a “nay”, in all likelihood presidents are strategically vetoing bills in the hope
that they can disburse side-payments in order to convert “yeas” into “nays.” In short, it seems like vetoes give presidents an additional opportunity to buy marginal votes in order to defend the status quo, but this vote-buying process mainly takes place to defend the status quo against bills supported by the opposition.

The main implication of this chapter for the rest of the book is that because the burden of anticipating behavior is placed on the executive and not on the legislature, then the legislature is free to behave sincerely in pursuing its preferences. In other words, the legislature does not have to restrict itself in order to anticipate the preferences of the president because if legislators are certain about their desires then the executive is powerless to prevent them from getting what they want. Because of this, executive powers do not seem to significantly limit the Universal Domain available to legislators. The main conclusion of this chapter, then, is that if legislative stability exists, it is not likely that this legislative stability would be produced by executive powers, because executive powers have been shown to be extremely weak in influencing legislative behavior. In fact, it is the president that must bear the burden of anticipating the preferences of the legislature, and not the other way around.
Chapter 4

Preference-Induced Equilibriums I: Do Legislators have Unidimensional Preferences?

In the previous chapter we analyzed whether executive power might be a source of legislative stability in Paraguay. I argued that a strong executive might count as a curtailment of either Arrow’s assumptions of Nondictatorship or of Universal Domain. That being said, I found that the Paraguayan executive is fundamentally too weak to significantly modify the behavior of Paraguayan legislators in such a way that would curtail their Universal Domain. It is unlikely, then, that executive powers alone would be the cause of legislative stability in Paraguay, should this legislative stability exist.

In this chapter I will analyze whether Paraguay uses another potential “solution” to the problem of legislative stability: preference-induced equilibriums (PIEs). In Chapter 2 I had discussed how PIEs were theorized to be able to create legislative stability. Essentially, the argument is that if legislators have strong ideologies, then their preferences may be assumed to lie on a unidimensional space. If this is the case, then equilibriums can easily be found at the preferences of the median legislator. This is a form of the restriction of Arrow’s assumption of Universal Domain as well as it limits the policy space to a single dimension.

That being said, in this chapter I will show that Paraguayan legislators do not seem to have strong ideologies, and their behavior does not seem to be unidimensional in large periods of Paraguayan democratic politics. In the rest of this chapter I will first discuss what “preferences” mean in relation to legislative politics, and I will discuss how different conceptualizations of preferences alter our expectations about the nature of preferences. After clarifying these expectations, I will rely on survey data and legislative roll-call voting data to create estimates of legislative preferences and to analyze the dimensionality of these
legislative preferences. Through this statistical analysis, and by placing these estimates in historical context, I show that the preferences of Paraguayan legislators seem to be mainly non-ideological and multidimensional. This structure of legislative preferences is incompatible with a PIE explanation for legislative stability.

4.1 Conceptualizing Preferences

There are two issues we must take into account when we discuss the concept of “preferences.” First, there is a difference between true preferences and expressed preferences. True preferences are the “real” preferences a person holds inside of their head. However, a person’s thoughts and feelings are not directly observable by researchers, and they can only be observed through some behavior. For example, if someone frowns after drinking tea, it is possible to assume that person does not like tea. That being said, the distance between true preferences and expressed preferences can become larger if the expression of preferences is constrained. For example, if someone dislikes tea, but the tea in question was prepared by one’s mother in law, then that person may be more likely to smile after drinking the tea, creating a mismatch between true preferences and expressed preferences. In short, true preferences are never observable, but unconstrained behavior can give us a way to measure true preferences, while constrained behavior may or may not allow us to measure true preferences.

In terms of legislative behavior, many researchers have derived measures of legislator preferences from one main behavior: roll-call voting on the chamber floor. Roll-call voting is a very public event, and legislators may wish to appease many principals—like party leaders, local constituencies, and the media—when casting their votes. Therefore, because of these outside pressures, measures of preferences based on roll-call behavior have the potential of creating a mismatch between true preferences and expressed preferences (Cox and McCubbins, 1993, 2005). Further, roll-call data may sometimes be subject to selection problems that can lead to biased estimates (Hug, 2010). Estimates based on roll-call voting can still be quite useful, as we shall see, but it is important to keep in mind that because of the
external constraints posed on voting behavior, roll-call estimates are measures of expressed preferences and possibly not true preferences. However, at a minimum, roll-call estimates of preferences do give us a summary measure of behavioral tendencies for legislators, and they give us a succinct way to observe which legislators “tend to vote together” or “tend not to vote together” on a set of issues (McCarty, 2016). As a shorthand, I will be referring to preferences captured by roll-call behavior as “expressed preferences.”

In order to capture something closer to true preferences, this chapter will also rely on anonymous survey data from Paraguayan legislators. Answering questions on a sheet of paper is also a form of behavior that expresses the preferences of a person. However, this behavior is much less constrained than roll-call voting because of the anonymity of the responses. Therefore although surveys are also technically a form of measuring true preferences through expressed preferences, surveys are created in a way so as to minimize the constraints on expressed preferences so that they more closely match a respondent’s true preferences. As a shorthand, I will be referring to preferences as captured by surveys as “true preferences.”

The second issue with preferences is understanding whether they are electoral preferences or ideological preferences (Smith, 2007). This issue is discussed in Chapter 2 as the contrast between Mayhew’s (1974) and Converse’s (1964) conceptualization of preferences. Mayhew describes preferences as only being individual, particularistic, selective, electoral preferences. That is, legislators only care about getting themselves reelected. An implication of Mayhew’s conception of preferences is that they are multidimensional, as particularism is likely to produce multidimensional preferences, and this assumption of multidimensionality is incorporated into Shepsle and Weingast’s (1981) original SIE model.

Contrastingly, Converse’s (1964) ideological conception of preferences assumes that preferences among highly informed and politically engaged individuals are likely to be low-dimensional. This is because politically informed and engaged people are likely to process political events through an ideological lens, and this ideological lens provides idea constraints. For example, gun control and abortion rights seemingly have nothing to do with each other,
but in some countries they have been packaged together by ideological positions. The right may be in favor of liberal gun rights, but restrictive abortion rights, and the left may be in favor of restrictive gun rights and liberal abortion rights. In this case, the positions of strongly ideological people on gun rights and abortion are likely to be highly correlated to each other, and these high-level correlations mean that multiple issues can be explained more strongly by a single factor loading—or ideological summary measure. As ideologies get stronger and stronger they are more likely to include correlations among more and more issues other than gun rights and abortion. If ideologies get strong enough, all policies are likely to be well explained by a single factor loading, and this would lead to our empirical conception of strong unidimensionality. Thus, strong ideologies produce low dimensional preferences because they package issues together, and by producing high correlations in preferences among disparate issues, this packaging reduces the dimensionality of the policy space.

4.2 Measuring Preferences

As suggested in the previous section, my analysis of legislator preferences in the Paraguayan Chamber of Deputies will rely on two data sources: roll-call data and survey data. By a combination of going to Paraguay to make requests for access to public information, and by scraping the website of the Paraguayan Chamber of Deputies I was able to access all electronic roll-call votes that were carried out on the chamber floor from 1995 to the present. These votes are not restricted to final passage votes, and they include all motions, procedural votes, and floor votes on policy. This has resulted in over 7,000 non-lopsided roll-call votes with an average of 1,172 votes per each 5-year legislative period. From these data I can derive latent measures of legislator preferences using well-known political science methods, such as those developed, expanded and tested by Poole and Rosenthal (1997), Poole (1999), Poole (2005), Clinton, Jackman and Rivers (2004), Jackman (2001), Clinton and Jackman (2009), Imai, Lo and Olmsted (2016), Poole et al. (2011), and Armstrong et al. (2014).

The second source of data I will be relying on in this chapter are survey data that ask
legislators to place themselves on a Left-Right ideological scale. These survey data are provided by the Project of Latin American Elites (PELA) of the University of Salamanca. In this project, researchers approach a representative sample of legislators of the lower chamber of most countries in Latin America once per legislative period. In Paraguay specifically, PELA has carried out waves of interviews in 1996, 1998, 2003, 2008, and 2013, giving us access to one wave of interviews for each legislative period in the Paraguayan democratic period—which began with the new constitution written in 1992 and the first general elections in 1993. The samples of Paraguayan legislators that PELA has interviewed in these waves are likely to be high-quality representations of the Chamber of Deputies as a whole. With only 80 members in the Chamber of Deputies as a whole, PELA has interviewed a range of 39 members in 1996 to 46 members in 2013. Having reached almost 50% of all legislators per wave, then, these samples are likely to be highly representative of the chamber as a whole. Similar to the procedures implemented on roll-call data, survey answers about legislators’ ideological positioning can be used to create common-space measures of legislator preferences using the Aldrich-Mckelvey (AM) procedure assuming a single dimension, or Poole’s “blackbox” procedure for multiple dimensions (Armstrong et al., 2014).

The advantage of using these two different data sources is that they allow us to observe differences between true preferences and expressed preferences as discussed in the previous section. Survey data would be closer to true preferences because responses are anonymous. Roll-call data is an example of expressed preferences that may or may not be reflective of true preferences. This is because if legislators are constrained then there would be a gap between their true preferences and expressed preferences, but if they are unconstrained then legislators would have expressed preferences that closely match their true preferences. The extent to which legislators are constrained, of course, is an empirical question that will be explored in this book.

In terms of ideological and electoral preferences, survey data seem to be more apt at capturing true, ideological preferences, because the question I am basing my estimations on have
to do with legislators’ Left-Right self-placements. Because “left” and “right” are ideological concepts, and because answers are anonymous—making electoral punishment in response to an unpopular answer impossible—these survey questions are more likely to capture an ideological conception of preferences and not an electoral conception of preferences.

Again, because roll-call behavior is constrained, what roll-call data are measuring is less clear. Roll-call behavior is likely to be influenced by legislator ideology, if legislator ideology exists and is strong, and it is also likely to be influenced by electoral incentives (McCarty, 2016). Being expressed preferences, the task of this chapter is to begin to understand the extent to which these roll-call voting measures of expressed preferences are affected by ideological and electoral considerations in the Paraguayan Chamber of Deputies.

4.3 Hypotheses about Preference Structures and Legislative Stability

The contrast between true and expressed preferences and between ideological and electoral preferences have implications for how legislative stability is constructed. As we discussed in Chapter 2, legislative stability can generally be created using two methods: Preference-induced Equilibriums (PIE) and Structure-Induced Equilibriums (SIE). PIEs have stronger implications about the nature of preferences, while SIEs can be constructed using different conceptualizations of preferences.

PIEs hold the assumption that true preferences have to be unidimensional. This assumption of unidimensionality, which is an assumption about the structure of preferences, also has strong implications about the nature of preferences. That is, the only justification that I am aware of about why we would be willing to assume that true preferences are unidimensional is because of the strong role of ideology in producing unidimensional, ideological preferences (Converse, 1964). A PIE also assumes that preferences drive legislative behavior, and that institutions are not necessary to mediate between preferences and legislative outputs in creating legislative stability (Krehbiel, 1992). Therefore, in a PIE world, true preferences would
mostly match expressed preferences, as institutions are not necessary in order to create stability, so nothing intervenes between legislator preferences and roll-call voting. Therefore, our first hypothesis is a pure PIE hypothesis:

**PIE hypothesis:** True, ideological preferences will be unidimensional, and expressed preferences will be unidimensional and reflective of ideological preferences.

SIEs also make assumptions about the *structure* of preferences, but the implications of these assumptions are less clear about what they mean for the *nature* of preferences. That is, multidimensional preferences can be ideological or electoral, or even a combination of both. Purely ideological multidimensional preferences could be produced by multiple, orthogonal, constraints on belief systems. For example, if not all issues can be compressed on a single left-right dimension, but legislators have ideologies that are organized by two latent concepts—like for example economic left-right, and social liberalism or conservatism—then pure ideologies could create multidimensional policy spaces. The role of institutions in this case would be to constrain true multidimensional ideologies onto expressed unidimensional behavior.

Multidimensional preferences could also result from purely electoral preferences, as the distributive model argues Shepsle and Weingast (1981). If legislators pursue only electoral preferences, and if electoral incentives are selective and personalistic, then legislator preferences are likely to be multidimensional as well. As Arrow (1951) argued, individualistic, rational, utility maximization leads to policy instability, which implies the multidimensionality of preferences (Black, 1948). The main empirical difference that is expected to be different with distributive, multidimensional preferences is that the structure of preferences is likely to be less pronounced. That is, whereas with an ideological SIE we might expect more than one ideological dimensions, in the distributive SIE we would expect much higher dimensionality and a generally low-level of predictive power for any one dimension.
**SIE hypothesis:** Regardless of whether they are ideological or electoral, true preferences will be multidimensional, and these multidimensional preferences will be constrained by legislative institutions to produce unidimensional expressed preferences.

Finally, there is the possibility that equilibriums are not created, meaning that there will be policy instability around the “yolk” or “uncovered set” of the chamber (Tullock, 1967; Tsebelis, 2002; Feld, Grofman and Miller, 1988). We would expect instability to occur when expressed preferences are multidimensional, because if expressed preferences are multidimensional that implies that neither ideology nor institutions are constraining preferences or voting behavior to create an equilibrium. This would be true regardless of the nature of true preferences. For example, it may be that ideological preferences are multidimensional and institutions are weak leading to instability around the yolk. Alternatively, it may be that true ideologies are unidimensional, but electoral preferences are particularistic and multidimensional, leading electoral preferences to amplify the dimensionality of behavior despite the low-dimensionality of true ideological preferences—leading to instability around the yolk. Finally, it could also mean that ideological preferences do not exist, and particularistic electoral preferences lead to high dimensionality of preferences which institutions fail to constrain. In any case, if expressed preferences are multidimensional then we can assume that both SIEs and PIEs have failed to produce legislative stability.

**Instability around the yolk hypothesis:** Regardless of the structure of true preferences, expressed preferences will be multidimensional.

### 4.4 Analysis of True, Ideological Preferences

As mentioned above, the data for the analysis of true, ideological legislator preferences are derived from five waves of the Project of Latin American Elites (PELA) surveys performed by the University of Salamanca. Specifically, there are three groups of questions that are
useful for deriving measures of legislator ideology, and they all consist of asking legislators to place stimuli on a left-right scale where “1” indicates the leftmost position and “10” indicates the rightmost position. What varies in the groups of questions is the stimuli. In one group of questions legislators are asked to place parties on the left-right scale, in another group of questions they are asked to place prominent politicians on the left-right scale and in another question they are asked to place themselves on the left-right scale. In combination, these three measures can be leveraged to analyze the structure of legislators’ ideological self-placement, and to analyze where legislators place stimuli—such as parties or political leaders—on the left-right scale.

These responses need to be processed statistically before they can be interpreted because of a problem called the “interpersonal incomparability” or “differential item functioning” (DIF) of responses. The idea behind these two concepts is that legislators respond to stimuli given their own ideological beliefs, and that makes the scale of 1-10 mean different things for different respondents. For example, if I am an extremely right-wing legislator, then I may label a centrist as a 1 (the leftmost option). Whereas, if I am an extremely left-wing legislator, I may label the same centrist legislator as a 10 (the rightmost option). By allowing for multiple interpretations of the meaning of the left-right scale, answers become distorted and incomparable. There are two ways to address this issue: the Aldrich-McKelvey (AM) procedure, and the “blackbox” procedure—the first of which assumes unidimensionality and the second of which allows for multidimensional analysis (Armstrong et al., 2014).

4.4.1 Unidimensional Analysis of True Ideological Preferences

One way to correct for the DIF distortion is with the Aldrich-McKelvey (AM) procedure. What the AM procedure does is it uses ideological self-placements to calculate the perceptual distortion of each respondent, to then be able to place both respondents and stimuli in a common, unidimensional policy space. The limitation of the AM measure is that it can only create measures for a unidimensional policy space, but it does provide estimates of fit to
see if the assumption of unidimensionality is adequate (Armstrong et al., 2014). Because the AM procedure deals with non-responses by listwise complete deletion, I dropped items where more than 25% of legislators were unable or unwilling to place the item on the left-right scale. Also, because PELA does not allow the publication of disaggregated data, and because responses are anonymous, instead of placing individual legislators on the created scales, I will be providing measures of where legislators place stimuli (parties and prominent politicians) on the left-right scale. Being that stimuli locations are calculated relative to individual ideological preferences, this process reveals the structure of ideological preferences of individual legislators, and it allows us to qualitatively observe how legislators are placing items on the left-right scale.

Table 4.1 : AM Summary

<table>
<thead>
<tr>
<th>Wave Year</th>
<th>N. Respondents</th>
<th>N. Stimuli</th>
<th>Negative</th>
<th>Reduction in Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>39</td>
<td>3</td>
<td>9</td>
<td>0.320</td>
</tr>
<tr>
<td>1998</td>
<td>44</td>
<td>9</td>
<td>8</td>
<td>0.221</td>
</tr>
<tr>
<td>2003</td>
<td>41</td>
<td>7</td>
<td>1</td>
<td>0.352</td>
</tr>
<tr>
<td>2008</td>
<td>48</td>
<td>12</td>
<td>1</td>
<td>0.070</td>
</tr>
<tr>
<td>2013</td>
<td>46</td>
<td>13</td>
<td>1</td>
<td>0.062</td>
</tr>
</tbody>
</table>

Table 4.1 provides summary statistics for the AM procedure. The main columns of interest are the last two columns, which give us information about how well the unidimensional AM procedure fit the data—smaller numbers in both statistics indicate better fit. The “Negative” column indicates the number of estimated weights that were negative. A negative weight means that a respondent made a mistake and incorrectly ordered stimuli, by for example placing a socialist party to the right of a libertarian party. That is, negative weights are expected only with low-information respondents that don’t know the correct ideological locations of certain stimuli, and it is quite unexpected to see such high levels of negative weights in high-information respondents such as deputies.

Given the negative weights column of table 4.1 Paraguayan deputies seem much more like low-information respondents than we would expect. This finding is not new. Saiegh (2009)
carried out the AM procedure in 9 Latin American countries, and he found that Paraguay had the highest number of negative weights among the countries he considered. According to Saiegh:

“The Percentage of uninformed respondents certainly indicates the (in)significance of the notions of ‘left’ and ‘right’ in some of these countries. If legislators are confused about the location of major parties on a left-right scale, then the party labels may not be meaningful indicators of legislators’ ideological orientations. In other words, if legislators are not well informed about the political stimuli, then we must be observing an ideologically disorganized party system.”

Saiegh only analyzed the 1998 wave, so here the 1996 wave also shows that there is a high level of wrong answers, but this may also be due to the low level of stimuli available in that year. In 1996, respondents left blank most questions to position prominent politicians on the left-right scale, and therefore only legislator placements of parties on the left-right scale could be used to produce the estimates. It is plausible that because democratic norms of respect for free speech were not cemented yet at the time, most legislators chose to leave questions that ranked individuals on the left-right scale blank. As a whole, though, on the measure of negative weights it seems that the concepts of “left” and “right” only begin to be meaningful in Paraguayan politics after 2003, when the number of “wrong” placements fall to 1.

The last column of table 4.1 provides us with more information about the fit of each AM procedure. Higher numbers in this statistic indicate worse fit, and lower numbers indicate better fit (Armstrong et al., 2014). This measure suggests that the weakness of fit for the unidimensional scale persists throughout 2003, and that the unidimensional scale only becomes salient from 2008 on. Intuitively, this makes sense because 2008 was the first time a left-wing president (Fernando Lugo) was elected, and it was the first time that “the left,” as a cluster as small parties that gained significant representation, became relevant in the country. A political growth in salience of “the left” could have given legislators—who did
not organize politics ideologically before—an ideological baseline that helped them place more stimuli on the left-right scale. That is, even without clear ideological positions for all stimuli, it may be easier to place all stimuli on the left-right scale because their proximity or distance to “the left” became more easily identifiable.

To put the Paraguayan results into a regional context, (Saiegh, 2009) created reduction in variance and negative weight statistics for 9 Latin American countries\(^1\) In comparison to the results shown in Table 4.1, we can clearly see that Paraguay in 1996 and 1998 had the most negative weights relative to all the countries considered by Saiegh. Furthermore, we can see that the reduction in variance statistics for 1996 and 2003 were substantially higher than all other Latin American countries considered—indicating a worse model fit for the unidimensional AM models. Only in 2008 do both negative weights and reduction in variance statistics approximate what we see in other Latin American countries.

Table 4.2 : AM Results in Other Latin American Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>N. Respondents</th>
<th>N. Stimuli</th>
<th>Negative</th>
<th>Reduction in Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>81</td>
<td>11</td>
<td>1</td>
<td>0.162</td>
</tr>
<tr>
<td>Bolivia</td>
<td>54</td>
<td>12</td>
<td>0</td>
<td>0.153</td>
</tr>
<tr>
<td>Brazil</td>
<td>118</td>
<td>12</td>
<td>2</td>
<td>0.269</td>
</tr>
<tr>
<td>Chile</td>
<td>81</td>
<td>11</td>
<td>0</td>
<td>0.084</td>
</tr>
<tr>
<td>Colombia</td>
<td>82</td>
<td>10</td>
<td>0</td>
<td>0.166</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>31</td>
<td>11</td>
<td>5</td>
<td>0.198</td>
</tr>
<tr>
<td>Mexico</td>
<td>94</td>
<td>12</td>
<td>1</td>
<td>0.191</td>
</tr>
<tr>
<td>Uruguay</td>
<td>62</td>
<td>10</td>
<td>1</td>
<td>0.115</td>
</tr>
</tbody>
</table>

So far, the AM procedure suggests that legislator ideology was multidimensional before 2008, but with the rise of “the left” as a significant political actor, the left-right scale became a more useful scale for legislators to place stimuli on. For further, qualitative, analysis Figure

\(^1\)Saiegh included the 1998 Paraguayan wave, which is not included in Table 4.2 but is included in Table 4.1 as I have re-calculated it.
4.1 shows the ideological positioning of each stimuli—produced through AM scaling—relative to legislator placements of these stimuli, and they include 95% confidence intervals created by non-parametric bootstraps as detailed by Armstrong et al. (2014). The two largest, traditional political parties are the Colorado Party (officially called the National Republican Association or ANR), and the Liberal Party (officially called the Authentic Radical Liberal Party or PLRA). Originally, predating democracy, the PLRA was conceived to be a liberal, free-market, right-wing party, and the ANR was conceived as an agrarian redistributive party (Rivarola and Boccia Paz, 2013). Although the purpose of analyzing deputy survey responses is to see if these stimuli can currently be placed effectively on the left-right scale regardless of how parties were originally conceived to be, I structured the plots in Figure 4.1 so that the PLRA is always on the right to facilitate comparison across panels.

First, let us discuss the three waves where we found low levels of fit for the AM models: 1996, 1998, and 2003. In these plots we have the two main traditional parties (ANR and PLRA), but we also have the National Encounter Party (PEN), and the Solidary Country Party (PPS). My prior expectation for the ideology of PEN is very weak, but my prior expectation for PPS is that it is a left-wing party. Furthermore, in 2003, Pedro Fadul, the leader of a center-right-wing, free-market party called Beloved Motherland Party (PPQ) is included as a stimulus although the party itself is not. In these three years we also have the following prominent politicians provided as stimuli for respondents to place on the left-right scale: Domingo Laño (PLRA), Guillermo Caballero (PEN), Juan Carlos Wasmosy (ANR), Raúl Cubas (ANR), Luis María Argaña (ANR), Lino Oviedo (ANR), Nicanor Duarte Frutos (ANR), Pedro Fadul (PPQ), Julio César Franco (PLRA), and Carlos Fillizzola (PPS).²

The 1996 plot and the 1998 plot seem at first sight to not be very problematic because the PLRA is to the right of the ANR as the original conceptions of these parties would have suggested. PEN, the party for which I did not have strong priors, also seems to be

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²Some of these politicians switched parties in future periods, but these were their parties at the time of their response in the three waves being considered.
Figure 4.1: Bootstrapped AM Positions for Stimuli

1996 Positions

1998 Positions

2003 Positions

2008 Positions

2013 Positions
consistently placed to the right of the ANR and PLRA, even if estimates for the PEN and the PLRA are not significantly different in either period—their non-parametrically bootstrapped confidence intervals overlap.

However, knowledge about political events that took place in 1998 call into question parts of the estimates provided in the 1998 cell of Figure 4.1. Although the figure shows that there seem to be some ideological differences within the ANR, this internal division does not match what we would expect. Lino Oviedo and Luis María Argaña competed in the ANR primary for the presidential nomination. Eventually, Oviedo won the primary. After winning the primary, however, Oviedo was sentenced to prison for his role in the 1996 military insubordination against then-president Juan Carlos Wasmosy. In his place, Cubas, Oviedo’s running mate, became the ANR candidate and Argaña, the defeated intra-party opposition presidential candidate became Cubas’ vice-presidential candidate. After winning the presidency conflicts continued. Cubas rapidly pardoned Oviedo after assuming office, and vice-president Argaña was assassinated in March 1999. These events led to a large-scale social movement that, after some violent repression, forced Cubas to resign, forced Oviedo into exile, and lead the president of the Senate, Luis González Macchi, to become president. These episodes are relevant to the 1998 figure because it is odd that Oviedo’s estimated position is so close to Argaña’s and so far away from Cubas’. It is similarly odd that Argaña’s estimated ideal point is not closer to Wasmosy’s—given the conflicts Wasmosy had with Oviedo in the latter period of his presidency.

The 2003 estimates further complicate the picture because in contrast to the previous two years, these estimates place the ANR to the right of the PLRA. This year does incorporate two stimuli that represent left-wing parties, the PPS and Fillizzola, and these at least are presented to the left of PLRA. However, given their foundational positions, and the estimates of the previous two waves, we might have expected the ANR to be on the left of the PLRA.

In short, the 1996, 1998, and 2003 AM estimates either had a high level of negative weights—indicating low-salience of the ideological scale to legislators—or a high level of the
AM fit statistic—indicating poor fit of the AM model to the data. Furthermore, the 1998 estimates do not show what we would have expected to see given the politics of the period—specifically relative to the intra-party conflicts in the ANR party. Finally, the contradiction between the orderings of the PLRA and the ANR in 1996 and 1998 on one hand and 2003 on the other is also concerning. As a whole then, it seems like the ideological estimates for these three survey waves, at least in their current unidimensional form, are not very informative about the structure of Paraguayan legislator ideologies.

Moving on to the last two periods, the 2008 and the 2013 AM estimates did have a stronger level of fit than the previous three models given their low level of negative weight parameters, and their low levels of the AM fit statistic—both of which which indicate a better fit. In these two figures we have two new parties, the UNACE party and the Advance Country (AP) party. The Advance Country (AP) is a small center-left party. UNACE is a party that originated as an intra-party movement inside the Colorado Party, led by Lino Oviedo, that then separated from the Colorado Party and became an independent party. While inside the Colorado Party the movement was called the National Union of Ethical Colorados, and when it separated from the party it renamed itself to be known as the National Union of Ethical Citizens—but it is called UNACE because of its name in Spanish. This party is quite conservative as the leader of the party, Oviedo, was a former general that was vital in overthrowing Gral. Stroessner in 1989, but in the democratic era he participated in military insubordination in 1996 and an attempted coup in 1999. The politicians included in these figures are Pedro Fadul (PPQ), Enrique González Quintana (UNACE), Federico Franco (PLRA), Orlando Penner Durksen (independent), Blanca Ovelar (ANR), Nicanor Duarte Fruto (ANR), Fernando Lugo (left-wing independent), Juan Afara (ANR), Efraín Alegre (PLRA), Bláez Llano (PLRA), Lilian Samaniego (ANR), and Adolfo Ferreiro (AP).

These two plots are different from the previous three plots in that they do show the same ordering of parties, with Lugo, Ferreiro and AP to the left, then the Colorados in the middle, then the Liberals, and then UNACE and PPQ to the right. These findings
are interesting because while they follow the logic of the Colorado Party originating as an agrarian party and the Liberal party originating as a free-market party, they do not follow the logic of political alliances. That is, in 2008, Lugo was able to win the presidency with an alliance with the PLRA, and the PLRA and Lugo governed together at the beginning of Lugo’s tenure. Therefore, the ordering may make sense in an abstract fashion, but it does not match the real political coalitions of 2008. Furthermore, another oddity is that PPS (a left-wing party that was part of Lugo’s coalition) is so close to the PLRA and so far away from Lugo in 2008.

In 2013, the main gap seems to be between the (non-ANR) left and everybody else. Although in 2008 there are splits within the group of non-leftists, in the 2013 period the confidence intervals of all the non-left estimates mostly overlap. This is especially true of the two main political parties, the ANR and the PLRA, whose estimates do not seem to be significantly different from each other in 2013.

4.4.2 Discussion of Unidimensional Analysis

The overarching theme of the AM analysis seems to be that a one-dimensional ideological analysis of legislators’ true ideological preferences in Paraguay does not make much sense. In the 1996, 1998, and 2003 periods the undimensional measures poorly fit legislator responses, and negative weights suggest that politics is not organized around ideological lines (Saiegh, 2009). In 2008, the strength gained by the left in the form of Lugo winning the presidency seems to have improved the fit of the AM models, but the ordering of actors the measure creates does not make intuitive sense. Lugo was only able to win and govern (at first) thanks to his alliance with the PLRA, but the AM procedure shows Lugo as being closer to the ANR than to the PLRA. Furthermore, the PPS, which is a left-wing party, is closer to the PLRA than to Lugo, which does not seem to make sense either. Even if Lugo later experienced the defection of the PLRA during his tenure, these problems started later during his presidency, and this would not have been case at the time the survey was being filled out.
in 2008—his first year in office. Finally, the 2013 estimates are similar to those produced in 2008, but in this year the 2013 estimates fail to distinguish between the two largest parties, signaling that ideology may be significant in abstract terms but not useful for distinguishing between the most important actors relevant to real-life political competition. In short, the unidimensional measures of Paraguayan legislators’ true, ideological preferences seem at best uninformative and at worst misleading.

4.4.3 Multidimensional Analysis of True Ideological Preferences

As mentioned above, the reason statistical models are needed to interpret legislators’ left-right self placements is because of the potential that legislators will interpret the left-right scale differently leading to the “interpersonal incomparability” or “differential item functioning” (DIF) of responses. One way to correct for that is using the Aldrich-McKelvey (AM) model, as I have done in the previous sections, but that model is limited to correcting DIF in a single dimension. However, Poole (1998) developed a generalization of the AM model that allows us to correct for DIF while also accounting for the potential multidimensionality of the data. This procedure was later implemented by a procedure called “blackbox” in R (Armstrong et al., 2014). Similar to the AM procedure, the blackbox procedure allows us to observe both statistics that describe the level of fit of the model given different assumptions about dimensionality, and it allows us to qualitatively observe how stimuli were placed on a multidimensional ideological space given legislator responses.

Table 4.3 contains summary statistics for the performed blackbox procedures on each of the survey waves. The last three columns contain the percentage of variance explained by each dimension. As can be seen, with this method the differences among waves are smaller than those we saw under the AM estimations. Although the 2008 and 2013 are also the waves where the first dimension explains most of the variance, the differences appear to be

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3For context, all the remaining parties in 2013—the AP, Frente Guazú (Lugo’s party) and PEN—jointly elected only 5 members to the Chamber of Deputies out of the 80 seats available.
Table 4.3 : Blackbox Summary

<table>
<thead>
<tr>
<th>Wave Year</th>
<th>N.Stimuli</th>
<th>N.Respondents</th>
<th>1D</th>
<th>2D</th>
<th>3D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>7</td>
<td>37</td>
<td>67.611</td>
<td>16.505</td>
<td>9.694</td>
</tr>
<tr>
<td>1998</td>
<td>9</td>
<td>64</td>
<td>67.721</td>
<td>12.460</td>
<td>6.953</td>
</tr>
<tr>
<td>2008</td>
<td>12</td>
<td>72</td>
<td>70.055</td>
<td>11.300</td>
<td>7.981</td>
</tr>
<tr>
<td>2013</td>
<td>13</td>
<td>53</td>
<td>68.076</td>
<td>13.267</td>
<td>4.157</td>
</tr>
</tbody>
</table>

much smaller than those we saw with the AM procedure because in all waves there is a significantly large second dimension, and sometimes even a relevant third dimension. These results, by themselves, already suggest that the ideologies of Paraguayan deputies are not highly structured. Although the first dimension is always the most relevant one, accounting for the highest level of variance, the second and sometimes even third dimensions seem to be quite relevant in every survey wave.

Figure 4.2 shows the plotted blackbox estimates for each stimuli on two dimensions. In contrast to the AM procedure, blackbox does not deal with missing data with listwise deletion, therefore it was unnecessary to drop issues that had few responses in them allowing us to include more stimuli in the plots—this difference is especially relevant for the 1996 responses. For these results, it makes sense to first analyze the 1996 and 1998 periods together, and then the 2003, 2008 and 2013 periods together because the results of the former two periods describe politics before “the left” existed in the political arena, and the latter three periods describe it after “the left” became an actor in politics.

In 1996 and 1998 we see that the main split on the first dimension is one between the Liberal Party stimuli (PLRA and Laino) and the Colorado stimuli (Wasmosy, ANR, and Argaña). It also makes sense that the primary split on the second dimension seems to be between the PLRA and PEN as these two parties are clearly in opposition to the dominant Colorado party, but they also remained independent from each other. In 1996, then, we can see a clear Colorado/not-Colorado first dimension, with fragmentation on the second dimension among not-Colorado alternatives. However, it should be noted that there is also
Figure 4.2: Blackbox Positions of Stimuli
a considerable division within the Colorado party on the first dimension. This split makes sense. Wasmosy was more of a moderate candidate, and he was the first civilian to serve as president in 39 years, while Argaña was, at the time, more supportive of the former dictatorship—having said at one point that if he won the election he would allow Stroessner to return to the country (Flecha and Martini, 2019). Therefore, the depiction Wasmosy as a more moderate candidate on the first dimensions seems intuitively reasonable.

In the 1998 wave we again see that the first dimension is dominated by a Colorado/non-Colorado split. But this time the second dimension seems to be dominated by intra-party conflict in the Colorado party (ANR). As mentioned in the AM analysis section, in the 1998 period the Colorado party was experiencing conflict among primary candidates for the presidential nomination. On the one hand was Lino Oviedo, who won the primary and became the party candidate, but was then barred from running in the general election because of his role in the 1996 military insubordination Wasmosy. After being barred, Oviedo’s running mate, Cubas, became the presidential nominee. On the other hand was Luis María Argaña who lost against Oviedo in the primary, but then became Cubas’ vice presidential candidate once Oviedo was barred from running. The estimates of this model therefore seem to be quite adequate as we have Wasmosy near Argaña on the one hand, and Cubas near Oviedo on the other hand, which was not the case with the unidimensional model.

In sum, both the 1996 and 1998 periods seem to show a Colorado/non-Colorado split on the first dimension, but what differs is how the split takes place on the second dimension. In 1996 the split on the second dimension seems to be dominated by the non-Colorado parties, whereas the split on the second dimension in 1998 seems to be dominated by the intra-party conflict of the Colorado party itself.

In the 2003, 2008 and 2013 waves we see that the first dimension becomes one of an ideological left-right split and the second dimension is dominated by the split between the ANR and PLRA parties. In 2003, we see that the leftmost party on the first dimension is,
we would expect, the left-wing party PPS and PPS party-member Fillizola. The rightmost party is, as we would expect as well, the UNACE party. On the second dimension, the main split is between the PLRA and the ANR parties, but they both occupy the ideologically “centrist” position between the left-right extremes.

In 2008 we similarly see Lugo on the far left of the first dimension, and the PPQ and UNACE parties in the far right as we would expect. The PPS, which is also a left wing party, is in an odd position because it seems more centrist than you would expect on the first dimension if the first dimension were purely an ideological dimension, but it also seems to be the party closest to Lugo in the multidimensional space. The main split on the second dimension again seems to be one of government and opposition, with Lugo’s coalition (composed of the PPS, PLRA and PPQ) toward the top, and the opposition Colorado and the UNACE—a splinter party formerly of the Colorado party—in the bottom half.

Finally, in 2013 we again see the first dimension capturing the left-right ideological dimension with Ferreiro, Lugo, AP and PEN on the left, and everyone else on the right. However, the second dimension still captures the most salient political division between the ANR and the PLRA.

4.4.4 Discussion about True Ideological Preferences

Both the AM procedure and the blackbox procedure seem to indicate that legislator ideological preferences have low levels of structure and are mostly multidimensional. For the AM procedure we saw that data from 1996, 1998 and 2003 were poorly fit by the AM model. For the 2008 and 2013 we saw that the unidimensional estimates produced were either qualitatively counter-intuitive given political processes that took place during the time of each wave, or they were not useful for distinguishing between the two largest political parties of the country—the PLRA and the ANR. Initially, then, it seemed like a unidimensional model of true preferences was inadequate to capture the true, ideological preferences of Paraguayan deputies.
With the blackbox procedure we were able to observe that a significant second dimension was present for every wave of responses—with a second dimension always explaining more than 10% of the variance of responses. Through qualitative inspection we were able to verify that a multidimensional depiction of legislator preferences made sense given political events of the time. In 1996 and 1998 the first dimension captured the division between the Colorado party and all other opposition parties, with the salient divisions on the second dimension being one of division between opposition parties in 1996 and division within the Colorado party in 1998. From 2003 on, the picture changes. With the entry of the left as a relevant political actor, and right-wing parties such as UNACE and PPQ as opposite anchor points to these left-wing parties. In 2003, 2008 and 2013 the first dimension did begin to capture the left-right ideological dimension. However, the second dimension continued to exist as a distinction between the Colorado and PLRA parties. In short, the first dimension captures a purely ideological position of parties—as that framework is how respondents are asked to rank parties—but the second dimension continues to capture a non-ideological opposition between the Colorado and Liberal parties that is relevant to the organization of politics.

4.4.5 Conclusions about True Preferences

Given the hypotheses established in Section 4.3, the main conclusion of the analysis of true ideological preferences is to provide evidence against the PIE hypothesis. As mentioned above, the PIE hypothesis relies on the unidimensionality of true legislator preferences, and a prime justification for why we would be comfortable with making this assumption is because legislators’ diverse policy positions get packaged together by ideologies. In this section we have found that in Paraguay the deputies do not have unidimensional true, ideological preferences. A single-dimensional model produced estimates with poor fit and counterintuitive estimates, and a multidimensional model found that a second dimension was always relevant. That is, legislator true ideological preferences do not have the structure necessary for a PIE to be present in Paraguay.
Given that a PIE is unlikely given legislators’ true ideological preferences, in the next section we turn to analyzing whether expressed preferences indicate that any sort of equilibrium exists in Paraguay—such as an SIE—or whether expressed preferences indicate that Paraguayan legislative behavior should produce policy instability. To reiterate the hypotheses of Section 4.3 if a SIE exists, we should expect unidimensionality of expressed preferences despite the multidimensionality of true preferences. Contrastingly, if policy instability around the yolk/uncovered set is a better way to understand legislative behavior in the Chamber of Deputies, we would expect multidimensional expressed preferences.

4.5 Analysis of Expressed Preferences

To analyze expressed preferences I used roll-call data to produce latent measures of legislator preferences. In this chapter I focused on analyzing each legislative period individually instead of analyzing preferences through calculating a common space for all legislative periods, which will be the focus of the next chapter. Therefore, in order to analyze the dimensionality of expressed preferences I relied on the W-NOMINATE, frequentist procedure for estimating ideal points, and the bayesian item-response theory (IRT) version of this estimation (Poole and Rosenthal, 1997; Jackman, 2001; Clinton, Jackman and Rivers, 2004). These two procedures are based on two different paradigms to arrive at their estimates, but the estimates themselves tend to be quite similar.

4.5.1 W-NOMINATE and Bayesian IRT Estimation Paradigms

W-NOMINATE is based on rational choice theory, which assumes that individuals attempt to make the most efficient decisions possible in an environment of scarce resources. NOMINATE stands for NOMINAL, Three-step, Estimation. This method generally has three sets of parameters: legislator ideal point parameters, roll-call parameters, and utility function parameters. The three-step estimation of this method occurs because NOMINATE creates starting values for ideal points, and uses these to estimate roll call parameters. Then it
estimates ideal points given these estimated roll call parameters. Then the utility function parameters are estimated given both ideal point parameters and roll-call parameters. This three-step process is repeated until convergence. Intuitively, W-NOMINATE models the choice legislators make when choosing whether to vote yea or nay, and given the observed choices legislators have made, W-NOMINATE creates a maximum-likelihood estimate of the position of legislator preferences—their ideal points. This model is explicitly a model of legislative voting, and it is built on rational choice theory (Poole, 2005).

The Bayesian IRT ideal point methods were built off of cognitive process models that originally sought to measure the capacity of students when taking standardized tests, and it was then modified to understand legislative latent ideology. IRT methods were originally developed to understand the extent to which standardized tests could identify which students are smarter than others, which questions were more difficult than others, and which questions were best at separating smart students from not-so-smart students. In Bayesian IRT models, the capacity of students is estimated through the MCMC sampling of this formula:

$$\Phi(\alpha_j - (x_{ik} \times \beta_{jk}))$$

In this formula $\Phi$ is the standard normal distribution (as used in a probit-link function). The parameters, inside the probit-link function, although estimated jointly, are indexed differently as the $x$ parameter is indexed by student (i), whereas both $\alpha$ and $\beta$ parameters are indexed by question (j), and the $x$ and $\beta$ parameters are also indexed by dimension (k). $\alpha$ is the “difficulty” parameter that provides the intercept for the probit line of each question. Intuitively, as the “difficulty” parameter for a question gets larger, fewer students will correctly answer that question. $x$ is the estimate for the “capacity” of students. Intuitively, the larger the capacity parameter for a given student, the more likely that student is to get correct answers on a test. The $\beta$ parameter is the “discrimination” parameter of each question. The discrimination parameter provides the slope for the probit line, and intuitively a higher discrimination parameter for a question indicates that that question is better at separating
high capacity students from low capacity students. The example provided above describes the estimation of parameters for a single dimension, but Bayesian IRT can be generalized to more than one dimension, and in the context of test-taking this could be useful if we wanted to discern the difficulty and discrimination of questions of different natures—for example if some questions have more to do with reading comprehension and another set of questions has to do more with logic and mathematics (Clinton, Jackman and Rivers, 2004).

When using this estimation method for understanding legislative behavior, the capacity, difficulty and discrimination parameters intuitively take on different meanings. The capacity measure becomes our measure of ideology. Instead of considering votes as either “correct” or “incorrect” as we would do in the test-taking framework, we would consider them to be “left” or “right” votes. Intuitively, a legislator with higher right-wing tendencies, has a higher “capacity” for voting in favor of right wing policies, and therefore his latent “capacity for voting in favor of right wing policies” becomes our estimate of the right-wing ideology of the legislator. Similarly, left-wing legislators will have a lower “capacity for voting in favor of right-wing policies” so their latent estimate also becomes a measure of their left-wing ideology. In short, in the political framework the “capacity” estimate can be interpreted as the legislators’ estimated ideology (Clinton, Jackman and Rivers, 2004).

The difficulty and discrimination parameters retain similar intuitive interpretations. Higher difficulty parameters indicate that fewer legislators are likely to vote in favor of a proposed policy—regardless of their ideology. Furthermore, the discrimination parameter also indicates the extent to which policy proposals separate left-wing from right-wing legislators, but the difference is that the sign of the discrimination parameter becomes more meaningful. In test-taking higher capacity students are always more likely to get correct answers (vote in favor) and lower capacity students are more likely to get incorrect answers (vote against). In legislative voting behavior, this is clearly not the case because “capacity” becomes ideology, meaning that sometimes left-wing legislators will vote in favor of a policy—getting a higher probability of being “correct” in that yea vote—whereas other times right-wing legislators
will be more likely to favor a policy—getting a higher probability of being “correct” in that yea vote. That is, if negative ideal points indicate “left” and positive ideal points indicate “right” then negative discrimination parameters will indicate that a policy had higher support among the left, and positive discrimination parameters will indicate that a policy had higher support among the right (Clinton, Jackman and Rivers, 2004).

Although these two procedures produce very similar estimates, I estimated both of them because they provide different ways of analyzing the dimensionality of legislative voting behavior. In this chapter each legislative session was analyzed separately because for now we are interested in legislative behavior within each legislative period and not across them, but in Chapter 5 the time dynamics of preferences will be taken into account to place preference estimates on a common space across periods (Poole and Rosenthal, 1997; Martin and Quinn, 2002).

### 4.5.2 Results of Analysis of Expressed Preferences

Table 4.4 contains estimates that describe the dimensionality of roll-call voting for each legislative period from 1995 to 2023. The first two columns again contain the timespan that each legislative period covers, and the number of votes on which the estimates are based. The rest of the columns of the table focus on three common measures of the dimensionality of the policy space. The first measure is called the number Multidimensional Preferences are Incompatible with this Explanation of votes that were correctly classified by the W-NOMINATE estimated ideal points. Column “Corr. 1” contains how many votes were correctly classified by the first dimension, column “Corr. 2” contains how many votes were correctly classified by the first and second dimension, and column “Corr Dif” contains the difference between “Corr. 2” and “Corr. 1,” which intuitively is how much the addition of a second dimension improves correct classifications over the estimation of a single dimension. In general, the correct classification estimates seem to indicate that a single dimension explains an overwhelming amount of legislative behavior, with the addition of a second di-
mension improving classification by a marginal amount—always less than 10%. That being said, the 7.62% improvement in 1998-2003 signals that a second dimension may have been relevant in that legislative period.

Table 4.4 : Dimensionality Measures

<table>
<thead>
<tr>
<th>Period</th>
<th>N.</th>
<th>Corr. 1</th>
<th>Corr. 2</th>
<th>Corr Dif</th>
<th>APRE 1</th>
<th>APRE 2</th>
<th>APRE Dif</th>
<th>PSCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995-1998</td>
<td>1721</td>
<td>83.82</td>
<td>85.22</td>
<td>1.40</td>
<td>31.80</td>
<td>37.69</td>
<td>5.89</td>
<td>52.56</td>
</tr>
<tr>
<td>1998-2003</td>
<td>1674</td>
<td>82.00</td>
<td>89.62</td>
<td>7.62</td>
<td>34.61</td>
<td>62.29</td>
<td>27.68</td>
<td>60.47</td>
</tr>
<tr>
<td>2003-2008</td>
<td>890</td>
<td>85.96</td>
<td>89.41</td>
<td>3.45</td>
<td>59.44</td>
<td>69.42</td>
<td>9.98</td>
<td>80.00</td>
</tr>
<tr>
<td>2008-2013</td>
<td>1219</td>
<td>83.80</td>
<td>87.86</td>
<td>4.06</td>
<td>42.01</td>
<td>56.52</td>
<td>14.51</td>
<td>73.51</td>
</tr>
<tr>
<td>2013-2018</td>
<td>1027</td>
<td>88.80</td>
<td>91.51</td>
<td>2.71</td>
<td>59.23</td>
<td>69.07</td>
<td>9.84</td>
<td>82.44</td>
</tr>
<tr>
<td>2018-2023</td>
<td>426</td>
<td>87.35</td>
<td>90.75</td>
<td>3.40</td>
<td>51.01</td>
<td>64.18</td>
<td>13.17</td>
<td>76.47</td>
</tr>
</tbody>
</table>

Another way to gauge the dimensionality of the policy space is using a measure called the aggregate proportional reduction in error (APRE). This measure compares the classification errors of W-NOMINATE to another benchmark: the minority vote. The question the APRE answers is, if we were to consider minority votes in every bill to be errors, to what extent do our ideal point estimates improve on correct classifications relative to this minority-vote error benchmark? The APRE is calculated in this way, where \( j \) indexes each bill and \( n \) is the total number of bills being aggregated:

\[
APRE = \frac{\sum_{j=1}^{n}(MinorityVote - NOMINATEClassificationErrors)_j}{\sum_{j=1}^{n}MinorityVote_j}
\]

Table 4.4 also contains the APRE for the first and second dimension, and it contains the difference between APRE 2 and APRE 1. Again, the difference between APREs indicates the extent to which the inclusion of a second dimension improves classification relative to the minority vote benchmark (Poole and Rosenthal, 1997). What these estimates show is that there are three legislative periods where a second dimension seems to be clearly relevant: 1998-2003, 2008-2013, and 2018-2023. That being said, the APRE is not of insignificant size in 2003-2008 and 2013-2018 either, but these two periods seem largely to be more unidimensional than the other three. Finally, both correct classifications and APRE estimations seem
to indicate that the 1995-1998 period was the most unidimensional legislative period.

The PSCL column of Table 4.4 includes dimensionality estimates of the Bayesian IRT ideal point estimates. As mentioned in Subsection 4.5.1 the Bayesian IRT estimation depends on three sets of parameters: ideal points indexed by legislators, and difficulty and discrimination parameters indexed by bills. The discrimination parameter acts like the slope of a probit line, and we can therefore explore the extent to which a single dimension explains legislative behavior by looking at the proportion of discrimination parameters that are statistically significant—the credible intervals of the estimates do not contain zero. Intuitively, if higher proportions of discrimination parameters are significant, then that would provide support for the unidimensional model (Clinton, Jackman and Rivers, 2004).

In the PSCL column we see that the 1995-1998, 1998-2003, 2008-2013, and 2018-2023 periods seem to be a bit multidimensional—less than 80% of bills are explained by the first dimension. Again, similar to the APRE estimates, the PSCL difficulty parameters also seem to indicate that the 2003-2008 and 2013-2018 periods were the most unidimensional legislative periods. One notable thing about the 1995-1998 period is that although a single dimension is poor at explaining behavior, only 52.56% of bills have significant discrimination parameters, and the inclusion of additional dimensions do not improve the APRE and correct classification fits. Therefore, that period seems to only have one structured dimension, but it also seems to be marked by a high level of unstructured, unexplained behavior.

Two last two ways to analyze the dimensionality of roll call voting is through the visual inspection of two indicators that result from the W-NOMINATE estimations: cutline angles and the eigenvalues of the double-centered matrix that is used to create the starting values for the W-NOMINATE estimation procedure (Poole, 2005). Figure 10.8 in the Appendix of this chapter contains histograms of the cutline angles of each legislative period. If cutlines are normally distributed around 90°, then this would indicate unidimensionality. This is because if the angle of a cutline is 90° then that indicates that the bill completely divides legislators on the first dimension with a vertical line, while 0° or 180° would indicate that the bill cuts
on the second dimension with a completely horizontal line. If unidimensionality is strong, we should expect the central tendency of cutline angles to be unambiguously centered on $90^\circ$ given the predominance of vertical, and not horizontal, cutlines—hence the expectation of a normal distribution around $90^\circ$ in unidimensional settings.

Upon inspecting Figure 10.8 in the Appendix to this chapter we can see that the central tendency around $90^\circ$ is quite predominant in the 1995-1998, 2003-2008, 2013-2018 and 2018-2023 periods. In contrast, the 1998-2003 and 2008-2013 periods seem to have a more multidimensional distribution of cutline angles. Finally, despite seeming mostly unidimensional the 2013-2018 and 2018-2013 periods seem to have some angles that fall on the second dimension as they both have fatter tails in the $10^\circ$-$30^\circ$ region.

Finally, Figure 10.9 in the Appendix shows the eigenvalues of the double-centered matrix used to provide starting points for legislator ideal points. Although this matrix is used before the W-NOMINATE three-step likelihood maximization takes place, methodologists have argued that analyzing the eigenvalues of this double-centered matrix can be useful for determining the dimensionality of roll-call behavior. What we are looking for with these plots is an “elbow” that shows where the size of eigenvalues precipitously fall and fail to contributing significantly to the explanation of variance of the underlying data (Poole, 2005).

Similar to what we have seen under all other measures, the 1998-2003 period and the 2008-2013 periods are the periods that show the strongest evidence of multidimensionality. The 1995-1998 period, the 2003-2008 period and the 2018-2023 period seem more prone towards unidimensionality. Finally, in the 2013-2018 there might be a relevant second dimension as the second eigenvalue is a little bit better at explaining variance than most other eigenvalues, but the first dimension seems to be clearly dominant.

4.5.3 Discussion of Structure of Expressed Preferences

Table 4.5 summarizes the main results exposed in the previous section. In general, there is not a clear overall trend for either unidimensionality or multidimensionality of expressed
preferences. It seems that during some legislative periods legislators were able to construct unidimensional expressed preferences and in other legislative periods this unidimensionality of expressed preferences fell apart. Furthermore, with the exception of 2003-2008 which seems unambiguously unidimensional, in some periods where unidimensionality is strongly constructed (1995-1998 and 2013-2018), there are some signs that more dimensions may still be useful for understanding what is taking place overall. In 1995-1998 it is quite odd that the Bayesian IRT betas (PSCL) are so bad at predicting roll-call votes. That result should indicate that even though only one dimension is relevant as a structural behavior, but a large portion of behavior is still very unstructured, therefore not being explained by the first dimension. This finding of a single dimension, but high levels of unstructured behavior around outside that single dimension is also suggested by the APRE of the first dimension of the 1995-1998 data, which is at 31.8%, which is the lowest APRE of all legislative sessions. Since the 1995-1998 period was the first democratic legislature in Paraguay ever, and since we only have data for the last three years of the period and not the first two, the high level of unstructured behavior may not be surprising. In 2013-2018, the unidimensional finding is mostly clear, but there are some small indications that a second dimension may still be relevant, as the cutline angles and the eigenvalues of the double-centered matrix slightly indicate that some votes may be better explained by a second dimension.

Table 4.5 : Summary of Findings

<table>
<thead>
<tr>
<th>Period</th>
<th>Corr.</th>
<th>APRE</th>
<th>PSCL</th>
<th>Angles</th>
<th>Eigenvalue</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995-1998</td>
<td>1d</td>
<td>1d</td>
<td>2d</td>
<td>1d</td>
<td>1d</td>
<td>Uni</td>
</tr>
<tr>
<td>1998-2003</td>
<td>2d</td>
<td>2d</td>
<td>2d</td>
<td>2d</td>
<td>2d</td>
<td>Multi</td>
</tr>
<tr>
<td>2003-2008</td>
<td>1.5d</td>
<td>1d</td>
<td>1d</td>
<td>1d</td>
<td>1d</td>
<td>Uni</td>
</tr>
<tr>
<td>2008-2013</td>
<td>1d</td>
<td>2d</td>
<td>2d</td>
<td>2d</td>
<td>2d</td>
<td>Multi</td>
</tr>
<tr>
<td>2013-2018</td>
<td>1.5d</td>
<td>1d</td>
<td>1d</td>
<td>1.5d</td>
<td>1.5d</td>
<td>Uni (mostly)</td>
</tr>
<tr>
<td>2018-2023</td>
<td>1d</td>
<td>2d</td>
<td>2d</td>
<td>1.5d</td>
<td>1d</td>
<td>Ambiguous</td>
</tr>
</tbody>
</table>
4.5.4 Qualitative Analysis of Estimated Ideal Points

A way to address the difficulties in establishing the unidimensionality or multidimensionality of legislative behavior in the Chamber of Deputies of Paraguay may be through the visual analysis of legislator ideal points on a two dimensional policy space to see if the political cleavages can be identified visually. Figure 4.3 contains these plots as made through the W-NOMINATE procedure. As a reminder to the reader, although some legislative periods seem to be more unidimensional than others, one finding that has not been ambiguous throughout all measures is that the first dimension is always more adept at explaining most behavior, but that the second dimension is in some periods adept at explaining a relevant minority of behavior.

The first session to look at is the 1995-1998 legislative period in Figure 4.3. For this period the statistics presented in the previous two sections suggested unidimensionality. In general, the ideal points seem to suggest unidimensionality as well since there is a split between the government and opposition on the first dimension, but there are not such large splits between legislators on the second dimension. There generally only seems to be a Colorado cluster and an opposition cluster. Historically, this also seems to make sense since the Colorado party was able to achieve a single-party majority in the Chamber of Deputies during this period. During this period there were some internal tensions in the Colorado Party between Gral. Lino Oviedo and the president of the time Juan Carlos Wasmosy, but those tensions do not seem to have translated into legislative competition among Colorados in the Chamber of Deputies in the 1995-1998 legislative period.

The 1998-2003 was unambiguously multidimensional according to the statistics presented in the previous two sections. The 1998-2003 cell of Figure 4.3 seems to confirm that this legislative period was multidimensional because there is an internal split within the Colorado party, and because there is a split among opposition parties between the Liberals and the PEN. Historically, this split makes sense. As mentioned when discussing multidimensional true preferences, in the 1998-2003 legislative period the tensions within the Colorado
party were very strong. Lino Oviedo competed against Luis María Argaña for the party nomination, and Oviedo won—though questionably. However, because of his military insubordination to Wasmosy in 1996, Oviedo was sent to prison and banned from running. In the end, Oviedo’s running mate, Raúl Cubas, became the presidential candidate and Argaña became the vice presidential candidate for the Colorado party. However, tensions between Oviedo and Argaña did not end there. Days after taking office, Cubas pardoned Oviedo. Then in March, 1999, Argaña was assassinated. The assassination led to public outrage and a popular uprising known as the “Paraguayan March.”\footnote{March being in this case a noun and not a verb.} As a result of this uprising, Cubas resigned, Oviedo went into exile first in Argentina and then to Brazil, and there being no president or vicepresident, the president of the President of the Senate, Luis Ángel González Macchi, became the president of the country. Justifiably, then, the 1998-2003 cell of Figure 4.3 shows that Colorado divisions were such that the Colorado party was split on the first dimension, and the traditional inter-party division between the Colorados and Liberal/PEN opposition was relegated mostly to the second dimension.

The 2003-2008 period was strongly unidimensional in the statistics presented in the previous two sections. The 2003-2008 cell in figure 4.3 shows that the division within the Colorado party on the second dimension mostly subsided during this time period. That being said, there does seem to be a small amount of a division in the Colorado party on the first dimension. This period also shows the rise of three new parties, the UNACE, PPQ and PPS parties. The UNACE party, as I have mentioned before, is a splinter party of the Colorado party that was formed by Lino Oviedo after his failed coup attempt of 1999. The PPQ party is a business-friendly economically center-right-wing party, and the PPS is a left-wing party. Although new parties gained representation for the first time, the Colorado party had an outright majority in the Chamber of Deputies, and the president, Nicanor Duarte Frutos, had strong control over the party for a large period of time—until he undertook a failed attempts to modify the constitution to, first, permit his reelection to the presidency,
and second, to assume as an active senator after having been president. The conflict over Duarte Frutos’ bid to modify the constitution to permit reelection would have led me to believe that internal divisions in the Colorado Party would have shown more multidimensionality in roll-call voting. Perhaps this is due to the fact that this conflict happened late in the presidential period, and a small amount of conflict towards the end was not enough to produce a full new estimated dimension. However, perhaps the divisions happened between branches of government, with a unified legislature against a power-seeking president, rather than becoming a split within the party. A more fine-grained analysis of these questions will be carried out in the next chapter, but for now it is sufficient to say that the Duarte Frutos period was mostly unidimensional, and that assessment seems to bear out in the overall qualitative analysis of ideal points on two dimensions.

The 2008-2013 legislative period was the first time since the fall of the dictatorship that a party other than the Colorado party won the presidency. This was in part a reaction to the unpopularity of Duarte Frutos’ attempt to modify the constitution to allow for his reelection or to enable him to assume an active seat in the senate. Because Duarte Frutos hand-picked his successor, Blanca Ovelar, as the Colorado presidential candidate, his unpopularity was translated into electoral losses for the party as a whole. Furthermore, Lino Oviedo’s conviction was overturned by the supreme court in October 2007, so he was allowed to run for president as a candidate for his previously formed UNACE party, and his candidacy also stole votes from the Colorado party. Finally, the Liberal party formed an alliance with left-wing parties and they nominated an outsider, Fernando Lugo, who was a former bishop (Flecha and Martini, 2019; Paredes, 2014).

The 2008-2013 legislative period was found to be multidimensional in the previous two sections. In the 2008-2013 cell of Figure 4.3 we can see that the main cause of this second

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5 The Paraguayan Constitution states that former presidents will take on the role of “Perpetual Senators” after they retire from the presidency. Perpetual Senators can speak in the Senate but they cannot vote meaning they have limited actual political power. The purpose of this was to effectively remove former presidents from the political realm. The fact that Duarte Frutos was attempting to assume an active seat in the senate, rather than becoming a Perpetual Senator, was a controversial move.
Figure 4.3: W-Nominate Ideal Points
dimension is a split between the Colorado and the UNACE parties. Although the UNACE party is technically a different party than the Colorado party, it is still Lino Oviedo’s movement that created a second dimension in the 2008-2013 period. Therefore, in both the 1998-2003 period and the 2008-2013 legislative period, it seems like the UNACE—first as the intra-party Colorado faction called the “National Union of Ethical Colorados” and then as the independent party the “National Union of Ethical Citizens”—caused the second dimension to be relevant to legislative politics. There also seems to be a slight division in the opposition between the Liberals and the PPQ party. What is to an extent surprising, however, is that the Liberals did not seem to be very internally split in this period. Since Lugo was impeached and removed from office in 2012, to be replaced by his Liberal Vice-President Federico Franco, it could have been plausible that an internal split in the Liberal Party was what led Lugo to lose votes and be impeached. However, that does not seem to be the case. Lugo seems to have lost the Liberal party as a whole, because although there was a split in the Colorado and UNACE parties, there was not much of a split among the Liberals on the second dimension.

The 2013-2018 legislative period marked the return of the Colorado Party to power. The Colorado Party won the presidency with an outsider, businessman, candidate called Horacio Cartes, and they won a plurality of the Senate and a majority of the Chamber of Deputies. Another very important political event was that on February 2, 2013 Lino Oviedo died in a helicopter accident. Oviedo’s death led to the UNACE party being re-absorbed by the Colorado party, providing it with an electoral boost as well.

In terms of dimensionality, the previous sections had suggested that the 2013-2018 legislative period was mostly unidimensional, but some measures of dimensionality left open the possibility that a second dimension may be relevant. In the 2013-2018 cell of Figure 4.3 we can see that there does seem to be somewhat of a split in the Colorado party. This split among the Colorados makes historical sense, because although throughout most of his presidency Cartes was able to rule over a disciplined party, towards the end of his presidency
there were several battles about the issue of reelection. These battles took place within the Colorado party in the form of a competition between two factions: The Honor Colorado (HC) faction, which supported Cartes, and in fact the movement’s initials are shared by him, and the Añeteté faction, led by then-senator Mario Abdo Benítez. These internal battles started with the election of the presidency of the Colorado party, where Cartes’ hand-picked nominee, Pedro Alliana, competed and won against Abdo Benítez. Then, the battle turned into one where Añeteté with the support of a Liberal faction of legislators led by Efraín Alegre, fought to block the modification of the constitution to allow the reelection of the president—this was supported by HC and a faction of Liberals led by Blas Llano. Though a riot eventually broke out in opposition to the modification of the constitution, which led to a fire in the building of congress, intra-party competition within the Colorado party continued even after the constitutional crisis abated. The conflict was then transferred to the primary elections within the Colorado party where Cartes’ former minister of finance and HC candidate, Santiago Peña, competed against Abdo Benítez. With all this conflict within the Colorado party, it makes sense that a second dimension became relevant, but perhaps this dimension is underrated because the intra-party conflict took place mostly during the last year of the 2013-2018 period.

The 2018-2023 had some measures that suggested multidimensionality and others that suggested unidimensionality in the previous section. The 2018-2023 cell presented in Figure 4.3 seems to show an internal division in the Colorado party that is very similar to the one we saw in the 2013-2018 period. This makes sense because although Abdo Benítez became the president in this period, there was still a high level of factionalism within both the Colorado and Liberal parties. For example, in 2019 Abdo Benítez was spared from being impeached by two PPQ votes in the Senate after a scandal about the re-negotiation process of the Itaipú dam with Brazil was revealed to the press. HC, the Liberal party, and most of the opposition

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6A lower level constitutional crises continued with the question of whether Cartes would assume an active or perpetual seat in the Senate. In the end he was unable to.
were in support of the measure. Eventually he was spared, but this event shows the extent to which the HC support of Abdo Benítez is conditional on certain outcomes. That being said, the measures of dimensionality of this period, presented in the previous section, are still a bit ambiguous, and that may be due to the fact that the amount of roll-call votes available for this period are still a bit low.

4.6 Correspondence between True and Expressed Preferences

Although up to this point we have looked at true, ideological preferences and expressed preferences separately, it would be useful to place both measures of preferences next to each other to see the extent to which they show the same thing. The main purpose of this exercise would be to see the extent to which expressed preferences are a reflection of true, ideological preferences, or whether legislative institutions and electoral incentives distort expressed preferences so that they are different from what ideological preferences showed.

In Figures 4.4 and 4.5 I compare the true, ideological preference estimates created with blackbox, to expressed preference estimates created with the W-NOMINATE ideal point estimation method. The main difference between the expressed-preference plots in Figures 4.4 and 4.5 is that instead of using the whole set of votes available for each legislative period, I only used the votes available in each legislative year when the PELA survey was carried out. This was done so that only roll-call votes that took place near the time period in which legislators answered the survey were taken into account in expressed-preference ideal point estimation. To reiterate, despite the fact that in some periods expressed preference behavior seemed more unidimensional than others, and despite the fact that true, ideological preferences always seemed to be multidimensional, in all of these estimates the first dimension always explained most of the variance.

The main thing these figures show is that true, ideological preferences do not much match expressed preferences. In fact, true ideological preferences and expressed preferences often

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7See appendix for decisions about cut-off periods for roll-call votes in relation to PELA survey waves.
Figure 4.4: True and Expressed Preference Correspondence

1996–1997 Legislative Period (Votes=552)

1998–1999 Legislative Period (Votes=227)

2003–2004 Legislative Period (Votes=194)

1996 PELA Survey

1998 PELA Survey

2003 PELA Survey
seem to be orthogonal to each other. In 1996 PELA ideal points, the intra-party Colorado split—between Wasmosy and Argaña—seems to be mostly on the first dimension, whereas the Colorado/Liberal split is mostly on the second dimension. In the 1996-1997 expressed preferences ideal points, we can see that intra-party divisions, which do not seem to separate much, are mostly on the second dimension, whereas the Colorado/Liberal split is mostly on the first dimension. In the 1998 PELA survey we similarly see that Colorado intra-party splits are on the second dimension, and the Colorado/Liberal split is on the first dimension, but in the 1998-1999 expressed preference ideal points we can see that Colorado intra-party
splits were so strongly on the first dimension that a faction of the Colorado party was voting alongside the Liberals on the first dimension—and somehow despite this intra-party break behavior looks mostly unidimensional.

Again, in the 2003, 2008, and 2013 PELA surveys we can see that the Colorado/Liberal split happens mostly on the second dimension, whereas the first dimension seems to capture a true left-right cleavage with unambiguously left-wing parties on the left (Lugo, AP, PPS) and unambiguously right-wing parties on the right (PPQ, UNACE), but with the ideologically ambiguous Colorados and Liberals always separating on the vertical axis. In contrast, the 2003-2004, 2008-2009, and 2013-2014 expressed preference ideal points clearly show that the Colorado/Liberal cleavage dominated the first dimension. In terms of the second dimension, it is not clear that second-dimensioal expressed preferences are ideological. In 2003-2004 we can see PPS, an ostensibly left-wing party, voting among PPQ and UNACE, ostensibly right-wing parties. In 2008-2009 we can see PPQ, an ostensibly right wing party, voting in complete contrast to UNACE, also an ostensibly right-wing party, but with MPT, PDP and APC, which are ostensibly left-wing parties—these latter parties are called, Popular Worker’s Movement, Progressive Democratic Party and Patriotic Alliance for Change, respectively. Finally, in 2013-2014 we can also see PPQ, an ostensibly center-right-wing party, voting among the AP and FG parties, which are ostensibly left-wing parties. All in all, then, expressed legislative preferences do not match up well with legislators’ true, multidimensional, ideological preferences.

4.7 Discussion

We began this chapter by conceptualizing legislative preferences on two axes. True preferences are preferences that legislators can express with little constraint or fear or retribution—such as that they can reveal in a confidential survey. Expressed preferences may have varying levels of constraint. Legislators may fear behaving in a way that can undermine several stakeholders that can affect their career prospects, and therefore legislators may conform to
behaving in a way that does not reflect their true preferences. We then discussed how preferences can be either ideological preferences or electoral preferences or both. Because legislators have high levels of political knowledge and interest, if preferences are mostly ideological, we would expect legislators to have low-dimensional, and perhaps even unidimensional, preferences. Contrastingly, if preferences are mostly electoral, and electoral preferences promote individualistic, selective, distributive behavior among legislators, then that should lead to multidimensional preferences.

With these conceptualizations of preferences in mind, I then turned to what legislative theory believes about how legislative stability is constructed, and what these alternative constructions of stability imply about preferences. In short, Preference Induced Equilibriums assume that true ideological preferences will be unidimensional, and expressed preferences will unidimensionally match those true ideological preferences. Structure Induced Equilibriums, in turn, assume that true preferences will be multidimensional—either because of multidimensional ideologies or because of electoral incentives—but that institutions will compress multidimensional preferences into unidimensional expressed preferences in order to create legislative stability. Finally, the last possibility is that no equilibrium exists, and that legislative instability exists around the yolk of the chamber floor.

The analysis above shows that in the Paraguayan Chamber of Deputies true, ideological preferences are multidimensional. We saw this through both the AM and blackbox operations. This finding is mostly true throughout the entire period of study that we have surveys for. A second dimension of true, ideological preferences is always relevant to explaining a high portion of the total variance of responses, and in many legislative periods it is this second dimension, and not the first, which contains the most important political division between the large and traditional Colorado and Liberal parties. These findings provide strong evidence against PIEs creating legislative stability in the Chamber of Deputies of Paraguay.

I then analyzed expressed preferences in the form of ideal points estimated from roll-call data to see whether these expressed preferences were unidimensional or multidimensional.
If they were unidimensional that would have provided support for a SIE creating legislative stability despite the lack of unidimensional, true, ideological preferences. If expressed preferences were multidimensional, that would have provided support for the idea that legislative stability mostly does not exist in Paraguay but that legislative behavior is structured by instability around the yolk of the Chamber of Deputies.

Analysis of expressed preferences showed that legislative behavior was at times unidimensional and at times multidimensional. In terms of our hypotheses, this would then suggest that legislative behavior can at times be constructed through SIEs, but at times stability cannot be created and instability around the yolk seems to reign—specifically in 1998-2003 and 2008-2013.

Finally, I ended by comparing true ideological preferences to expressed preferences to see the extent to which they correspond to each other. In general, these two sources of preferences seem to be quite different, and at many times orthogonal to each other. That is, although in both true preferences and expressed preferences, the first dimension was always more important for explaining a larger portion of behavior, the first dimensions of true preferences often did not match the first dimension of expressed preferences. From 2003 on, the first dimension of true preferences seems to be more ideological, with left-wing stimuli, like PPS and Lugo, and right-wing parties, like UNACE and PPQ, anchoring the ideological first dimension. However, the second dimension mostly contains the division between the Colorado and the Liberal parties. In contrast, expressed preferences after 2003 mostly contain the Colorado/Liberal split on the first dimension, and the second dimension is not clearly ideological either. Before 2003, both true and expressed preferences show intra-party splits, especially in the Colorado party, but in the 1996 survey intra-party splits are first-dimensional, while in 1996-1997 votes they are second-dimensional, and in the 1998 survey intra-party splits are second-dimensional, but in 1998-1999 votes they are first-dimensional.
4.8 Conclusions and Implications

The main finding of this chapter seems to be that ideology is not the driving force of politics in the Paraguayan Chamber of Deputies. True ideological preferences were always multidimensional. This is a highly unusual situation where we were able to verify through survey responses that a PIE does not seem to exist in the Chamber of Deputies. Despite a PIE not existing, it seems like in some periods the structure of legislative preferences are not incompatible with a SIE. That is, while true ideological preferences—captured from surveys—were always multidimensional, in some period expressed preferences—captured through roll-call votes—did turn out to be unidimensional. This is especially true of the 2003-2008 legislative period. However, I will leave a more comprehensive analysis of whether a SIE exists in Paraguay for Chapter 6. For now, at least, we can say with certainty that this chapter finds that the unidimensionality of roll-call votes seems to be a conditional rather than static feature of Paraguayan politics.

The main implication of this chapter is that it has shown that stability needs to be created given that PIEs do not exist because of the structure of legislators’ true and expressed preferences. One limitation of this chapter has been that we have been analyzing roll-call behavior for each five-year legislative period in isolation rather than looking at how preferences evolved within and between legislative periods. In the next chapter I will look at roll-call behavior more thoroughly by analyzing whether legislative preferences are static or whether they change across time. This will be useful for understanding whether the primary dimension of legislative competition changes both within and between legislative periods, or whether the main partisan dimension is static across time.
Chapter 5

Preference-Induced Equilibriums II: Do Legislators have Stable or Shifting Preferences?

In the previous chapter we have seen that legislators do not seem to have strong ideologies because their preferences as expressed in the PELA survey were multidimensional and a bit unstructured. We have also seen that there were some periods where legislative behavior, or expressed preferences, were mostly multidimensional (like the 1998-2003 and 2008-2013 periods), but that other periods seemed to be mostly unidimensional. Given that true ideological preferences were multidimensional in every legislative period, but expressed preferences were multidimensional in some periods and unidimensional and others, I concluded that this suggests that the Paraguayan Chamber of Deputies has at some points been able to create legislative stability and unidimensional roll-call voting in some periods, but they have been unable to create stability in other periods. This changing capacity to create unidimensional legislative behavior is highly unusual.

In this chapter I will be exploring whether legislative preferences change in the Paraguayan Chamber of Deputies. Previous research has explored whether legislative expressed preferences change, and the established consensus is that they mostly do not (Poole and Rosenthal, 1997; Poole, 2007), except under certain conditions of extreme electoral pressures (Kousser, Lewis and Masket, 2007; Clark, 2012). However, theories of legislative politics also heavily rely on the concept of “realignment” where the contents of electoral and legislative conflict is switched from one set of issues and alliances to another set of issues and alliances (Poole and Rosenthal, 1997; Miller and Stokes, 2006). In the United States, static legislative preferences are reconciled with realignment because the contents of the House of Representatives changes through the replacement of legislators and it is not legislative preferences themselves
that change across time within each individual legislator.

In contrast, as I will show in this chapter, Paraguay is interesting because in times of realignment the legislators in the Chamber of Deputies changed their expressed preferences within legislative periods. That is, constant legislators *modified* their expressed preferences in at least two periods of time in Paraguayan democratic history. Notably, these two periods of change ended with a reversion to the “normal” dimension of politics. Because these periods of change are contained within five-year legislative periods, meaning that the legislative composition of the chamber was held constant, these expressed preference changes must imply behavior change through modification of preferences.

Although the purpose of this chapter is mainly to show that changes take place, and not to fully explain why these changes take place, I propose that these changes happen because of two different reasons which will be explored more fully in future chapters. The first reason is because even though legislative periods last five years, the rules of the Chamber of Deputies give legislators many opportunities to change their internal institutions. The Chamber President, the Directive Table, and legislative committees are selected yearly rather than once per legislative period, giving legislators many opportunities to change the leadership under which they function. The second reason why legislators change their behavior within legislative periods is that electoral institutions create fault lines within political parties, which can lead intra-party divisions to be expressed as a second dimension of roll-call voting. Specifically, Paraguay uses Closed-List Proportional Representation (CLPR) for its general elections, but it also uses CLPR for its party primary elections. This creates both incentives for parties to hold together—responding to general election CLPR incentives—but also compete fiercely internally—responding to primary CLPR incentives. These competing incentives could be leading legislators to change their expressed preferences. That being said, the adequacy of these explanations act will be explored further in future chapters.

In order to show that preferences change in the Paraguayan Chamber of Deputies, this chapter will proceed as follows. I will first review the concept of “realignment” and I will dis-
cuss the implications that changes in expressed preferences within legislators across time has for both the concept of realignment and for our understanding of dimensionality of behavior. I will then provide empirical evidence to show that legislative behavior changes within legislators across time rather than through the replacement of legislators in the Chamber of Deputies of Paraguay. This evidence will be provided by estimating ideal points under different assumptions and comparing the estimated ideal points that result from those varying assumptions. Namely, by carrying out W-NOMINATE on my full dataset, I can estimate ideal points assuming legislative preferences are constant. Then, the DW-NOMINATE and dynamic IRT methods assume, using different methods, that legislative preferences can change across time, but they also contain components that assume that individuals are the same people across time, and therefore they do not allow for complete independence of an individual’s ideal point from one year to another. Finally, by estimating W-NOMINATE, OC, and bayesian IRT ideal points separately for each year I can create estimates of ideal points that are completely independent from one year to another. These last estimates perhaps provide the unrealistic assumption that a person’s preferences in one year is completely independent from their preferences the next—treating that same person effectively like two different people—but they provide the most flexibility in allowing legislator preferences to change. By comparing estimates that either take into account change or completely treat people like different individuals from one year to the next, to the pooled W-NOMINATE model that assumes that preferences never change, we can see the extent to which legislative expressed preferences are static or dynamic (Poole, 2007).

5.1 Replacement: Realignment through Static Preferences

In their seminal analysis on roll-call voting in the United States House of Representatives, Poole and Rosenthal (1997) analyzed whether legislative politics had “realigned” throughout history. The concept of realignment describes the process through which the main dimension of conflict among legislators is replaced by another main dimension of conflict as time goes
on, and they found some evidence to indicate that realignment had taken place in certain periods of American history. In their formulation of the concept, Poole and Rosenthal (1997) included a graphic to conceptually explain how realignment can be observed. Figure 5.1 reproduces their graphic below.

Figure 5.1: Visualization of Realignment

Figure 5.1 shows a hypothetical situation where, in the first cell, the black and gray parties are shown to be mostly placed on the first dimension with some, smaller, variance on the second dimension. In the second and third cell, we can see how certain issues begin to split each party internally, making the variance of their preferences on the second dimension increase. In the fourth cell, we can see how old alliances seem to break down, and new ones
begin to form, leading alliances to shuffle, and the parties to be largely indistinguishable. Finally, in the last cell we can see the concluded realignment process with the two parties now mostly placed on the new first dimension—which use to be the old second dimension—with some small variance on the new second dimension—which use to be the old first dimension. This, in short, is how Poole and Rosenthal (1997) conceptualized realignment.

However, according to their findings, Poole and Rosenthal (1997) and Poole (2007) found that this realignment took place mostly without legislators changing their behavior. Seemingly, this finding of static legislative preferences would contradict with the argument of realignment. That is, if individual preferences are static, then how can the overall preferences of a chamber change across time?

Their answer was: replacement. If legislator preferences are static, then the overall preferences of a chamber can be changed by replacing old legislators whose preferences load strongly on the first dimension with new legislators whose preferences load strongly on the second dimension, until the importance of the second dimension is such that it becomes the new first dimension. In this way, Poole and Rosenthal (1997) argued that realignment can take place by replacing legislators with stable preferences, rather than modifying the behavior of non-changing legislators.

5.2 Modification: Realignment through Preference Change

A key component about all forms of realignment, is that it cannot take place unless overall preferences are multidimensional. In terms of replacement, overall preferences have to be multidimensional for realignment to be possible because if overall preferences are unidimensional, then any replacement one could carry out would simply exchange one person on the single dimension of conflict for another person who loads on that same dimension of conflict. It seems then that, by definition, unidimensional preferences are aligned, and if preferences are truly and completely unidimensional, their unidimensionality excludes any and all realignments.
However, in terms of modification, the relationship between multidimensionality and realignment seems to be less clear. Wouldn’t it be possible for legislators to simply change their positions on the first dimension, with that unidimensional preference change accounting for the realignment? To answer this we again have to consider the two different kinds of preferences we had discussed in the previous chapter: ideological and electoral preferences.

The methods we have available to derive estimates of ideal points on the basis of roll-call data conceptualize preferences as ideological preferences. Poole (2005) and Armstrong et al. (2014) for example explain how NOMINATE methods have been explicitly created to extract measures of ideological preferences from behavior. According to Poole (2005):

“If the voters have coherent belief systems, then within the spatial theory of voting their issue positions lie on a low-dimensional plane through the issue space, because attitudes across the issues are constrained... The presence of constraint implies two spaces – one with a few fundamental dimensions, and a second, high-dimensional space representing all the distinct issues” (emphases in original, p.13).

Borrowing the idea of “belief systems” and “idea constraints” directly from Converse (1964), these methods seek to extract a basic space which represents their ideology or “low-dimensional space underlying individuals’ evaluations,” and an action space, or the “multi-dimensional issue space” (p. 14).

In contrast to this methodological conceptualization of preferences as ideology, however, most evidence of expressed preference change in legislators has been attributed to electoral preferences. For example, (Kousser, Lewis and Masket, 2007) found that legislators tend to vote in a more moderate manner when threatened with recall elections, and Clark (2012) found that term-limited legislators are less likely to be loyal servants of their party. If preference changes take place in response to electoral incentives, this conclusion would implicitly conceptualize the portion of expressed preferences that change as electoral—not ideological in the strict sense—preferences.
The gap between a purely ideology-based ideal point estimation procedure, paired with preferences that may change due to institutional shocks, opens the possibility for ideal points to be misinterpreted. This is because, if preferences change, then those changed preferences are very likely to be picked up as a new dimension. Therefore, unidimensional preference changes are to an extent equivalent to realignment onto another dimension. In other words, in its most extreme expression, sequential unidimensionality of all sorts, ether through replacement or modification, can be considered forms of realignment and therefore multidimensionality.

To show why this is the case let me provide the following example. Imagine four legislators—A, B, C, and D—placed on a unidimensional policy space from left to right, with the largest gap being between B and C. Because of their preferences on this first dimension, A tends to vote with B and C tends to vote with D. However, imagine as well that half way through the legislative period, A changes its position and now becomes an ally to D, leaving the largest gap between C and D. As a result, B and C, reacting to this change, start to vote together more often, and A and D tend to vote together more often.

Empirically, this situation can be modeled in two different ways. One option is to find the exact moment in which A switches its position to be closer to D. If we can find that date, we can estimate two sets of ideal points separately, and our estimates would be unidimensional in both estimations (Martin and Quinn, 2002). In the former estimates the ordering would be $A < B < C < D$ and in the latter estimates the ordering would be $B < C < D < A$. The second option would be to pool all votes together and estimate ideal points in two dimensions. This would show A closer to B and C closer to D on one of the estimated dimensions, and it would show A closer to D and B closer to C on the other estimated dimension.

In short, preference changes can also, to an extent, be considered a form of multidimensionality, at least in our interpretations of empirical estimates of ideal points. With that in mind, in this chapter I analyze not only whether preferences change, but also how preference changes affect the dimensionality of the policy space. As we have seen in the previous chap-
ter, this will be essential if we want to understand in a finer-grained way when legislators are able to create SIEs through unidimensional roll-call voting and when they are unable to do so.

All of this is not to say that true multidimensionality in preferences can never exist. If legislators do in fact have ideologies on two dimensions, then that would also produce multidimensional voting behavior (if institutions do not intervene). However, if this were the case, then multidimensionality would be a product of static behavior and not changing behavior. These arguments do put forward the idea that changing preferences must, to an extent, be multidimensional because of the way ideal point estimation procedures conceptualize preferences, and because of the mechanics through which preference changes usually come about.

5.3 Institutional Expectations for Preference Change in Paraguay

As mentioned in the introduction, there are institutional reasons why we would expect legislators to change their behavior across time in the Paraguayan Chamber of Deputies. First, legislative periods are long, lasting five years, giving legislators the ability to modify their behavior across time. Second, leadership positions in the Chamber of Deputies change once a year rather than once every five-year period, and this allows legislators to change their behavior in response to different leadership. Finally, Paraguay uses very particular electoral institutions where closed-list proportional representation (CLPR) elections take place both at the general election level and in the intra-party primary level.

CLPR at the general election level and at the primary election level create competing electoral incentives for legislators. At the general election level, CLPR should promote party unity because electoral accountability is collective rather than individual (Carey, 2009). However, strong primaries have been found to undermine party unity to an extent because it gives legislators an incentive to promote their personal brands in detriment of party discipline (Hazan, 2000). The oddity of having CLPR at the primary election level, however, is that
primaries undermine party discipline to promote sub-party factions that correspond to the legislative lists that compete in primary elections. Within a single party, multiple lists compete in primary elections, and these lists receive representation on the party list in proportion to the votes they receive in the primary elections. Then, these party lists compete at the general election level and they receive representation in the legislature in proportion to the votes they receive in general election. Therefore, CLPR at the primary and general election levels promotes collective accountability both within and between political parties.

Figure 5.2 shows an example of how CLPR may promote dynamic, multidimensional behavior. The figure shows two political parties, the gray party and the white party, with their internal movements, the square internal movement and the circle internal movement. In the left panel we see what we would expect to see when we observe inter-party competition. Here the gray party competes with the white party, and the internal party factions cooperate internally in order to support this inter-party competition. In contrast, the right panel would show what we would expect to see during times of primary elections, when the intra-party factions have less of an incentive to cooperate with their party as a whole, and may be more inclined to compete internally. In this sense, Paraguay would exhibit what Morgenstern (2003) would refer to an “agent system” rather than a “party system,” where legislatures are organized by individuals, parties, but also “potentially coherent groups other than parties,
such as factions, state delegations and alliances” (p.28).

The main difference about Paraguay, however, is the changing nature of the salience of these different “agents.” Tying the discussion back to the previous discussion about realignment, a feature about the Paraguayan Chamber of Deputies is the temporal aspect of the salience of each axis of competition. That is, as Figure 5.2 implies with its arrows, the intra-party divisions are not permanent features of legislative competition in the Chamber of Deputies, but rather the salience of intra-party movements vary across time, with intra-party conflict being more important in certain moments, and intra-party conflict being less important in other moments.

Figure 5.3 : Regression to Alignment
Because, as we have seen in the previous chapter, ideology is not particularly important to legislators, the concept of realignment presented in Figure 5.1 may have to be modified to show a process that is less of a re-alignment in the sense that legislators become aligned onto a new issue-alignment, but more of a regression to alignment, where after a bout of internal divisions, legislators move back into the political alignment they were competing on before the intra-party divisions. This regression to alignment process is presented in Figure 5.3.

Similar to realignment, this regression to alignment also implies periods of multidimensionality and unidimensionality of expressed preferences. In the previous chapter we saw that there was variability in the dimensionality of legislative behavior from period to period. However, in what follows we will explore whether that variability actually changes within each legislative period and not only across each legislative period. Changes within legislative periods would provide support for the assertion that legislative preferences in Paraguay change through modification of preferences.

5.4 Baseline of Static Preferences

In order to analyze whether legislative preferences change, we need a baseline of what legislative preferences would look like if they did not change. The left cell of Figure 5.4 shows ideal point estimates aggregated with W-NOMINATE over my entire dataset of 7,330 non-lopsided roll-call votes that range from 1995-2020. These ideal point estimates are generated under the assumption that each legislator holds preferences that are completely static throughout their entire (voting) life. In general, the first dimension seems to capture the Liberal/Colorado division, and the second dimension seems to capture intra-party divisions mainly within the Colorado and Liberal parties. In order to allow for the potentially high dimensional structure of preferences, these W-NOMINATE ideal points were estimated over 10 dimensions.

To explore the dimensionality of these pooled ideal points, the right cell of Figure 5.4
shows the eigenvalues of these estimations. In general, the eigenvalues seem to suggest that the dimensionality of the overall ideal points are a bit high, but it also suggests that the first two dimensions are the most relevant ones as there is an “elbow” that separates the first two dimensions from the rest. The eigenvalues decline more slowly from the third dimension forward than they did from the second dimension to the third.

Table 5.1 : Pooled Dimensionality

<table>
<thead>
<tr>
<th>Stat</th>
<th>N. Votes</th>
<th>Dim.1</th>
<th>Dim.2</th>
<th>Dim.3</th>
<th>Dim.4</th>
<th>Dim.5</th>
<th>Dim.6</th>
<th>Dim.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>APRE</td>
<td>7330</td>
<td>42.21</td>
<td>54.17</td>
<td>59.03</td>
<td>62.71</td>
<td>65.64</td>
<td>67.55</td>
<td>69.85</td>
</tr>
<tr>
<td>APRE Margins</td>
<td>7330</td>
<td>42.21</td>
<td>11.95</td>
<td>4.87</td>
<td>3.67</td>
<td>2.93</td>
<td>1.91</td>
<td>2.30</td>
</tr>
<tr>
<td>Correctly Classified</td>
<td>7330</td>
<td>84.22</td>
<td>87.49</td>
<td>88.82</td>
<td>90.62</td>
<td>91.14</td>
<td>91.77</td>
<td></td>
</tr>
<tr>
<td>Correct Margins</td>
<td>7330</td>
<td>84.22</td>
<td>3.26</td>
<td>1.33</td>
<td>1.00</td>
<td>0.80</td>
<td>0.52</td>
<td>0.63</td>
</tr>
</tbody>
</table>

Table 5.1 contains two further statistics that can help us gauge the overall dimensionality of pooled, static, legislative preferences: the APRE and the proportion of correct classifications. These two statistics seem to point to something similar to what the eigenvalues had shown. The first two dimensions account for the most improvement in the APRE and in the correct classifications. Subsequent dimensions, although still relevant to an extent, contribute marginally less and less as the dimensionality of the model is increased. That being said, although the first two dimensions are the most relevant ones, all dimensions up
to dimension 5 continue to supply more than a 2% improvement in APRE, which could suggest that they are of continued relevance, while the correct classification margins seem to be mostly important up to dimension 2 after which the inclusion of additional dimensions does not seem to contribute much. Overall, because the first two dimensions seem to be the most important ones, and because analysis becomes considerably more complicated as more than two dimensions are analyzed, I will be focusing mostly on the first two dimensions of legislative behavior in this chapter.

5.5 Comparison Group of Time-Modeling Procedures

Having estimated ideal points with W-NOMINATE on the pooled dataset, now we have to compare that assumption of static preferences to other models that are more flexible about their assumptions about time. In this section I will be explaining two models that account for time by modeling it directly. Specifically, there are two models that directly incorporate time into their ideal point estimations: DW-NOMINATE and Dynamic IRT models (Poole and Rosenthal, 1997; McCarty, 2016; Martin and Quinn, 2002; Imai, Lo and Olmsted, 2016; Armstrong et al., 2014). Each of these models are extensions of the W-NOMINATE and Bayesian IRT models described in the previous chapter, respectively.

DW-NOMINATE stands for Dynamic-Weighted Nominal Three-step Estimation. The main addition in this model relative to W-NOMINATE is the “Dynamic” portion, which is carried out by imposing a constraint on how legislators are allowed to move across time with a time trend. The strongest constraint would be a constant-term time trend, which assumes that legislators maintain their same position throughout their legislative lives—essentially producing the same estimates as the pooled W-NOMINATE presented in the last section. However, a linear-term time trend would allow legislators to move in one direction—but not back from that direction. A squared-term time trend would allow a legislator to move twice, once in one direction and once in another. A cubed-term time trend would allow a legislator to move three times, in one direction, back, and then back again. And so forth.
Although the historical importance of DW-NOMINATE to the advancement of our understanding of legislative behavior cannot be overstated, certain characteristics of this estimation procedure have been called into question in recent years. In terms of time dynamics, the main drawback of this model is, according to McCarty (2016), that “cases of abrupt change may not [be] well captured even by the higher order polynomials explored by Poole and Rosenthal.” That may not be an important drawback in the United States where legislative preferences are quite constant, but as we shall see in the rest of this chapter, DW-NOMINATE may be a bit too restrictive to capture the preferences of Paraguayan legislators.

Before introducing the next model, however, DW-NOMINATE does provide some statistics to explore the extent to which time is a significant factor in understanding legislative behavior. Poole and Rosenthal (1997) suggested estimating DW-NOMINATE models with higher polynomials, and exploring the extent to which these higher polynomials improve APRE and Correct Classifications could be a way of determining whether legislative preferences change across time (Poole and Rosenthal, 1997).

One factor to take into account is that the definition of what a “time period” constitutes is not exactly clear in relation to the Paraguayan Chamber of Deputies. As mentioned in the introduction to this chapter, legislative periods last five years, but for each year within these five year periods, legislators may change the chamber leadership. Changing institutions while maintaining the composition of the chamber constant may still have an effect on legislative preferences (Kousser, Cox and McCubbins, 2010), which would imply changes within each five-year legislative period even if the composition of the chamber remains constant. I therefore alternate between considering a “time period” to mean every five-year term and considering a “time period” each legislative year.

Table 5.2 shows the results of these models. DW-NOMINATE was estimated both assuming that one five-year period constitutes a “time period,” and assuming that each legislative
Table 5.2: DW-NOMINATE Time Polynomial

<table>
<thead>
<tr>
<th>Dim. Num.</th>
<th>Time Polynomial</th>
<th>APRE Period</th>
<th>Correct Period</th>
<th>APRE Year</th>
<th>Correct Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0.462</td>
<td>0.852</td>
<td>0.464</td>
<td>0.853</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>0.462</td>
<td>0.852</td>
<td>0.471</td>
<td>0.855</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>0.462</td>
<td>0.852</td>
<td>0.475</td>
<td>0.856</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>0.462</td>
<td>0.852</td>
<td>0.475</td>
<td>0.856</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0.511</td>
<td>0.866</td>
<td>0.536</td>
<td>0.872</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>0.511</td>
<td>0.866</td>
<td>0.557</td>
<td>0.878</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>0.511</td>
<td>0.866</td>
<td>0.560</td>
<td>0.879</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>0.511</td>
<td>0.866</td>
<td>0.563</td>
<td>0.880</td>
</tr>
</tbody>
</table>

year also constitutes a "time period." What both these estimation procedures show, however, is that although adding a dimension does considerably improve model fit. This is true both when years are considered a time period and when 5-year sessions are considered a time period. Interestingly though, time polynomials seem to add no improvements to the model when a 5-year period is assumed to be a time period, but they do improve classification and APRE when time periods are assumed to mean single years. The addition of a linear time polynomial seems to add 3 APRE points and less than 1% correct classifications, and after that it seems that the addition of higher time polynomials produce diminishing returns. In short, when time periods are assumed to be smaller, it seems like changes in preferences seem to be slightly more important—at least in terms of DW-NOMINATE APRE and correct classification statistics. That being said, all DW-NOMINATE models I include in this chapter incorporate two dimensions and a cubed time polynomial in order to allow the model to be extra flexible, just in case.

The second model that takes time into account which I have included in the analysis is the Bayesian dynamic IRT method developed by Martin and Quinn (2002). This model specifies that the ideal point of a legislator is equal to his or her ideal point in the previous period \(x_{t-1}\) plus a random shock \(\epsilon_t\) with mean zero and variance \(\sigma^2\)—formally \(x_{t-1} + \epsilon_t\). This statistical process is known as a \textit{random walk}. The main drawback of this procedure

\(^1\)Each legislative year ranges from July 1 to June 30 of the following year.
is that $\sigma^2$ cannot be estimated, and if $\sigma^2$ were 0, then that would mean that legislative behavior remains constant from one period to the next, and if $\sigma^2$ is too large then $x_t$ would be completely independent from $x_{t-1}$. Because it cannot be estimated $\sigma^2$ has to be set a priori, and it is impossible to know if the true value was selected (McCarty, 2016). Another limitation of the procedure is that it can only be estimated for one dimension of legislative behavior (Martin, Quinn and Park, 2011). Finally, the last limitation of this procedure is practical. Because of the proliferation of parameters, and because these parameters are estimated using MCMC algorithms, the dynamic IRT estimation procedure takes a very long time, especially with large amounts of data. Fortunately, Imai, Lo and Olmsted (2016) created a way to estimate Martin and Quinn’s (2002) dynamic IRT model using expectation-maximization algorithms, which allow for considerably faster convergence, even with large amounts of data. Therefore, all dynamic IRT models used in this book have been carried out using Imai, Lo and Olmsted’s (2016) procedure.

5.6 Comparison Groups of Independent Estimates

The last group of models were calculated assuming static preferences, but using subsets of the overall data. Like the previous chapter, I calculated independent models using data pooled at the five-year period level, but I also calculated independent models using data pooled at the yearly level. The five-year period models assume that legislative preferences are static within each legislative period, but that legislative preferences are completely independent from each other from one period to another. The yearly models similarly assume that legislative preferences are static in each year, but that legislative preferences are completely independent from one year to another.

These yearly and five-year period models were estimated using three different estimation procedures: W-NOMINATE, Optimal Classification (OC), and Bayesian IRT (Poole and Rosenthal, 1997; Poole, 1999; Jackman, 2001). W-NOMINATE and OC were calculated in two dimensions, and the Bayesian IRT models were estimated in one dimension. These
models should provide the most flexibility to legislative behavior, but they also create ideal points that are not placed on a common space from one time period to another.

5.7 Comparing Five-Year, Local First Dimensions to the Global First Dimension

Figure 5.5 shows the absolute correlation coefficients between each five-year estimation procedure and the pooled W-NOMINATE. The higher the absolute correlation coefficient the more similar the five-year models are to the pooled W-NOMINATE models, and higher levels of absolute correlation coefficients would support the idea that legislative preferences are mostly static. Figure 5.5 shows the comparisons between the global first dimension and each local first dimension for each five-year period. Should the reader want to review the ideal point estimates created for each five-year period she can review Figure 4.3 in the previous chapter.

In general this Figure 5.5 seems to support the idea that legislative preferences are quite static. Absolute correlations are very close to 1, regardless of the estimation procedure, in all periods except the 1998-2003 period. This indicates that when aggregated at five-year periods legislators behave as if their preferences were static, at least on the first dimension.

However, as we will see in the following sections, that last statement has one large caveat. In the Paraguayan Chamber of Deputies, the Chamber President, the Directive Table, and the compositions of the committees can be changed once a year, rather than once every five-year period. Therefore, it might not make sense to aggregate ideal points at the session level to search for behavior changes. If expressed preferences change with institutions, and preference change is relegated to the second dimension with data pooled at the five-year level, then local first-dimensional behavior may correspond to global estimates even though legislative preferences have been changing all along. A way to explore if this is the case is to analyze ideal points in a yearly fashion—within which institutions and legislators are held constant—to see if yearly first-dimensions continue to correspond to the global W-
Figure 5.5: Five-Year Period Comparisons to Global First Dimension

<table>
<thead>
<tr>
<th>Period</th>
<th>Correlation Coefficient</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995−1998</td>
<td></td>
<td>dwnom2d</td>
</tr>
<tr>
<td>1998−2003</td>
<td></td>
<td>dynIRT1d</td>
</tr>
<tr>
<td>2003−2008</td>
<td></td>
<td>irt1d</td>
</tr>
<tr>
<td>2008−2013</td>
<td></td>
<td>oc2d</td>
</tr>
<tr>
<td>2013−2018</td>
<td></td>
<td>wnom2d</td>
</tr>
<tr>
<td>2018−2023</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.8 Comparing Yearly, Local First Dimensions to the Global First Dimension

Figure 5.6 shows the results of yearly estimates when compared to the pooled W-NOMINATE estimates on the first dimension. The first interesting thing to see is that most estimation procedures pretty much agree in their descriptions of the relationship between local estimates to global estimates. The one measure that seems to be disagree at times is DW-NOMINATE, which changes at a slower pace than all other estimates. This may be what we expected given that DW-NOMINATE is known to be less sensitive to quick changes.

Despite that, Figure 5.6 mainly shows that there were some situations where local, yearly

NOMINATE estimates.
preferences were quite different from the global W-NOMINATE estimate. The strongest detractions seem to be in the 1998-1999, 1999-2000 and 2017-2018 legislative years. The whole 2003-2008 legislative period seems to correspond quite well to the global W-NOMINATE estimate, which may be what we would have expected from the most unidimensional time period. The 2008-2013 legislative period seems to have two peaks downwards in 2009-2010 and 2011-2012—but those downward peaks are only captured by the IRT and the dynamic IRT procedures.

Figure 5.6: Yearly Comparisons to Global First Dimension

The main reason why IRT measures may differ from all other measures is because all other measures limit the space on which ideal points can be estimated. This means that extremist legislators tend to reach the outer bounds of the allowed space, and then cannot move further. All yearly, locally generated, two-dimensional, W-NOMINATE ideal points
are presented in the appendix of this chapter. In the appendix, in the second cell of Figure 10.12 we can see that the two-dimensional W-NOMINATE places the UNACE party near the Colorado party on the first dimension, but it mostly separates them on the second dimension. Furthermore, the UNACE party seems to have been quite radical in this year because the ideal points of all its members are at the limit of the space allowed by W-NOMINATE. With a very close inspection of Figure 5.6 it is possible to see that local W-NOMINATE correspondence to the global W-NOMINATE estimates does fall slightly in 2009-2010 and then peaks upward slightly again in 2010-2011. This slight movement does seem to be caused by UNACE’s movement from radically opposed to the Liberals on the first dimension to a more central position on the first dimension. However, the extent to which this movement is manifested seems to be limited by the outer bounds allowed by the W-NOMINATE measure.

In contrast, the outer bounds of IRT measures are less constrained. Therefore, the change that is limited and small in the W-NOMINATE estimates in Figure 10.12 of the Appendix, is quite large in the IRT estimates. Figure 5.7 shows how first dimensional preferences changed from the 2009-2010 period to the 2010-2011 period according to one-dimensional IRT estimates. In any case, both W-NOMINATE and IRT procedures show that UNACE moved from being an outlier to being a central figure on the first dimension in the 2009-2010 and 2010-2011 time periods, but they disagree about how radical that movement was, with W-NOMINATE estimating a small change because of its two-dimensionality and bounded space, and IRT estimating a large change because of its single-dimensionality an less-bounded space.

The 1998-1999, 1999-2000 and 2017-2018 legislative year shifts are more straightforward because all measures in Figure 5.6 agree that there were deviations from the global first dimension in these periods. The 1998-2000 shift makes sense because in 1999, the “Paraguayan March,” vice-presidential assassination, coup attempt, and mass movement that I mentioned in the previous chapter took place (Flecha and Martini, 2019; Paredes, 2014). This was a moment rife with internal divisions for the Colorado party. Similarly, in
Figure 5.7: IRT One-Dimensional Estimates
2017 President Horacio Cartes attempted to modify the constitution illegally, which resulted in a mass movement against the constitutional amendment. This movement and escalations to it led to one death inside the Liberal party at the hands of the police and the burning of the building of Congress by angry protesters (Carrizosa, 2018). In both these periods intra-party divisions were very high, but they were short, intense bouts of intra-party divisions. These sharp divisions accounted for the behavior change.

5.9 Comparing the Yearly, Local First Dimensions to the Global First and Second Dimensions

A further analysis we can carry out is to see the extent to which locally estimated first dimensions correspond to the second dimension of the global W-NOMINATE. This would be useful for analyzing whether sequential unidimensionality is contributing to the global W-NOMINATE second dimension. The first dimension at the local level is always the one that explains the most variance, but as we saw in Figure 5.6 the local first dimension does not always correspond to the global first dimension. Are these non-correlated local first dimensions perhaps contributing to the global second dimension?

Figure 5.8 shows the extent to which the local first dimension of the yearly W-NOMINATE estimations are correlated to the global first and second dimensions. As we can see, the 1998-1999 and 1999-2000 years show that the local first dimension is highly correlated to the global W-NOMINATE second dimension exactly as the first dimension’s correlation to the global first dimension spikes downwards. Second, the 2017-2018 period also shows how the correlations of the local first dimension to the global first dimension spikes downwards while the correlation of the local first dimension to the global second dimension spikes upwards. It is also interesting to note that intra-party divisions took place mostly in the legislative

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2In Figure 5.8 only W-NOMINATE estimates are included, but Figure 10.15 in the appendix shows the extent to which different local first-dimensional measures agree about these correlations to the global second dimension.
Figure 5.8: Yearly Correspondence to Global First and Second Dimensions

The 2003-2008 and 2013-2018 legislative periods seem to have upward movements in the correlation of the local first dimension to the global second dimension without corresponding drops in the correlations of the local first dimension to the global first dimension. In these cases intra-party factionalism seems to be less relevant, but it mainly seems to be caused by changes in the position of the UNACE party. As mentioned in the previous chapter, UNACE is a splinter party that separated from the Colorado party under the leadership of Lino Oviedo. The periods where the first local dimension is highly correlated to the second periods where the UNACE was mostly non-existent (UNACE was a strong legislative player from 2003 to 2013). In sum, these two time periods show that in fact the global second dimension of intra-party divisions was a very prominent cleavage among legislators in these two time periods.
global dimension, but there is no downward spike between the first local dimensions and
the first global dimension—namely, 2003-2008 and 2010-2013—seem to be periods where the
UNACE party was closer in expressed preferences to the Liberal party than to the Colorado
Party (see Figures 10.11 and 10.12 in the appendix).

In short, preferences in Paraguay seem to change, and they changed most considerably
in the 1998-2000 period and in the 2018-2019 period. In these periods intra-party divisions
in the two traditional parties—the Colorado and the Liberal parties—seem to have taken
the center stage of legislative competition. This could be seen in Figure 5.8 as the local first
dimension was highly correlated to the global second dimension but not highly correlated
to the global first dimension in these periods, meaning that the main competition of this
period took place on the intra-party axis rather than on the inter-party axis. Finally, in the
2003-2013 periods the UNACE party seems to increase the extent to which the local first
dimensions are related to the global second dimension without undermining their relationship
to the global first dimension. To an extent, UNACE’s role can be interpreted as eliminating
intra-party divisions or as being the result of extensive intra-party divisions, as the party
itself splintered out of the Colorado party and its members returned to the Colorado party
after the death of their leader, Lino Oviedo in 2013. In any case, its relevance in contributing
to the global second dimension seems to have fluctuated from year to year, implying behavior
change among legislators.

5.10 Comparing the Yearly, Local Second Dimensions to the Global
First and Second Dimensions

Up to this point I have been comparing local first dimensions to the global first and second
dimensions, but as I have shown in the previous chapter, the second dimension of legislative
behavior was quite relevant in the 1998-2003, 2008-2013 periods and possibly relevant in the
2013-2018 legislative periods as well. Therefore, in this section I take every locally estimated
W-NOMINATE second dimension and I compare those estimates to the globally estimated
W-NOMINATE first and second dimensions. The results of these comparisons are presented in Figure 5.9.

Figure 5.9: Yearly Correspondence of Second Dimension to Global First and Second Dimensions

What is interesting to see in this figure is how dimensions rise and fall from relevance. In the 1998-1999 time period we can see that the local second dimension is highly correlated to the global first dimension. This happens exactly at the same time when the local first dimension was more highly correlated to the global first dimension as shown in Figure 5.8. What both these findings show is that as intra-party divisions became more relevant in this period, inter-party divisions were not completely eliminated but rather relegated to the local second dimensions. Further, as the intra-party divisions were reduced in the 2001-2003 period—as shown in Figure 5.8 when the local first dimension returns to having high correlations to the global first dimension—Figure 5.9 shows that the intra-party divisions are
not completely eliminated. Rather, they are also relegated to the local second dimension.

The second interesting finding is related to the 2013-2018 legislative period. In the previous section we had seen that there is a downward spike in the correlation between the local first dimension to the global first dimension at the same time as there is an upward spike in the local first dimension to the global second dimension. This showed that at this period in time, intra-party divisions rose in relevance as inter-party divisions receded to an extent. What Figure 5.9 shows is that in this case intra-party divisions actually grew gradually into being of central importance. This can be seen because the local second dimension in 2016-2017 was highly correlated to the global second dimension, indicating that intra-party divisions began to be relevant. Subsequently, in 2017-2018 the local second dimension was more highly correlated to the global first dimension, indicating that inter party divisions moved to the background for intra-party divisions to take the center stage in that year—as also indicated by Figure 5.8.

In short, the comparison of local second dimensions to global first and second dimensions mostly tell the same story we have seen in the previous section. The 1998-2000 period and the 2017-2018 period showed a strong relevance of intra-party divisions in the two dominant political parties. What this section adds is how those divisions preceded or remained after taking the central stage for a couple of years. In the 1998-2003 period intra-party divisions remained in the local second dimensions after having receded from the local first dimensions. In the 2013-2018 legislative period intra-party divisions were first captured by the local second dimension in 2016-2017 before taking the central stage in 2018-2018.

5.11 Inspecting Temporal Salience of Each Dimension Using Cut-line Angles

So far, my approach has been to estimate ideal points at both the global level and at the yearly level, and then to correlate the results of these estimation procedures to search for indications of change. This has been the approach used by previous researchers (Poole, 2007).
However, I have also argued that modifications in behavior may be related to dimensionality. That is, if legislative preferences change through legislators modifying their behavior, then that behavior could be estimated as a second dimension by models that pool all legislative behavior together.

A way to explore whether this is the case is by analyzing bill-level parameters rather than looking at legislator estimates to get a more fine-grained picture of whether and how legislative preferences change across time. A way to do this is using the cutlines of the global W-NOMINATE ideal point estimates. As mentioned before, the global W-NOMINATE assumes that legislative preferences are completely static across time, and if legislative preferences change this may not be an adequate way to model legislative preferences. However, I have argued that changes in legislative preferences may also be related to dimensionality. That is, if legislators change their behavior, then that may lead their behavior before the change to load on one dimension and their behavior after the change to load on the second dimension. If this is the case, we can observe the angles of bill-level cutlines to see if they are mostly vertical or horizontal (Armstrong et al., 2014). If most behavior is unidimensional, that means most cutlines will be vertical, or have an angle of 90 degrees relative to the x axis. The more the average cutline deviates from 90 the more that would indicate that a second dimension is also relevant.

In Figure 5.10, I ordered each roll-call chronologically and then I took the rolling average of cutline angles to see how the relevance of each dimension varied across time. These rolling averages were created by taking the first 5% of votes after ordering them all chronologically, taking the average of this group, and then sequentially removing the oldest vote and adding the next newest vote chronologically from this 5% group, then taking another average, and repeating this process until I reach the most chronologically recent vote available. This procedure gives us a sense of how the average cutline of votes changed across time. Cutlines were calculated in a way that 90 degrees indicates complete unidimensionality—all lines are completely perpendicular to the x axis—and 0 indicates complete second-dimensionality—all
As we can see the rolling averages of cutline angles mostly follow the same trends we have seen in the previous sections. Angles show a strong increase of the second dimension in the 1998-2000 periods and in the 2016-2018 periods. These rolling averages of cutline angles are also a bit more clear about change in the 2003-2008 and 2008-2013 legislative periods. It seems like the 2003-2008 legislative periods did not experience any changes in preferences among legislators as the rolling average of cutline angles does not vary much across time. However, the 2008-2013 legislative period does seem to have a bit of variance. The interesting thing about the variance in the 2008-2013 period is that the lowermost point of this period takes place in the 2009-2010 period, which is also where Figure 5.6 and Figure 5.7 showed low correlations to the global first dimension, and a radical UNACE party, respectively. This
adds support to the idea that changes in UNACE’s behavior led to these discrepancies from the global first-dimension and these lower estimates of cutline angle rolling means.

In any case, all measures up to this point have seemed to suggest that the 1998-2003 and the 2013-2018 legislative periods have been periods of substantial change, and that the 2003-2008 legislative period has been one of substantial stability and unidimensionality. In the 2008-2013, changes in the preferences of UNACE politicians seem to have reshuffled politics. In short, except for the 2003-2008 period, which was also the most unidimensional legislative period according to the findings of the previous chapter, changing expressed preferences seem to have been the norm in the Paraguayan Chamber of Deputies.


The empirics of most of this chapter have revealed that the 1998-2003 period and the 2013-2018 legislative period showed a high level of change among the preferences of legislators within periods. In this section I will be qualitatively explaining the events that took place in the 2013-2018 legislative period, and how the intra-party factionalism of this period led to dynamic legislative behavior. The 2013-2018 period is one of the only periods where I was able to get the intra-party CLPR lists that both Colorado and Liberal party pre-candidates competed under. Thanks to these data, I can label roll-call vote ideal points of legislators with their electorally-induced general election party labels and their primary election, intra-party movement labels. With these labels it is possible to explore whether preferences were in fact caused by the electoral incentives of intra-party factions or not.

The 2013-2018 period began with a strongly unified Colorado party majority. This high level of unity was a response to the 2008-2013 executive period, where a non-Colorado president (Fernando Lugo) occupied the executive office—The Palace of López—for the first time since 1948. Despite this initial unity, as the legislative period came to an end, the Colorado party became divided over President Cartes’ push to modify the constitution to
allow for his reelection. This reelectoral push led to an intra-party division, where the movement that was competing against Cartes within the party—the Añetete movement—worked with large portions of the opposition to block Cartes’ intra-party movement—the Honor Colorado or HC movement\(^3\)—from modifying the constitution.

In Figure 5.11 we can see yearly DW-NOMINATE ideal points for the last four years of the Cartes presidency. In the top row, ideal points are labeled by party (C for Colorado and L for Liberal). What we can see from these yearly DW-NOMINATE scores is that the Colorado party begins being quite unified, as most Cs cluster around a single space. However, as time passes, we can see that divisions among the Colorados becomes larger and larger. With the first row, then, we can see that the Colorado party division was the largest change in this time period, and this intra-party division is probably what accounts for the 2017-2018 changes in preference that most of the previous empirics of this chapter identified.

Figure 5.11 : Preference Change by Intra-Party Faction

However, this by itself does not show that these intra-party divisions were electorally-

\(^3\)Notice that the initials of this movement match the initials of Horacio Cartes.
induced. In order to explore this further we can see the second row of Figure 5.11. Here, we see only the ideal points of the Colorado party, but these Colorado ideal points are now labeled by intra-party movements with A representing the Añetete movement and H representing the Honor Colorado movement. We can see that as time passed the main split in the Colorado party conformed to the split between intra-party movements competing electorally among each other.

The electoral competition between Añetete and Honor Colorado took place on several fronts. First, Añetete’s leader—who was elected as president in 2018—Mario Abdo Benítez competed for the presidency of the Colorado Party against Honor Colorado’s Pedro Alliana in 2015. In this instance, Alliana and the HC movement won the presidency of the Colorado party. Then, in 2017, Mario Abdo Benítez led the opposition within the Colorado party against Cartes’ reelectoral push. Finally, once Cartes was barred from running for president, Honor Colorado nominated Cartes’ Finance Minister, Santiago Peña, to run in his stead for the party nomination. Santiago Peña ran and lost against Mario Abdo Benítez in the party primary of 2017, and Mario Abdo went on to win the general elections in 2018. In short, beginning in 2015, the competition between Añetete and Honor Colorado continued to intensify throughout the legislative period—and at the moment of writing tensions between these two movements continue in the Colorado party.

In this section I briefly went over a single example that shows how intra-party competition leads to behavior change in order to justify the assertions I made at the beginning of this chapter. However, Chapter 7 will review Paraguayan history more thoroughly in order to show that intra-party divisions, in both the Colorado and Liberal parties, have been the norm throughout Paraguayan history. Chapter 7 will also argue that it is likely that these pre-existing factional dynamics had a strong effect on the electoral system that Paraguay chose to adopt during democratization.
5.13 Conclusions

The main conclusion of this chapter is that legislative politics in Paraguay is very dynamic. Changing preferences seem to drastically modify the conditions under which legislators have to carry out their daily tasks. Furthermore, some of the most radical changes seem to take place within the bounds of five-year legislative periods rather than between them. The 1998-2003 shifts from being strongly two-dimensional to moderately unidimensional in the span of a single year. The 2003-2008 period is the only period that shows a full period of legislative stability and overall unidimensionality. The 2008-2013 period shows a high level of two-dimensional behavior, which gradually rises to become more unidimensional—even in the face of the impeachment and removal of the president in 2012. Finally, the 2013-2018 period begins near the highest level of unidimensionality in democratic history, only to fall precipitously into two-dimensionality in the last two years of the legislative period.

This diversity of situations is mostly not available in other countries. Furthermore, the combinations of situations that the Paraguayan legislature provides for analysis are extremely convenient. We can observe periods of stability (2003-2008), periods where stability is slowly constructed despite no party holding a majority (2008-2013), we can observe a period of the dissolution of stability despite single-party majority in the chamber (2013-2018), and we can observe complete chaos (1998-2003).

Less fortunately perhaps, the extent to which legislators are willing to change their behavior also implies that legislators do not have strong, ideological preferences. Ideological preferences are often believed to be static, since they are built on principle (Converse, 1964). In contrast, particularism is more prone to changing, multidimensional preferences, as legislators are likely change their voting behavior from issue to issue in order to maximize their particularistic benefits. Both Chapters 4 and this chapter, then, seem to imply that Paraguayan legislators are not highly ideological. This lack of ideology percludes the possibility that legislative stability, when it exists, is due to preference-induced equilibriums.
Chapter 6

Structure-Induced Equilibriums: Do Institutions Concentrate Powers in Legislative Leaders?

6.1 Introduction

In Chapters 4 and 5 we have seen that the preferences of legislators in Paraguay do not seem to conform to what would be necessary for a preference-induced equilibrium to exist. The former showed that true ideological preferences, captured by surveys, were always multidimensional and expressed preferences, captured by roll-call voting, were mostly multidimensional with a few exceptions. The latter chapter showed that the preferences of Paraguayan legislators were not static, and it showed that the reason legislative preferences seem to change is because intra-party closed-list proportional representation electoral incentives lead to the creation of intra-party factions that compete in party primaries. Multidimensional, dynamic preferences of legislators are not compatible with the PIE explanation for legislative stability, and therefore we must look elsewhere.

In this chapter I will be analyzing whether legislative stability in Paraguay, if it exists, is caused by a structure-induced equilibrium (SIE). As a reminder to the reader, in Chapter 2 we discussed that the SIE explanation for legislative stability argues that legislators have multidimensional preferences, which would not lead to equilibrium on their own, but that legislative institutions concentrate agenda-setting powers in certain actors of the legislature—chamber leadership, committees, etc.—and that it is this concentration of powers which leads to legislative stability. Agenda-setting powers are a limitation to Arrow’s assumption of Universal Domain because if chamber or party leaders have the ability to prevent the floor from voting on certain issues, then it is limiting the domain of policies from which the floor
can choose its policies from. This limitation of Universal Domain can, at least theoretically, produce legislative stability (Shepsle and Weingast, 1981). That being said, it is unclear why legislators would tolerate these institutions. Legislators who experience policy losses from the existence of these institutions may very well choose to change these institutions. If institutions are constantly changed by simple majorities, then legislators are effectively ridding these institutions of any stabilizing effects (Riker, 1988; Aldrich, 1989).

In this chapter I review constitutional, legislative and partisan institutions in Paraguay to see where we might expect actors to hold high levels of agenda-setting powers. In general, I find that very few agenda-setting powers are available to partisan and legislative leaders, and therefore these leaders have almost no hope of restricting the wishes of floor majorities. Analyzing constitutional institutions I find that the inter-chamber negotiation process is structured in such a way that neither chamber has complete control over its own agenda. Analyzing legislative institutions I find that although some agenda-setting powers to exist—principally held by committees—these agenda-setting powers can easily be undermined through the existence of two motions that can be approved by an absolute majority of either chamber. Finally, by analyzing partisan institutions I find that hierarchy does exist within parties, but I also find that parties use inclusive institutions that make it very difficult to eject intra-party factions from the party. This inability to decide who is and is not a member of the party, and a constitutional disposition that forbids parties from punishing legislators for voting against their parties, means that political parties are well-suited to maintain their coalitions, but they are ill-suited for maintaining discipline among their coalitions.

These weak agenda-setting institutions seem to imply that legislative stability through a SIE is unlikely. In order to explore whether instability is prominent in Paraguay, I end this chapter through an empirical analysis of the legislative institutions of the Chamber of Deputies of Paraguay. Riker (1988) had argued that legislative institutions may be unable to compel legislative stability if these institutions themselves “inherit” majoritarian insta-
bilities. That is, if institutions can be changed by simple majorities, then it is unlikely that those institutions will constrain the preferences of those same majorities. I therefore analyze the ideological composition of leadership positions in the Chamber of Deputies. By showing that the ideological composition of these institutions change substantially from one year to another—even while legislators are not replaced, as legislators are elected for five-year terms—I show that it is unlikely that legislative institutions are creating SIEs in Paraguay’s Chamber of Deputies.

The implication of this chapter is that, because agenda-setting institutions are so weak, it is also unlikely that SIEs will exist in the Paraguayan legislature. This is because some restriction to the assumption of Universal Domain is necessary in order for legislative cycling to be eliminated (Aldrich, 1989). Legislative outcomes in Paraguay must therefore be understood in disequilibrium. As I will show in Part II of this book, disequilibrium legislative politics continues to allow for the concentration of power of political parties—thus making parties beneficial to legislators—but it does come at the price of more erratic and unpredictable policymaking.

6.2 Weak Agenda-Setting Powers in Paraguay

Previous literature has argued that many legislative institutions may be useful for creating structure-induced equilibriums (SIEs). Shepsle and Weingast (1981) have argued that committees can create equilibrium if they are able to have agenda control over their issues of expertise, and if proposed policies are considered through “closed rules” that prohibit the proposal of amendments. Aldrich (1989) argued that a SIE could be created by a simple agenda-setting rule that only allows bills that are supported by a majority of the majority party to reach the floor. Similarly, Cox and McCubbins (2005); Cox (1997) argued that legislators may have incentives to delegate legislative power to party leaders—although they did not directly address the issue of legislative stability. What all these explanations have in common, however, is that they argue that for legislative stability to be created, someone
must be able to limit Universal Domain through agenda-setting powers. Agenda-setting powers can be centralized—such as in the chamber leadership—or decentralized—such as across committees—but agenda-setting powers must be somewhat non-majoritarian because otherwise the agenda-setting powers will not provide any additional stability over simple majoritarianism.

Paraguayan institutions do not provide strong—centralized or decentralized—agenda-setting powers to legislative actors. The main limitations to agenda-setting powers are codified in the Constitution of Paraguay and in the internal rules of the Senate and the Chamber of Deputies. In what follows I will discuss both the constitutional and intra-chamber limits to agenda-setting powers.

6.2.1 Constitutional Limitations to Agenda-Setting Powers

In terms of the Constitution, the main limitation to agenda-setting powers comes from Article 211. As mentioned when discussing presidential vetoes, when bills are proposed in Paraguay, these bills must “originate” in one of the two chambers of the legislature. In order for a bill to become law, after the “chamber of origin” approves the bill, it must be considered by the “chamber of revision,” and if it is approved by the chamber of revision, then the bill is sent to the executive for approval or veto, and if it is not vetoed the bill becomes a law. The reason why Article 211 of the constitution limits agenda-setting powers for both chambers is that if the chamber of origin passes a bill—providing a “half sanction” for the bill—then the chamber of revision must vote on the bill before 3 months pass or else the bill is given an “automatic sanction” by the revision chamber, and then is directly sent to the executive for approval or veto. Essentially, then, the revision chamber is not able to completely control its agenda because anything passed by the chamber of origin must be considered by the revision chamber lest the bill be approved automatically. Both chambers of the legislature are therefore likely to be as stable as the least stable of both chambers, because if one chamber consistently passes a large amount of bills, that will completely
undermine any agenda-setting efforts of the revision chamber, as they will not be able to avoid voting on issues they would rather not vote on.

Interestingly, the Paraguayan legislative process also generally seems to create a situation where legislative “gridlock” is unlikely. Take for example rejections. According to Article 206 of the Constitution, if the chamber of origin passes a bill and then the revision chamber “rejects” that bill with an absolute majority, the chamber of origin can “ratify” its original decision with an absolute majority. If the revision chamber fails to reject this ratified proposal with a two-thirds majority, then the bill can pass despite the objection from the chamber of revision—essentially allowing a single chamber to pass a bill. In contrast, Article 207 of the Constitution which allows for inter-chamber “modifications” of bills seems to give the upper hand to the chamber of revision. In this case, if a bill passed by the chamber of origin is modified by the revision chamber then the chamber of origin can accept or reject the modifications. If the chamber of origin rejects the modifications—with an absolute majority—then the revision chamber must either ratify its decision to modify the bill, or it must accept the original bill. If the revision chamber ratifies its modifications—with an absolute majority—the bill is sanctioned and sent to the executive despite the objections of the chamber of origin. Therefore, if a revision chamber desires to kill a bill that was approved by the chamber of origin, it might be more likely to modify a bill in a way that is completely unacceptable to the chamber of origin and to the executive in order to kill the bill with a veto. Revision chambers might be less likely to reject the bill because a rejection gives the upper hand to the chamber of origin, whereas modifications give the upper hand to the chamber of revision.

In sum, by reviewing these articles of the Constitution, it is easy to see why agenda-setting may be difficult in terms of inter-chamber conflict. In Paraguay, one chamber of the legislature can force the consideration of an issue by another chamber of the legislature. Furthermore, through modifications, one chamber can re-frame an issue in a way that the chamber of origin did not anticipate, perhaps leading to a majority different from the ma-
jority that originally passed the bill to accept the modifications. Perhaps because of this the term “gridlock” is not often heard about Paraguayan legislative politics. It is much more often the case that bills are modified and passed in a new form that had nothing to do with the original proposal. Furthermore, sometimes bills pass by accident because of the failure of a chamber to consider a half-sanctioned bill in time. The constitutional provisions discussed in this section to an extent promote these kind of accidental, cyclical, and non-equilibrium legislative outcomes.

6.2.2 Chamber Rules: Limits of Agenda-Setting in both Chambers

The weakness of the agenda-setting powers of legislators is also reflected in the rules of each of the two chambers of the legislature. Although each chamber has its own rules and senators or deputies can modify their rules however they wish, both chambers have generally created rules that are very similar. In order to discuss all the chamber rules in a somewhat organized fashion, I will first discuss institutions that define the different actors of the legislature, then I will discuss institutions that regulate voting to pass a bill, and then I will discuss motions. As we will see, despite the agenda-setting potential of some of the existing legislative institutions, there are two motions that mostly undermine their effects: motions of preference and motions of order.

Legislative Actors

Legislative institutions in both the Chamber of Deputies and the Senate from three broad actors that influence the lawmaking process. These three actors are the “directive table” (mesa directiva), legislative “benches” (bancadas), and committees (comisiones). On paper, these different actors do seem to hold some agenda-setting powers, but as we will see these powers are undermined by certain motions available to members of the floor.

The first of these institutional actors, the Directive Table is made up of a President, two Vice- Presidents, and three Secretaries. The President leads the ordinary and extraordinary
sessions of the chamber and can call extraordinary sessions on his or her own. The chamber President also decides which committees each bill will be derived to for study. The Directive Table as a whole sets the “order of the day” (*Orden del Día*), which is the daily legislative agenda, but it does so in consultation with the president of each legislative bench. Therefore, at first sight it might seem like the Directive Table might have some agenda-setting powers because of its control over the order of the day and because they decide which committees they send bills to—opening the possibility for them to send a bill to a committee from which the bill never exits.

The Directive Table often functions in close coordination to the leaders of the legislative benches. The formation of benches is regulated in the rules of the Chamber of Deputies but they exist as well in the Senate even though they are not structured as strictly in the Senate rules. In the Chamber of Deputies each party that is represented in the legislature can have its own legislative bench. That being said, small parties can unite to become a single legislative bench if they so desire if six legislators choose to form a multiparty bench. If a small party does not reach six legislators, it can form a bench on its own. Large parties can also split into multiple benches if at least six legislators choose to do so. Each legislator can only be a member of a single legislative bench at a time, but they can switch from one bench to another with relative ease. Legislative benches, then, consult closely with the Directive Table in creating the order of the day. While they hold no formal powers over the order of the day, their input is often taken seriously by the Directive Table. Finally, while benches do not have any further former powers in terms of the legislative process, all benches are given additional resources by the chambers—such as bench offices, bench secretaries, bench conference rooms, etc.—which can serve as resources for legislators. While outside of the scope of my current analysis, future research should explore how these additional resources incentivize the formation or dissolution of legislative benches, and what benefits benches provide for legislators.

The last legislative institution/actor formed by the rules of the Senate and Chamber of
Deputies that may be relevant to agenda-setting are committees. Committees do seem to have some effects in stalling and removing bills from the agenda. In order for a bill to be able to be voted on by the floor the bill first needs an “opinion” (dictamen) from at least one committee. This opinion can be a favorable opinion, or an unfavorable opinion, and because committee minorities can also issue minority opinions, opinions may be both. Bills cannot be voted by the floor until they receive opinions from a committee—whether favorable or unfavorable. In the Senate special attributes are given to the committee of the treasury (comisión de hacienda), where bills that have not received an opinion from the committee of the treasury cannot be passed through a motion of immediate approval (sobre tablas) and cannot be voted on by the floor. Ostensibly, these seem like strong agenda constraints to the majority of legislators of each chamber, but as we will see when we discuss motions, there are ways to override the requirement of an opinion from a committee before the passage of a bill.

Voting Procedures and Amendments

Even if the Directive Table and committees were able to exert some control over the agenda, the voting rules that each chamber of the Paraguayan legislature use are likely to create unstable outcomes. Previous literature on legislative behavior have distinguished between two forms of voting in legislatures: forward-moving agendas and backwards-moving agendas. Forward-moving agendas are likely to create more instability in legislative outcomes and backwards-moving agendas are likely to create less instability (Wilson, 1986). Paraguay uses a forward-moving agenda voting process.

In forward-moving agendas every time a bill is amended, that new amended bill becomes the status quo. Any further amendments provided to a bill are compared, not to the original status quo, but to the last amended form of the bill that was approved in a previous round. This procedure continues until all amendments halt, and the last amended bill that was approved becomes the new status quo and the collective choice of the chamber. In contrast,
backwards moving agendas create one alternative to the status quo. All amendments to this alternative proposal are voted on until amendments cease. After all amendments cease, this finally amended version of the alternative proposal is paired up with the original status quo, and voted on. Only after the final version of the alternative beats the original status quo then the alternative version of a bill becomes the new status quo. Backwards-moving agendas create more stability because “In contrast to a forward voting procedure where an outcome can end up anywhere in the alternative space, outcomes under a backward voting procedure are constrained by the status quo or by intersecting win sets of the status quo” (Wilson, 1986).

In both chambers of the legislature in Paraguay, legislators use a forward-moving voting process where they first approve a bill “in general” and then they go through each article of the bill and approve each article separately through approvals “in particular.” When voting in particular any amendment can be proposed to any of the articles of the bill, and these are voted up or down relative to the original text of the article. Furthermore, while the author of the bill is always given a chance to defend the original language of the article first before others propose and defend modifications, there is not really any limitation to the amendments other legislators can propose in either chamber. Furthermore, committees cannot prohibit amendments on bills either.

In short, voting procedures in both chambers are likely to produce unstable legislative outcomes. This is mainly because all bills that are considered by the floor are effectively considered through open rules on amendments. Furthermore, this open rule is paired with a forward-moving voting procedure where bills are first voted on in general and then each article is voted on in particular without a final pairing between the—possibly amended—adopted bill and the original status quo. These institutions are likely to produce cycles in voting (Shepsle and Weingast, 1981; Wilson, 1986).
Motions

There are four kinds of motions available to legislators of both chambers: motions of immediate approval (moción sobre tablas), motion of reconsideration (moción de reconsideración), motion of order (moción de orden) and motions of preference (moción de preferencia). As we will see in this portion of the chapter, motions of order and motions of preference are especially important because strategic legislators can use these motions in order to undermine the (already weak) agenda-setting powers of chamber leaders. However, I will discuss all four motions for completeness.

The motion of immediate approval is a motion for a bill to be passed immediately without having to receive an opinion from a committee, and it requires a 2/3 vote of the chamber in order to pass. The motion of reconsideration is a motion to remove the approval of a bill or motion that was approved in a given legislative day—in order to correct an error. The motion of reconsideration can only be carried out on a bill that was approved in a given legislative day, where before the day ended legislators decided to withdraw their approval. This motion also has to be passed with a 2/3 majority. These two motions are less relevant than the motion of order and of preference because although the motion of immediate approval can override agenda-setting restrictions, both these motions are non-majoritarian because they require supermajorities, and therefore they are unlikely to contribute to majority-cycles and instability.

The motion of preference is important because it is essentially a motion to put a bill on the legislative agenda. The motion of preference is perhaps the motion that mostly goes against any other agenda-setting institution in either chamber. That being said, requirements for the motion of preference change from chamber to chamber. In the Senate, a motion of preference can be passed by an absolute majority for bills that have not been considered by committees yet—essentially forcing them to expedite their opinions—and they require a 2/3 vote for bills that have already been considered by committees. These latter motions of preference do not serve to put bills on the agenda, since with committee opinions they will already
reach the floor, but they serve to move the consideration of a bill upward in the agenda, and hence the higher threshold. In contrast, in the Chamber of Deputies the motion of preference always requires a 2/3 majority in order to pass, and bills that have not received an opinion from committees cannot be subject to a motion of preference.\footnote{Historically, the motion of preference in the Chamber of Deputies used the same, absolute majority, threshold as the Senate until 2011 when this rule was changed and a higher threshold was put in place. I do not know the circumstances under which this change was made, but understanding this rule change is definitely something that should be analyzed in future studies.} Therefore, in the Senate the motion of preference is able to override agenda-setting institutions—through hastening committees to provide opinions—but in the Chamber of Deputies the motion of preference cannot override the need for a committee opinion and therefore it cannot override all agenda-setting institutions.

The final motions to consider are the motions of order. In both chambers motions of order can be passed by an absolute majority. Motions of order can be used for a series of topics like ending the legislative day, declaring free debate, ending debates, taking a recess, holding the consideration of an issue for a later date, and returning a bill to the committee. The main motion of order that is relevant to overriding agenda-setting institutions, however, is the motion of order that creates a committee of the whole. As we have seen in both chambers, one possible agenda-setting institution that limits the majority from considering a bill is that bills cannot be considered until they have received an opinion from the committees they have been derived to, and special requirements for opinions from the treasury committee exist in the Senate. That being said, if either chamber ever wanted to override this requirement, any legislator could simply make a motion to constitute the chamber into a committee of the whole, the committee of the whole could then give a committee opinion and end debate. Then after ending the debate the committee of the whole could be concluded in favor of the regular session, and in the regular session the bill could be approved. That is, even while some agenda-setting institutions exist on paper, the formal rules of both chambers provide mechanisms to override the agenda-setting powers provided to committees.
6.2.3 Conclusions about Agenda-Setting Powers in Paraguay

In sum, legislative institutions in both the Senate and the Chamber of Deputies seem a bit contradictory in their intentions. On the one hand, special legislative actors are constituted through institutions and some semblance of power imbalances are created among them. The Directive Table creates the order of the day, different benches receive unequal resources, leaders of the benches have closer contact with the Directive Table than non-leaders and therefore they have more sway over the agenda, and committees of policy experts must provide opinions before bills can be approved by the floor of the whole. This broad structure is shared by both chambers. However, two simple motions in the Senate and one in the Chamber of Deputies, which can be proposed by any legislator and approved by an absolute majority, undermine this entire framework of agenda control. In the Senate motions of preference can force issues onto the legislative agenda. In the Senate and the Chamber of Deputies any bill being held up by a committee can be brought to the floor through a motion to constitute the chamber into a committee of a whole. Furthermore, both chambers adopt open rules for amendments and both chambers implement a forward-moving voting process for approving bills. In combination, these institutions provide very little agenda control for the chamber leadership, and they give almost all of the legislative power to floor absolute majorities. Given this institutional set-up, we would not expect legislative institutions to be able to reign in cycling majorities in either chamber of the legislature. Furthermore this cycling would be exacerbated by the inter-branch, constitutional automatic sanctions of bills if the revision chamber does not vote on a bill before 3 months.

6.3 External Structures: Can Parties Induce Equilibriums?

As we have seen in the previous section, it seems like both the Paraguayan Constitution and the rules of each chamber create conditions that are likely to produce legislative cycles and instability. In this section I will explore whether institutions that are external to the legislature, namely parties as organizations, can produce legislative stability from outside the
legislature. There have been arguments and theoretical models that have proposed that if parties can enforce a simple rule—no bill that is not supported by the majority of the majority party reaches the floor for a vote—then that simple rule in itself could provide a structure-induced equilibrium (Aldrich, 1989). Perhaps despite the weak agenda-setting powers of legislators, the hierarchy of legislators can be maintained through partisan institutions, which create an agenda-setting situation in the legislature through institutions that are external to the legislature. In order for this to work there would need to be hierarchy within political parties and political parties would need to be able to exert discipline on legislators.

In this section I will show that intra-party institutions and electoral institutions of Paraguay make it very difficult to exclude factions that have held power in the past from attaining (at least some) power in the future. This inability to exclude factions is mainly achieved through the extensive use of proportional representation (PR) to elect every corporate body in the country—whether state or partisan, or national, regional or local. These PR rules are paired with very high thresholds for removal of anyone that was elected under PR rules—usually a 2/3 majority of any given collective body is required. I argue that these high thresholds for ejections, which transcend partisan and state institutions, paired with few partisan institutions that can exert power on legislators, lead to parties that are able to exist and maintain themselves effectively, but which cannot fully contain cycling and cannot fully constrain the contradictions of their intra-party functioning. Perhaps having parties is still an improvement in terms of stability relative to not having parties, but as we will see in this section parties that exist in Paraguay are definitely unable to completely constrain or eliminate their intra-party factions.

6.3.1 The Fusion of Factions I: Party Institutions

In broad strokes, both of the largest political parties in Paraguay, the Colorado and Liberal parties, have a somewhat similar structure. In both of these political parties the maximum organ is the convention. The convention of each political party chooses a partisan legislative
body, which is called the “junta of government” (junta de gobierno) in the Colorado party and the “directory” (directorio) in the Liberal party. Finally, within these legislative bodies both of these political parties have an executive and cabinet that is somewhat fused with the legislature in a quasi-parliamentary manner, and this executive is called the “Directive Table” (mesa directiva) in the Colorado party, and the “political committee” (comité político) in the Liberal party. Finally, very important structures to both of these parties are also the local offices of political parties called “sectional commissions” (comisiones seccionales) in the Colorado party, and “local committees” (comités locales) in the Liberal party. It is from the districts of these local committees that the delegates that conform the national party convention are chosen. At the moment of writing all PR elections for both parties are carried out through closed-list elections, meaning intra-party factions must compete as lists, but this is due to change starting in the municipal elections of 2021 where primaries and general elections will be carried out through open-list elections.

To show that all factions end up being fused in the main legislative body of each party it is interesting to go over the election process for each. The main legislative body of the Colorado party, the junta of government, is chosen through a tiered electoral system. 52 seats of the junta of government are chosen through 19 electoral districts (17 departments, Asunción and Colorados in Argentina), which have a district magnitude proportional to an average between 1) the total number of affiliated members of each district and 2) the total number of votes emitted by Colorados in the last election of each electoral district. The remaining 38 members—which includes the president—are chosen through a national PR district. Interestingly, although the President of the Directive Table is chosen on a ticket that is separate from the junta of government of the Colorado party, party presidential candidates can simultaneously be listed in the election of the junta of government as well. Therefore presidential candidates that lose the election can continue to be a part of the party legislative body. The rest of the Directive Table—the fused executive-legislative body of the junta of government—is chosen by simple majority from the junta of government from
among its members, and any member of the Directive Table can be removed by a 2/3 vote of the junta of government. According to the party rules it seems like the President holds a lot of power in the Colorado party because Presidents are tasked with preparing the order of the day (the agenda) for the junta of government.

Similarly, the main legislative body of the Liberal party, the directory, is also chosen in a tiered system through closed-list PR. The Liberal directory has 30 seats chosen from a national district and 25 seats chosen from each of the departments. In contrast to the Colorado party, these 25 seats are chosen by one for each department and Asunción (17 departments and Asunción), and then the six largest departments get a second seat, and then foreign Liberal affiliates get one seat as well. Presidents of the party are not chosen from a separate list from the legislative seats, and the president and the first vice president candidates are simply the first two members of each list, and when computing the results the d’Hondt system is used from the third person on the list forward for the winning list. This implies that the presidential candidates of lists that lost the election will probably continue to receive representation in the directory as well as they will be on the top of their respective lists for the d’Hondt computations of the legislature. The rest of the members of the fused executive— the “political committee”—are chosen through majority rule from the directorate. The president of the political committee seems to have less power over the directory than the president of the Colorado party has over the junta of government, because the PLRA statutes detail that the directorate will be governed, where relevant, using the same rules of the Paraguayan Chamber of Deputies. As I had discussed, these rules do not concentrate much agenda-setting powers in the chamber president, so we might expect the president of the PLRA to have less control over the agenda of the directory as well.

These institutions that are inclusive towards the leaders of factions that lost elections are mirrored in the lower echelons of each of the two political parties—all the way down to the Colorado sectional commissions and the Liberal local committees. Furthermore, the use of closed-list PR is also mirrored in all collective, party institutions. The use of these
inclusive closed-list PR formulas paired with the fusion of executive and legislative bodies is very interesting because it shows that even when factions lose elections, they are able to maintain political power in both of the main parties of Paraguay. Clearly, their political power within parties will vary relative to the level of support that they are able to garner, but regardless of the positions they take, whether within or outside of the party, it seems like it is difficult to exclude factions that can garner a certain level of support from receiving representation in the two largest political parties of Paraguay—even if these factions do not garner the support necessary to gain a majority of the party.

6.3.2 The Fusion of Factions II: Primary, Municipal and General Election Rules

In the previous section I showed how the institutions that elect partisan leadership positions in the Colorado and Liberal parties have the effect of being inclusive to factions that can garner a certain level of support—even if these factions do not reach majorities on their own. A further question we may want to explore is whether partisan candidates to electoral positions are similarly fused as leadership positions within the party are. If so, then factions would not only be fused in holding partisan positions, but they would also be fused into positions of power in the government.

There are two rules in the electoral code that are especially relevant to fusing factions into political parties. The first is the rule that states that intra-party primaries are mandatory for the selection of party leaders and for the selection of party candidates. The second rule comes from the Constitution, which writes that the election of all collective bodies in Paraguay must be carried out through proportional representation using the d’hondt aggregation formula. Interestingly, these rules apply to both the general elections and intra-party primaries.

The result of these institutions is a situation where essentially it is impossible to exclude intra-party factions that can garner some support within each party from reaching representation at the national level. This is because intra-party factions compete in closed-list proportional representation intra-party primaries in order to receive representation on the
legislative lists of each political party. The most important part of this setup, however, is that the order of party lists are also established by the d'hondt system results of intra-party elections. Because the order of the list is established in this way, that would ensure that leaders of each intra-party faction would receive a high position in the party list when they compete for the general election. Therefore, the dual closed-list proportional representation system for elections ensures that intra-party factions will receive representation in the list of the party as a whole, and if the party is able to gain a relatively good amount of support in the general election—as the Colorado and Liberal parties are often able to do at the general election level—this system ensures that the leaders of intra-party factions will be high enough on the party list so as to receive national representation.

Figure 6.1: Intra-Party Factions Nominated To Senate in 2017

To illustrate this point, I have been able to find the results of the 2017 primary elections for the nomination of senate candidates of both the Liberal and Colorado parties subdivided by the intra-party lists that competed in those primaries to nominate their candidates from the electoral tribunal of each of these two parties in Paraguay—the Independent Electoral Tribunal for the Liberal party and the Partisan Electoral Tribunal for the Colorado party (Carrizosa, 2018). Each of the parties had to nominate 45 senators from among their intra-party factions. Although each party provided a single list to the Senate, in Figure 6.1
we can see that those party lists were actually composed of several intra-party factions. Furthermore, the order of the nominated senators also made it very likely that the leaders of these intra-party factions would receive representation in the senate. The top ten spots of the Colorado senate spots were made up of three different intra-party movements, and the top ten senate spots of the Liberal party were made up of six different intra-party movements. In short, closed-list PR with the order determined by the d’hondt formula makes it very likely that several different intra-party factions will receive representation, and the d’hondt formula actually creates a sort of naturally produced zipper quota that makes it very likely that different factions will be fused into party lists and then into legislative positions.

One interesting aspect that differentiates the Colorado from the Liberal parties is that the Liberal party has more intra-party factions than the Colorado party does. More research is needed to determine the structural and sociological factors that cause these varying levels of factionalism within the two largest parties of the country, and doing a deep dive into those questions is outside of the scope of this book. That being said, perhaps it may have to do with how political parties are organized locally. If we look at the extent to which the largest intra-party faction of each party won representation to the deputy lists across the country in Figure 6.2, we can see that in the Colorado party the Honor Colorado movement seems to be capable of gaining at least some representation in all the departments of the country. In contrast, in the Liberal party the Equipo Joven movement seems to concentrate representation in certain departments, like Misiones for example, while being not competitive in some other departments.

Despite those differences between the Colorado and the Liberal parties, it seems that the national electoral system serves to maintain representation of intra-party factions in government as well as in the leadership of each particular party. The use of proportional representation with the d’hondt formula to assign the order in which legislators are nominated in party lists creates a sort of natural zipper quota for each of the intra-party factions in the party list. This ensures that if the party as a whole is able to gain a decent amount of votes
Figure 6.2: Intra-Party Factions Nominated To Senate in 2017

Representation: Equipo Joven

Representation: Honor Colorado
in the general elections, the first people to enter into legislative offices will be the heads of
the different intra-party factions.

6.3.3 The Fusion of Factions III: A Lack of Imperative Mandates

So far we have seen that both intra-party institutions and the electoral institutions of
Paraguay as a whole seem to fuse intra-party factions into party lists, and then they pro-
vide proportional representation to these party lists—all the while prioritizing the leaders
of each intra-party faction. However, as I have argued, this fusion of intra-party factions
into party lists may be useful for maintaining partisan coalitions, but it should not be useful
for creating legislative stability, because the fusion of factions themselves do not provide the
agenda-setting powers necessary to limit Universal Domain to reduce legislative cycles. Since
we saw that on their own, legislative institutions seem vulnerable to certain rules that give
the preponderance of power to floor majorities over possible chamber leaders, a question we
are left with is whether external, partisan institutions can provide a similar agenda-setting
powers to party leaders that can then act on legislative behavior to produce legislative sta-
bility. To foreshadow, there are some constitutional dispositions that limit the extent to
which political parties can discipline their legislators, making it quite difficult to restrict the
agenda or to direct their legislators to behave in a given way.

When one enters the Senate in Paraguay, one would be greeted with the plaque shown
in Figure 6.3, that sits behind the president of the chamber, and which reads “The Senators
and Deputies will not be subject to imperative mandates.” This phrase, honored with a
plaque in the Senate, is a reference to Article 201 of the constitution, which regulates the
circumstances under which legislators can be impeached and removed from their positions.
Article 201 of the constitution has been interpreted by the judiciary as meaning that political
parties cannot exert influence or punish legislators of their own party for voting against their
political party.

This interpretation of the constitution has been used several times by party members to
escape being sanctioned by their own political party. For example, in 2017 Blas Llano, a member of the Liberal party, decided to support the Colorado president, Horacio Cartes, in his attempt to modify the constitution in order to allow for the reelection of the president. This attempt to modify the constitution was fraught with conflict and it eventually led to a series of protests that led to protesters burning down the building of Congress. That being said, before this conflict played out, the Liberal convention ordered Liberal legislators to reject any legislation attempting to enable the reelection of president Cartes. Despite this mandate from the party convention, Blas Llano and his intra-party faction, the *Equipo Jóven* (Youth Team), supported the attempt to modify the constitution. After the dust settled, the Liberal party president, Efrain Alegre, tried to eject Llano from the party. In response to that, Llano simply sued the party claiming that imperative mandates are unconstitutional, and he was reinstated into the Liberal party by the courts. In the 2019-2020 legislative year, Blas Llano was the president of the Senate, representing the Liberal party, with two Colorado vice-presidents. In short, ejections from the party for not respecting party mandates is not a plausible mechanism for parties to influence their legislators and in this example we can see a situation where this article directly contributed to party indiscipline.
6.3.4 Conclusions about Partisan Institutions

The main purpose of this chapter was to explore whether agenda-setting powers were identifiable in constitutional, legislative and party institutions. Up to this point, I have shown that in Paraguay, legislative institutions and political parties have very few agenda-setting powers, and most of the power is held by the majority of the floor of each chamber. I also explored whether political parties could exert external pressure on legislators so that legislators perhaps behave “as if” party structures controlled the legislative agenda. On all these counts we have seen that agenda-setting powers of legislative and partisan institutions are probably not strong enough to create legislative stability.

I have also explored why, perhaps, political parties continue to exist despite the fact that agenda-setting powers are not substantial. I have argued that this can happen because the electoral institutions used by intra-party organizations and by the government as a whole ensure that intra-party factions will receive partisan representation. Through PR primaries paired with PR general elections, and with the d’hondt determining the order of the partisan lists, electoral institutions maximize the probability that intra-party factions will be represented in the party and in the legislature, and the electoral system creates a natural zipper quota for intra-party factions, which prioritizes the leaders of intra-party factions in party lists. Through this fusion of intra-party factions into partisan and legislative bodies, paired with a constitutional article which makes punishment of maverick legislators impossible, the institutional structure of Paraguayan politics makes it very difficult for parties to eject intra-party factions from their ranks.

6.4 Empirical Analysis of Unstable Legislative Institutions

Up to this point in this chapter we have seen that there are very few agenda-setting powers available to chamber leaders and party leaders. Therefore, we might expect legislative outcomes in Paraguay to be a bit unstable. In this final section of the chapter, I will explore whether this expectation can be justified through empirically observing the functioning of
legislative institutions in Paraguay’s Chamber of Deputies.

Specifically, Riker (1988) argued that legislative institutions may be incapable of creating legislative stability, because often times these institutions themselves can be modified through simple majorities in the chamber. Therefore, institutions that can be changed by simple majorities are likely to “inherit” the instability of the floor as a whole. The question I will be addressing in the remainder of this chapter then is, do legislative institutions inherit the instability of the floor? If the answer to this question is “yes” then that would also support the argument I have been making throughout this chapter that structure-induced equilibriums are unlikely to exist in Paraguay.

Before addressing the question of whether legislative institutions inherit the instability of the floor, however, there is a methodological issue that I must settle. The problem that we are facing at this point is we need a proper way to measure dynamic legislative preferences. Although we are able to rely on roll-call data in order to make preference estimates for legislators, the problem of estimating legislator dynamic ideal points in multidimensional settings is not simple. The main existing method for doing this is DW-NOMINATE, but this method runs into problems when preferences change drastically from one period to another (McCarty, 2016), and as we have seen in Chapter 5 the preferences of Paraguayan legislators do seem to change quite drastically. In order to create dynamic, multidimensional preference estimates for Paraguayan legislators I aim to adapt a model created by Nokken and Poole (2004) into a Bayesian framework. After detailing how this method functions, I will then turn to addressing the issue of whether legislative institutions are stable or unstable.

6.5 Estimating Ideal Points for Dynamic, Multidimensional Preferences

The two most common ways of creating common-space, dynamic estimations of legislator preferences on the basis of roll-call behavior are the DW-NOMINATE procedure (Poole, 2005) and a dynamic Bayesian IRT model developed by Martin and Quinn (2002). Both
of these methods have certain limitations, however, in producing estimates. The limitation of DW-NOMINATE is that although it is capable of incorporating slow-moving changes in preferences, abrupt changes cannot be adequately captured by the model, even when higher order time polynomials are used (McCarty, 2016). This limitation is problematic for understanding the Paraguayan legislature because as we had seen in Chapter 5, legislative preferences do seem to change quite substantially from one legislative year to another.

The limitation of the Bayesian IRT model is, according to McCarty (2016), that the dynamics of ideal points are estimated according to the variance of the random walk of ideal points, $\sigma^2$. If $\sigma^2$ was constant, then ideal points for a particular legislator would be constant across time, and if $\sigma^2$ was large, then ideal points might be so different from one period to another that the estimates would no longer be comparable across time. Despite the importance of having a correct $\sigma^2$, however, this parameter cannot be estimated beforehand, and therefore it is left up to a somewhat arbitrary choice made by the researcher about how much variance from one period to another the researcher is willing to tolerate. Furthermore a final limitation of the Bayesian IRT model is that existing implementations of the model can only calculate dynamic ideal points for a single dimension. Two-dimensional, Bayesian IRT ideal points are currently unavailable (Martin and Quinn, 2002; Imai, Lo and Olmsted, 2016).

A less used approach which is able to address these issues was developed by Nokken and Poole (2004). Nokken and Poole argued that it would be possible to estimate a dynamic form of common-space preferences by using a two-step procedure. In the first step, one estimates a DW-NOMINATE model with a constant time-trend term. This model essentially produces static estimations of preference for each legislator as the constant time-trend does not allow preferences to change. After estimating this static model, Nokken and Poole (2004) suggest taking the bill-level parameters estimated from this static model—such as the cutting lines—and holding these parameters constant in order to re-estimate ideal points for each particular legislative period. By creating ideal points for each period with these common-space cutting
lines held constant in a second round of estimations, it is therefore possible to create common-
space, dynamic ideal points. A key assumption of this model is that preference change among
legislators can be captured by the bill-level parameters of the constant ideal point estimation
model. That way, when ideal points are re-estimated on the basis period-level subsets of
these bill-level parameters, the changes in preferences from one period to another can be
captured through the variation contained in these bill-level parameters.

Fortunately, as we had seen in Chapter 5, in Paraguay the cutting-line angles of a static
estimation procedure do seem to capture changing preferences among Paraguayan legislators.
In Figure 6.4 I reproduce the rolling-averages of a pooled W-NOMINATE estimation in
the left panel that I had shown in Chapter 5, and I show that a similar pattern can be
uncovered about these rolling-averages of cutting-line angles when we run a pooled Bayesian
IRT ideal point estimation procedure in the right hand panel. Both these models assumed
that legislative preferences were completely static, but as we can see the variance in the
angles of cutting lines can capture how behavior changed from period to period, with some
periods being more prominently about first-dimensional competition (when the cutting line
rolling averages are closer to 90) and with other periods being more prominently about
second-dimensional competition (when the cutting line rolling averages are closer to 0).

Figure 6.4 : Rolling Average of Cutline Angles
In the Bayesian version of this model, ideal points in two dimensions are estimated using the following model:

\[ \Phi(\alpha_j - ((x_{1i} \ast \beta_{1j}) + (x_{2i} \ast \beta_{2j}))) \]

Where \( \alpha_j \) is the “difficulty” parameter, which is indexed by bill, \( x_{1i} \) is the first-dimensional coordinate for each legislator’s ideal point, \( x_{2i} \) is the second-dimensional coordinate for each legislator’s ideal point, and \( \beta_{1j} \) and \( \beta_{2j} \) are the bill-level “discrimination” parameters for the first and second dimension. Cutting lines can be extracted from these estimates in the following way. The intercept of each cutting line is given by \( b = -\frac{\alpha_j}{\beta_{2j}} \), and the slope of each cutting line is given by \( m = -\frac{\beta_{1j}}{\beta_{2j}} \). The angle of each cutting line can be extracted by taking the arctangent of the slope of each cutting line and multiplying it by \( 180/\pi \) in the following way: \( \text{angle} = \text{atan}(m) \ast (180/\pi) \) (Armstrong et al., 2014). All these parameters are either indexed by legislator (\( i \)) or by bill (\( j \)).

The model shown above of course only creates a single ideal point per legislator on the two-dimensional coordinates \( x_{1i} \) and \( x_{2i} \). In order to create a dynamic model, what we need is one ideal point on two coordinates for each legislator for every time period (\( t \)). That is, we would want to estimate \( x_{1it} \) and \( x_{2it} \). Doing so is straightforward because in the first round of estimations, where we assumed preferences were stable, we were able to generate all the necessary discrimination and difficulty parameters of the static model. Therefore, the only thing we would have to do to get each period-specific ideal point is hold the discrimination and difficulty parameters constant when estimating each period-level ideal point. Since we already have these estimated parameters from the first-round of estimations, they can be held constant in the second-round of estimations setting their priors as being distributed as: \( \alpha_j \sim \text{dnorm}(\mu = \alpha_j, \tau = 1e12) \), \( \beta_{1j} \sim \text{dnorm}(\mu = \beta_{1j}, \tau = 1e12) \) and \( \beta_{2j} \sim \text{dnorm}(\mu = \beta_{2j}, \tau = 1e12) \). Having a precision parameter that large for each bill-level parameter essentially holds them constant during period-level preferences estimations, and because all these bill-level parameters were jointly estimated, any period-level ideal points
derived from these parameters will be on a common space, and will incorporate the dynamism of legislator preferences (Nokken and Poole, 2004; Jackman, 2001; Clinton, Jackman and Rivers, 2004). This procedure was especially easy to carry out in Paraguay because the small size of the Chamber of Deputies made the estimation of the pooled Bayesian IRT model required for the first step simple computationally.

To illustrate the common-space estimates that are possible from this estimation procedure, Figure 6.5 shows the ideal points that resulted from the procedure detailed in this section for each five-year legislative period considered by this book. It must be noted that in Figure 6.5 I estimated the dynamic common-space Bayesian IRT model considering that each “period” is a five-year legislative period. However, as we will see in the next sections of this chapter, it is also possible to subdivide the dynamic estimates further, creating ideal points—and uncovered sets—for each legislative year within each legislative period instead of assuming that legislator preferences are constant within every five-year legislative period.

6.6 Institutions: Inheriting Instability

Armed with these dynamic estimates we can now address the first question that this chapter is focused on: do legislative institutions inherit the instability of legislator preferences? Given that I have argued that agenda-setting powers are not especially important for understanding legislative behavior in Paraguay, we might expect legislative institutions to show high levels of instability as well as they are likely to “inherit” the instability of majoritarian rule as a whole (Riker, 1988). There are two characteristics about the Paraguayan Chamber of Deputies that greatly facilitate my task to address this question.

The first interesting characteristic of the Chamber of Deputies is that Paraguayan Deputies that hold leadership positions—such as the Chamber Presidency, First and Second Vice-Presidencies and all 3 Secretaries of the Directive Table—continue to vote throughout their tenure. Whereas in other countries, like the United States for example, chamber leaders such as the Speaker of the House do not vote on the floor except in cases of a tie, in Paraguay
the chamber leaders vote as often as regular legislators—allowing us to create preference estimates for them as well.
The second advantage of analyzing the Paraguayan Chamber of Deputies is that the chamber leadership is elected at the beginning of each legislative year—rather than once per five-year legislative period. Therefore, if legislative institutions inherit the instability of the floor as a whole we would expect high levels of change in who holds leadership positions within five-year legislative periods.

There are two forms of change that we may consider when analyzing whether institutions inherit legislative instability. The first form of change can be considered *replacement*, which is essentially when the leadership position is transferred from one actor to another. The second form of change can be considered *preference change*, which is when the leadership position is maintained by a single individual over more than one legislative year, but this single individual behaves in substantially different ways in different legislative years. Both of these alternatives will be discussed in the following sub-sections.

### 6.6.1 Leadership Change Through Replacement

The first way to analyze whether institutions change by inheriting legislative instability is to explore whether leadership positions change through replacement of leaders. As mentioned above, I have information for who made up the Directive Table of the Chamber of Deputies from 2003 to the present. Furthermore, I have the option of creating ideal points that either vary per year or that are allowed to vary from one five-year period to another while remaining constant within each five-year period. In order to analyze whether the preferences of the Directive Table change through the replacement of its members, in this section I will mainly focus on ideal points calculated as being constant within each five-year period while allowing them to change between one five-year period and another. Keeping ideal points constant throughout each five-year period and observing whether the composition of the Directive Table changes from one year to another would allow us to observe whether the Directive Table is subject to *replacement* instabilities that result from legislative majoritarianism.

In Figure 6.6 I show six panels. All panels in this figure show the same ideal points,
estimated over the full five-year legislative period. The first panel in the top-left simply shows the ideal points of legislators pooled at the five-year period level and two uncovered sets—replicated from Figure 6.5. Because the UNACE party splintered off of the Colorado party and rejoined the Colorado party in 2012, I consider both these parties a single legislative coalition.

Figure 6.6 : 2003-2008: Composition Changes in Directive Table

From 2003 to the 2020 the UNACE and Colorado party coalition has held a majority of seats of the Chamber of deputies. In 2003 UNACE had 10 seats and the Colorados had 37; in 2008 UNACE had 15 seats and the Colorados had 30; in 2013 the Colorados had 44 seats and UNACE had 2; and in 2018 the Colorados had 42 seats of the 80-person Chamber of Deputies. Given this state of affairs a less stringent version of Cartel theory formed by Calvo (2012) might expect there to be a “plurality cartel” in those periods where there was no single-party majority, where power is less concentrated because it must be shared among

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2They also held 45 seats out of 80 in 1998. Only in 1993 did they have a minority of the Chamber with 38 Colorado legislators.
the members of the majority coalition rather than held completely by a single party. In any case, both “majority” and “plurality” cartel theories expect that partisan outcomes will be produced through the concentration of partisans in legislative institutions so as to co-opt legislative institutions in benefit of the party or ruling coalition.

 Returning to Figure 6.6, then, in the first panel we can see the ideal points on their own and in the next panels we can see where the president (P), first and second Vice-Presidents (V1 and V2), and the three secretaries (S) of the Directive Table were positioned ideologically in each legislative year of the five-year period. In the figures we show in this section preferences are held constant within each five-year period, so changes are only allowed to happen through replacement and not through behavior change. Finally, cartel theory would expect all leadership positions to be held by those closest to the preferences of the majority coalition—UNACE/Colorado coalition—and it would not expect minority parties to hold any leadership positions.

Figure 6.7: 2008-2013: Composition Changes in Directive Table
Figures 6.6, 6.7, 6.8, and 6.9 do not seem to show an image that corresponds well to Cartel theory. As we can see, leadership positions are not often concentrated in the area that corresponds to the the majority party alone. In fact, power often seems to be distributed among all the different factions of the legislature. The Directive Table as a whole, is not concentrated in a single party in any of the time periods observed.

Figure 6.8: 2013-2018: Composition Changes in Directive Table

Focusing in on the President of the Chamber, which we might consider to be the most powerful and prestigious position, we can see that there is only one period where the President is held by the Colorado party for the entire period. Figure 6.6 shows that the 2003-2008 period was the only one where the Colorado party held the chamber presidency for the entire period. This fact, however, is not enough to fully conform to the Cartel model, however, because the Vice-Presidencies were held by different parties. Often the President of the Chamber delegates powers to the first and second Vice-Presidents in carrying out particular legislative days. It would seem odd that the Vice-Presidents are held by other parties than
the majority party if the cartel model would be functioning in this period, as chamber
Vice-Presidents hold a considerable amount of power as well.

Moreover, in later periods, there seems to be even fewer justifications for the cartel model
in Paraguay. Figure 6.7 shows that in the 2008-2013 period, the Presidency is held by the
liberals in the 2008-2009 and 2009-2010 legislative years, only to be taken by the Colorados
in the last three years of the session. Similarly, Figure 6.8 shows that in the 2013-2018
legislative period the presidency was also held by the liberals in the first year of the period.
Then from 2014 to 2018 the Presidency seemed to be held by the Colorado party, but it is
notable that in the 2017-2018 legislative year the presidency seems to have moved from one
intra-party faction of the Colorado party to another. Finally, Figure 6.9 shows that in the
two legislative years we have for the 2018-2023 legislative period the presidency seems to
have moved from one faction of the Colorado party to another.

In short, it is clear that institutions that are able to change as much as these are unlikely
to produce much legislative stability. While the overall rules of the Chamber of Deputies do
not change often, it is clear that the rules of the Chamber allows for high levels of institutional
flexibility. By allowing leadership positions to change each year rather than every five-year
period, the legislative institutions of the chambers are able to change alongside the changing
preferences and political alliances of legislators. There is perhaps only one exception to this
story of unstable institutions, which we will explore further in the next sub-section.

6.6.2 Change Through Modifying Behavior: The Case of The Cartes Presidency

If we look at the rolling-averages of cutting-line angles for 2014-2016 time period in Figure 6.4, we can see that in this period there is an upward spike in the rolling angles, which indicates that this period was marked by a more unidimensional period of political competition. The attentive reader may have also noticed in Figure 6.8 that the third, fourth and fifth facets of that figure, corresponding to the 2014-2017 legislative years, are identical. I reproduce these three facets below in Figure 6.10, and I include the 2017-2018 legislative year to show how the leadership changed after this period of stability. The preferences of legislators were not allowed to vary, by design, because ideal points were calculated at the five-year-period level and not at the level of the legislative-year, but it is still interesting to see that in these three years legislators were able to not cycle in their preferences over who should be the leaders of the chamber. Might this perhaps be a period in which legislators were able to successfully delegate powers to party leaders?

In fact, there were no elections for the Directive Table between July 1, 2014 and December 31, 2016. Through the Resolution No 794 approved by the Deputies on August 12, 2014, the Chamber essentially changed the terms of their leadership positions to last three years rather than one—after which the rules would revert to their yearly terms. Interestingly, though, even though legislators were able to delegate power in this period, it does not seem that powers were centralized in a single party. The first Vice-Presidency was given to the liberal party throughout these three legislative years, as well as one secretary of the Directive Table. The first Vice-President is especially important because if the President is not present for whatever reason, the first Vice-President may act as President in a given legislative day. These leadership positions, although static in the sense that the leadership was not replaced in these three years, was still a leadership of consensus rather than a cartel of power for the
majority, Colorado, party.

Furthermore, up to this point we have been assuming that preferences are stable within each five-year period in order to focus on leadership change through replacement. However, as the rolling-averages of angles in Figure 6.4 show the dimensionality of conflict can change within each five-year period, leading the preferences of legislators to change through changes in behavior rather than through the replacement of legislators. Similarly, the preferences of the leadership of the chamber may be able to change through those in leadership positions changing their behavior rather than through the replacement of leaders.

Figure 6.11 shows how the preferences of those in leadership positions can change even when those that hold those leadership positions are not replaced. In the last two years of the 2013-2018 period, the battle over whether President Cartes could be reelected or not...
started to rage, and as we had seen in previous chapters of this book, this battle divided the two traditional parties internally. In the Colorado party the Añeteté movement, led by Mario Abdo Benítez, opposed reelection, and the Honor Colorado movement, led by Cartes, supported reelection. In the liberal party the Equipo Jóven faction supported reelection, and a coalition of the remaining factions of the liberal party opposed it. Of the Colorado party ideal points, those that are of the Honor Colorado movements are in the top-right of each panel of Figure 6.11, and the Añeteté is at the bottom-right.

It is interesting, then, to see how in the first three panels how the President of the chamber, who remained unchanged in these three legislative years, moved back and forth between the two intra-party factions. In 2014-2015 the President seemed to be closer to what would later become the Añeteté faction then in 2015-2016 he moved closer to the Honor
Colorado faction, only to return to the Añetete faction in the 2016-2017 period. Finally, in 2017-2018 the President of the chamber was replaced by a coalition of liberals and the Honor Colorado movement, essentially excluding the Añetete faction from holding any legislative leadership positions in that year. In other words, even without the replacement of the President from 2014-2017, the ideological composition of the chamber presidency seemed to have changed as the behavior of the Chamber President fluctuated back and forth between the intra-party factions of the Colorado party. Inherited institutional instability, then, can happen through replacement, but it can also happen through changes in preferences of unchanging office holders.

6.6.3 Conclusions About Institutional Instability

What this section shows is that legislative stability is not likely to be the product of legislative institutions that exert agenda-setting powers in the Chamber of Deputies of Paraguay. This can be shown because legislative institutions themselves were forged in the Chamber of Deputies in order to be able to accommodate legislative instability. Although the terms of legislators last five years, the terms of the leadership positions of both chambers only last a single year, meaning that if a frustrated majority of legislators were unable to do something in one year they can simply change the leadership and get it done in the next. Furthermore, it seems that in anticipation of these weak institutions, political parties and factions tend to share power in leadership positions rather than concentrate power in majority parties. In some cases supermajorities are able to exclude certain minorities from representation in the Directive Table—Patria Querida (Q) was excluded in 2003-2004 and 2005-2007, UNACE (U) was excluded in 2010-2013, and Añetete was excluded in 2017-2018—but power over the Directive Table was never concentrated entirely in a single party for the whole five-year legislative period. Given what we would expect from a legislature that has high levels of instability, the institutions that govern the Chamber of Deputies are clearly as unstable as the policymaking process seems to be as a whole.
6.7 Conclusions

The main argument this chapter has made is that Paraguayan constitutional, legislative and partisan institutions are not strong enough to produce structure-induced equilibriums. The main reason why this seems to be the case is because legislative majorities are not limited in their ability to consider policy issues. Without certain legislative or partisan leaders restricting the agenda, legislative instability is expected as there is no restriction to the assumption of Universal Domain (Arrow, 1951). The weakness of agenda-setting institutions can also be observed by the instability of institutions themselves. As we have seen in this chapter as well, the leadership of the Chamber of Deputies changes often and substantially. This means that if a majority is dissatisfied with how leaders organize the chamber in one year, they can simply change the leadership in the next year. This too limits the ability of institutions to constrict the Universal Domain available to legislators (Riker, 1988).

Because we excluded the possibility that preference-induced equilibriums might cause legislative stability in chapters 4 and 5, it seems that the only expectation we have left is to assume that the legislation process in Paraguay happens under circumstances of disequilibrium. In the following chapters I will begin to analyze what lawmaking under these circumstances entails, and I will also describe how common disequilibrium politics have been throughout Paraguayan history. Another question that remains to answer is whether political parties in Paraguay are able to concentrate powers in themselves, even without the existence of equilibriums.

Part II of this book will focus entirely on the role of political parties in the policymaking process. Chapter 7 will review the historical origin of political parties in Paraguay. Overall, in this chapter I will argue that political parties were developed in order to minimize instability, but they have been unable to do so throughout most of Paraguayan history mainly because of the intra-party factionalism that these parties have had since their inception. This chapter, therefore deals with the “Why Parties?” question I had highlighted in Chapter 2.
In Chapter 8, I take the historical understanding of political parties in Paraguay developed in Chapter 7, and I develop a theory of how political parties may continue to function and concentrate benefits in themselves even despite high levels of intra-party factionalism. The main arguments I propose in this chapter are that political parties have the ability to maintain themselves as broad coalitions because 1) broad coalitions are useful for party leaders to be able to anticipate the preferences of voters and 2) because reducing broad coalitions to minimal winning coalitions creates zero sum competitions for power within the political party. That is, party leaders construct their leadership off of the support of other party members. By including more members or excluding some members leaders can gain or lose political party. Intra party struggles over power make it difficult for anyone to be excluded by the party, then, because leaders will want to protect their factions while excluding competing factions, and this sentiment will be shared broadly among all party leaders. Choosing who to exclude and who to maintain, then, is likely to be highly divisive and difficult, leading to broad coalitions.

Finally, in Chapter 9 I extract and analyze empirical implications derived from the theory developed in Chapter 8. The main findings of this chapter is that political parties are able to concentrate benefits for themselves and to concentrate costs in the minority party. However, this capacity to concentrate benefits in majority parties is stronger when benefits are equally distributed across all intra-party factions. When one intra-party faction dominates the majority party, minority factions of the majority party may moderate their behavior a bit to produce less partisan and more centrist outcomes.
Part II

If Instability, Then Why Parties?
Chapter 7

Why Parties? Historical Development of Parties in Paraguay

7.1 Introduction

Up to this point, the overarching finding of Part I of this book was that legislative stability does not seem to be fully present in the Paraguayan legislature—not through a dictatorship, not through preference-induced equilibriums and not through structure-induced equilibriums. In Part II—beginning in this chapter—I analyze the effects that political parties have on legislative outcomes in Paraguay. As mentioned in Chapter 2, there are two foundational questions that deal with political parties. The first one, developed by Aldrich (2011) asks “Why Parties?” That is, why were political parties historically developed, and who benefits from political parties? The second foundational question asks “Where’s the Party?” (Krehbiel, 1993). That is, how can we observe or identify the effects that political parties have on legislative outcomes? In this chapter I will be addressing the “Why Parties?” question, and Chapters 8 and 9 will address the “Where’s the Party?” question.

In Chapter 2, we discussed three theories that attempted to explain why political parties develop and whose interests political parties may serve. The “cleavage” theory of party development argues that political parties are the result of large-scale historical events, which then create social-identity groups or “cleavages” that become the building blocks on which political parties are constructed (Lipset and Rokkan, 1967). In contrast, Aldrich’s (2011) model of political parties argues that political parties were created by politicians and for politicians that are seeking to concentrate legislative benefits in themselves. Finally, the UCLA School of political parties largely argues that parties are useful for concentrating
benefits in the majority party, but it argues that the main actors that benefit from this concentration are narrow interest-groups and benefit seekers and not politicians (Bawn et al., 2012).

While the historical development of political parties in Paraguay does not completely conform to any of these three theories discussed above, I will argue in this chapter that the UCLA School model most closely conforms to the historical events that led to the creation of parties in Paraguay. First of all, political parties developed in 1887, but Paraguay was not fully democratic until 1989. Therefore, the Aldrich’s (2011) model is unlikely to account for Paraguayan parties because Aldrich argued that political parties are created by and for politicians—mainly legislators—but in Paraguay legislators were not central to Paraguayan politics until much after political parties were founded. Furthermore, as we will cover in more detail, the first political party—the Democratic Center, which later changed its name to become the Liberal party—developed outside of government as a response to the actions of government leaders. Both these facts make Aldrich’s (2011) model for how parties developed in the United States incapable of transferring well to the Paraguayan context.

In contrast to Aldrich’s model, both the cleavage theory and the UCLA School theory are group-centered theories for the development of political parties, and because of this they do not strictly require a democratic legislature to exist for political parties to develop. All that is necessary is that these groups form and lay the groundwork for the development of political parties. That being said, the meaning of “group” in these two theories is somewhat different. For the cleavage theory “groups” are social-identity groups that result from large-scale, impactful historical events. In contrast, for the UCLA School “groups” are simply narrow-interest organized groups, such as for example teachers, religious congregations, shepherds, fishers, etc. A way to distinguish between these theories, then, is to analyze the quality of groups that gave rise to political parties in Paraguay in 1887.

As I will show in this chapter, in Paraguay political parties seem to have been created through haphazard coalitions of different narrow-interest groups and actors, which then be-
came political parties. These “groups” are therefore much more in line with the expectations of the UCLA School of political parties. That being said, even though this explanation seems to provide the best account of the creation of parties in Paraguay, there are still important characteristics of Paraguayan politics that this model does not capture.

The main argument I will make in this chapter is that while the UCLA School model of narrow-interest groups being the central units of analysis in Paraguayan politics is useful, the UCLA School model—as it currently exists—does not consider the extent of chaos and instability that can result from narrow interest-groups pursuing their own benefit. That is, like Arrow argued, if interest-groups have multidimensional preferences then cycling “majorities”\(^1\) are quite likely. These cycling majorities among narrow interest groups will even be more likely if interest groups have no need to anticipate the preferences of the electorate. That is, if, like in most of Paraguayan history, elections were highly unfair and unfree, then interest groups might never form broad coalitions to appeal to this electoral center, and they may instead opt to continually struggle to maximize their own benefits at the expense of everyone else—this issue will be explored in more depth in Chapter 8. In this chapter I will mainly show the extent to which the narrow pursuit of interest-group material benefits, without any restrictions from the electorate as a whole, led to a large scale chaos and instability in the Paraguayan political system.

Correcting the UCLA School theory of party formation with Arrow’s argument of legislative instability, the main theme of political history in Paraguay can be captured by one phrase: *factionalism leads to instability*. This instability was present among interest-groups before the formation of political parties, and in response to this instability political parties were formed in an attempt to create some stability and in order to concentrate benefits in the majority party—as argued by Aldrich and the UCLA School. However, Paraguayan political parties had such strong intra-party factions that they largely failed at creating this stability.

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\(^1\)Majorities is in quotations because interest groups can compete for power through attempting to capture institutions even in a non-electoral manner. Therefore cycles of dominant factions are likely, but these dominant factions will not necessarily be numerical majorities of the population.
for most of Paraguay’s political history. Eventually, rather than creating political parties in order to limit Universal Domain and create legislative stability, by 1940 Paraguayan elites decided instead that a dictatorship would be the only way to create stability in the country. A stable dictatorship finally consolidated in 1954 under Alfredo Stroessner and this stable dictatorship remained in power until 1989. As this dictatorship flailed, however, intra-party factionalism began to re-emerge from under the dictatorship—and for a moment instability did as well. However, as elections moderated the extent to which factions could pursue their narrow interests, then the instability of politics as a whole also seemed to be reduced in the democratic period. In sum, political parties were created as an attempt to curtail the instability of factions, and after they failed to do so for a substantial amount of time, Paraguayan elites turned to dictatorship to eliminate factionalism.

Although this book is not a history book, a detailed understanding of certain historical events will be important for the construction of my argument that Paraguayan parties most closely match the UCLA School model of parties. Before speaking about the formation of political parties in Paraguay, I will give a short historical introduction that will review the independence of Paraguay, and the results of the Triple Alliance War between Paraguay on one side and Brazil, Argentina and Uruguay on the other. Then I will compare and contrast two myths about how political parties resulted from the Triple Alliance War to the historical facts that surrounded the creation of political parties in 1887. I will then discuss how, even after the formation of political parties, intra-party struggles existed throughout most of the history of both political parties—and with them political instability. These intra-party struggles survived until the 1940s when fascistic ideas combined with a strengthened military organization that was returning to Paraguay after years of fighting the Chaco War against Bolivia. Military might, the 1940 fascistic constitution and the Colorado party eventually consolidated under Alfredo Stroessner, who eliminated factionalism through authoritarianism—abandoning Arrow’s assumption of nondictatorship and creating stability. As the dictatorship weakened in the late 1980s, however, intra-party factionalism
in the ruling party led to the fall of the dictatorship and the transition into democracy. With
the exception of the Stroessner dictatorship, then, factionalism has been a fundamental part
of Paraguayan politics throughout history, and as I will argue, this factionalism has molded,
and been sustained under, the democratic constitution of 1992.

7.2 Background of the First Years of Paraguay: Independence,
Consolidation and Near-Annihilation

Until 1810, Paraguay was a Spanish colony, which was administered by the Vice-royalty of
Buenos Aires. In 1810, Buenos Aires declared its independence from Spain, and Paraguay,
breaking from its closest administrative unit of Buenos Aires, decided to remain a Spanish
colony. This finally changed in 1811 when Paraguay formally declared its independence from
Spain as well. At this point, however, Buenos Aires sent troops to attempt to re-conquer
Paraguay for itself in 1811. After losses in the battles of Tacuarí and Paraguarí, Buenos Aires
stopped its conquest attempts, but formal recognition of Paraguayan independence did not
come from Brazil until 1844 and did not come from Argentina until 1856. Thus in 1811,
the independence of Paraguay was on unstable foundations, with the main competitions to
its sovereignty coming from Spain and Buenos Aires—with some of the locals maintaining
fealty to these powers.

Under these conditions, the first dictator of Paraguay, Dr. José Gaspar Rodríguez de
Francia, consolidated and maintained power from 1811 to 1840. Extremely zealous and
wary of Spanish and Argentinian influence among the Paraguayan populace, Dr. Francia
eliminated competition to his power (through a series of imprisonments and executions),
he strengthened the Guaraní language and undermined Spanish in order to prevent foreign
conspirators from having influence in the country, he weakened the Catholic church in the
country, he sealed Paraguayan borders, and he forbade intermarriage in Paraguay among
people of European descent, forcing them instead to marry local Paraguayans in order to
dilute their (non-Paraguayan) national identities. Paraguay, then, initiated as a country that
was severely cut off from the rest of the world in economic and cultural ties, and began as a kind of self-sufficient hermit kingdom.

After Dr. Francia’s death, President Carlos Antonio López rose to power in 1844. Carlos Antonio López opened the country a bit more to the rest of the world. He reopened trade with the country’s neighbors, he fomented more exchange with Europeans—he even married an Irish woman called Elysa Lynch—and he attempted to modernize Paraguay through the creation of a train line, infrastructure for telegraphs, and an iron foundry. Although Paraguay was still very authoritarian under Carlos Antonio López, the country became in a sense more open to the world and more economically dynamic.

Carlos Antonio López died in 1862, and immediately afterwards his son, Francisco Solano López, was chosen as his successor. Under Solano López, the Triple Alliance War began in 1864 between Paraguay on the one side, and Brazil, Argentina and Uruguay on the other side. Many books have been written about this war, and going into the details about the international context that led to this war are outside the scope of this book. However, suffice it to say, that the effects of this war were disastrous for Paraguay. According to Whigham and Potthast (1999) “Rarely has a society tolerated such losses before forcing an end to hostilities. By way of comparison, the oft-cited sacrifice of life on the part of the Soviet Union during World War II amounted to twenty-seven million deaths, just over 10 percent of the Soviet population.” By using the 1846 Paraguayan census to predict the population of Paraguay before the war, and by comparing that projection to the population counted in the 1870 census, Whigham and Potthast (1999) estimates that “the true figure [of Paraguayans killed or displaced by the War] appears to have reached 60 to 69 percent” with a ratio of “four to five women for every man.”

Therefore, it is not an exaggeration to say that the Paraguay that existed after 1870 was unrecognizably different from the Paraguay that began to form after the War. With Asunción under control of the Allied forces in January 1, 1869 and with Francisco Solano López being killed by the Allied forces in March 1, 1870, the Triple Alliance War gave way
to a sort of re-foundation of the Paraguayan state. In this post-war context our story about the development of political parties in Paraguay begins.

7.3 Two Myths about Party Formation in Paraguay: Addressing Modern Propaganda about the Triple Alliance War

During the most recent dictatorship of Alfredo Stroessner, who ruled with absolute power over Paraguayan institutions from 1954 to 1989, the heroes of the Triple Alliance War were glorified, and a straight path between this war and the formation of both traditional political parties was concocted by his regime. Two myths about the formation of political parties were developed.

The first myth of party development claims that the Liberal party—to which Stroessner was violently opposed to—developed from the “Paraguayan Legion,” a military division conformed of Paraguayan troops which fought against Paraguay in the Triple Alliance War. The Colorado party, this myth claims, was constructed off the remains of the Paraguayan military contingent that fought for Paraguay—under the President Francisco Solano López—against the triple alliance (Chamorro, 2016). The second myth about the formation of political parties in Paraguay has more to do with regional powers in South America. That is, Paraguay was mainly defeated by the Argentinian and Brazilian armies. Therefore, the second myth claims that the main division that created the two traditional political parties of Paraguay was a division among the Paraguayans who held stronger affinity to Argentina against those Paraguayans that held a stronger affinity to Brazil. These divisions in affinity, this myth claims, eventually crystallized into the two traditional political parties that we know today.

If these myths were true, that would provide strong evidence for the cleavage argument of the development of political parties in Paraguay. These two myths seem to conform quite well to the idea that large-scale historical events created social cleavages that eventually crystallized into political parties. If these myths were true, that would mean that the de-
velopment of political parties in has been Paraguay are fundamentally different from most other political parties in Latin America, and it would lead us to believe that Paraguayan parties may be more similar in kind to those found in Europe. As I will show in the next section, however, these myths are, more than anything else, false.

7.4 The Formation of Parties: The Beginning of the “Liberal” Period

As we will see, both myths discussed in the previous section are not widely relevant to how political parties actually formed in Paraguay. By following some of the main actors of politics of the time to observe how political alliances actually took place at the time, we can see that the Colorado and Liberal parties mostly entailed the solidification of certain power-driven alliances that then formalized into partisan institutions, but that the members of these partisan institutions did not have very strong identities that separated the partisan of one party from another. Furthermore, these alliances seemed to form mostly outside of the legislature. Therefore, because of these two characteristics of party formation, political parties in Paraguay seem to conform most closely to the model developed by the UCLA School. The following account detailed in this section is a bit confusing, but the detailing of these ever shifting alliances should serve to show that 1) stable cleavages were not immediately produced as a result of the Triple Alliance War, and 2) that partisan consolidation happened mostly outside of the legislature.

1870 gives rise to what is called the “Liberal” period by Paraguayan historians. This period is called this way because the constitution of 1870 was a liberal document modeled off the constitutions of the United States and Argentina. Although it was frequently violated and it was never implemented fully as the liberal, democratic document it actually was, most politicians and most of Paraguayan society at the time at least payed lip service to the ideals of liberalism, private property, and that the source of legitimacy of the government arose from the people. The liberal period of Paraguayan history ends in 1940, when a new,
explicitly authoritarian and fascistic constitution replaces the constitution of 1870 (Rivarola 
and Boccia Paz, 2013; Lewis, 2016).

The liberal period of Paraguayan history began with political struggles surrounding the 
constitutional convention that was tasked with writing the constitution of 1870, which was to 
organize the state in post-war Paraguay. Two electoral clubs formed around two charismatic 
leaders in order to electorally compete for representation in the convention. The first, the 
Union Club formed as an electoral organization of a man named Cándido Bareiro, who was a 
ropolista, and the second was the Club of the People, which formed around a man named 
José Segundo Decoud, who was a legionnaire. That being said, neither of these men initially 
held positions of power, as the Allies placed a triumvirate in the executive position of the 
country until the new constitution was approved. This triumvirate eventually came to be 
dominated by a man named Cirilo Antonio Rivarola (a lopista turned legionnaire after being 
captured by the Allies in the war).

Then in July 3, 1870 the elections for the constitutional convention take place and every-
thing gets more complicated. Before the elections, the Union Club (led by Cándido Bareiro) 
changes its name to the Club of the People seemingly to create confusion. In response, the 
old Club of the People (led by Decoud) changes its name to the Great Club of the People, 
and this organization also receives the support of a prominent man of the time named Fa-
cundo Machaín. After these elections, the Great Club of the People (led by Decoud) win 
the elections, and immediately they try to depose Cirilo Antonio Rivarola as executive, and 
they name Facundo Machaín as President. At 24 years of Facundo Machaín became the 
youngest president in Paraguayan history. That being said, the Great Club of the People 
made the mistake of removing Rivarola without the consent of the Allied forces. Therefore, 
Machaín’s presidency lasted a whopping 12 hours, and Rivarola was reinstated as president 
by the Allied forces. To maintain his presidency, Rivarola sought the support of Cándido 
Bareiro, to whom he offered the vice presidency. Rivarola was seen as pro-Brazil and Bareiro 
was seen as more pro-Argentina (Chamorro, 2016; Lewis, 2016).
Astonishingly, Cándido Bareiro did not accept Rivarola’s offer of the vice presidency, and Bareiro joined forces with Machain and Decoud to create the *National Party*. United, the *National Party* attempted to impeach Rivarola’s Minister of Finance, named Juan Bautista Gill. In response, Rivarola dissolved Congress (which was unconstitutional, but he did it anyway). Eventually, Juan Bautista Gill, with support of Brazil, pushed Rivarola (who had previously fought in support of Gill) to resign. Rivarola’s vice president, Salvador Jovellanos, became the president for a while, but he was eventually succeeded by Juan Bautista Gill. In order to reach power, Juan Bautista Gill (pro-Brazil) initiated a revolution with the military support of a *lopista* officer named Bernardino Caballero, and the political support of Cándido Bareiro (*lopista*, pro-Argentina) and with the political support of José Segundo Decoud (a *legionnaire*) (Chamorro, 2016; Lewis, 2016).

This is perhaps where the coalition that later forms the Colorado party begins to solidify. On April 12, 1877 Juan Bautista Gill was assassinated by a group of people that were supported by the former President Cirilo Antonio Rivarola. Gill’s vice president assumed the executive position for the remainder of the period. However, given the vacuum in power, two figures started to circle around the executive position for the next constitutional period: Cándido Bareiro, and Facundo Machain (Chamorro, 2016; Lewis, 2016).

If we recall before, Cándido Bareiro was the founder of one of the clubs that competed in the constitutional convention: the *Union Club*, whereas José Segundo Decoud and Facundo Machain were part of the (original) *Club of the People*. After Gill’s death, however, Machain, against the recommendations of Decoud, assumed the legal defense of those that murdered Gill. Because of this, Bernardino Caballero (in alliance with Bareiro) arrested Machain and sent him to prison. On October 29, 1877 this prison was opened up by police forces and, after intentionally letting a couple of prisoners run away, the police used those escapes as a justification to violently crack down on the prison. Facundo Machain, the main contender against Cándido Bareiro, was murdered in his prison cell. Afterwards, Cándido Bareiro ran for office and won an uncontested election.
In 1880 Bareiro suddenly died, and he was replaced by his military companion, Bernardino Caballero, as president. Bernardino Caballero ruled from 1880 to 1886, and throughout his presidency he was able to maintain a solid hold of power—finishing the last two years Bareiro’s constitutional term, and then ruling for a four-year constitutional term of his own. In 1886, Caballero, finishing his constitutional term, was persuaded by his supporters that he should abandon power in order to respect the constitution. In his place Patricio Escobar, a military man close to Caballero, runs unopposed for the presidential office.

With this background, 1887 is the year that both political parties are born. The event that incited the formation of parties was an election for one Senate and one Chamber of Deputies seat to be held in the town of Villarrica. One candidate, Antonio Taboada, had supported Caballero’s candidacy to president in 1882, and he was part of the movement that supported Escobar in 1886, and he was running for the Senate seat of Villarrica. Unfortunately for him, we was running against the former President Bernardino Caballero himself, who maintained the support of the President Patricio Escobar. Taboada was quite popular in Villarrica, so at first he was able to deploy a small army of armed locals to protect Caballero from stealing the elections. Escobar’s government decided, therefore, to postpone the elections until June 13, 1887, and by doing so they were able to send reinforcements to Villarrica. Once the elections took place, the forces allied to Taboada were arrested, and they were sent to Asunción and freed ten days later. In response to the event, Taboada and others decided to form the “Democratic Center” party, which later changed its name to the Liberal party on July 10, 1887. José Segundo Decoud, still an ally of Escobar and Caballero, persuaded them to form a pro-government political party as well on August 25, 1887, which was called the National Republican Association, also known as the Colorado party.

In short, we can see that the formation of parties did not seem to follow any cleavages in society. Bernardino Caballero was a lojista and José Segundo Decoud was a legionnaire, but they both founded the Colorado party together. Gill was favored by Brazil, but he governed with the support of Cándido Bareiro, who was favored by Argentina at one point.
Facundo Machaín was ideologically liberal, in a similar fashion to José Segundo Decoud, and although they had originally started a political club together, José Segundo Decoud ended up as part of Bareiro’s political alliance, and Machaín ended up being assassinated in prison. These rotating alliances, not based on ideology, identity or international ties, seem to simply change given the political necessities of the times. Taboada himself—the candidate who “lost” the Villarrica election in 1887 and one of the founders of the “Democratic Center” party—supported Patricio Escobar—the president and one of the founders of the Colorado party—only one year earlier in 1886. Finally, historical works show that the propensity of legionnaires in both Liberal and Colorado parties, at the time of their foundations, were essentially equal (Chamorro, 2016; Lewis, 2016). With these shifting, unstable coalitions that are seemingly orthogonal to any possible identity groups, it becomes clear that parties in Paraguay did not form around cleavages.

7.5 Partisan (In)stability: Intra-Party Factionalism and Civil Wars

In the previous section we saw that the events that took place immediately prior to the development of political parties were quite chaotic and idiosyncratic. Furthermore, we saw that political alliances were very fragile and could be at times even seemingly contradictory. Those that violently hated the leadership of one actor at one point might decide to be close allies to that same actor at another point—for example, this happened with the impeachment attempt that the National Party made to Gill while he was Minister of Finance, which quickly turned into an impeachment of President Rivarola by the National Party in Gill’s favor. Political alliances prior to the creation of political parties were weak, transient, contradictory and generally chaotic.

At this point I would like to draw a parallel to a concept that I have been highlighting throughout this book. That parallel is between the chaotic alliances we see before the creations of political parties, and the “chaos” expectations derived from Arrow’s (1951) social-choice formulation, from Condorcet’s Paradox (Condorcet, 1785), and from Aldrich’s
(2011) formulation of the “chaos” theorem that provides a justification for the development of political parties—all of which we reviewed in Chapter 2. According to Aldrich, political parties are created in order to reduce this “chaos” because by creating a stable alliance in government, political parties allow a majority of legislators to concentrate the costs of legislating into the minority party and the benefits of legislating in the majority party. As a useful side effect, these “long term legislative coalitions” should also provide an instrument for the reduction of majoritarian cycling.

In Paraguay it seem like the creation of political parties did somewhat respond to attempts from politicians to reduce instability. That being said, in contrast to Aldrich’s formulation, the first formal political party was the Democratic Center political party—which later changed its name to the Liberal party—and this political party was unambiguously developed outside of government as a response to the arbitrary use of power by the government. That is, before the government coalition created a political party, non-politicians that did not have political power created a political party in order to defend itself from the government. This organization mobilized citizens, pooled economic resources, and accumulated some military power in order to prevent the government from destroying opposition members.

It is interesting that this parallel I am drawing between Arrow’s (1951) cycling majorities and pre-partisan politics has been made by some very prominent authors in the far past. For example, Hobbes (1651) argued that:

Nature hath made men so equall, in the faculties of body, and mind; as that though there bee found one man sometimes manifestly stronger in body, or of quicker mind then another; yet when all is reckoned together, the difference between man, and man, is not so considerable, as that one man can thereupon claim to himselfe any benefit, to which another may not pretend, as well as he. For as to the strength of body, the weakest has strength enough to kill the strongest, either by secret machination, or by confederacy with others, that are
in the same danger with himselfe... From this equality of ability, ariseth equality of hope in the attaining of our Ends. And therefore if any two men desire the same thing, which nevertheless they cannot both enjoy, they become enemies; and in the way to their End, (which is principally their owne conservation, and sometimes their delectation only,) endeavour to destroy, or subdue one an other (sic.).

The key part of this quote perhaps is the phrase “the weakest has strength enough to kill the strongest... by confederacy with others.” This phrase suggests that the social choice expectation of cycling majorities can also exist in non-legislative and non-voting situations. If the threshold necessary to remove a sitting president is lowered from simple majority to “a confederacy of people strong enough to forcefully remove the president,” that would probably make the executive much more vulnerable to removal from the outside as many such coalitions are possible in situations of unconsolidated military power. In fact, throughout Paraguayan history completing an executive term without a successful coup or impeachment has been the exception rather than the rule.

As Aldrich argued, in 1887 two political parties developed in order to attempt to reduce this disorder, and to be able to compete electorally. Interestingly, however, this does not seem to take place in the legislature in Paraguay, but it seems to take place principally as a means for opposition members to pool resources in order to prevent the government from exploiting them and so that they can compete more effectively against the government party. Parties in Paraguay therefore seem to principally serve as an organization to mobilize people into counteract (or to support) the government, and then political parties became long-term coalitions of people dedicated to these mobilization efforts. A question that remains, however, is: after political parties developed, were they able to reduce chaos and cycling majorities in Paraguayan politics?

For much of the liberal period of Paraguayan politics (1870-1940), the answer to this question was: no. The reason why these newly formed political parties did not serve to
reduce chaos was because immediately after their formation both political parties formed very strong intra-party factions. The former Democratic Center, from here on out called the Liberal party, gave way to two intra-party factions: the radical liberals and the civic liberals. These intra-party movements were created by two party personalities: Cecilio Báez and Benigno Ferreira respectively. In contrast, the Colorado party divided itself into two factions as well, but this factionalization responded principally to power struggles between Colorado partisans that belonged to the military—such as Bernardino Caballero, Patricio Escobar, and Emilio Aceval—in contrast to partisans that were civilians.

These intra-party divisions led to a continuation of the unstable policymaking process that preceded the formation of parties. In 1891 the Liberal party attempted a revolution against the Colorado party, but this revolution was pushed back by a Colorado military man named Juan Bautista Egusquiza. After this failed revolution, the civilian faction of the Colorado party eventually started to support a Juan Bautista Egusquiza against the governing faction of Bernardino Caballero. This civilian-supported faction of the Colorado party also gained the support of both factions of the Liberal party. Eventually, the faction that supported Egusquiza fully exited the Colorado party to be absorbed by the Liberal party. With this shift in power, the Liberal party was able to take power from the Colorado party in the civil war of 1904.

The 1904 civil war was pivotal because it marked the end of military presidencies in Paraguay until after the Chaco War—the next military President after the 1904 civil war would be Rafael Franco who gained office in 1936. Civilian governments did not mean the end of factionalism, however. In 1911 another civil war broke out because the radical faction of the liberal party split into two, with one side favoring Manuel Gondra and another side favoring Albino Jara. Therefore, the 1911 civil war took place among Gondra radical liberals, Jara radical liberals, civic liberals and colorados. Another civil war took place in 1922 as well among a faction of liberals who supported Manuel Gondra and another faction of liberals that favored a man named Eduardo Schaerer. In short, factionalism was rampant
throughout the liberal period of Paraguayan history despite the development of parties, and this is illustrated among the multiple civil wars that took place in Paraguay during this period, in addition to the chaotic and cyclical politics of the time Rivarola and Boccia Paz (2013); Lewis (2016).

7.6 The Chaco War and the Rise of Fascism

There are two methods of curing the mischiefs of faction: the one, by removing its causes; the other, by controlling its effects.

There are again two methods of removing the causes of faction: the one, by destroying the liberty which is essential to its existence; the other, by giving to every citizen the same opinions, the same passions, and the same interests (Madison, 1787).

An event that substantially changed how politics was carried out in Paraguay was the Chaco War where Paraguay fought a war against Bolivia over disputed territory in the northern region of Paraguay. This war lasted from 1932 to 1935, and after the conclusion of the war an important actor returned to the political scenery of Paraguay: the military. Upon returning victorious from the war with Bolivia, military actors became less and less content with the normal functioning of politics at the time, and they were especially exhausted of political parties. On February 17, 1936 a Colonel of the Chaco War named Rafael Franco initiated a revolution that overthrew the Liberal president of the period. This coup was quite different than those that came before because Franco also abolished Congress, he forbade any freedoms of press, and he imprisoned those that formed part of the previous government. Furthermore, Franco also attempted to govern without the support of either of the two traditional parties, opting instead to create his own party, called the Revolutionary February Party, which was mainly supported by unions and associations of former combatants in the Bolivian war.
As the quote that initiates this section suggests, the nationalist military movement that was initiated after the Chaco War was substantially different than previous political organizations because it was explicitly opposed to political freedoms and political organizations that gave way to factionalism—following Madison’s suggestion of eliminating the causes of faction, even though Madison explicitly argued against doing this, or in another framing, sacrificing Arrow’s assumption of Nondictatorship in order to create stability. The writings of the time show that the main actors of the February Revolution sought to unify the country under a single unitary state that was more involved in the daily lives of citizens but also less tolerant of freedoms that were granted in the past. Rafael Franco did not succeed in definitively consolidating power at that time, however, and he was deposed by a coup in 1937. After a short return to power of the Liberal party, Marshal José Félix Estigarribia, who led all the Paraguayan troops against the war against Bolivia, took power in 1939. Shortly after assuming the presidency, Estigarribia decided that the 1870s constitution was too restrictive, and he performed a self-coup, with the support of the military, and he created a new markedly authoritarian constitution, the constitution of 1940, which he essentially dictated according to his own preferences and decreed on his own authority (Rivarola and Boccia Paz, 2013).

Factionalism was still not quashed at this point, however, because shortly after he decreed the constitution of 1940, Marshal Estigarribia died in a plane crash. This was extremely problematic because the new 1940 constitution did not provide a vice president, and legislative elections had not taken place yet before Estigarribia’s plane crash. Therefore, a military junta just chose another member of the military, Higinio Morínigo, to take his place.² Morínigo was supposed to only be an interim president for two months, but he ended

²A fascinating historical occurrence took place in the selection of Morínigo. The Junta that chose him was made up of five people. One of these members, Captain Urbíeta Rojas, said he had no preference among the two options being considered: General Paulino Antola and General Higinio Morínigo. Despite that, a tie was produced among the other four members of the military Junta, so his vote became decisive. Because he was indifferent, and because he thought that Morínigo would only be president for two months until a new president was selected, he took his matchbox out of his pocket and he flipped it to decide the next president. The matchbox chose Morínigo (Rivarola and Boccia Paz, 2013; Lewis, 2016).
up being president until 1948, the longest a single person held the executive office since before the Triple Alliance War.

Higinio Morínigo also reigned in a very illiberal way. He outlawed the Liberal party, and he prohibited freedom of speech, press and assembly for most of his presidency. Towards the end of his presidency he began to lose power, and he found himself having to rely on the only social base of support he had left to rely on, the Colorado party. The Colorado party, which had been out of power since 1904, was happy to form a part of the government, but was not so happy about having to share power with Morínigo. Under duress Morínigo decided to backtrack on his authoritarian ways and in 1946 he opened the country to what historians called the “democratic spring.” Opposition leaders, and former presidents were allowed to return to the country, press freedoms were reinstated. This was a short period of openness and respect for the freedoms of the people.

This openness, and the fractious nature of the governing coalition among Morínigo, the military, the February Revolution Party and the Colorado party, quickly devolved into the civil war of 1947. At the end of this civil war, Morínigo was deposed from power, and the Colorado party became the party of government again. That being said, instability prevailed. From 1948 to 1954 there were six Colorado presidents—which developed two intra-party factions called the Democratic faction and the Red Division faction. This instability, however, was contained when one person was finally able to control the military, the government and the Colorado party under his personal command in August 15, 1954. This person was Gen. Alfredo Stroessner.

7.7 The Leviathan: Costs and Benefits of a Stationary Bandit

Therefore before the names of Just, and Unjust can have place, there must be some coercive Power, to compell men equally to the performance of their Covenants, by the terrour of some punishment, greater than the benefit they expect by the breach of their Covenant...(Hobbes, 1651, sic.).
Thomas Hobbes perhaps would have been proud of the power Alfredo Stroessner was able to concentrate. In so many words, Hobbes believed that a Leviathan was necessary because without a centralized power, any contract made among citizens would be invalid, because any party could renege on this contract without fear of consequence. Therefore, the leviathan was necessary to give force to all contracts, because if a centralized power was strong enough so as to not be challenged by anyone, then this leviathan could stop citizens from reneging on their contracts by threatening a punishment larger than the benefit the citizen would receive from being dishonest (Hobbes, 1651). Stroessner began by concentrating the power of the military under himself. Then, he was able to take control of the presidential office. Finally, through military and political maneuvers, he was able to subdue the entirety of the Colorado party under his command. This triad of military-party-government unity was what historians call the “granitic unity” of the Stroessner presidency (Flecha and Martini, 2019).

Similar to Hobbes’ argument, some modern authors have also argued that a centralized dictatorship should be preferable for citizens than absolute anarchy would. Olson (1993) for example argued that a dictator or “stable bandit” was preferable to “roving bandits” because:

If the stationary bandit successfully monopolizes the theft in his domain, then his victims do not need to worry about theft by others. If he steals only through regular taxation, then his subjects know that they can keep whatever proportion of their output is left after they have paid their taxes. Since all of the settled bandit’s victims are for him a source of tax payments, he also has an incentive to prohibit the murder or maiming of his subjects. With the rational monopolization of theft—in contrast to uncoordinated competitive theft—the victims of the theft can expect to retain whatever capital they accumulate out of after-tax income and therefore also have an incentive to save and invest... In a world of roving banditry there is little or no incentive for anyone to produce or accumulate anything that may be stolen and, thus, little for bandits to steal.
In this sense, the warring factions of the Liberal period of Paraguayan history seem to have been quite similar to the “roving bandits” conceptualized by Olson (1993). It may have been expected then that consolidating power in a single authoritarian leader would have benefited Paraguayan society, because rather than many factions violently competing for control of the government—forcing citizens to cooperate with their faction, only to be punished by the competing faction if they happened to lose the struggle—would not have been a good environment for investing in one’s own properties. In this sense, then, the authoritarian government of Stroessner would have been expected by political scientists to be an improvement on the roving factions of previous years.

Though better than roving bandits, stable bandits also have their drawbacks however. The main drawback of the stable bandits relative to a democratic government is the level and nature of taxation of these two different systems. The “rational autocrat,” Olson (1993) argues, would mainly focus on maximizing his personal income through taxation. Therefore, this autocrat would be less interested with maximizing the productivity of his country as a whole, and he would be more concerned that the taxation of his country’s wealth maximize his own personal profits. The only upper limit to the taxation incentives of the autocrat, in this situation, is that the autocrat would only want to restrict taxation that is so destructive of his country’s property that it undermines his personal income. Any taxation under this threshold is acceptable for the autocrat. According to Olson (1993):

To be sure, the rational autocrat will have an incentive, because of his interest in increasing the investment and trade of his subjects, to promise that he will never confiscate wealth or repudiate assets. But the promise of an autocrat is not enforceable by an independent judiciary or any other independent source of power, because autocratic power by definition implies that there cannot be any judges or other sources of power in the society that the autocrat cannot overrule. Because of this and the obvious possibility that any dictator could, because of an insecure hold on power or the absence of an heir, take a short-term view, the
promises of an autocrat are never completely credible.

In other words, the autocrat is still detrimental to economic growth because the autocrat’s incentive to maximize his or her personal income through taxation undermine’s the citizens’ incentives to invest in their own property. This is because unconstrained authoritarian power means the authoritarian government can effectively expropriate one’s property at any point. Private property under authoritarian governments is therefore never completely safe. An authoritarian may attempt to constrain itself in order to be able to credibly commit to protecting the property of its citizens, but in order to do so the government essentially must renounce power and must become less authoritarian. In fact, prominent authors have argued that historically authoritarian governments have renounced power—voluntarily or through coercion—to the citizenry in order to be able to commit to protecting property rights and individual rights more broadly (Acemoglu and Robinson, 2006).

These expectations political scientists developed about authoritariansim seem to match what took place with the Stroessner dictatorship almost to the letter. According to Neri Farina (2019), who wrote the best-known chronology of the Stroessner dictatorship:

Stroessner interpreted that the democratic formalities and rituals were important to project as the face of his regime. Taking the necessary care to not provide a single opportunity to the opposition, he made himself be reelected 8 consecutive times through elections once every five years. His electoral victories became an acquired habit...

To this state of affairs, Stroessner ascribed the adjective: peace. And the progress was real, undeniable. Tangible like the persecutions, the corruption, the torture, the harassments that the savage Urban Guard inflicted on the citizenry; the banishments, the accusations of the pyragüés³, the emptying of government coffers,

³Pyragüé means “hairy feet” in Garaní, and it was the name people gave to the informal networks of spies that Stroessner maintained among the citizens. These people would receive a reward for telling the government about a citizen that read left-wing materials, associated with organizations contrary to the
the murders in the Department of Investigations and the elections without any semblance of democracy.

The progress was made constant above all during the 1960s and 1970s: Asunción acquired the aspect of a city and it overcame, in 1959, the shame of being the only capital in South America without running water. The East of the country was developed, agriculture flourished (especially cotton and soy), substantial public infrastructure was constructed, commerce with the exterior grew, the entry of foreign currency grew, the economy was organized... and there was more dynamism in general.

Contrary to this dynamic, the country was unable to develop industrially and entrepreneurially because of thieving ministers..., unscrupulous politicians and greedy military men who, taking advantage of the impunity granted to them by Stroessner, impeded the investment of productive capital: before any productive project was approved they demanded a large amount of stocks in the company or they directly demanded a large bribe for “protection,” in the style of a mob. This led national and international entrepreneurs who had serious intentions of investing in the country, to flee in terror (Neri Farina, 2019, 26).

The excerpt from Neri Farina’s (2019) account almost exactly matches what Olson (1993) would have expected from an authoritarian government. The elimination of cycling, non-democratic, factionalism—factions which behaved similarly to roving bandits—with a unified stationary bandit did reduce economic instability, it generally promoted some more investments in the productivity of the country, and the lifestyle of Paraguayan citizens generally improved relative to what came before. Of course, the new authoritarianism did not respect individual rights, human rights or private property any more than minimally necessary to regime, or violated any of the directives of the government in any way. They were called “hairy feet” people because they were quiet, hidden and devious, similar to animals with hairy feet that can walk around without making a sound.
maximize the tax revenue that could fill the coffers of the autocrat himself and his closest allies. After initially improving on roving bandits, the stationary bandit began to be less and less capable to improve the economic and social wellbeing of the citizenry because doing so would have required limiting the power of the autocrat in order for the government to be able to credibly commit to providing stable property rights to potential investors.

7.8 The Return of Factions

Around 1987, splits in the governing Colorado party started to arise in the form of two intra-party factions. The first faction, called the traditionalist faction formed as an intra-party movement that was aiming to renew and reform the Colorado party a bit, and they were running Juan Ramón Chaves to the Junta of Government of the Colorado Party—the most important organ of the party. The second faction, called the militant faction was the faction that more strongly supported the continuation of Stroessner in power, and this faction contained prominent party members like Sabino Augusto Montanaro, the Minister of the Interior, and Mario Abdo Benítez, Stroessner’s private secretary. The 1987 Colorado party convention was the first time in the Stroessner period that more than one candidate was presented to compete for the Junta of Government of the Colorado party.

However, because the militant faction contained among its ranks, the Minister of the Interior, the police cooperated with the militant faction to essentially kick the traditionalist faction out of the 1987 convention. A convention filled with only the militant faction of the Colorado party then chose their leaders to the positions of power in the party. However, this factionalism was the beginning of the end for the Stroessner dictatorship, and the traditionalist faction would serve as a civilian support for Gral. Andrés Rodríguez,⁴ the man who eventually led the coup against Stroessner on February 2 and 3 of 1989 (Neri Farina, 2019).

The Liberal party, began its slow, tortuous road toward institutionalization in the 1960s.

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⁴Rodríguez was close to Stroessner through family ties. Rodríguez’ daughter, Martha Rodríguez, married Stroessner’s son, Hugo Alfredo “Freddy” Stroessner.
Being outlawed by Higinio Morínigo, and being unable to re-establish under the subsequent Colorado presidencies, a “Liberal Party” was founded and was approved as the “official opposition” party under Stroessner, and this party was founded by the brothers Fernando and Carlos Levi Rufinelli. The expectation was that the underground Liberal convention of 1962 would choose someone that would decide to support the Rufinelli brothers in becoming the official opposition to Stroessner, and perhaps they might have even competed in the elections of 1963. Unfortunately for the Rufinelli brothers, the 1962 convention approved an agenda of radical intransigence to the Stroessner regime. At this point, then, the Liberal party found itself in the awkward position of being split between a “Liberal Party” (PL), which was approved by Stroessner, and an informal “Radical Liberal Party” (PLR), which did not participate in elections or the legislature. Eventually, however even this Radical Liberal Party began to participate of government as well (Neri Farina, 2019).

These two factions of the Liberal party began to join forces in the late 1970s. In January 16, 1976, Domingo Laínó for the PLR and Carlos Levi Ruffinelli for the PL, decided to sign a unification accord. Following this agreement on January 22, 1977, a new unified party directory was chosen. Towards the beginnings of the 1980s this newly unified political party became the “Authentic Radical Liberal Party” (PLRA) which is the formal title that the current Liberal party uses today.\(^5\) One of the main actors of this political party was Domingo Laínó, who became the undisputed leader of the PLRA after the fall of the dictatorship (Neri Farina, 2019).

### 7.9 The New Constitution and Factions under Democracy

It is under this situation of a factionalized Colorado party and a unified Liberal party that the coup of 1989 takes place to depose Alfredo Stroessner. Gral. Andrés Rodríguez, with the political support of the *tradicionalist* faction of the Colorado party, carried out the coup.

\(^5\)After democratization, they opted to maintain the Authentic Radical Liberal Party name rather than the shorter Liberal Party name in order to pay tribute to their resistance to the Stroessner dictatorship.
on Alfredo Stroessner on February 2 and 3 of 1989, and they also led the democratization process. This democratization process followed a strictly electoral schedule, where each subsequent election led to a higher level of formal democratization.

The first of such elections took place on May 1, 1989. This election was considered a transitional election, and the press characterized the election as a “free, but not clean” election (Rivarola and Boccia Paz, 2013). Furthermore, this election took place using the electoral framework established by the dictatorship’s Electoral Statute, which was passed in 1981. This Electoral Statute was markedly authoritarian because it gave the majority party 2/3 of every legislative body it won, and only the remaining 1/3 was to be distributed proportionally to all other parties using the D’hondt formula. Despite this, the opposition chose to participate because they accepted that this election formed part of a transition to a more democratic system. This election ended with Andrés Rodríguez winning the presidency with 76.9% of the vote, and Domingo Laino winning 20.98% of the vote. Again, these results were the official results, but they were not completely clean results.

Even though this election was not really democratic yet, following the 1989 coup and election Paraguay underwent an effective level of liberalization perhaps not seen before in its history. Freedoms of press and assembly began to be respected. Political ideologies of all stripes and colors were allowed to compete, assemble, protest, and publish—even a Paraguayan Communist Party was founded, which would have been unfathomable under Stroessner’s dictatorship. As part of this liberalization, two former-Colorado organizations that were expelled from Paraguay during Stroessner’s consolidation of the Colorado party: the Popular Colorado Movement (MOPOCO), and the National Republican Asociation in Exile and Resistance (ANRER). Both these organizations were re-absorbed by the Colorado party once they returned from exile after the 1989 coup.

The next step in the electoral agenda was to reform the Electoral Statute of 1981 to re-

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6Stroessner claimed that his government was not a dictatorship but rather a “democracy without Communism.” Of course, the label “communist” was liberally used by the government as a synonym of “enemy of the state,” which was simply anyone that caused problems for the regime.
place it with a more democratic electoral system. Recall that I had mentioned that Negretto and Visconti (2018) made the argument that the reason for moving from single-member district (SMD) electoral systems to proportional representation (PR) electoral systems was because factions within the dominant majority party wanted to make sure that if they had to leave the majority party they would continue to be able to receive representation if they chose to run independently. Interestingly, it seems like Negretto and Visconti’s (2018) argument aptly captures what took place in Paraguay, because one of the most contentious issues discussed in order to pass the 1990 Electoral Code was the issue of intra-party democracy. This issue was led principally by the Colorado party, and in fact the leadership of the Liberal party was against intra-party democracy being regulated by the electoral code. According to Domingo Laino, the president of the Liberal party, it was not that he was against intra-party democracy, per se, but he claimed that he did not think it was the role of the central government to dictate how parties chose their candidates. Finally, however, primary elections were mandated by the Electoral Code, and this portion of the code was passed by a 36 to 34 vote, with 30 colorados voting in favor, 17 colorados voting against, 3 liberals voting in favor, 17 liberals voting against, and 3 small-party legislators voting in favor of mandated intra-party primaries. It was also decided that intra-party primaries were necessary not only for the selection of party candidates, but also for the selection of party leaders. This Electoral Code also included important provisions like the prohibition of any form of reelection for the president, the election of Intendentes (Mayors), the allowance of candidates to run independently of parties, automatic registration, and it initially established that the president would be chosen with a runoff election if he did not reach a certain threshold in the first round—as we will see this last provision was later changed so that the president would be chosen through plurality rule instead (Flecha and Martini, 2019). Interestingly, the 1990 Electoral Code was passed before overturning the 1967 authoritarian constitution developed by Stroessner—the new constitution would be written in 1992—, so ironically the 1990s Electoral Code was both the initiation of a new electoral democracy while also being an unconstitutional piece
of legislation.

The next step in the electoral agenda of democratization took place in May 27, 1991 with the first democratic municipal elections in Paraguay. This was perhaps the first truly—though probably still imperfectly—democratic election in Paraguayan history as it was the first election to be carried out under the 1990 electoral code. This election sent a shockwave of fear through the authorities of the Colorado party because an independent candidate, Dr. Carlos Filizzolla, won the Mayoral race of the Municipality of Asunción. Also, the Liberal party won in 42 of the 203 municipalities that existed at the time. While the Colorado party did win a majority of the municipalities, party leaders were very concerned that they had performed less well than expected in important, large, urban centers. It was this fear that led party leaders to push for the elimination of the runoff in presidential elections and to put forward a simple plurality rule for the selection of the president—an institution which benefits the two largest parties (Flecha and Martini, 2019). In response to this election the factions of the Colorado party also temporarily set their differences aside in order to compete in the Constitutional Convention election, which took place on December 1, 1991, under a united front.

After the 1992 Constitution was written and approved, the intra-party divisions started again in the Colorado party towards the end of 1992 in anticipation of the 1993 General Elections, in which a new president would be chosen—Andrés Rodríguez would be barred from running as the 1992 Constitution prohibited any and all forms of reelection. The main issue was that the person favored as the presidential candidate by most of the party, Luis María Argaña, sought support of the militant, pro-Stroessner faction of the Colorado party in order to gain his popularity. The outgoing president, Rodríguez, having carried out the coup on Stroessner, was not too fond of the idea of a return of militant Colorados to power. Therefore, the 1992 primary election was mired in fraud, and this fraud was admitted publicly by prominent Colorado party members in 2008.7 Therefore although if fairly recorded the

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7Juan Carlos Galaverna admitted that fraud was committed against Argaña in 2008 Flecha and Martini
electoral results would have proclaimed Argaña as the winner of the primary, instead the nomination went to Juan Carlos Wasmosy, an outsider businessman without much political experience.

These intra-party factions remained in the Colorado party in democratic times, but they changed and re-assembled around different figures. Because Wasmosy did not win a single-party majority of the legislature, and because even his party was split into two factions, Wasmosy both had to rely on a prominent, ex-military party leader, named Lino César Oviedo, and he had to create a “governability pact” with the opposition parties. Throughout his presidency he was on unstable grounds, however, and eventually he even fell into a conflict with Oviedo—his main basis of support in the Colorado party. When he thought he had a moment of strength, Wasmosy ordered the retirement of Oviedo from the army. Oviedo did not comply with the order, and was accused of military insubordination. As a concession Wasmosy offered Oviedo the portfolio of the Ministry of Defense, but this led to civilian mobilizations against the deal. Eventually, Oviedo retired from the military without receiving the Ministry portfolio, but this retirement enabled him to run for office, which he immediately began to do in 1996 under the intra-party movement “National Union of Ethical Colorados” (UNACE).

Once Wasmosy’s presidency a fullblown battle between Luis María Argaña and Lino César Oviedo began in the Colorado party. The scene of this battle was the 1997 intra-party primary between Oviedo and Argaña. Again this primary was riddled with chicaneries. Oviedo won the primary, but after winning he was accused of the military insubordination he carried out against Wasmosy in 1996, and he was therefore sent to prison and barred from assuming the party nomination. After this event took place, Oviedo’s vice president, Raúl Cubas Grau, assumed the top of his ticket, and in order to create a “consensus” ticket of “reconciliation,” Argaña was named the vice president of Cubas’ ticket for the Colorado party. However, problems continued, and these problems were especially accentuated when...
Cubas pardoned Oviedo’s sentence in 1998.

In 1999 the intra-party conflict driven by factions of the Colorado party continued. In March of 1999, Argaña’s car was shot down in the middle of a street in Asunción, and the vice president died. This led to a mass scale mobilization against the Cubas presidency. This mobilization was initially met with violence, and some of the protesters were shot by military officers, but eventually the government backed down. Cubas resigned, Argaña was dead, so there was an immediate vacuum of power in the government and in the Colorado party. The next in the line of succession was Luis González Macchi, the Colorado president of the Senate. He served out the remaining 4 years and 5 months of the presidential term, and a special election was held in which Julio César “Yoyito” Franco, of the Liberal party, was chosen as vice president—he received the support of the UNACE faction of the Colorado party in order to be able to win (Paredes, 2014). In 2003, a newly elected president from the Colorado party, Nicanor Duarte Frutos, brought much stability to the party and the country.

However, factionalism never subsided from the main two political parties. Oviedo’s, UNACE movement eventually splintered off of the Colorado party—changing its name from National Union of Ethical Colorados to National Union of Ethical Citizens—and returned to compete independently from the Colorado party in the 2013 presidential elections. This may have been what led the Colorado party to lose for the first time since 1948 against a left-wing independent former bishop named Fernando Lugo who ran with the support of the Liberal party. Lugo’s coalition was especially fractious because he himself was not a part of the largest party of his coalition, the Liberal party, whereas is vice president, Federico Franco, was. In 2012, Lugo was impeached and in 2013 Lino Oviedo died in a helicopter accident. This led to the reunification of the UNACE into the Colorado party. Even with this reunification, however, the fragmentation of the Colorado party persisted. While initially unified in support of the new presidential candidate, Horacio Cartes, the Colorado party began to split again in 2017 with one faction, the Honor Colorado faction supporting Cartes, and another, the Añetete faction, supporting a new party leader of the
name Mario Abdo Benítez—the son of the private secretary of Stroessner with the same name. In 2017 Abdo Benítez and his movement beat the Honor Colorado faction for the nomination to the executive office, and in 2018 he was elected the president of the country.

7.10 Conclusions: The Shadow of History

The purpose of this chapter was to trace the historical processes that led to the foundation and development of political parties in Paraguay to see which theory of parties most closely conforms to the parties we see in Paraguay. The three theories we had reviewed in the previous chapter were 1) the cleavage model of party development, 2) Aldrich’s model of party development, and 3) the UCLA School model of party development. The cleavage model argues that historical processes that act on a country create salient identity-groups, which then serve as the basis on which political parties are then constructed. Aldrich’s model argues that political parties are created by politicians, for politicians, in order for politicians to solve certain collective-action problems that are present for politicians when legislating and when mobilizing the electorate for elections. Finally, the UCLA School argues that political parties are principally tools used by interest groups, which seek to dominate the party nomination process in order to ensure that only their “friends” are nominated to positions of power. In this last model groups are the main actors that make up parties, but in contrast to the cleavage model these groups are either narrow-interest groups or activist ideologues, but they are not quite the deep-rooted, historically salient, identity groups that the cleavage model assumes. So under which of these models of political parties do Paraguayan parties fall under?

As argued by (Dix, 1989), Paraguayan political parties do not seem to fall under the cleavage theory of parties. Extensive explorations of this fact were carried out by Lewis (2016) and Chamorro (2016) who minutiously traced the backgrounds of the main actors that developed the Colorado and Liberal parties and found that the initial composition of these two parties were quite similar. There were not more legionnaires or lopistas in one
party over the other, and neither of the parties were solely composed of people with affinity to either of the main occupying powers of Paraguay after the Triple Alliance War—Argentina or Brazil. By summarizing the confusing cyclical alliances and power struggles that took place right before the formation of parties I showed that there were no stable, historically derived, identity groups that could have served as the foundation of political parties at the time. Parties seemed to form around idiosyncratic solidifications of political alliances.

An issue we have seen in Paraguay is that the instability created by factions and the factionalism of the two main political parties of the country is quite real. I have argued, like Aldrich (2011) and the UCLA School have, that political parties could theoretically reduce this instability by limiting the Universal Domain available to legislators—or politicians more broadly. Given the level of political instability in Paraguay before political parties were created, it seems plausible that political parties were created in order to attempt to reduce this instability. That being said, it is also evident that this attempt at stabilization through the creation of political parties failed in Paraguay, especially because political parties were so factionalized even after they were institutionalized. After failing for years to create stability through political parties, Paraguayan elites had no better idea than to reduce instability through creating a dictatorship. Finally, after the dictatorship fell factions re-emerged but (mostly) without the high levels of instability that we had before the dictatorship and before democratic institutions.

In sum, it seems clear that while the factionalism of political parties in Paraguay do seem to signal that narrow-benefit interest-groups are key actors in Paraguay’s political parties, the UCLA School does not provide a sufficient explanation for what mechanism political parties use to maintain their intra-party factions in check. That is, how do narrow-benefit interest-groups create and maintain the broad coalitions that are necessary to form political parties? What mechanisms or institutions do they use to avoid dissolution, factionalism, and chaos? These answers are not readily available from the UCLA School model at the moment (McCarty, 2016).
In short, the UCLA School is the closest model to accounting for the factionalism of Paraguayan politics, but there are still modifications to this theory that would be necessary to provide a more comprehensive account. In the next chapter I turn to developing this theory of fractious parties. Like the UCLA School theory of parties, I start from the assumption that the key actors of political parties are narrow-benefit interest groups, but I develop the theory further to account for why these groups may be willing to form broad coalitions (political parties) under democratic systems, and why they may fail to decide to form these coalitions under non-democratic, competitive systems of government.
Chapter 8

A Theory of Fractious Parties

8.1 Introduction

In the previous chapter, we explored how existing models for the creation of political parties failed to completely account for conditions of party development in Paraguay. First of all, although political parties did form after the Triple Alliance War, it is clear that the war did not create sociological cleavages that then solidified into political parties. In the run up to the foundation of Paraguayan political parties, politics was cyclical, chaotic and pragmatic. Factions and political alliances formed and fell apart, only to reform and fall apart again. That being said, after the 1887 special election of Villarrica, both political parties were founded and somewhat institutionalized in order to 1) counteract the executive, and 2) defend the executive from this counteraction. In this sense, then the foundation of parties in Paraguay seems closest to what would be expected by the UCLA School, which assumes interest-groups will form and disband alliances until they are able to sustain an alliance within competing political parties. However, perhaps because of their US focus, the UCLA School fails to fully grasp the incentives for intra-party factionalization that clearly exist and have existed in Paraguay throughout its history. Therefore, one question we must answer in addition to understanding why parties exist in Paraguay is why do intra-party factions exist in Paraguay? And when can these intra-party factions cooperate to become partisan, long-term coalitions?

In this chapter I will attempt to address the issues I have raised about how existing theories only incompletely account for what we observe in Paraguayan politics by creating a comprehensive theory of fractious parties. First, I will modify the UCLA theory of parties to
account for intra-party fragmentation, and I will conclude that political parties can survive through one simple institution: making it difficult to eject sub-party factions from the party. I argue that this institution can be maintained because of 1) the informational gains that an oversized party has over a minimal-winning coalition, and 2) because the decision of who to eject from the party is zero-sum, so it is bound to create intra-party conflict because ejecting different factions will concentrate power in different, opposing, leadership structures in the party.

After creating this model of “Why Parties” (and why factions) I will extend this model to show “where” the effects of these multidimensional parties can be found independent from the outcomes we might expect from party-less legislatures. Finally, I will also discuss how agenda setting fits into this model. I argue that agenda setting powers are not necessary for the development and maintenance of political parties. Although it is true that agenda setting powers may be useful for defending the party label because it hides the disorderly intra-party negotiations that take place in lawmaking from the electorate, I argue that when push comes to shove political parties are quite capable of surviving this clumsiness. In other words, agenda setting powers may be useful, but they are not necessary for the formation and maintenance of parties.

8.2 Why Parties? and Why Factions?

Both Aldrich and the UCLA School argue that political parties are created in order to form long-term coalitions, but they differ in their descriptions of who the long-term coalitions are for. Aldrich argues that the long-term coalitions are meant for politicians, but the UCLA School argues that long-term coalitions are meant for interest groups and activists. Aldrich argues in his model that long-term legislative coalitions are maintained through concentrating power in the party leadership. In contrast, the UCLA School argues that the party leadership is weak, and that the main way that interest groups coordinate and maintain their long-term coalitions is through nominating their “friends” to positions of power. That being said, where
Aldrich is clear about how intra-party disputes are resolved—through partisan hierarchy and party institutions—the UCLA School model is unclear about how interest-group coalitions are maintained and how party institutions affect how interest-group preferences translate into party positions (McCarty and Schickler, 2018). Therefore, there are two overarching conflicts that jointly exist between these two models. First, who are the dominant actors in party politics, party leaders or interest groups? The second question is, how do these dominant actors maintain a partisan coalition, counteracting the natural tendency of majoritarian institutions to dissolve into cycling, Arrovian non-partisan pressures?

Let us begin with the portion that both Aldrich and the UCLA School have in common. Regardless of who the main actor of interest is—politicians or interest groups—both models assume that these political actors can benefit from long-term coalitions (Bawn et al., 2012; Aldrich, 2011). Furthermore, both these models assume that their respective actors of interest—politicians or interest groups—have multidimensional, particularistic preferences. Because of this multidimensional structure of preferences, if party institutions and legislative institutions do not intervene, we may expect cycling majorities and legislative instability as predicted by Arrow (1951). As a reminder, Arrow argued that any electoral system cannot simultaneously be 1) be Rational (individual preferences are complete and transitive), 2) have Universal Domain (no policy alternative is restricted beforehand), 3) have Pareto Optimality or Unanimity (if every member of the group chooses a single option that option should win), and 4) be a Nondictatorship (an individual cannot choose for the group as a whole) (Arrow, 1951). Whether the main actors of political parties are interest groups or politicians, it seems unavoidable that one major role of political parties must be to reduce the legislative instability produced by unconstrained, multidimensional and non-partisan preferences (Aldrich, 1989), and this reduction of instability must come at the curtailment of one of the four assumptions provided by Arrow.

Hobbes (1651) and the Revolutionary February Movement initiated by Rafael Franco after the Chaco War in Paraguay in the 1930s and 1940s would emphatically agree with
this, and they would argue that the solution to Arrow’s problem is simple: create a dictatorship. To a degree, Aldrich agrees with this prescription. Obviously, Aldrich does not promote dictatorship as a solution to legislative instability, but he does argue that the concentration of power in certain actors can lead to more legislative stability. According to Aldrich (1989), “Institutional structures can... induce order, but each such structure also concentrates power” and “as a result, these order-producing institutional structures may be attacked and possibly altered on the grounds that they are ‘nondemocratic,’ i.e., nonmajoritarian,” and finally he writes that “the problem, therefore, is to strike an ever fragile balance between majoritarian instability and nondemocratic concentrations of power.” Therefore, the argument that concentrating power reduces legislative instability is not without merit.

That being said, dictatorships are not ideal for society because they give the dictator the authority to tax the population too highly, which is bad for the productivity of society as a whole. In order to maximize productivity of society under a dictatorship, the dictator would have to make credible commitments to respect private property in order to incentivize private investments. That being said, it is impossible for the dictator to credibly commit to respect property without renouncing some of his powers (Olson, 1993; Acemoglu and Robinson, 2006). Therefore, as a whole, dictatorships are less than optimal at the country level because dictators cannot credibly commit to respect private property, and without this credible commitment citizens and foreigners have no incentives to invest in the country as those investments can be expropriated at any point.

Less evidently, high concentrations of power can also be problematic at sub-national organizations like political parties or private firms. To see why, we must again return to Condorcet’s writings, but instead of focusing on his paradox, we must this time focus on “Condorcet’s Jury Theorem” (Miller, 1992). This theorem explores how collective choices may be better than individual choices. According to this theorem, if the average member of a group has more than 50% probability of getting a right response then the group as a whole will make better decisions than each individual inside of the group, and the probability of
the majority of the group making a correct decision increases to 100% as the group gets large. Because of Condorcet’s Jury Theorem, a dictator may have very strong incentives to delegate some power to his/her subordinates even if the subordinates are no more likely to make the right choices than the dictator. According to Miller:

Suppose, for example, that a dictator and each of his two subordinates independently have a 60 percent probability of making the correct judgment... If the dictator agreed to be bound by majority rule, the correct judgment would be made 65 percent of the time; that is, the majority judgment would be a 5 percent improvement (Miller, 1992, 81).

This example shows that even if subordinates are no more intelligent than the dictator, devolving some powers to subordinates may benefit the dictator. Therefore, pure dictatorships never produce optimal outcomes for organizations such as firms or political parties either because an organization that relies on a single individual to make all of its choices—a dictatorial organization—is likely to make fewer correct choices than an organization that relies on several individuals to make all of its choices even when everyone—dictators and subjects alike—have similar levels of information and expertise.

Of course, the assumption that everyone is equally knowledgeable is unrealistic. There are many situations where expert subordinates, who perhaps have spent their entire lives studying a particular topic or problem, may have more information about how to properly solve problems than the dictator himself. If this were the case, then the dictator of course would have an incentive to give more decision-making powers to these subordinates in order to be able to take advantage of their expertise. That being said, “as problem solving and decision making in an organization becomes much more complex, those individuals

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1While majoritarian institutions in this case would still be an improvement relative to the non-expert dictator’s decision, majoritarian institutions are also likely to dilute the effectiveness of the expert’s decisions. Therefore, more than relying on majoritarian institutions it would be more useful for the dictator to give full powers to the expert in deciding on his/her topic of expertise, and less useful for the dictator to constrain this expert’s decisions through majoritarian institutions unless all people that are voting are experts on the issue (Miller, 1992).
who have expertise... will increasingly manage to secure a real share of decision-making authority... [which] inevitably gives them some opportunity to advance their own interests” (Miller, 1992, 82 and 86). Of course, in the presence of delegation “the advantages of dictatorship so clearly captured by the Arrow theorem - coherence, efficiency, and consistency - will be at risk. As pockets of delegated authority spread within the decentralized firm, keeping the firm on a unified coherent course will become ever more difficult” (Miller, 1992).

This conflict between union of purpose with decentralization of expertise was captured by “Sen’s Paradox.” According to Sen, an organization cannot satisfy these four assumptions simultaneously: 1) Universal Domain, 2) Pareto Optimality or Unanimity, 3) Rationality (complete and transitive preferences), and 4) Minimal Delegation (Miller, 1992, 88).

Sen’s Paradox brings us back to the UCLA School’s model of political parties. According to Miller, one option to reduce inefficiencies or intransitivities created by Sen’s Paradox is to limit universal domain, and he argues that “the most obvious means for doing so is selection: choosing people who will have the ‘right’ preferences” (Miller, 1992, 95). This is exactly what the UCLA School argues that interest-groups do in order to dominate political parties (Bawn et al., 2012, 7). They argue that by controlling the selection process of candidates—candidate nomination—interest groups can reduce the principal-agent problems because they have less of a need to oversee their agents (politicians) because the agents of interest groups are true believers of the group’s cause.

The issue that the UCLA School does not deal with, however, is that “ironically... selecting industrious, loyal individuals solves only one level of the Sen Paradox. If two different subunits of an organization each select industrious individuals who are loyal to subunit goals and values, the Sen Paradox can reemerge at a higher level in the organization, as the phenomenon sometimes called ‘tribal warfare’” (Miller, 1992, 97, emphasis in original). Because there are many interest-groups and activists that may seek to control the nomination process, it is likely that this tribal warfare will take place within political parties that decentralize too much power in interest groups. If this tribal warfare takes place, the “energetic pursuit
of subgoals result in outcomes that are inefficient for the organization as a whole” (Miller, 1992, 97).

In sum, the social choice and game theoretic work presented in this section show that there are reasons to expect hierarchy in political organizations. This hierarchy is essential for reducing the instability which is pervasive under simple majoritarianism. However, hierarchy is not without problems of its own. In complex organizations where leaders must rely on subjects to make decisions which are correct for the organization as a whole, there is necessarily a trade-off to be made between concentration of power in the top, which may cause the leadership to make inefficient decisions more often than necessary, or decentralization of power, which may lead experts to make choices that are efficient at the level of their sub-party organization, but which are inefficient for the party as a whole. In short, in any party organization that is not ruled by a party-dictator, we are likely to have some level of intra-party factionalism.

In the context of politics, this tug-of-war between party leaders and partisan interest groups have also been described by (Aldrich, 2011, 187), who argued that “benefit seekers... prefer to be a critical component of the winner’s coalition, therefore desiring very close victories. That way benefit seekers can most convincingly press their claims on the winner, arguing that their support was crucial.” This is, I argue, the core of the conflict between party organizations and intra-party factions. Whereas party organizations have an incentive in maximizing the electoral prospects of their party in order to gain a majority in the legislature, intra-party factions also care very much about their relative position within the majority party. Given this structure, party organizations would prefer a larger than minimal coalition for two reasons. First, because a larger than minimal coalition allows party organizations to concentrate more power because they need not rely on any single coalition member to maintain power, but rather they can play faction members against each other. Second, party organizations would prefer a larger than minimal coalition because it would maximize their probability of having maintaining their majority-party positions. In
contrast, faction leaders would prefer a minimum-winning-coalition and they would prefer that the minimum-winning-coalition be composed only of members that maximize their relative influence within the majority party.

As a real-life manifestation of this conflict we may consider the dilemma depicted by (Przeworski and Sprague, 1986). These authors explored why socialist parties did not bring about the level of radical change feared by most conservatives in Western Europe after the mass enfranchisement of Western-European working-class populations. The main reason, argued (Przeworski and Sprague, 1986, 3) was that:

The proletarians... never became a numerical majority in any society. Hence the electoral mandate for socialism could not be obtained by workers alone...

Given the minority status of workers, leaders of class-based parties must choose between a party homogeneous in its class appeal but sentenced to perpetual electoral defeats or a party that struggles for electoral success at the cost of diluting its class orientation.

Therefore, it is easy to see that the tension between the incentives of intra-party factions (the proletariat) and the party as a whole (a coalition capable of winning majorities) must exist because there is a trade off between getting more concentrated benefits for a particular sector and the broadness of the appeal that this sector can have in order to win an election. Only by becoming more inclusive can the party reach the support it needs to command a majority, but this inclusiveness comes with the drawback that it makes it more difficult for a subgroup of the newly inclusive party to concentrate benefits in itself. In short, all these examples show that it is important to consider that party organizations and intra-party factions may have different interests. Parties as a whole might want to maintain an oversized coalition in order to maximize its ability to win a majority. In contrast, factions may want a minimal winning majority in order to be able to concentrate as much power in themselves in order to amass as much distributive benefits for themselves as possible.
8.3 Hierarchical Complications in the UCLA School Model

So how might we modify the UCLA School model to account for the hierarchical dilemmas I described above? As discussed in Chapter 2, Bawn et al. (2012) illustrate their model with Figure 8.1, which includes interest groups A, B, C, D, E, Parties 1 and 2, the electoral blind spot, the equivalence class and example positions p1’, p1”, p2’, and p2”. The main issue with this model is that under these conditions we do not have a strong theoretical reason for understanding why Party 1 and Party 2 are the parties that form, and not others (McCarty and Schickler, 2018). As I will show, there are a variety of party coalitions that can form given this configuration of preferences, and it is necessary to develop how political parties form from a given configuration of legislator or actor preferences.

Figure 8.1: UCLA School “Electoral Blind Spot”

To begin the model, I will make the assumption that all the interest groups in Figure 8.1 have a single vote, and because this assumption essentially allows me to treat interest groups as legislators, I will simply be referring to A, B, C, D and E as “actors” or “legislators.” This is clearly a simplifying assumption that does not match up to reality because interest groups are likely to have diversity in members, resources and political access. That being said, we
are already making a series of simplifying assumptions—a two rather than higher dimensional space, having only five groups and having only two parties, single-peaked preferences, etc.— and I have shown in the historical chapter of this book that cycling was especially prominent in Paraguay when politics took place among interest groups that were unconstrained by the electorate and when politics took place outside of the legislature. Therefore, these simplifying assumptions are not likely to be problematic because throughout this exercise I am mainly focused on providing an explanation for the stability of partisan coalitions. Any cycling effects we may uncover by assuming that groups have single votes is more likely to underestimate instability of coalitions rather than overestimate instability of coalitions. Therefore, if we cannot find stable parties under these assumptions, it would be even more difficult to find stable parties under the assumption of varying strength of interest groups—which would be even more problematic for the UCLA School model because it implicitly argues that accounting for the formation of parties under these more complex assumptions about interest groups is straightforward.

With that simplifying assumption in place, let us first consider where we might expect outcomes to result given this configuration of actor preferences, assuming that political parties do not exist. In order to do this in a simple, visual manner, we can rely on the concept of the “yolk” that I described in Chapter 2. To recall, the yolk is the smallest circle possible which touches all median lines, and median lines are lines that separate a minimal majority from everyone else (in this case a median line has 3 points either on the line or on one side of the line and two points on the other side of the line and off of the line). The yolk shows the region towards which policy outcomes should gravitate towards under conditions of simple majority rule, and smaller yolks indicate higher levels of policy stability (Feld, Grofman and Miller, 1988). Figure 8.2 shows where the “center” of this configuration

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2These figures are theoretical examples, so the shown yolks may not be optimized as fully as possible. Furthermore, perhaps uncovered sets are better conceptually than the yolk because they give a more precise estimate of exactly where we would expect policy outcomes to result. That being said, yolks are useful for this theoretical exposition and uncovered sets will be used in the empirical portions of this book. The size of the yolk and the size of the uncovered set are related (Tsebelis, 2002).
of preferences may be found. Of course, this is not an equilibrium and instability may still be seen, but with the yolk at least we can see a region towards which policy is more likely to move towards and not away from (Feld, Grofman and Miller, 1988). Finally, we can also see that the configuration of preferences of these interest groups is not completely centered on the preferences of the electorate. This is, of course, a function of the arbitrary places where I decided to locate the preferences of ideal points in this example—which is based on Bawn et al.'s (2012) example—but nonetheless showing that the aggregated preferences of interest groups are distinct from the aggregated preferences of voters is part of the argument of both Bawn et al. (2012) and Schattschneider (1975).

Figure 8.2 : Expectation of Outcomes Without Political Parties

The argument of Aldrich (1989) and Aldrich (2011), which is a portion that the UCLA School agrees with, is that by forming long-term coalitions a majority of legislators (or groups) can concentrate benefits in themselves and concentrate the costs of policymaking in the minority. To explore what these coalitions may look like, we can make “unanimity cores” for each possible combination of 3 legislators. A 3-legislator unanimity would become a majority in this 5-person, theoretical legislature. Therefore, all 3-legislator unanimities show all potential minimal-winning parties. All possible configurations of unanimity cores
are shown in Figure 8.3. Each unanimity core is simply the triangle between three points. For example, the triangle AED is a unanimity core for those three actors, triangle ADB is another unanimity core, and BCE, and so on and so forth. In total, there are 10 combinations of 3-legislator parties available. However, it is easy to see that some 3-legislator parties are more beneficial to legislators than others. Namely, parties that are formed by adjacent legislators are able to create smaller and less-centrist (relative to the legislators’ center) unanimity cores. For example, party AED would be able to concentrate more power, given the preference configuration of its members, than party EBD, because the unanimity core of AED is smaller than the unanimity core of EBD. A smaller unanimity core would lead a party to create a stronger intra-party consensus, allowing it to concentrate more benefits in itself.

Figure 8.3: All Possible Unanimity Cores, Relative to Yolk of Floor

Of course, political parties must not only be ruled by unanimity. In fact, Aldrich (1989) argued that it would be possible to create a structure-induced equilibrium for an entire legislature by simply following one rule: a bill will only reach the floor if a majority of the majority party agrees on it. By implementing this agenda-setting rule, a majority party may implement its agenda while permitting some level of intra-party dissent. In order to
modify Figure 8.3 to allow for the possibility of intra-party majoritarianism rather than requiring intra-party unanimity, I created Figure 8.4. The two panels of this figure show all possible yolks for all possible majority parties. As I mentioned above, some majority party configurations may be able to concentrate more power than others given the configuration of preferences of their members. In the left panel of Figure 8.4 we can see five compact, non-centrist yolks that derive from configurations of parties developed by actors that are close to each other while the right panel shows large, more-centrist yolks that are derived from configurations of parties developed by actors that are further away from each other. Parties with large yolks are more likely to have unstable internal politics.

Figure 8.4: Partisan, Intra-Party Majoritarian Outcome Possibilities

We might expect AED to become the majority party in this situation because yolk 1 in the left panel is the smallest. This would be the party that would allow for the largest concentration of power for the majority party. In terms of intra-party hierarchy, according to Cartel Theory and Conditional Party Government, we might expect Party AED to delegate

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3Given that all possible majority parties are 3-actor combinations, median lines for each party are simply lines that connect 2 actors within the party. They happen to be the same as the unanimity cores for each party in this example, but a unanimity core and a median lines can be conceptually distinct.
powers to a leader of this party in order for this leader to maintain the coalition and defend
the party label (Cox and McCubbins, 1993, 2005; Carroll and Kim, 2010; Aldrich, 2011). This
devolution of power might probably be given to the legislator which is closest in preferences
to the median of the majority party, but because in multidimensional spaces medians often
do not exist, perhaps the delegation of power in this situation would be given to the member
of the party that is closest to the yolk of the majority party. In the case of yolk 1, that
would be legislator E.

Unfortunately, like most solutions to instability in multidimensional spaces, this attempt
to reduce legislative instability through partisanship is bound to be the victim of legislative
instabilities itself (Riker, 1988). In the coalition AED, E becomes the party leader because
E is closest to the yolk of that party. However, if A is able to eject D from the party and
incorporate B, then A would be the legislator closest to yolk 2, the yolk of the new majority
party, and A might be better positioned to become party leader. Then, B may attempt
to eject E from the party and incorporate C into the party so that B becomes the new
party leader, and so on and so forth. Therefore, neither hierarchy nor long term legislative
coalitions are expected to eliminate legislative instability entirely, but they may reduce them
to the extent that it is difficult to eject people from political parties. This slow-moving cycle,
or “realignment” of politics through the lateral replacement of coalition members has been
called “flanking” by other academics (Miller and Schofield, 2003).

Because minimal winning coalitions are unstable, oversized majorities may often be cre-
ated in their place (Frohlich, 1975; Krehbiel, 2018). Granted, oversized majorities are also
likely to be somewhat unstable (Frohlich, 1975), but I argue that oversized majorities may
be somewhat more stable to the extent that it may be difficult to eject people from oversized
coalitions. Imagine now for example that in party AED, A, in an attempt to shift power
away from E, is able to incorporate B into their coalition. However, assume also that A fails
to eject D from their coalition. That would result in the oversized majority party of AEDB
shown in Figure 8.5. There are now four possible partisan combinations that would reach a
majority of the chamber: AED, EBD, EAB, and ADB. The unanimity core of the party as a whole becomes the polygon ABDE. With this oversized coalition, the incentive would be for legislators to eliminate one legislator from the coalition in order to concentrate power in one of the possible minimal winning coalitions. However, a conflict of intra-party interests arises for legislators when they try to decide on who to eject from the party and who to keep in the party.

Specifically, it may be possible for legislators B and D to exploit a conflict between legislators A and E in order to gain and maintain political power within the party. First, B and D are in an advantageous position because for them ejecting someone from the party does not provide large gains relative to the yolk of the floor—ejecting A or E would lead to minimal winning parties with the large unanimity cores of ABD or EBD and the centrist partisan yolks of 7 or 10, all of which mostly overlap with the yolk of the floor. In contrast, legislator E would gain substantially by ejecting B from the party because the minimal winning coalition of AED is distinct from the yolk of the floor as a whole, and because yolk 1 would make it reasonable to make E the leader of this minimal-winning party. In contrast, A would prefer to eject D from the party because the unanimity core of AEB is distinct from the yolk of the floor as a whole, and because yolk 2 would make it reasonable to make A the leader of this minimal-winning party. However, if A proposed ejecting D, both D and E would vote against this proposal. D would vote against because it would not want to be ejected from the majority party and E would vote against it because it would not want the power of the party to be concentrated in yolk 2 near A. Similarly, if E proposed ejecting B, B would vote against this because it would not want to be ejected, and A would vote against this as well because it would not want all the power of the party to be concentrated in E. In short, with a simple supermajoritarian rule for ejections (requiring 3 yeas) the oversized coalition can be maintained, and party members may have an incentive in maintaining this supermajoritarian rule as long as the zero-sum problem of who to eject from the party—and where to concentrate intra-party power—continues to exist. This zero-sum problem, and the
fact that 3 yeas are necessary for the party to be able to pass policy in the 5-actor legislature, create strong incentives for the party to create and maintain supermajoritarian institutions.

Figure 8.5: Intra-Party Dynamics in Oversized Parties

Additionally, it might somewhat be in the interest of legislators A and E to maintain both legislators B and D in the party as well. The coalitions of AEB and ADE, that are able to maintain a majoritarian coalition and concentrate power in legislators A and E are also the coalitions that have the smallest overlaps with the yolk of the floor of a whole and no overlap with the blind spot of the electorate as a whole. However, yolks 7 and 10 and the 3-legislator unanimity cores of EBD and ABD mostly overlap with the yolk of the floor as a whole and they partially overlap with the blind spot of the electorate. Therefore, the inclusion of both B and D may be useful even for A and E because it allows them to prevent themselves from passing extreme policies that may be punished by the electorate. In other words, B and D can provide information to A and E about which policies may be unacceptable to the electorate, and therefore A and E may decide to give up their prospects of concentrating too much power in themselves if they find that their quasi-dictatorial powers may lead to the development of parties that lose in a landslide in the next round of elections.
If we add a bit of complexity to this idealized model, the informational problems of legislators are likely to be substantially higher than what I have modeled here. For example, up to this point A, B, C, D and E have been treated as legislators with one-actor-one-vote, but if we were to generalize this model to interest groups the actors would have varying levels of strength leading one yolk or another to be more important centers of gravity. Additionally, the relative strength of each group can vary across time, shifting the internal dynamics of the party. Given these more complex informational problems, even minimal winning coalitions that have the ability to concentrate power in themselves may be willing to tolerate an oversized coalition if this oversized coalition can “save them from themselves” relative to the electorate as a whole. Much in the same way that Miller (1992) argued dictators have informational limitations and may make poor decisions if they are omnipotent but not omniscient, omnipotent minimal-winning coalitions can meet their own demise by not incorporating legislators that help them understand the size and location of the electoral blind spot.

In sum, what I have developed in this extended example are one mechanism for the formation of oversized coalitions, and one mechanism for the maintenance of oversized coalitions. In terms of oversized-coalition formation, the mechanism is as follows:

- When minimal winning coalitions exist, they concentrate legislative power in themselves relative to the legislature as a whole. However, within the minimal winning coalition, power is also concentrated in the hands of the particular actor closest to the yolk of the minimal-winning coalition.

- in order to unsettle this intra-party dominance and to maximize reelection prospects for the party as a whole, legislators that are not dominant within the party—which are likely an intra-party majority—may attempt to include new actors in the party, leading to an oversized coalition.

The second mechanism I developed has to do with the maintenance of oversized coalitions.
That mechanism is as follows:

- Once an oversized coalition is established, an intra-party conflict arises about who should be ejected from the party should the party want to return to becoming a minimal winning coalition. Dominant actors, in seeking to maximize or maintain their own power and prevent the concentration of power of their intra-party opponents, may prevent expulsions from the party.

- Furthermore, even in this idealized situation, legislators have an information problem about the location and size of the electoral blind spot. Oversized coalitions are beneficial, then, because the inclusion of centrist actors in an oversized party allows for non-centrist actors to be better able to anticipate the preferences of the electorate in order to prevent electoral wipe-outs.

The benefit of this expanded model is also that it can make predictions for what we would expect to see in political parties that function in non-democratic, competitive systems. In that case, we would simply see a situation where minimal winning coalitions have less of an interest in anticipating the electoral blind spot—which doesn’t exist when elections do not take place—and therefore they may be more willing to concentrate power in themselves. The within-minimal-winning-coalition hierarchical problems are still likely to remain, however. This may explain why intra-party struggles and seeming “flanking” processes have been so common throughout Paraguay’s “liberal” period. When non-democratic minimal-winning coalitions exist, if the opposition can entice a single member of the minimal winning coalition to leave the governing coalition, then in our example there are immediately 10 possible minimal winning alternatives—and many more as the number of actors gets larger. That being said, while all minimal winning coalitions are likely to be unstable as long as preferences are multidimensional, not all minimal winning coalitions are likely to be the same in terms of concentration of power, as the sizes of the minimal-winning-coalition unanimity core and yolks are likely to vary in size. Given the instability of strictly min-
imal winning coalitions—and in non-democratic regimes the meaning of “minimal” would
obviously be fuzzy as elections do not provide strong measures of support for the dominant
coalition—somewhat oversized coalitions may still be desirable in non-democratic regimes
so that oversized coalitions can both provide information and stability to the regime. This
information and stability, of course, comes at the expense of somewhat limiting the ability
of the regime to create concentrated benefits for itself. All in all, this model captures the
trade-off between concentration of power and ability to gain and maintain power presented
by Przeworski and Sprague (1986) as a very real tension within political parties—even under
non-democratic regimes.

8.4 Where’s the Party? Partisan and Non-Partisan Outcomes

The previous model served to show the conflict between party leaders and party members,
and it showed that a key institution that may be relevant for maintaining a political party
is that political parties make it difficult to eject minority opinions from the party—this
institution is supported by the intra-party conflict over leadership positions that the question
of who to eject entails, as the ejection of one minority may concentrate powers in another,
leading a majority to oppose the ejection. Two main limitations about the previous example,
however, are 1) that given that the party yolks 1, 2, 10 and 7 overlap the yolk of the legislature
as a whole, it is difficult to see what benefit the creation of the political party may create for
members relative to the outcome they would have received had the party not existed, and
2) in the previous example it also seems like the choices political parties and legislators as a
whole have to make is highly constrained by the electoral blind spot. That being said, I will
argue that neither of these two points undermine the model.

Relative to the first issue, the fact that partisan predictions might not be distinct from
non-partisan predictions are quite consistent with previous theories of legislative parties. The
fact that partisan and non-partisan outcomes were observationally equivalent was, after all,
the argument made by (Krehbiel, 1993) when he asked his question of “Where’s the Party?”
Furthermore, even most partisan political theories concede that the power of political parties may wane under different configurations of preferences within the parties (Aldrich, 2011; Cox and McCubbins, 1993, 2005). Therefore, in terms of the first problem, the model I exposed in the previous section is useful because it can be used to create both partisan and non-partisan predictions for where we might expect outcomes to result if parties are effective at concentrating power and if parties are not effective at concentrating power. Parties that are effective at concentrating power are likely to have some key supermajoritarian rules in order to maintain the political party and in order to be able to legislate in a partisan manner. As mentioned in the previous section, supermajoritarian rules can assist parties by limiting the extent to which they can expel minority interests from the party, which can allow political parties to anticipate the blind spot of electors more effectively and can limit the intra-party competition for dominance of the majority party. Another reason why supermajoritarian rules may be important for political parties is because in order for a partisan majority to dominate a legislature, a party needs at least 50%+1 seats of the legislature and it needs at least the 50%+1 of the legislature that correspond to its party to vote in a given way. That is, in order to have a partisan majority a majority party needs a supermajority of its party’s vote. Therefore a legislature that functions in a partisan fashion would meet the following prediction:

- **Partisan prediction:** Legislative outcomes are partisan if outcomes are more prominent near the region of preferences that corresponds to the supermajority of the majority party. In a two-dimensional space, this region can be operationalized as the supermajoritarian uncovered set of the majority party or the supermajoritarian yolk of the majority party.

To reiterate the meaning of the uncovered set, point X is “covered” by Y if all points that beat Y also beat X. Therefore, all points that cannot be covered by another form part of the uncovered set. The uncovered set is a region where we might expect most policy outcomes in multidimensional spaces. To reiterate the meaning of the yolk, the yolk is the
smallest point possible that touches all median lines, and a median line is a line that divides a minimal majority on one side and on the line, from a maximum minority on the other side. The yolk also signals a “center” of multidimensional preferences ruled by majority rule, and smaller yolks indicate less instability while larger yolks signal more instability. Taking into account supermajorities, qualified uncovered sets and yolks can be calculated by using a supermajority rule instead of a simple majority rule, and when a supermajority core exists it coincides with the supermajoritarian uncovered set (Tsebelis, 2002).

As we saw in the model developed in the previous section, different coalitions—whether oversized or minimal-winning—create different expectations for partisan outcomes. When legislators are able to establish a party with others that are close to them, as the minimal winning coalition of AED might be able to, then legislators are capable of using their partisan powers to create outcomes that are different from the yolk of the floor as a whole. However, the ABD coalition and the ADC coalitions, for example, create “partisan” expectations that largely overlap with the non-partisan expectation of the yolk of the floor as a whole. Furthermore, oversized majorities like the ABDE coalition I mentioned have a unanimity core that completely overlaps the outcome we would have expected from the floor as a whole. Interestingly, however, the example of the ABDE party formation I proposed might serve to justify why parties that cannot provide policy outcomes distinct from the floor do not automatically dissolve. Even within that ineffectual party, intra-party competition for power and coordination problems can make it difficult to eject a member from the coalition in order to make the party more effectual. Therefore, the first non-partisan prediction is of the ineffectual party:

- **Ineffectual Party:** A party that as a supermajority uncovered set or yolk that mostly coincides with the majoritarian uncovered set or yolk of the floor as a whole.

Another possibility of non-partisan outcomes can exist when a majority party exists and has a supermajoritarian uncovered set which does not coincide with the uncovered set of the floor, but in which legislators act as individuals rather than members of a given party. If this
were the case, technically the supermajoritarian uncovered set of the majority party could be estimated, but we might expect that if legislators act as individuals rather as party members, most outcomes would gravitate towards the uncovered set of the floor and not towards the uncovered set of the party. In the words of (Krehbiel, 1993, 235), “significant party behaviour [is] defined and operationalized as behaviour that is independent of preferences.” In this sense, “independence of preferences” would mean independent of the outcome we would expect from non-partisan legislators, which would be the uncovered set of the floor. If a non-disciplined party cannot minimally contain legislators to cooperating with the party, then the party could continue to exist, but it would not be considered a “legislative coalition” in any real sense of the word. Therefore, the second non-partisan outcome would be:

- **Non-Coalition Party:** A party that exists on paper but which does not constrain legislative behavior in any meaningful way. A supermajoritarian uncovered set may separate from the uncovered set of the floor, but in a non-coalition party the supermajoritarian uncovered set would not significantly predict legislative outcomes independent of the floor uncovered set.

### 8.5 Agenda Setting

An issue with the operationalization of “significant” partisan behavior by Krehbiel (1993) highlighted by Cox and McCubbins (1993, 2005) and Smith (2007) is that agenda-setting powers must be taken into account in order to uncover party effects that may be hidden. This critique is mainly a methodological issue. The problem is that roll-call data are very prominent in studies of legislatures, and these data are particularly vulnerable to the effects of agenda setting. The main argument, then, is that because roll-call data are affected by agenda setting institutions, and because parties may control these agenda setting institutions through partisan cartels, then preference estimates derived from roll-call behavior already include the effects of political parties in them. Therefore, agenda setting powers are important to consider because if not taken into account one may conclude that political parties
do not matter even though political parties have a strong agenda setting effect on the data generating process of roll-call behavior which biases one’s preference estimates (Hug, 2010).

However, something that is less frequently taken into account is that agenda setting powers can not only affect the relative partisanship of our preference estimates, but it can also affect the dimensionality of our preferences estimates (Dougherty, Lynch and Madonna, 2014; Wright and Schaffner, 2002). Therefore, similar to the criticism that Cox and McCubbins (1993, 2005) and Smith (2007) made about preference estimates incorporating the effect of parties, it must also be true that the dimensionality of preference estimates are also affected by the agenda setting powers of political parties—should these agenda setting powers exist. Ignoring that partisan agenda setting powers may also the dimensionality of legislative preferences is problematic because by assuming that unconstrained preferences are unidimensional we do not account for the full effect of political parties as an institution that not only concentrates benefits in the members of the party, but also an institution that fabricates legislative stability where it otherwise would have not existed (Aldrich, 1989).

The treatment of dimensionality of Cartel Theory is a bit problematic. In so many words, the construction of Cartel Theory is that majority party legislators have an interest in protecting the party label. In order to protect the party label the majority party must prevent being “rolled.” A roll is when a majority of the majority party votes against a bill, but the bill passes anyway—thus “rolling” the majority party as a steam-roller might. To prevent majority rolls, majority party members are willing to delegate some agenda setting powers to the leadership of the political party. Party leaders will often be found in the center of the majority party, so the agenda setting rule becomes: if a majority of the majority party is against a bill, then a bill will never reach the floor for a roll-call vote. By using this agenda-setting rule the majority party can prevent rolls through delegation to the party leadership. The losers in this arrangement are the majority party legislators that fall in the ideological position between the median of the party and the median of the floor because these legislators may individually benefit from majority party rolls. In order to offset this
policy loss for those members that must sacrifice for the party, Cartel Theory argues that these costs are offset by the party through “side-payments” to policy losers in the form of log-rolls and other distributive benefits. Cartel theory considers that the main motivator for legislative behavior is not ideology, and it argues that the main component of legislative preferences are electoral preferences. Cartel Theory is often modeled in a unidimensional manner (Cox and McCubbins, 1993, 2005; Carroll and Kim, 2010).

My main concern with Cartel Theory is that it simultaneously includes aspects of unidimensional models and aspects of multidimensional models without clarifying why it is willing to make those decisions. Try, for example to put Cartel Theory in the context of Preference Induced Equilibriums (PIEs) and Structure Induced Equilibriums (SIEs). Because preferences are modeled unidimensionally, Cartel Theory may seem like a PIE. However, Cartel Theory is also an explicitly non-centrist model, because it models the median of the majority party as being more relevant than the median of the floor as a whole. In order to justify this shift, it uses a non-preference-based explanation: the institution of agenda-setting. However, in order to justify why this institution exists, it relies on electoral preferences—which tend towards multidimensionality given the diversity of constituencies in the United States (Shepsle and Weingast, 1981)—and “side-payments.” This last concept of side payments is perhaps the least compatible with a unidimensional theory of parties. Previous researchers have shown quite consistently that in the absence of unidimensional preferences, legislative instability is expected, and without institutions this legislative instability can only be sustained if preferences are strictly unidimensional and single-peaked (Black, 1948; Riker, 1988; Aldrich, 1989). The existence of “side payments” in Cartel Theory are therefore difficult to sustain because if preferences were strictly unidimensional, there would be no side through which to pay. The assumption of unidimensionality of preferences is perhaps why (Krehbiel, 2018, 1108-1109) does not believe that Cartel Theory is particularly damaging to the centrist, Pivotal theory of politics, as he claims that “In fact, the basic model in Pivotal Politics is no more nor less a pivot theory than its putative nemesis, the party cartel theory,” and ”it
is straightforward to represent the cartel model within the pivot framework to represent the cartel model within the pivot framework and to make precise analytic comparisons between specific partisan and non-partisan models.”

Perhaps that is why some authors have been moving away from unidimensional models of legislative behavior, as Aldrich, Rohde and Tofias (2007) argued in their chapter called “One D[imension] is not enough.” However, when we shift Cartel Theory into a multidimensional space, several questions arise. For example, does agenda-setting produce legislative stability and partisan outcomes, or does it only produce partisan outcomes and not legislative stability? If agenda setting institutions create legislative stability, why are they impervious to legislative instability as the “inheritability problem” might suppose? (Riker, 1988) Can partisan outcomes be achieved without agenda setting powers?

I argue that agenda-setting powers are not strictly necessary for the formation of maintenance of political parties. That being said, agenda-setting powers may still help “defend the party label” of majority parties (Cox and McCubbins, 1993, 2005). That is, because no part of the model model of fractious parties depicted above is an equilibrium—not yolk the floor as a whole, not yolks of intra-party competition—, the lack of agenda setting powers would probably reveal the inconsistencies of the legislative policymaking process to the electorate. The main difference between my model and cartel theory, then, is that without agenda setting powers parties are still more likely to concentrate benefits for themselves, albeit in a more clumsy, contradictory and detrimentally transparent way. Furthermore, hierarchy may still exist in the model of fractious parties, but this hierarchy is not necessarily only created in the form of agenda-setting powers for the majority leadership or legislative committees.

This, of course, is also what I found when I analyzed agenda-setting powers in Paraguayan constitutional, electoral, legislative and partisan institutions. In Chapter 6, I found that the main resource parties and intra-party organizations have had in order to maintain themselves are electoral and constitutional rules which prohibit sectors from being excluded from the legislature and excluded from political parties. This is not to say that the Paraguayan polit-
ical system is perfectly inclusive. A country that is as unequal and as corrupt as Paraguay definitely suggests that the political system could be more inclusive of underrepresented sectors of society. That being said, Chapter 6 showed that many institutions in Paraguay were created so that groups that were included in the political system could prevent being newly excluded by it.

8.6 Conclusions

The model of fractious parties clarifies many aspects that previous models had left unresolved. The model of fractious parties is a multidimensional model that explains why parties exist, why these parties are likely to be somewhat oversized, and why reducing parties from oversized majorities to minimal winning majorities may be difficult. It ascribes this difficulty of reducing oversized majorities to intra-party competitions over dominance of the majority party. Furthermore, because of this difficulty that oversized parties have in ejecting minority opinions from the party to produce a minimal-winning coalition, this model also accounts for why political parties may continue to exist even when they fail to massively concentrate benefits in their members. While they are always likely to provide some benefits to their members, majority parties will always have to balance the extent to which they will be able to concentrate power, the extent they can prevent “flanking” moves that can change the nature of shifting minimal winning coalitions, and the extent to which the majority party can avoid harsh backlashes from the electorate.

The model of fractious parties also creates clear expectations for partisan and non-partisan legislative outcomes in multidimensional spaces in a way that has not been available before. Similar to Conditional Party Government, the model of fractious parties incorporates the idea that the strength of political parties may wax and wane given the configuration of preferences within the majority party relative to the configuration of preferences of the floor as a whole. However, in contrast to CPG, the model of fractious parties creates clear partisan and non-partisan expectations. Granted, these expectations are simultaneously fuzzier
and more precise because instead of making single-point predictions—such as the median of the majority party or the median of the floor in one dimension, or the multidimensional mean of the majority party and the multidimensional mean of the floor in two dimensions (Aldrich, Rohde and Tofias, 2007)—the model of fractious parties takes predicts partisan outcomes can be captured by the supermajoritarian uncovered set of the majority party and non-partisan outcomes can be captured by the majoritarian uncovered set of the floor as a whole. While these are regions rather than points given that uncovered sets are not estimates of equilibrium outcomes, they are clear predictions derived from the theoretical expectations of this chapter and previous theoretical and empirical work (Feld, Grofman and Miller, 1988; Tullock, 1967; Tullock and Brennan, 1981; Tsebelis, 2002; Bianco, Jelizakov and Sened, 2004; Bianco and Sened, 2005; Bianco et al., 2006, 2008; Aldrich, 1989; Shepsle and Weingast, 1981, 1987).

Finally, the model of fractious parties presented in this chapter does not find agenda-setting powers to be necessary for the formation and maintenance of political parties. While I agree that agenda-setting powers are likely to be important for protecting the party label, I argue that political parties are likely to be able to survive even when they fail to protect the party label through agenda-setting. This may be less than optimal, as the clumsy, contradictory intra-party struggles will be more transparent—probably making the party less attractive to the electorate. That being said, I argue that agenda-setting powers are not strictly necessary for parties to be able to concentrate benefits in their party members, and they are not strictly necessary for the survival of political parties.

In Chapter 9 I will carry out an empirical analysis of the theory of fractious parties developed in this chapter. Specifically, I will analyze the extent to which majority parties in Paraguay are able to concentrate legislative powers in themselves, despite the weak agenda-setting powers available to them—as I had argued in Chapter 6—and despite the high levels of preference change among legislators and intra party fractionalization among parties—as I had argued in Chapters 4 and 5. As I will show, despite these weaknesses it seems that
fractionalized parties are still able to produce tangible benefits to their partymembers, but the extent to which they are able to do so varies according to the configuration of preferences of legislators.
Chapter 9

Disequilibrium Politics: Concentrating Benefits Without Legislative Stability

9.1 Can Power Be Concentrated Even Under Instability?

Up to this point I have provided evidence of the unstable policymaking process of Paraguay through several different empirical strategies. First, I argued that a requirement for unstable policymaking is that preferences be multidimensional, and although there has been some variance in the level of multidimensionality from one period to the next, I showed in Chapter 4 that the second-dimension seems to be quite important overall throughout the democratic period of Paraguayan history. Second, I further argued that changing preferences of legislators may be expected from an unstable policymaking process, and I showed that the preferences of Paraguayan legislators do seem to change substantially within periods in Chapter 5. Third, in Chapter 6, I showed that Paraguayan electoral, partisan, and legislative institutions focus, not on giving parties agenda-setting powers, but rather on fusing factions into political parties and making it difficult for any one particular faction to be ejected from party structures. Finally, in Chapter 7 I showed that historically, although the two traditional parties have exist in Paraguay since 1887, intra-party factions have been historically present as well, and they have provided a considerable amount of political instability in Paraguay until the Stroessner dictatorship eliminated all factions in 1954. As his dictatorship began to flail, however, these intra-party factions immediately began to re-emerge. All of these factors point towards the conclusion that the legislative process in Paraguay must include some level of instability or majoritarian cycling.

A remaining question, however, is whether political parties are able to concentrate power...
in their members despite their inability to fully discipline their members. This remaining question is closely related to Krehbiel’s (1993) question of “Where’s the Party?” The idea here is, if parties are unable to discipline its members through negative-agenda powers, then why do parties exist? Are parties able to change policy outcomes relative to what we may have expected to see had parties not existed? It seems that if parties cannot make individuals behave as partisans, then legislative outcomes would match what we would expect from non-partisan legislators.

In order to explore whether political parties have an effect on legislative outcomes, even under circumstances of cycling policymaking and legislative instability, I will be focusing on explaining two indicators that capture which legislators benefit the most from legislative outcomes—these indicators are called win-rates and roll-rates, and I will describe these measures more fully in the next section. I then create theoretical expectations of partisan and non-partisan legislative outcomes in one and two dimensions. I then derive independent variables from these theoretical models and I compare and contrast the explanatory power of these different models. The main findings of this chapter are that 1) while unidimensional models perform almost as well as multidimensional models in capturing the partisanship of legislative outcomes, or lack thereof, 2) the multidimensional models are more useful than unidimensional models they can also capture the stability of legislative outcomes in addition to its partisanship. Through this additional nuance that multidimensional models allow us to see, I am able to provide support for the fractious theory of parties I developed in Chapter 8. In short, while political parties do function to concentrate benefits for their members, these benefits are more effectively concentrated when they are shared among all majority party members. If benefits are concentrated in the dominant faction of the majority party at the expense of the minority faction of the majority party, then the majority party—and their ability to concentrate benefits in themselves—is weakened. These findings show in a very real sense the hierarchichal problem of political parties. While concentration of powers can benefit the party, intra-party struggles for power within the majority party can lead to
bargaining problems among the factions of the majority party. These bargaining problems can be resolved by “watering down” the concentration of benefits a faction has hoping to gain in order to share power with the other factions of the majority party, or it can lead to an all-out intra-party war, where factions begin to behave as independent parties, undermining the majority party’s capacity to concentrate powers in itself at all.

9.1.1 Dependent Variables

The main dependent variable I will be focusing on in this chapter is derived from the roll-call data I have been using throughout this book. The two dependent variables are win-rates and roll-rates. A legislator “wins” when the preferences of that legislator matches the preferences of the majority. That is, the legislator wins if he voted “yea” in a vote where 50%+1 legislators voted “yea” and a legislator wins if he voted “nay” in a vote where fewer than 50%+1 legislators voted “yea” in a particular vote. The win-rate of each legislator is the proportion of times a legislator won on the votes he carried out. Win-rates have been used to capture both positive and negative lawmaking powers of legislators. Positive lawmaking powers are when legislators are able to pass policy, and negative lawmaking powers are when legislators are able to impede policy from being passed. Overall, then, win-rates express the proportion of times that legislative outcomes matched the preferences of each particular legislator (Smith, 2007).

In contrast to win-rates, roll-rates mostly capture negative lawmaking powers. A “roll” is when a legislator votes against a bill, but the bill passes anyway—as if the legislator were steamrolled by the majority. The roll-rate is simply the proportion of times that legislators have been “rolled” on legislative votes. Roll-rates are interesting in contrast to win-rates because certain academics have argued that through agenda-setting powers political parties may be able to prevent rolls—maximizing negative lawmaking power—without necessarily being able to force the party’s legislators to pass policy—without maximizing positive lawmaking power (Cox and McCubbins, 2005). Therefore, it is interesting to analyze both
win-rates and roll-rates separately as indicators of the positive and negative powers of legislators.

### 9.2 Unidimensional and Multidimensional Hypotheses

As discussed extensively in Chapter 2, partisan and non-partisan unidimensional and multidimensional models have been created in an attempt to understand legislative outcomes. The unidimensional models have been extensively used in the past and therefore they are quite well defined. The multidimensional models presented here will focus on the model of fractious parties that I developed in Chapter 8. Whereas unidimensional models are based on medians, the model of fractious parties relies more heavily on multidimensional outcome estimates, such as the uncovered set.

As discussed extensively in Chapter 2, the pivotal model argues that if preferences are unidimensional, then the outcomes of legislatures would principally be controlled by the median legislator. In terms of roll-rates and win-rates, then, we might expect that legislators that are closer to the median legislator will have higher win-rates and lower roll-rates. Therefore the first, non-partisan hypothesis of unidimensional outcomes would be:

**Unidimensional, non-partisan:** The smaller the ideological distance between a legislator and the median legislator, the higher the win-rate and the lower the roll-rate of a legislator.

Unidimensional models have also been developed in order to account for the possibility of partisan outcomes. Cartel theory has argued that partisans may choose to delegate powers to partisan leaders in order for these party leaders to use negative, agenda-setting powers to protect the party label. Legislators are only willing to delegate to those that are most likely to pursue the interests of the party as a whole, so party leaders are expected to be close to the median of the majority party. Cartel theory argues that while parties may be able to amass positive policymaking power when legislators have preferences that are homogeneous
within parties and polarized among parties, parties will always be able to maintain some negative agenda-setting powers regardless of the preferences of their legislators (Cox, 1997; Cox and McCubbins, 2005). Therefore, the main prediction of a unidimensional, partisan model would be:

**Unidimensional, partisan:** The smaller the ideological distance between a legislator and the median legislator of the majority party, the higher the win-rate and the lower the roll-rate of a legislator.

In multidimensional spaces the expectations of previous theories are less clear. However, in the model of fractious parties I developed in Chapter 8, I proposed a clear expectation for both partisan and non-partisan outcomes relying mainly on the concept of “uncovered sets.” As mentioned in Chapter 8 point X is “covered” by point Y if every proposal that beats Y also beats X. The uncovered set is therefore the set of points that cannot be covered by any other point. The uncovered set is where we might expect policy outcomes to gravitate towards, because points in the uncovered set are less vulnerable to change than points outside of the uncovered set are. When a core exists—a set of points that cannot be defeated by any alternative—the uncovered set coincides with the core (Bianco, Jelizakov and Sened, 2004).

Armed with the concept of the uncovered set, I was able to create both partisan and non-partisan expectations of legislative outcomes in multidimensional settings. For non-partisan expectations, we simply expect the uncovered set of the floor as a whole to explain legislative outcomes. In other words:

**Multidimensional, non-partisan:** The smaller the ideological distance of a legislator from the uncovered set, the higher the win-rate and the lower the roll-rate of that legislator.

In contrast, I had argued that partisan expectations can be operationalized by using the supermajoritarian uncovered set of the majority party. This supermajoritarian requirement
is necessary because, as I discussed extensively in Chapter 8, in order to have a partisan majority, one must have a supermajority of that party. That is, what counts as a partisan majority on the floor requires a supermajority of the majority party. Therefore, using a supermajority uncovered set of the majority party as the expectation of partisan outcomes makes sense.

**Multidimensional, partisan:** The smaller the ideological distance of a legislator from the supermajoritarian uncovered set of the majority party, the higher the win-rate and the lower the roll-rate of that legislator.

However, an additional characteristic of uncovered sets is that medians are always a single point, whereas uncovered sets are always sets of points. As sets of points, uncovered sets can vary in size. The sizes of the uncovered sets give us an opportunity to capture the extent to which we would expect legislative stability—whether that stability be partisan or non-partisan. Smaller uncovered sets imply more legislative stability, because the region towards which policy outcomes gravitate is smaller, and larger uncovered sets imply less legislative stability. Therefore, with multidimensional models, in addition to understanding the general ideological *location* of legislative outcomes, we can also observe the relative *stability* of these predictions. The smaller each of these uncovered sets, the stronger we would expect the pull of each uncovered set to be. We can conceptualize this increasing strength as an interaction between distance from each uncovered set and the size of each uncovered set. In other words:

**Interaction, non-partisan:** As the size of the uncovered set of the floor gets smaller, the effect of the distance from the uncovered set on roll-rates and win-rates gets stronger.

**Interaction, partisan:** As the size of the supermajoritarian uncovered set of the majority party gets smaller, the effect of the distance from the uncovered set on roll-rates and win-rates gets stronger.
While concepts like median of the floor and median of the majority party are quite simple in terms of estimation, the estimation of the uncovered set has been quite difficult in the past. In order to estimate uncovered sets, I replicated the “brute force” procedure described by Bianco, Jelizakov and Sened (2004)\textsuperscript{1}. Because estimations are based on brute-force grid-search procedures at regular intervals—I used a grid-search of .02 intervals on both the x and y axes—, and because all ideal points are on a common-space, it is possible to compare the sizes of uncovered sets by simply counting the number of points that are found to be inside each uncovered set of interest.

### 9.3 Visual Inspection of Uncovered Sets, Roll-rates and Win-Rates

Before proceeding into the statistical models, I will show how all the parts of the multi-dimensional models are constructed, and how we might expect them to perform. Figure 9.1 shows three panels for the 2013-2014 legislative year of the Cartes presidency, where unidimensionality was high according to the rolling average cutline angles (shown in Figure ?? of Chapter 6), and therefore where inter-party conflict was more prominent than intra-party conflict. The leftmost panel of Figure 9.1 shows the ideal points and the uncovered sets for

\textsuperscript{1}For more information on how to estimate the uncovered sets please refer to Bianco, Jelizakov and Sened (2004), and/or view the source code and documentation of the R function I developed to be able to estimate uncovered sets easily, which can be found here: https://github.com/acarrizosa/uset.
the 2013-2014 legislative year. The central panel again shows these ideal points, but the size of each point is regulated by the win-rate of each legislator in that legislative year. Finally, the rightmost panel shows the legislator ideal points again, with the size of each point being regulated by the roll-rate of each legislator in the 2013-2014 legislative year. As we can see in this year, where the Colorado party was strong and united, win-rates seem to be higher among Colorado legislators, and roll-rates seem to be lower among Colorado legislators. As expected by a partisan model of legislative outcomes, it seems like the Colorado party was largely able to dominate the lawmaking process in this legislative year.

In contrast, Figure 9.2 shows ideal points, uncovered sets, win-rates and roll-rates for the same legislators, but in the 2017-2018 legislative year. These estimates, again, describe the Cartes presidency, but in the last year of his presidency the Colorado party was largely divided because of the struggles the party had over the reelectoral attempts of President Cartes. We can see this division in the ideal points, where the Honor Colorado movement of the Colorado party—which supported the president—can be found in the top right ideal points of the Colorado party, and the Añetete movement of the Colorado party—which opposed the president—can be found in the bottom right ideal points of the Colorado party, dividing the Colorado party on the second dimension. In the center and rightmost panels of Figure 9.2 we can see that both win-rates and roll-rates seem to show that the Honor Colorado movement (top right) benefited the most from this division, while the Añetete movement (bottom right) received win-rates and roll-rates similar to what we might have expected to see in an opposition party. In other words, the intra-party divisions of the Colorado party seemed to have weakened “party government” as a coalition of the Honor Colorado movement and a faction of the Liberal party seem to have concentrated power in this particular period.

That being said, the picture shown in both Figures 9.1 and 9.2 are not completely clear. For example, in Figure 9.2, despite the intra-party division both floor and majority-party uncovered sets seem to favor the Honor Colorado movement (in the top-right). Similarly, in
Figure 9.2: 2017-2018 Ideal Points Plotted by Win-rates and Roll-rates

Figure 9.1 both floor and majority-party uncovered sets seem to favor the Colorado party as a whole as well. Through visual inspection alone, then, it is not easy to see whether the floor uncovered set or the party uncovered set is better at explaining win-rates and roll-rates. Therefore, in the next sections we will explore these alternatives in more detail using statistical models. In section 9.4 I will analyze win-rates and roll-rates aggregated at the five-year period level with ideal points and uncovered sets aggregated at the five-year period level. In section 9.5 I will repeat this analysis to explore whether we can uncover different relationships when all measures are aggregated at the yearly level.

9.4 Period-Level Regression Models

As mentioned in the hypothesis section, we are analyzing two dependent variables—win-rates and roll-rates—using two different models—unidimensional models and multidimensional models. Furthermore, each of these models provide two possible expectations: partisan and non-partisan outcomes. In the unidimensional models the main independent variables of interest are the distance of each legislator from 1) the median legislator of the floor and 2) the median legislator of the majority party or coalition. In the multidimensional models the main independent variables of interest are the distance of each legislator from 1) the uncovered set of the floor as a whole, and 2) the supermajority uncovere
or coalition. In this section I will explore how both unidimensional and multidimensional models are similar or distinct in their expectations of legislative outcomes—win-rates and roll-rates—when all variables are aggregated at the five-year period levels. All models in the following sections are linear models as the dependent variables of roll-rates and win-rates are continuous variables.

Table 9.1: Win-Rates: Period-Level Unidimensional Models

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<tr>
<td>Adj. R2</td>
<td>0.043</td>
<td>0.046</td>
<td>0.194</td>
<td>0.582</td>
<td>0.826</td>
<td>0.461</td>
</tr>
</tbody>
</table>

To begin, let us focus on win-rates. Table 10.11 contains the results of the unidimensional models and Table 10.10 contains the results of the multidimensional models. To maintain simplicity, both tables only show the directionality of each effect, a star (*) if the p-value of the coefficient was smaller than .05, and the Adjusted R² of each model to give the reader an idea about the goodness-of-fit of each model. As mentioned in the hypothesis section, a non-partisan unidimensional model would expect the win-rate of a legislator to decrease as the distance between a legislator and the median legislator of the floor increases. A partisan unidimensional model would expect the win-rate of a legislator to decrease as the distance between a legislator and the uncovered set of the floor increases. Finally, a partisan multidimensional model would expect the win-rate of a legislator to decrease as the distance between a legislator and the uncovered set of the majority party increases.

As Table 10.11 and Table 10.10 show, except for in the 1995-1998 legislative period, both unidimensional and multidimensional models largely seem to agree that the majority coalition did in fact dominate the lawmaking process. Interestingly, however, the 1995-
1998 legislative period is the only period where the Colorado/UNACE coalition was not in the majority. In this period the Liberal party and the National Encounter party (PEN) collectively held 42 seats relative to the 38 seats of the Colorado party, but neither party on its own held a majority of the floor as a whole—the Liberals had 32 seats and PEN had 10 seats. This division among the “ruling” Liberal and PEN coalition, in addition to the fact that the Colorados held the presidency and the fact that this was the first democratic period after a 35 year dictatorship jointly perhaps explain why no party was able to concentrate powers in itself. Furthermore, a centrist policymaking process for the 1995-1998 legislative period makes sense as this period was marked by a broad “governance pact” among Colorados, Liberals and PEN members in order to strive for a stable transition to democracy.

Perhaps more historically interesting is the fact that according to the win-rates the Colorado party was able to concentrate powers in itself in the 1998-2003 legislative period. This period was, as I had mentioned before, marked by intra-party conflict in the Colorado party between the faction that responded to Argaña and the faction that responded to Lino Oviedo. After Oviedo was pardoned his prison sentence and Argaña was assassinated, massive protests shook the country in the Paraguayan March in 1999, and finally President Cubas had to resign and Lino Oviedo had to flee the country. According to win-rates, at

<table>
<thead>
<tr>
<th>Table 9.2 : Win-Rates: Period-Level Multidimensional Models</th>
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<tbody>
<tr>
<td>Dist. Floor Uset.</td>
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<tr>
<td>Dist. Maj. Uset.</td>
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<tr>
<td>Adj. R2</td>
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<tr>
<th>Table 9.3 : Roll-Rates: Period-Level Unidimensional Models</th>
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<tr>
<td>Dist. Floor Med.</td>
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<tr>
<td>Dist. Maj. Med.</td>
</tr>
<tr>
<td>Adj. R2</td>
</tr>
</tbody>
</table>
least, it seems like the Colorado party was able to maintain power in itself, on aggregate, throughout the tumultuous 1998-2003 period.

Table 9.4: Roll-Rates: Period-Level Multidimensional Models

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</thead>
<tbody>
<tr>
<td>Dist. Floor Uset.</td>
<td>+*</td>
<td>+</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
<td>-*</td>
<td>-</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.249</td>
<td>0.017</td>
<td>0.716</td>
<td>0.45</td>
<td>0.724</td>
<td>0.873</td>
</tr>
</tbody>
</table>

Turning to roll-rates, Tables 10.9 and 10.8 show the directional results of both unidimensional and multidimensional models. Again, both sets of models largely agree, but here we can see that, according to roll-rates, both 1995-1998 and 1998-2003 periods seemed to be non-partisan periods of legislative competition. Again this seems to make a bit of sense because in the 1995-1998 time period the Colorado/UNACE coalition had the plurality but not the majority of the seats of the chamber, and no other party held a majority either. In the 1998-2003 the Colorado party did hold a majority, but this majority was split because of the high levels of intra-party conflict over Lino Oviedo’s pardon by President Cubas and the assassination of Vice-President Argaña. Therefore the 1998-2003 results seem, at this point, a bit mixed. It is difficult to see whether partisanship or non-partisanship was predominant in this legislative period with these analyses alone.

However, as we have seen many times when analyzing Paraguayan politics, legislator preferences can change quite substantially from one year to another even within legislative periods. In the next section, then, I will analyze yearly results to see the extent to which legislative outcomes continue to be partisan or non-partisan at this yearly level. Because both unidimensional models and multidimensional models seem to largely agree, I will only be presenting the results of the multidimensional models in the next section, but the results of the unidimensional models will be available in the Appendix.
9.5 Year-Level Regression Models

In Tables 10.24 and 10.12 we have the results of the multidimensional models for roll-rates and win-rates in the 1995-1998 period. In general we see that there is not much intra-period variance in partisanship of legislative outcomes, and in general it seems that this period was mostly characterized by non-partisan lawmaking.

<table>
<thead>
<tr>
<th>Table 9.5 : Win-Rates: Year-Level Multidimensional Models</th>
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<tr>
<td>Dist. Floor Uset.</td>
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<tr>
<td>Adj. R2</td>
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<th>Table 9.6 : Roll-Rates: Year-Level Multidimensional Models</th>
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<tr>
<td>Dist. Floor Uset.</td>
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<tr>
<td>Dist. Maj. Uset.</td>
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<tr>
<td>Adj. R2</td>
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The picture changes a bit in the 1998-2003 legislative period. While in the period-level results the win-rate models did seem to show that he 1998-2003 period was partisan, the roll-rate models seemed to show that the 1998-2003 period was non-partisan. In Tables 10.26 and 10.14 we can see that the discrepancy may have been due to the fact that there are differences within this period in terms of partisan outcome. The 1998-1999 year seems to have been substantially non-partisan according to roll-rate and win-rate models. The 1999-2000 period is non-partisan according to the win-rate model and non conclusive in the roll-rate model. Finally, from 2000 on all models seem to agree that outcomes were mostly partisan. Given the historical occurrences these findings largely make sense as the bulk of the intra-party Colorado conflicts of the period took place in 1999.

In order to save space, for the next periods I will consider only the multidimensional roll-rate models, but all remaining win-rate and unidimensional models are contained in
Table 9.7: Win-Rates: Year-Level Multidimensional Models

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<tr>
<td>Dist. Floor Uset.</td>
<td>-*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
<td>+*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.455</td>
<td>0.282</td>
<td>0.093</td>
<td>0.129</td>
<td>0.274</td>
</tr>
</tbody>
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Table 9.8: Roll-Rates: Year-Level Multidimensional Models

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<tbody>
<tr>
<td>Dist. Floor Uset.</td>
<td>+*</td>
<td>+</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
<td>-*</td>
<td>+</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.615</td>
<td>-0.018</td>
<td>0.089</td>
<td>0.134</td>
<td>0.089</td>
</tr>
</tbody>
</table>

Table 9.9: Roll-Rates: Year-Level Multidimensional Models

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<tr>
<td>Dist. Floor Uset.</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.446</td>
<td>0.306</td>
<td>0.538</td>
<td>0.629</td>
<td>0.581</td>
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Table 9.10: Roll-Rates: Year-Level Multidimensional Models

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<tr>
<td>Dist. Floor Uset.</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.462</td>
<td>0.662</td>
<td>0.221</td>
<td>0.383</td>
<td>0.41</td>
</tr>
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</table>

perhaps the most interesting part of these findings is that partisan outcomes seem to be maintained throughout the entire 2013-2018 legislative period. As I have discussed this period covers the presidency of Horacio Cartes, who initially began his term with high levels
of support from the Colorado party, but in 2017 this support gave way to high levels of intra-party conflict over the issue of reelection, where a faction of the Colorado supported modifying the constitution to allow for the reelection of Cartes and another faction opposed the modification. Despite this intra-party factionalization that took place in 2017, the Colorado party still seems to have been able to maintain power in itself overall.

Table 9.11: Roll-Rates: Year-Level Multidimensional Models

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<tbody>
<tr>
<td>Dist. Floor Uset.</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.535</td>
<td>0.703</td>
<td>0.585</td>
<td>0.77</td>
<td>0.726</td>
</tr>
</tbody>
</table>

Table 9.12: Roll-Rates: Year-Level Multidimensional Models

<table>
<thead>
<tr>
<th></th>
<th>2018-2019</th>
<th>2019-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dist. Floor Uset.</td>
<td>-*</td>
<td>-</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
<td>+*</td>
<td>+*</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.838</td>
<td>0.865</td>
</tr>
</tbody>
</table>

To further explore what took place in the 2017-2018 period we can see Figure 9.3, which shows the 2017-2018 ideal points, the floor and majority party uncovered sets in the left panel, and which shows who among the Colorado legislators belonged to which intra-party faction in the center panel, and we can see the roll-rates of legislators in the leftmost panel. What we can clearly see from this figure is that both non-partisan and partisan uncovered sets seemed to favor the Honor Colorado intra-party movement over the Añetete intra-party movement. This can also be seen among the roll-rates of the members of the Añetete movement which were higher during the 2017-2018 legislative period. What is interesting, however, is that the roll-rates of the Liberal legislators that were close to the uncovered set of the floor as a whole were not as low as we might have expected if non-partisan expectations fully explained outcomes. This is perhaps why the regression models continue to show that roll-rates increase as the distance from the majority party uncovered set increases, and decreases as the distance
from the uncovered set of the floor increases. This example shows that political parties are able to maintain power even despite substantial intra-party divisions.

Figure 9.3: 2017-2018 Uncovered Sets, Intra-Party Factions, and Roll-Rates

The ability of the Colorado/UNACE coalition to maintain power despite the divisions of their coalition can also be clearly seen throughout the entire 2008-2013 legislative period. The period-level models of the previous section and the yearly models of Table 10.16 all show that the supermajority uncovered set of the UNACE/Colorado coalition was able to concentrate powers in itself relative to the uncovered set of the floor as a whole. This was also achievable despite considerable divisions between UNACE and the Colorado party as can be seen in Figure 9.4.

In sum, despite the fact that the Colorado/UNACE coalition has had a considerable amount of intra-party or intra-coalition divisions, it seems to have been able to maintain legislative power in the Chamber of Deputies. This can be seen in both unidimensional and multidimensional models, using both win-rates and roll rates. It seems, then, that despite “the conditions” not being met, and despite the lack of strong agenda-setting institutions for the chamber leadership, political parties are useful for concentrating power in a majority coalition.

What is also clear, however, is that the intuition behind Conditional Party Government seems somewhat persuasive still. While partisan influence does not often wane completely, it is still clear from Figure 9.3 that intra-party divisions do seem to benefit certain factions
of the majority party or coalition at the expense of others. Furthermore, as I had mentioned above, it is also important to note that unidimensional expectations are often points—the median legislator of the floor and the median of the majority party are conceptualized as single points—whereas uncovered sets can vary in shape and size. Changes in the size of the uncovered set modify our expectations about legislative stability. Smaller uncovered sets imply higher expectations of legislative stability, while larger uncovered sets imply lower expectations of legislative stability. The next section, then, will focus on empirically analyzing whether these expectations about the varying sizes of uncovered sets are justified observationally.

9.6 Pooled Regression Models

In order to analyze the effect that the sizes of different uncovered sets have on roll-rates and win-rates it is necessary to pool legislators of each legislative year together. This is because uncovered sets can vary either by legislative year or by legislative period—depending on which level roll-rates, win-rates and ideal points are estimated over—but ideal points, and the
distance of each legislator to each uncovered set or median is determined by legislator year. In other words, variables are either indexed by legislative year \((y)\), by five-year period \((p)\), and by legislator \((i)\), and we have several variables of interest. Focusing only on yearly models \((y)\) for explanatory purposes, the dependent variables—roll-rates \((R_{iy})\) or win-rates \((W_{iy})\)—would be indexed by legislator-year. One set of independent variables, such as distance from the floor uncovered set \(U_{f_{iy}}\), distance from the majority party uncovered set \(U_{m_{iy}}\), distance from the median of the floor \(M_{f_{iy}}\), or distance from the median of the majority party \(M_{m_{iy}}\), are also indexed by legislator-year. However, the size of the uncovered sets are indexed either by legislative year. Assuming that they are indexed by year, the sizes of the uncovered sets could correspond to the uncovered set of the floor as a whole, \(S_{f_y}\), or to the uncovered set of the majority party \(S_{m_y}\).

The main characteristic of interest about the size of the uncovered sets, however, is not so much how the sizes themselves affect win-rates and roll-rates, but the most important issue is whether the interaction between the distance of each legislator from each uncovered set by the size of each uncovered set is statistically and substantively significant. This is because as the size of an uncovered set gets smaller, that means that legislative instability is likely to be reduced. Because uncovered sets intuitively describe the spatial region where policy outcomes are most likely, if this region is small, then there are fewer plausible options for legislators to choose from, leading to a larger level of legislative stability (Tsebelis, 2002). This perhaps is the usefulness of multidimensional models relative to unidimensional models of legislative behavior. Whereas models of party and floor medians create positional expectations for legislative outcomes that are single points—while assuming away any considerations of legislative instability—multidimensional models reliant on uncovered sets have the potential of addressing both the issues of the location of legislative outcomes and the expected stability of those legislative outcomes simultaneously.

Putting all these concepts together, then, we can create the following pooled interactive models of legislative outcomes relying on ideal points, uncovered sets, and the sizes of the
uncovered sets. For roll-rates the model would be as follows:

$$R_{iy} \sim \alpha + Uf_{iy}\beta_1 + Um_{iy}\beta_2 + Sf_{y}\beta_3 + Sm_{y}\beta_4 + Uf_{iy}Sf_{y}\beta_5 + Um_{iy}Sm_{y}\beta_6$$

A similar model can also be created for Win-rates simply replacing the $R_{iy}$ for $W_{iy}$. In contrast, however, the highest level of complexity available from unidimensional models does not include the interaction terms. Because medians are points, it is impossible to create a size interaction, and therefore the most we can achieve using a unidimensional model in predicting roll-rates is the following:

$$R_i \sim \alpha + Mf_{iy}\beta_1 + Mm_{iy}\beta_2$$

The main limitation of this model, then, is that it might be capable of showing where we might expect partisan and non-partisan outcomes, but it is not as adequate as informing us about how stable we might expect those policy outcomes to be.

Finally, it is also possible to include a multidimensional model that takes into account both the short-term preferences of legislators—aggregated at the year-by-year level—and the long-term preferences of legislators—aggregated at the five-year-period level. This can be done by repeating independent variables that are calculated at the period-level for each legislator/year. That is, while we have some independent variables that vary by year ($y$) we can have some independent variables that vary by period ($p$) alongside them in the following way:

$$Year = Uf_{iy}\beta_1 + Um_{iy}\beta_2 + Sf_{y}\beta_3 + Sm_{y}\beta_4 + Uf_{iy}Sf_{y}\beta_5 + Um_{iy}Sm_{y}\beta_6$$

$$Period = Uf_{ip}\beta_7 + Um_{ip}\beta_8 + Sf_{p}\beta_9 + Sm_{p}\beta_{10} + Uf_{ip}Sf_{p}\beta_{11} + Um_{ip}Sm_{p}\beta_{12}$$
Exploring long-term preferences along short-term preferences is useful because it allows us to see whether long-term partisan coalitions are possible even despite short-term failures to concentrate benefits in the majority party. For example, when looking at the year-by-year models in Section 9.5 we had seen that in the first two years of the 1998-2003 period parties did not seem to be able to concentrate powers in themselves, but in the last three years, and in the period as a whole, it seemed like the majority was able to concentrate powers in itself. Therefore, by including independent variables derived by both short-term and long-term preferences of legislators we can capture these shifting yearly dynamics while still capturing slow-moving abilities of parties to concentrate powers in themselves as well. In the following sections I will first compare and contrast multidimensional year-level models to unidimensional year-level models, and then I will move to analyze multidimensional models using the nested period/year independent variables I discussed here.

9.7 Results of Pooled Yearly Models

Table 10.36 shows the results of unidimensional and multidimensional models that predict roll-rates aggregated by legislative year. Model 1 simply takes the distance of each legislator from the median of the floor as a whole, and uses that variable as an independent variable to predict roll-rates. As we can see, and as expected by a non-partisan unidimensional model, the coefficient is positive, meaning that as the distance increases roll-rates increase as well. Model 2 repeats this exercise by using the median of the majority party or coalition instead of the median member of the floor as the independent variable. As expected by a unidimensional, partisan model of legislative behavior, the coefficient is also positive, indicating that as legislators are further away from the median of the majority, their roll-rates also increase. When both these independent variables are included together, however, in Model
it becomes clear that the partisan model is more representative of reality than the non-partisan model because “Dist. Floor Median” takes on a negative coefficient, and “Dist Maj. Median” maintains a positive coefficient. This indicates that as legislators move away from the center of the legislature and towards the median of the majority party, the roll-rates of those legislators go down. In other words, more partisan legislators are better able to impede policies they dislike from being passed.

Models 4, 5 and 6 of Table 10.36 replicate the findings we saw Models 1, 2 and 3 using multidimensional measures rather than unidimensional measures. The main thing that is directly apparent is that the multidimensional indicators show a very similar story to what we had
seen from the unidimensional models. Independently both distance from the uncovered set of the floor and distance from the supermajoritarian uncovered set of the majority party have positive coefficients, indicating that as distance rises so do roll-rates. However, when both independent variables are included simultaneously the non-partisan variable—uncovered set of the floor—takes on a negative coefficient and the partisan variable—uncovered set of the majority party—takes on a positive coefficient. These results, again demonstrate that non-centrist legislators are more likely to be rewarded.

Model 7 of Table 10.36 includes the interaction between the distance of each legislator from both (floor and majority party) uncovered sets, and the size of each respective uncovered sets. As we can see, the coefficients on the size of the floor and majority party uncovered sets are significant, and the interaction effects are significant as well. In order to understand what these coefficients mean substantively, however, I calculated first differences for changes in distance from the uncovered set of the floor and distance from the uncovered set of the majority party, holding the size of each uncovered set constant at a “small” size and then performing these first differences again by holding the constant at a “large” size. First differences were calculated from 2 standard deviations below the mean of distance to the floor to 2 standard deviations above the mean of distance to the floor, and then these first differences were performed again with the distances from the uncovered set of the majority party. In terms of the size of uncovered sets, holding the size of the uncovered set constant to “small” meant holding the size constant at 2 standard deviations below the mean of all (either floor or majority party) uncovered set sizes, and holding the size constant as ”big” entailed holding the size constant at 2 standard deviations above the mean. The results of these first differences are presented in Figure 9.5.

As we can see in Figure 9.5, the left panel shows what an increase in distance from the uncovered set of the floor of a whole from 2 standard deviations below the mean to 2 standard deviations above the mean, while holding the size of the uncovered set constant at a “big” size and at a “small” size. The left panel shows that as the distance from the uncovered set
of a legislator increases, the roll-rates of that legislator decreases—regardless of whether the uncovered set is small or large. However, when the size of the uncovered set is large, the negative effect of distance on roll-rates becomes stronger as well. Substantively, this means that it is more beneficial for legislators to be non-centrist when the uncovered set of the floor as a whole is large, as this non-centrism will likely be prized with a lower roll-rate.

In contrast, the right panel of Figure 9.5 shows that the first differences of distance from the uncovered set of the majority coalition both had positive effects on roll-rates. However, here we see that when the uncovered set of the majority party is large, the positive effect of distance on roll-rates gets larger as well. In other words, legislators are penalized more for being non-partisan when the uncovered set of the majority party is large and they are penalized less for being non-partisan when the uncovered set of the majority party is small.

This finding is a bit unexpected, but it is not completely inconsistent with what we have observed in the previous sections. The expectation might have been that when the partisan uncovered set is small, then the penalization for being non-partisan would have been larger—opposite to what we observe in Figure 9.5. However, in Figure 9.1 we had seen that in 2013-2014—when the Colorado party was unified around the figure of Horacio Cartes, and party government seemed to be able to be established—the uncovered set of the
majority party was in fact larger than the uncovered set of the majority party shown in Figure 9.2, which showed the 2017-2018 legislative period where intra-party divisions were large. Therefore, it seems that the size of the uncovered set of the majority party is not exactly the same as “strong consensus” among the majority party, and may sometimes be considered also simply “few options” for agreement among majority party members—especially when this party is internally divided.

Furthermore, it seems clear that those few consensus options are not necessarily near the center of the party. As Figure 9.2 showed, it is quite possible for the majority party uncovered set to be small but non-centrist, and this benefit for one faction of the party over the other may lead to a slight weakening to the party. When intra-party consensus options are few and non-centrist, then that seems to create an incentive for weak intra-party factions to choose to slightly strengthen the floor as a whole vis-a-vis the party.

What might be happening is that short-term changes in preferences lead to opportunistic realignments where the majority-party uncovered set is hijacked by a particular faction of the majority party. That seems to be what is happening in the 2017-2018 legislative period where the Colorado uncovered set seems more representative of the Honor Colorado intra-party movement than of the party as a whole. In line with the theory of fractious parties I developed in Chapter 8, the concentration of powers is beneficial for the party as a whole to a certain point, but afterwards intra-party battles over who controls the party can undermine the majority party. That is, these hierarchichal dilemmas inside the majority party clearly continue to exist among factions of the majority party.

Despite these short-term losses, it is still clear that despite the unexpected finding on the size of the uncovered set on legislative outcomes, it is still beneficial to be closer to the majority party than to the floor uncovered set. In other words, it still pays to be a partisan legislator even despite these short-term coordination failures which lead to intra-party struggles. Furthermore, we had also seen that these coordination failures are in fact short-term, and that afterwards legislators often revert to their partisan practices—as we
had seen in Section 9.5. If coordination problems are only short-term, then the party may be able to perform its duty of being a “long term legislative coalition” even if there are some occasional short-term hiccups. By incorporating long-term preferences of legislators I address this possibility in the following section.

9.8 Results of Nested Models

In the previous section, both the dependent variable of roll-rates and the independent variables of distance from the uncovered set and the sizes of the uncovered set were all created at the year level. However, it is also possible to create all these indicators for the entire five-year legislative period rather than focusing on indicators created in a yearly fashion. Doing so may allow us to compare and contrast long-term policymaking dynamics to the shorter-term policymaking dynamics shown in the previous section with the year-level estimates.

In the previous section we had seen the unexpected finding that the interaction term between Dist. Maj. Uset and Maj. Uset. Size had a negative coefficient on predicting roll-rates, meaning that when the uncovered set of the majority party is large, then legislators are more penalized when their distance is far from the uncovered set of the majority party. I argued that it might be that the size of the uncovered set of the majority party gets small due to intra-party divisions, and I argued that when this happens the partisan uncovered set may be more beneficial for one faction of the majority party than another. The losing faction of this small partisan uncovered set may seek to weaken the party relative to the floor in these cases, to prevent the majority faction of the majority party from entirely dominating legislative outcomes. That being said, it still might be possible that in the long-term political parties are able to maintain their political power despite certain short-term hiccups.

In order to explore whether this is the case, we can analyze roll-rates using independent variables derived from both period-level and year-level ideal point estimates. Period-level estimates of ideal points, and their resulting uncovered sets, are likely to capture the long-term preferences of legislators over the full five-year period. In contrast, yearly estimates
of ideal points, and their resulting uncovered sets, are likely to capture short-term changes in legislative preferences. Therefore, if short-term changes in preferences detract from the partisanship of long-term alliances, then we might expect legislators to be punished for being non-partisan when they deviate from long-term party influence, but they may be less punished for deviating from short-term party influences—as these short-term influences may be distinct from the long-term goals of the party.

Table 10.39 includes the results of period-level and year-level independent variables explaining roll-rates in the Chamber of Deputies of Paraguay. Model 1 of Table 10.39 shows a model that predicts roll-rates as aggregated by full five-year period. For this reason the number of observations is smaller, because we are only considering a single ideal point per legislator per period, and a single roll-rate per legislator per period. Model 2 replicates the same exact model, but it codes the dependent variable as a roll-rate per legislator per legislative year, while independent variables are maintained as one independent variable per legislator per period—that is, the same period-level indicator of one legislator is repeated for each year the legislator is in the period. What both Models 1 and 2 show is that these coding decisions do not make a difference in the overall substantive conclusions of both models. Whether coded by period or coded by year, the coefficients of both models that are significant are significant in either both or neither, and they always hold the same sign.

The main finding of interest in Models 1 and 2 is that the interactive term between Maj. Uset Dist and Size is not significantly different from zero. This means that the period-level models, on their own, do not show that the size of the uncovered set of the majority party interactively affects the effects of distance from the majority party uncovered set on roll-rates. In other words, Models 1 and 2 do not show that the strength of the majority party gets stronger as the uncovered set of the majority party gets smaller.

Model 3 simply replicates Model 7 of Table 10.36. Again this model shows the somewhat unexpected finding that the strength of the majority party weakens as the size of the majority party uncovered set gets smaller. This finding can be seen in the positive value of the
Table 9.14: Nested Period/Year Models

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
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<td>(Intercept)</td>
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<td>0.12***</td>
<td>0.11***</td>
<td>0.12***</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
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<td>-0.20***</td>
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<td>-0.13***</td>
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<td>(0.02)</td>
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<td>(0.03)</td>
</tr>
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<td>0.32***</td>
<td>0.25***</td>
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</tr>
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<td>(0.02)</td>
<td>(0.01)</td>
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<td>(0.03)</td>
</tr>
<tr>
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<td>-0.00***</td>
<td>-0.00</td>
<td>-0.00</td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
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<td>(0.00)</td>
</tr>
<tr>
<td>Maj. Uset Size (P)</td>
<td>-0.00***</td>
<td>-0.00***</td>
<td>-0.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td></td>
<td>(0.00)</td>
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<td>-0.00***</td>
<td>-0.00*</td>
<td></td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>Maj. Uset Dist * Size (P)</td>
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<td>0.00</td>
<td>-0.00***</td>
<td></td>
</tr>
<tr>
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</tr>
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<td>Dist. Floor Uset (Y)</td>
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<td>-0.08**</td>
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<tr>
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<td>Floor Uset Size (Y)</td>
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<td>-0.00</td>
</tr>
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<td>(0.00)</td>
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<tr>
<td>Maj. Uset Size (Y)</td>
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<td>-0.00*</td>
</tr>
<tr>
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<td></td>
<td></td>
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<td>(0.00)</td>
</tr>
<tr>
<td>Floor Uset Dist * Size (Y)</td>
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<td></td>
<td>-0.00***</td>
<td>-0.00***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td>(0.00)</td>
</tr>
<tr>
<td>Maj. Uset Dist * Size (Y)</td>
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<td>0.00***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| R²   | 0.55 | 0.42 | 0.40 | 0.44 |
| Adj. R² | 0.55 | 0.42 | 0.40 | 0.44 |
| Num. obs. | 471 | 1889 | 1889 | 1889 |

***p < 0.001; **p < 0.01; *p < 0.05

interactive term Maj. Uset Dist * Size (Y), and it is depicted visually in Figure 9.5.

Model 4 of Table 10.39 shows what happens when we include both period-level and year-level independent variables simultaneously to predict year-level roll-rates. Pooling together the period-level and year-level independent variables does not largely change the story told by most period-level and year-level coefficients. The main change of interest of Model 4,
however, is that by pooling together the period-level and the year-level independent variables, the period-level interactive term—Maj. Uset Dist * Size (P)—becomes significant and negative similar to the Floor Uset Dist * Size (P) interactive term. This means that by controlling for short-term partisan changes in legislative behavior, the five-year trends do conform to our expectations. That is, after controlling for year-level independent variables, the smaller the uncovered set of the majority party, the higher the penalty for less-partisan legislators.

To see this interactive effect in a more visual manner Figure 9.7 shows the interactive effect of both period-level interaction terms of Model 4 of Table 10.39—Maj. Uset Dist * Size (P) and Floor Uset Dist * Size (P). In contrast to what we had seen in the year-level interactive terms presented in the previous section, these interaction terms show that the sizes of floor and majority party interacted with legislators’ distances to those uncovered sets follow similar patterns. For both the uncovered set of the floor as a whole and the uncovered set of the majority party, the relationship between size and distance is similar. While movement away from the uncovered set of the floor is always good for a legislator—because it diminishes roll-rates—the beneficial, negative effect is larger when the uncovered set of the floor is large and it is smaller when the size of the uncovered set of the floor is small. Similarly, for the period-level coefficients, it is always costly for legislators to be further away ideologically to the uncovered set of the majority party, but this cost is larger when the uncovered set is small than when the uncovered set of the majority party is small.

That being said, the year-level interaction effects of Model 4 of Table 10.39 show a similar story to that of Model 3 of Table 10.39. That is, they both show that at the year level the interactive effect between size of and distance from the majority party uncovered set continues to be reversed. When the majority party uncovered set is large, legislators are more punished for deviating from that large uncovered set, and when the uncovered set is small legislators are less punished from deviating from that smaller uncovered set. I argue that this perhaps is because internally divided parties produce smaller uncovered sets that
benefit one faction of the party over the other, leading the losing faction to prefer to legislate using the uncovered set of the floor rather than the uncovered set of the party—reducing the roll-rates of those that are further away from the small partisan uncovered set. This seems to be a short-term mechanism, however. In the longer-term legislators seem to benefit from being closer a small uncovered set of the majority party. By subtracting out these short-term effects, the benefits of having a long-term small uncovered set for the majority party becomes apparent.
One thing that should be of note of all these models is that although the short-term and long-term models disagree on the interactive effect of the size of the majority party uncovered set and the distance of each legislator from that uncovered set, all the models presented in this and the previous section agree on basically every other characteristic of the models. That is, there is overwhelming evidence that despite the intra-party divisions of majority parties in Paraguay, legislators that are closer to the majority party uncovered set always have lower roll-rates and higher win-rates than those that are further away—meaning the majority party or coalition is almost always able to concentrate benefits in itself. Furthermore, it is generally beneficial to be a non-centrist legislator as well. The benefit of being non-centrist legislator is constantly stronger when the uncovered set of the floor as a whole is large and it is constantly weaker when the uncovered set of the floor as a whole is small.

Finally, the unexpected year-level effects on the interaction between the size of the majority party uncovered set and the distance of legislators from this uncovered set also seems to fit well under the model of fractious parties I developed in 8. That is, this clearly shows that there are two levels of legislative competition. In the long-term inter-party competition makes it beneficial for legislators of the majority party to strengthen the party in order to minimize the roll-rates of majority partisan legislators. That being said, intra-party struggles over who controls the party can undermine the benefits of a strong party. Having a small uncovered set that benefits one faction of the majority party at the expense of the other seems to create short-term incentives for the minority faction of the majority party to prefer legislating in a centrist manner rather than in a partisan manner. In other words the partisan concentration of benefits seems beneficial as long as those benefits are distributed somewhat equally among party members. Once one faction can use the concentration of party benefits for itself and at the expense of minority intra-party factions, it seems that minority factions may decide to enable non-partisans to gain more power if that can also lessen the influence of the majority faction of the majority party over that majority party.
In the long-term, partisans seem to legislate in a way that benefits the majority party as a whole, allowing the party to be, in fact, a long-term legislative coalition, but it is clear that in the short-term there are some situations where coordination or bargaining problems cause the factions of the majority party to pursue particularistic factional benefits at the expense of the party as a whole—revealing the “tribal warfare” that hierarchical dilemmas can produce as we discussed in Chapter 8 (Miller, 1992).

9.9 Leadership Positions and Negative Agenda-Setting

In Chapter 8 I also argued that while agenda-setting powers may be helpful in hiding the extent to which parties have intra-party disagreements, they are not strictly necessary for majority parties to be able to concentrate power in themselves. This has been demonstrated to an extent in the previous section as short-term intra-party hierarchical dilemmas can weaken the party, but overall these factionalized parties have been able to concentrate powers in themselves in the long-term. These findings clearly show that a party would benefit from stronger agenda-setting powers as it might hide the short-term intra-party problems of the party in order to strengthen their long-term power—or at least not reveal their fractionalization to the electorate, possibly motivating an electoral cost. That being said it is still possible to address the issue of whether agenda-setting powers are necessary for Paraguayan parties to succeed in a more systematic manner.

Because we have information about who occupied leadership positions in the Chamber of Deputies from 2003 to the present, and because all of these legislators continued to vote throughout their tenures as leaders of the chamber, it is possible to see whether they have an inordinate amount of influence in legislative outcomes in the Chamber of Deputies. This can be analyzed by seeing whether the roll-rates of legislative leaders are lower than the other legislators of the floor, and by seeing whether the win-rates of legislative leaders are higher than the other legislators of the floor. The former finding would be consistent with the Cartel model as this model argues that legislative leaders concentrate agenda-setting
powers in themselves for the benefit of the party. Presumably, then, if leaders continued to vote alongside other legislators while having agenda-setting powers, the roll-rates of leaders would be close to or at 0. In terms of win-rates the expectations are less clear, but we might posit that leaders are also more likely to have higher win-rates than legislators that are not leaders—if only because they hold leadership positions.

Table 9.15: 2003-2020 Win-Rate Pooled Models (Leadership)

<table>
<thead>
<tr>
<th></th>
<th>Roll 1</th>
<th>Roll 2</th>
<th>Win 1</th>
<th>Win 2</th>
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<tr>
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<td>0.14***</td>
<td>0.34***</td>
<td>0.34***</td>
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<td>0.00***</td>
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</tr>
<tr>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
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</tr>
<tr>
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<td>-0.00***</td>
<td>0.00***</td>
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</tr>
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<tr>
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<td>-0.00***</td>
<td>0.00***</td>
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<tr>
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<td>-0.00**</td>
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<td>0.09*</td>
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<td>(0.04)</td>
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<td>0.01</td>
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<td>(0.01)</td>
<td>(0.02)</td>
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<tr>
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<tr>
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<tr>
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<td>(0.03)</td>
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<td>0.48</td>
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***p < 0.001; **p < 0.01; *p < 0.05

The models shown in Table 10.40 show the independent variables we had included in the
year-level models, but this time I include dummy variables that indicate which legislators were the Chamber President, First and Second Vice-Presidents, or any of the Secretaries of each legislative year. The only difference in these models is that they only include the legislative years of 2003 to 2020 because I was unable to get information about who held leadership positions in the Chamber of Deputies before 2003. However, all distance, size and interaction coefficients are significant and in the same direction as the models we had seen in the previous section.

In the model “Roll 1” of Table 10.40 we can see that the dummy variables of none of the leaders of the Directive Table had an effect on roll-rates. Model “Roll 2” of Table 10.40 pools all leadership positions into a single dummy variable that takes on a value of 1 if any leadership position was held in a given year and a value of 0 otherwise. Again, this value is not significantly different from zero. Finally, the models “Win 1” and “Win 2” of the table replicate the previous two models using win-rates as the dependent variable instead of roll-rates. Interestingly, model “Win 1” shows that being President of the chamber does seem to have a slight effect on win-rates. Just as interesting, however, is that the First Vice-President tends to have a win-rate that is significantly lower than the average legislator. Upon consideration, however, this fact matches the argument I had made about leadership positions being filled mostly through a consensus of legislators. That is, in contrast to what we may expect from Cartel theory, as we have seen in Chapter 6, leadership positions are not usually captured by a single party or a single legislative coalition. Often leadership positions are shared across most if not all parties of the chamber. Therefore, if the First Vice-Presidency is often given to the second largest force of the legislature, in order to give them representation in the leadership positions, then this negative coefficient on the dummy variable of the First Vice-President is exactly what we may expect.

Finally, the “Win 2” model simply pools all leaders into a single dummy variable which indicates 1 if a legislator held a leadership position in a given year and 0 otherwise. Similarly to what we had seen in the “Roll 2” model, it does not seem that holding any leadership
position is useful in increasing the win-rate of those members of the leadership. In sum, the roll-rate models indicate that it seems very unlikely that leaders concentrate agenda-setting powers in themselves, and the win-rate models do indicate that the President has a higher win-rate than average and that the First Vice-President has a lower win-rate than average, but this is not necessarily because the leaders hold any special powers themselves. This may simply reflect that if leaders are chosen by consensus, then it might be a tradition to give the First Vice-Presidency to the second strongest force of the legislature—whether that be a minority party or a minority faction of the majority party or coalition.

9.10 Conclusions

The purpose of this chapter was to explore one question: is it possible for majority parties and/or majority coalitions to concentrate legislative benefits for themselves even in the face of intra-party factionalism, weak agenda-setting powers, and legislators with dynamic preferences? Given the empirical findings of this chapter, the answer to this question seems to be: mostly yes.

Throughout this chapter, we consistently saw that except for the initial years of the democratic period, specifically 1995-1999, all other legislative years have shown marked partisanship of legislative outcomes. This is true of both win-rate models and roll-rate models and it is also true of unidimensional and multidimensional models (see Appendix for all models). I then explored whether the size of partisan and non-partisan uncovered sets had an effect in explaining roll-rates and win-rates. The uncovered set of the floor as a whole had unambiguous significance. That is, as the uncovered set of the floor as a whole gets larger, legislators get less punished for being more partisan, and when the size of the uncovered set of the floor as a whole gets smaller the partisanship of legislators is punished more—that is roll-rates get larger and win-rates get smaller. In contrast, the effects of the size of the uncovered set of the majority party were less straightforward. It seems that in the long-term, five-year period level, the size of the uncovered set of the majority party
functions in the same way as the uncovered set of the floor. That is, legislators get punished more from moving away from the uncovered set of the majority party when this uncovered set is small. However, in the short-term, year-level interactive effects seem to be reversed. I argued that this reversal could be explained by the fact that short term concentrations of power in the majority faction of the majority party may be detrimental for the minority faction of the majority party, leading this minority faction to choose to slightly strengthen the uncovered set of the floor as a whole in detriment of the majority party as a whole. Finally, the last finding of this chapter was that leadership positions did not seem to have a meaningful effect in explaining either roll-rates or win-rates—showing that any partisan concentration of power is not likely to have been produced through the agenda-setting powers of legislative leaders.

The findings of this chapter provide quite a bit of support for the theory of fractious parties I developed in Chapter 8. In this chapter we saw evidence for the importance of both inter-party competition for power over the legislature as a whole, but we also saw evidence for the importance of understanding intra-party dynamics of power concentration as well. In short, a very important finding of this chapter is that the majority party concentrates power in the party as a whole, but that if that concentration of power overwhelmingly benefits one faction of the majority party at the expense of another, then the majority party consensus can be weakened with impunity by the majority faction of the majority party. Furthermore, we have also seen that majority parties in Paraguay, even despite their strong intra-party divisions, usually stick together. Even the UNACE party, which left the Colorado party, continued to mostly function as an intra-party faction of the Colorado party while they were separated—at least on the legislative floor—and once the UNACE party was disbanded it re-integrated into the Colorado party. That is, despite substantial intra-party divisions at certain points in time, which have a noticeable effect on legislative outcomes, politics in Paraguay often tend to regress to the Liberal/Colorado alignment of inter-party divisions.

Both the model I developed in Chapter 8 and the findings of this chapter draw attention
to the importance of understanding hierarchical dilemmas in the organizations of political parties. The tug-of-war between intra-party factions and party organizations as a whole is very real, and it was evidenced empirically in this chapter. As we can see, parties benefit from concentrating benefits in the party as a whole, while factions also search for benefits to be concentrated in themselves within the majority party. In order to concentrate benefits in themselves within the majority party, dominant intra-party factions may seek to eject minority intra-party factions from the majority party in order to concentrate both inter-party and intra-party power.

Unfortunately for those intra-party factions that pursue this strategy, it seems like these short-term ejection attempts are difficult to implement successfully. Minority intra-party factions that lose to these concentrations of intra-party power have the recourse of competing under the uncovered set of the floor as a whole and not under the uncovered set of the majority party when these intra-party concentrations of power become too dangerous. Furthermore, while short-term benefits can be gained to an extent by dominant factions of the majority party operating in concert with factions of the minority party, these alliances are difficult to maintain once the incentives for competition on partisan lines arise during the general elections. That is, while intra-party fragmentation arises often, they just as often subside in the face of the general election incentives.

A final thing to mention about this situation of Paraguayan politics is that it is not entirely a negative situation. Of course, the Paraguayan legislature, with its factionalized parties, does not live up to the expectations of “responsible party government” put forward by the APSA (APSR, 1950). However, newer theories of legislative behavior also contend that political parties in general do not live up to these expectations either (Bawn et al., 2012). The silver lining of this situation is, however, that intra-party factionalism seems to be a safeguard that prevents an overwhelming concentration of power. It is important to notice that this intra-party factionalism provides a mechanism through which minority factions of dominant parties can defect against that majority party with impunity. This can
be used to less-than-noble effects, like extracting distributive benefits from the executive, or log-rolling, but it can also be used to prevent a faction from gaining absolute control of government.

In fact, in the two periods where we saw the highest level of intra-party divisions—1999-2001 and 2016-2018 per the findings of Chapter 5—these massive, deep intra-party divisions were the result of certain party leaders’ attempts to completely dominate the majority, Colorado, party. In 1999, as we have discussed, the intra-party divisions were caused by the assassination of the vice-president, Argaña, the pardoning of the leader of military insubordination in 1996, Lino Oviedo, and the violent repression of a manifestation that took place in Asunción. These events, known together as the “Paraguayan March” led to an impeachment process that motivated the resignation of the President Raúl Cubas, and, since the vice-president was dead, the President of the Senate, Luis González Macchi became president of the country. In this period we essentially see one faction of the Colorado party voting almost as if they were part of the Liberal party for two years (see Figure 10.10). Something similar happened in the 2016-2018 period. In this period the conflict surrounded President Cartes’ move to attempt to modify the constitution in order to allow himself to run for reelection through less-than-constitutional means. The leading opposition to this move to modify the constitution was the minority faction of the Colorado party itself—the Añeteté faction (Carrizosa, 2018). In short, in both these cases it is not an exaggeration to say that in this case the factionalism of parties functioned in support of democracy.

The main drawback of intra-party fragmentation, however, is that it lends itself to policy instability, legislative cycling, and perhaps a distributive kind of politics. These drawbacks are very real, and they should not be ignored. However, throughout this book we have explored deeply what the price is of curtailing these drawbacks. In order to prevent fragmentation and legislative cycling, the concentration of powers in certain actors is necessary. However, given Paraguay’s past of authoritarianism and extreme instability and chaos, it is important that any changes that are made take into account the possible negative effects that
those changes may have. Concentrating power can have the negative effect of undermining
the hard-fought democracy that Paraguay has been able to construct for itself for the first
time in its history. Diffusing power further can also create problems of more violent cycles
that lead to even more legislative instability.

In the next and final chapter of this book I will discuss the conclusions and recommenda-
dations that can be derived from the empirical work of this book as a whole. On the basis
of the empirical work of the rest of this book, I will suggest institutional changes that may
lead to less intra-party factionalism, and more stable politics in Paraguay. This chapter will
also provide a series of questions that are left unanswered by this book. As always, the
possibilities of further exploration of political phenomena are infinite. That being said, I will
point what are, in my view, further research avenues that could be beneficial for a deeper
understanding of Paraguayan politics and legislative politics in general.
Chapter 10

Conclusion

This book started with a discussion about prominent legislative theories that have been important to our current understanding of legislative politics. I argued that there were three foundational questions to the understanding of legislative politics. The first was, “Why so Much Stability?” the second was “Why Parties?” and the third was “Where’s the Party?” (Tullock, 1967; Aldrich, 2011; Krehbiel, 1993). In answering these questions a broad base of researchers moved our understanding about legislative behavior forward, but they also created explanations for legislative behavior that were built on different assumptions—such as unidimensionality of preferences or multidimensionality of preferences—and which created different expectations of legislative outcomes—such as partisan or non-partisan expectations of outcomes.

In applying these concepts to the Paraguayan political system, it quickly became clear that many of the stabilizing forces that are present in other political systems were not present in Paraguay. Paraguay does not have a strong executive that substantially modifies legislative behavior through the need of legislators to anticipate executive preference—discussed in Chapter 3. Paraguayan legislators do not have strong ideologies that might create stability through unidimensionalizing the true ideological preferences of legislators—discussed in Chapter 4 and Chapter 5. Finally, Paraguay does not have institutions that on their own are likely to produce stability through concentrating power in certain legislative or partisan actors. Most political powers are simply given to the floor majorities of each chamber, with few restrictions to their power—as discussed in Chapter 6. As a whole, these characteristics about Paraguayan politics are likely to incentivize legislatures that produce unstable, changing, cyclical and somewhat contradictory legislative outcomes.
Part II of this book focused on exploring how legislative politics worked under these expectations of instability, and whether political parties were able to concentrate benefits in themselves despite this higher level of legislative instability in Paraguay. In Chapter 7 I saw that historically the answer to this question was mainly: no. While political parties were ostensibly created in an attempt to reduce the instability of politics, and to unite the opposition to the president in their resistance to the government’s powers, political parties in Paraguay failed to create political stability for much of Paraguay’s history because of their high levels of intra-party fragmentation. This fragmentation led to cycling domination of the government by changing coalitions, which in general promoted a large amount of coups, continually replaced executives, and at times civil wars.

In Chapter 8, however, I argued that once Paraguay moved from a non-democracy to a democracy, political parties were able to somewhat reduce the tendency of politics of cycling by using two, partisan institutions. First, political parties made it difficult for any faction that forms a part of them to be ejected from those political parties—and this was done through a series of PR rules that “fused” factions into representative institutions of each party and into lists of nominated politicians of each party. Second, because a partisan majority in the legislature is equivalent to a supermajority consensus of the majority party, then that can also incentivize political parties to create consensus internally and to adopt supermajoritarian institutions. Through making it difficult to eject factions from their ranks, and through adopting supermajoritarian institutions, I argued that political parties should be able to concentrate benefits in themselves, even in the face of intra-party factionalism.

In this sense, then, it seems that political partied in Paraguay can provide some legislative stability to the system. After all, partisan outcomes mean that cycling coalitions, while still existent, will be less prominent, and that a majority party will tend to be, mostly, in the majority. The alternative would be a majority party that is consistently undercut by its own intra-party factions. While I find evidence that majority parties in Paraguay are, at times, undercut by their intra-party factions, that is not the most likely case. Through the
empirical analyses I carried out in Chapter 9 I found that legislative outcomes mostly favored the majority party throughout the democratic history of Paraguay. The partisan effect is *slightly* moderated when intra-party division is high and when the uncovered set of the majority party favors one faction more than the other, but even when these divisions exist it is better to be in the majority party than in the minority party, and when these divisions do not exist it is unambiguously better to be in the majority—indeed, of preferences. In short, parties in Paraguay matter, they reduce legislative instability, and they provide the opportunity for accountable policymaking to exist. That being said it is still possible to do more to increase the stability of the legislative process in Paraguay.

### 10.1 Recommendations

As I discussed in Chapter 7, Aldrich (1989) argued that for legislative stability to exist, then it is necessary to concentrate some power in certain legislative actors. Of course, the problem of concentrating powers in certain actors, is that this concentration of powers must be inherently non-majoritarian in order for it to curb the unstable effects of simple majoritarianism. It is therefore necessary to strike a balance between creating some power inequalities in the legislature in order to reduce instability without turning the legislature into a dictatorship or an oligarchy. Finding the line is a normative question, and therefore it will be difficult to find a “correct” configuration of power inequality. In what follows I will therefore simply propose some policy modifications that might reduce instability, and I will briefly discuss the pros and cons of each possibility. I will first discuss changes that would not require a modification of the constitution, since their implementation can be carried out more easily, and I will then discuss changes that would require constitutional changes.

Of course, anticipating what will happen in the future is a bit more difficult than explaining what has happened or how things have functioned in the past. Therefore, whereas the rest of this book has focused on the rigorous analysis of data and rigorous theorization, the recommendations and discussions of what remain of this chapter are more tentative, and
they raise more questions than they answer. That being said, this discussion should fuel future empirical work, and it could be of use to policymakers considering reforms.

10.1.1 Non-Constitutional Reforms to Enact Legislative Stability

The easiest institutions to change in order to create incentives for more legislative stability is the chamber rules. However, because they are the easiest to change, they are also the least likely institutions to be able to withstand the instabilities of the chamber floor. In any case, if changes to chamber rules are able to survive, then these might be some changes that would help create legislative stability.

The first rule that would be useful is changing from a forward-moving agenda to a backwards moving agenda. This rule change is interesting because the way in which it creates legislative stability is very subtle, so legislators may be less resistant to this change. As mentioned in Chapter 6, both chambers of the legislature in Paraguay currently use a forward-moving agenda, where a bill is first approved “in general” and then each article of the bill is considered “in particular” where amendments can be offered openly to each article, and amendments to each article are immediately voted up or down. Once amendments cease, the finally amended bill immediately moves forward, since it was already approved “in general” in the first round. A backwards moving agenda would simply entail a final passage vote. Essentially, the process could be flipped with the approvals “in particular” happening first, and the “in general”. Once amendments are inserted into the bill, and approved or rejected, then the final version of the bill could be given a final “in general” vote relative to the status quo. Another alternative would be to have an “in general” vote, then the “in particular” votes, and then wait three days, and have a single “in general” vote to decide whether the finally amended bill should be approved relative to the status quo. Changing to a backwards moving agenda, and giving legislators a couple of days to consider the implications of all amendments passed before moving to a final passage vote, should create some legislative stability (Wilson, 1986). Furthermore, these extra steps do not blatantly concentrate pow-
ers in certain legislators over others, so this change might be met with less resistance from legislators.

The second rule that would be useful is to increase the thresholds necessary for motions of preference and motions of order to compose a committee of the whole chamber. As mentioned in Chapter 6, these two motions could be used to undermine the agenda-setting powers given to committees. By increasing the threshold from an absolute majority to something like a 3/5 majority or even a 2/3 majority, then that would essentially give committees more agenda-setting powers over the agenda. In all fairness, the Chamber of Deputies already increased the threshold for all motions of preference from an absolute majority to a 2/3 majority requirement in 2011, but it would be useful for creating legislative stability if these higher thresholds were also adopted in the Senate, and if these higher thresholds also applied for creating a committee of the whole.

A third rule change would be to strengthen committees. This rule change may be a bit more controversial, as it more directly concentrates power in certain legislators over others. However, certain rules that could be put in place are that bills cannot reach the floor for a vote without the approval of certain committees. This rule is currently in place in the Senate where an opinion from the committee of the treasury is necessary for a floor vote to be possible, but as mentioned before, this would have to be paired with a change to the thresholds of motions in order to be actually binding. Finally, another option for committees is for them to be able to declare certain bills as requiring “closed rules.” Say for example, if within a committee there is consensus that the wording of a bill is essential, one rule change could be to make their opinions binding. In order to make their opinions binding relative to the floor, rules could be created that forbid amendments to bills that receive a consensus opinion from a given committee. If committee members have a higher level of expertise or higher levels of interest in a certain issue considered usually by a committee, enacting “closed rules” to voting on bills could induce stability (Shepsle and Weingast, 1981). This could also be paired with permanent compositions of committees. Currently legislators are
assigned to committees once per year, with the election of new leadership of the chamber. Strengthening the powers of committees would also entail allowing legislators to serve as committee members for the full five-year legislative period.

The final changes that could be carried out in order to promote legislative stability, and probably the one that would be the most controversial for legislators, would be to strengthen the leadership—the directive tables—of each of the two chambers. One aspect of this would also be to expand the terms of the directive table to five years rather than changing it every year. Perhaps this would encourage political parties to create long-term alliances that could ease the functioning of the majority party. This would be especially necessary in the last three years of the legislative period, where intra-party primary competitions often take place, dividing the majority party. Of course, it might also be problematic to concentrate so much power in the leadership positions, as one faction of the majority party may dominate this institution at the expense of the other, but concentrating power would create stability if possible. An alternative may also be to create a parliamentary-like leadership position in each chamber where instead of having yearly elections to choose the directive table, the directive table could only be changed if there is a “no confidence” vote which motivates a change in the directive table. In any case, more work would be necessary to find what would be acceptable to legislators, but making leadership positions long-term and stable, and pairing these leadership positions with stronger agenda control, would lead to legislative stability. Importantly, though, it is important to not concentrate too much power in legislative leaders, because we would also like to avoid them essentially becoming the sole dictators or oligarchs of each chamber.

10.1.2 Constitutional Changes that Should Encourage Legislative Stability

The recommendations presented in the previous section are the easiest to implement because it is easy for legislators to change the rules under which they govern themselves in each of the legislative chambers. However, because of this same reason, these institutions may be too
weak to control legislative stability. This is because, if legislative institutions can be changed by absolute majorities of each chamber, then legislative institutions may themselves “inherit” the instability of floor majorities (Riker, 1988). Despite this, there are many legislative institutions that bind legislators considerably despite the fact that they can be overturned by legislative majorities, so modifying legislative rules as a solution to legislative instability should not be discarded completely. That being said, if it is found that legislative institutions cannot solve problems of instability in Paraguay modifying the constitution slightly could produce a more stable policymaking process.

The first change that could be made, which would considerably reduce legislative instability, is simply raising the threshold for veto overrides from an absolute majority to a 2/3 majority. It would be vital to increase the threshold necessary to override a total veto, and rising the threshold for a partial veto may also be useful, but it might not be as strictly necessary as rising the total veto. As I discussed in detail in Chapter 3, the presidential veto in Paraguay is so weak that it is the president who often has to anticipate legislative preferences in order to avoid an override. In contrast, if the veto of the president had a higher threshold for override, then legislators would have to anticipate executive preferences when legislating. Even if the veto is never used, then, legislators are more likely to produce stable legislative outcomes with a high-threshold veto, because in their legislative tasks legislators are likely to incorporate anticipations of executive preferences. Given the long authoritarian past of Paraguay, citizens are often, and often rightly, concerned about assigning more powers to the Paraguayan president. Raising the threshold of the executive veto, however, should be a mostly benign increase in executive powers because 1) it will probably produce more stable legislative politics, and 2) it still does not provide wide-ranging powers to the president because it only increases the president’s negative powers—preventing what the president doesn’t like from passing—without increasing his positive powers—allowing the president to bypass the legislature. Partial vetoes are at times a bit more controversial, because they do seem to assign some more, quasi-positive, powers to the president (Alemán and Schwartz,
However, even if we only raised the threshold for override of total vetoes, we might expect higher levels of legislative stability.

The second constitutional change that would provide more legislative stability would be to allow each chamber to control their own agenda more fully. As mentioned in Chapter 6, in Paraguay when a chamber of origin passes a bill, the revision chamber has three months to vote the bill up or down or else it has an “automatic sanction.” Furthermore, rejecting a bill gives the upper hand to the chamber of origin, whereas modifying a bill gives the upper hand to the revision chamber. Therefore, revision chambers are more likely to modify a bill in an undesirable manner to the chamber of origin in order to get it repealed by an executive veto. This leads to odd policymaking, where the legislature is more likely to pass an undesirable bill by accident, and it is less likely for “gridlock” to take place in Paraguay.

This could be solved in several manners. In case that people are uncomfortable with allowing legislators to bury bills forever without voting on them, as inter-chamber competition usually happens in the United States, one thing that could be possible is simply to strengthen rejections vis-a-vis modifications. In this case, the chamber of origin would be able to force the revision chamber to consider a bill with the three month limit, but the revision chamber would be able to express its own preferences and simply truly reject a bill that it doesn’t like. That way policymaking is transparent to the citizens, but it also prevents gridlock through negative agenda-setting powers of each chamber.

In contrast, if people prefer to simply match the United States system more closely, it could be possible to eliminate the “automatic sanction” of bills completely, and allow each chamber to decide whether it wants to consider the bill approved by the other or not. This would allow each chamber to simply ignore a bill passed by the other chamber, if it is not willing to pass the bill, but it could also produce higher levels of gridlock. In any case, a considerable amount of legislative instability could be reduced by giving each chamber more control over its own agenda—whether that be by strengthening rejections, or by eliminating the automatic sanction of bills.
10.2 Epilogue

While implementing some of these reforms might be beneficial, reformers must keep in mind that completely eliminating legislative instability has its trade-offs. Principally, having stronger, more united political parties will probably lead to a higher level of concentration of power in party leaders. These unified political parties will also be more capable at benefiting they party members, and they may be more able to detract from the “center” of citizen preferences as a whole. In Paraguay, this can be seen as an even more prominent issue because the Colorado party has been mostly dominant throughout democratic history. This has not led to an overt concentration of powers because factions of the Colorado party itself often serve as a check to the powers of the Colorado party. Creating fully disciplined parties could eliminate this check on the powers of the Colorado party.

In contrast, creating disciplined parties may also create new checks to the powers of the Colorado party as well. For example, we have already seen a situation where the Colorado party was able to concentrate power in itself—during the Nicanor presidency—which led to the exodus of an intra-party faction into becoming an independent political party—the UNACE party. Perhaps changes in institutions that concentrate political powers in the leadership of each party may simply lead intra-party factions to express themselves as independent parties, creating a formally multiparty Paraguayan system, which Paraguay currently sort of functions as. After all, according to Negretto and Visconti (2018), Latin American systems chose PR systems in order for intra-party factions to be able to compete as independent parties should they have to. Paraguay shows that the UNACE was able to survive and be quite successful when it became independent from the Colorado party, so there is no reason why this can’t happen again in the future. It could even happen in parties other than the Colorado party. Although mass fragmentation is unlikely as the D'hondt formula tends to favor larger parties.

That being said, what this discussion shows is that future works in political science analysis should explore the down-side of concentrating powers in political party leaders.
The more intra-party discipline is enforced through party institutions, the more difficult it might become for intra-party factions to provide a check on party leaders. This problem may be even more difficult if intra-party factions cannot credibly threaten to leave the party. If electoral systems promote few, large political parties in the system, then intra-party factions may have difficulty checking political party leaders, because they cannot credibly threaten to leave the majority party. Exploring this problem in more depth in the future would be an interesting task for future research.

A final issue about party discipline that political science has to address in the future is the question of, how desirable is it for citizens to be aware about the intra-party factions of political parties? I have argued that, while agenda-setting powers are not strictly necessary for political parties to be able to maintain themselves and concentrate benefits in their members, agenda-setting powers would be useful for political parties because they could “hide” intra-party conflicts from the electorate, and through this they could make it seem like their party decisions have a consistent, though-out logic, behind them. If a party is divided on an issue, party leaders can simply decide to not schedule a bill for a vote until they are sure a majority of their party is behind it, and once they’re sure, they can schedule and pass it. Furthermore, if they believe some of their legislators would pass a bill mainly supported by the opposition, party leaders could never schedule a bill in order to prevent the majority from being rolled (Cox and McCubbins, 1993, 2005). Through both these mechanisms—where these agenda-setting powers exist—legislators are essentially “hiding” the true nature of politics from the electorate. Is this “hiding” of the true nature of politics desirable? Or is it detrimental to a democratic politics? Is it better for citizens to see the true, chaotic, messy, contradictory policymaking process? Or is it better for citizens to simply believe that policymaking is a logical, straight-forward, process?

These are questions that we currently do not know the answers to. Furthermore, the predominant assumption of unidimensionality of legislator preferences makes it difficult for political science to explore these questions. This is because assuming legislators have uni-
dimensional preferences immediately bypasses any need for academics to explain and un-
derstand the dynamics of legislative instability. If there is any finding that suggests that a political system has legislators that have preferences on at least two dimensions, then it would be extremely useful for political scientists to uncover and model legislative preferences in that way. If legislative behavior is unidimensional in spite of the multidimensional preferences of legislators, then it is possible to explore how institutions prevent certain preferences legislators have from being expressed on the legislative floor.

This book has provided a model for understanding legislative preferences that are quite unrestricted. They are unrestricted because Paraguay has a weak president, because legislators have weak ideologies, and because the political system provides few agenda-setting powers to party and legislative leaders. These characteristics of the system led to legislators expressing their preferences through legislative voting in a multidimensional and dynamic manner. Despite this, this book was able to provide a theory of fractious parties that can model expected—partisan and non-partisan—legislative outcomes given dynamic preferences in more than one dimension. In contrast to unidimensional models, this multidimensional model is more accurate in describing both inter-party and intra-party conflicts that legislators face when legislating. The practice of modeling multidimensional preferences directly in the analysis of legislative behavior is something that should be continued in future political science studies.
Part III

Appendixes
Appendix to Chapter 3

Introduction

In order to analyze veto behavior in Paraguay, I am relying on two separate data sources—bill histories and roll-call votes—for the 2008-2018 time-period. Presidents and legislatures are chosen concurrently in Paraguay for 5 years, so this time period includes two executive/legislative periods: 2008-2013 and 2013-2018. These two periods are particularly interesting because the 2008-2013 period had an extremely weak executive, and the 2013-2018 period had one of the stronger executives the Paraguayan system can produce.

In terms of bill history data, I was able to retrieve data from the “System of Legislative Information” of the Paraguayan legislature, which includes bill history data from 2008 to the present. These bill histories include every single procedure carried out on a bill—including entries and exits from commissions, movement from one chamber to another, vetoes, etc. In total, I was able to get information about 167,843 procedures carried out on 12,696 bill projects. From this constructed database I was able to extract the dependent variable of interest which is whether a bill received a partial or a total veto.

A second dataset of interest is roll-call data. This data is particularly useful because the models developed above rely heavily on the president having information about the preferences of legislators. Roll-call data is useful for creating estimates of preferences for legislators through ideal point estimation (Poole and Rosenthal, 1997; Clinton, Jackman and Rivers, 2004). Paraguay has been consistently recording the electronic votes of legislators in the Chamber of Deputies since 1995 to the present. This includes 1,238 non-lopsided votes.

1 See: http://silpy.congreso.gov.py/
for the 2008-2013 period and 1,088 non-lopsided votes for the 2013-2018 legislative period for a total of 2,326. Because we are interested in seeing the extent to which the executive is able to anticipate legislative preferences when placing a veto, measures of legislative preferences derived from roll-call data will be extremely useful. Roll-call data for the Senate is not available for this time period.

Unfortunately, merging these two datasets has been challenging because bill histories and roll-call data are stored in separate formats and they have no common id to link the cases from these different datasets. I was however, able to link a subset of bills and bill histories using the dates of each bill history procedure, the dates of each roll-call vote, and the title of each bill.

**Soft Merge Process**

I made several rules to merge the two data sets. The first rule was that a roll-call could be merged to a bill history only if a procedure detailed in the bill history occurred on the same day as the roll-call vote. Then, I took the title of the roll-call vote and of the bill history, and I only merged those bills where the titles coincided in 70% of the words. Finally, if there were several roll-call votes that matched above 70% with the title of the bill history, I made the roll-call with the highest percentage of same words be the vote finally binded to the bill history case. Finally, when a single bill history matched with multiple roll-call votes on a given day to an acceptable extent, I also prioritized later roll-call votes to earlier ones. That way, only the vote that was closest to the executive veto decision was kept on bill histories that underwent multiple votes.

**Implications of Case-Selection Process**

The case-selection procedure I detailed in the previous section clearly does not live up to the random selection ideal. That being said, it is an explicit form of selection on the independent variable as the date-match becomes more likely the higher the number of procedures a bill
underwent—and because of this number of procedures is an independent variable in most models of Chapter 3. This should not be problematic because, according to King, Keohane and Verba (1994), “Selecting observations for inclusion in a study according to the categories of the key causal explanatory variable causes no inference problems... [and] it is possible to avoid bias while selecting on a variable that is correlated with the dependent variable, so long as we control for that variable in the analysis” (emphasis in original). Therefore by controlling for this variable on which the selection of cases was carried out, then we can minimize bias in our estimates.

A second requirement to successfully select on the independent variable while minimizing bias in the estimates is to make sure that the variance of each independent variable spans the full range of values that that variable takes on in the full population of cases. In order to ensure that selected independent variables continue to span the full range of values available in the full population of cases I created histograms that show the distribution of each independent variable in the population of cases (in the left panels), and the distribution of each independent variable in the sample of cases (in the right panels) for all the independent variables I used in the models shown in Chapter 3. As we can see in the remainder of this section, all samples seem to mostly follow the distribution of their respective populations as a whole, indicating that we have few reasons to expect biased estimates on the basis of the selection process detailed above.

**Sequential Complication of Models to show Stability of Estimates**

The tables below show the same models as those included in Chapter 3, but I sequentially add one independent variable at a time in order to show that the addition of each independent variable does not modify the coefficients of previously added independent variables much. That is, the findings in Chapter 3 are resistant to slight variances in model specifications.
Figure 10.1: 08-13 (Lugo/Franco) Difficulty Parameter: All Data vs Censored Data

Figure 10.2: 08-13 (Lugo/Franco) Discrimination Parameter: All Data vs Censored Data
Figure 10.3: 13-18 (Cartes) Difficulty Parameter: All Data vs Censored Data

Figure 10.4: 13-18 (Cartes) Discrimination Parameter: All Data vs Censored Data
Figure 10.5: Chamber Jumps: All Data vs Censored Data

Figure 10.6: Number of Procedures in Chamber of Deputies: All Data vs Censored Data
Figure 10.7: Number of Procedures in Chamber of Deputies: All Data vs Censored Data

![Histograms showing the distribution of procedures in Chamber of Deputies with and without censored data.]

Table 10.1: 08-13 Period: Ordered Logit

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<th>Model 3</th>
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Appendix to Chapter 4

Appendix

Cutoffs for Yearly Roll-Call Data

Below are the dates I chose for roll-call cutoffs in order to compare ideal points created from PELA responses to expressed preferences of legislators in Figures 4.4 and 4.5. The fortunate thing about the periods of fieldwork of each PELA wave, was that they happened within each legislative year. In Paraguay, the legislative year starts on July 1 and ends on June 30 of the next year. In this period the a new Chamber Directorate—including the Chamber President, two Vice-Presidents and three Secretaries—can be chosen and the composition of chamber committees can be re-constructed. Therefore, I chose to cut off roll-call selections to include all roll-calls that happened in the legislative year in which fieldwork for PELA took place. That way, all legislators, and legislative institutions, are held constant to match the context in which PELA responses took place.

Table 10.7 : Roll-Call Selection Procedure for Figures 4.4 and 4.5

<table>
<thead>
<tr>
<th>Wave Year</th>
<th>N. Resp.</th>
<th>Field Dates</th>
<th>N.Rolls</th>
<th>Roll Dates</th>
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</table>
Figure 10.8: Histograms of Estimated Angles


1998–2003: Cutting Line Angles

2003–2008: Cutting Line Angles

2008–2013: Cutting Line Angles

2013–2018: Cutting Line Angles

2018–2023: Cutting Line Angles
Figure 10.9: Histograms of Estimated Eigenvalues
Appendix to Chapter 5

Figure 10.10: 1998–2003 Yearly Local W-NOMINATE Estimates
Figure 10.11: 2003-2008 Yearly Local W-NOMINATE Estimates
Figure 10.12: 2008-2013 Yearly Local W-NOMINATE Estimates
Figure 10.13 : 2013-2018 Yearly Local W-NOMINATE Estimates
Figure 10.14: Angles of Pooled W-NOMINATE

Figure 10.15: Yearly Comparisons to Global Second Dimension
Appendix to Chapter 9

Period-Level Models

Roll-Rate Models

Table 10.8 : Roll-Rates: Period-Level Multidimensional Models

<table>
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<tr>
<td>Dist. Maj. Uset.</td>
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<td>+*</td>
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<tr>
<td>Adj. R2</td>
<td>0.249</td>
<td>0.017</td>
<td>0.716</td>
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<td>0.724</td>
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Table 10.9 : Roll-Rates: Period-Level Unidimensional Models

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<td>Adj. R2</td>
<td>0.268</td>
<td>0.07</td>
<td>0.761</td>
<td>0.393</td>
<td>0.779</td>
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Win-Rate Models

Table 10.10 : Win-Rates: Period-Level Multidimensional Models

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<tr>
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<td>Adj. R2</td>
<td>0.074</td>
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<td>0.111</td>
<td>0.512</td>
<td>0.768</td>
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### Year-Level Models

#### Roll-Rate Models

#### Table 10.11: Win-Rates: Period-Level Unidimensional Models

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<td>+*</td>
<td>+*</td>
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<td>+*</td>
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<tr>
<td>Dist. Maj. Med.</td>
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<td>-*</td>
<td>-*</td>
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<tr>
<td>Adj. R2</td>
<td>0.043</td>
<td>0.046</td>
<td>0.194</td>
<td>0.582</td>
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<td>0.461</td>
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#### Table 10.12: Roll-Rates: Year-Level Multidimensional Models

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<tr>
<td>Dist. Maj. Uset.</td>
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<td>0.281</td>
<td>0.253</td>
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#### Table 10.13: Roll-Rates: Year-Level Unidimensional Models

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#### Table 10.14: Roll-Rates: Year-Level Multidimensional Models

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### Table 10.15: Roll-Rates: Year-Level Unidimensional Models

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<td>0.131</td>
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### Table 10.16: Roll-Rates: Year-Level Multidimensional Models

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</tr>
<tr>
<td>Dist. Maj. Uset.</td>
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<td>+*</td>
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### Table 10.17: Roll-Rates: Year-Level Unidimensional Models

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### Table 10.18: Roll-Rates: Year-Level Multidimensional Models

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<tr>
<td>Dist. Maj. Uset.</td>
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<td>+*</td>
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### Table 10.19: Roll-Rates: Year-Level Unidimensional Models

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<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-</td>
<td>-*</td>
</tr>
<tr>
<td>Dist. Maj. Med.</td>
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<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
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<tr>
<td>Adj. R2</td>
<td>0.342</td>
<td>0.548</td>
<td>0.209</td>
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Table 10.20 : Roll-Rates: Year-Level Multidimensional Models

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<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
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<td>+*</td>
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<tr>
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<td>0.535</td>
<td>0.703</td>
<td>0.585</td>
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Table 10.21 : Roll-Rates: Year-Level Unidimensional Models

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<td>Dist. Floor Med.</td>
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<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
</tr>
<tr>
<td>Dist. Maj. Med.</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
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<tr>
<td>Adj. R2</td>
<td>0.737</td>
<td>0.841</td>
<td>0.691</td>
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Table 10.22 : Roll-Rates: Year-Level Multidimensional Models

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<td>-*</td>
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</tr>
<tr>
<td>Dist. Maj. Uset.</td>
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<td>+*</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.838</td>
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Table 10.23 : Roll-Rates: Year-Level Unidimensional Models

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<td>Dist. Floor Med.</td>
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<tr>
<td>Dist. Maj. Med.</td>
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<tr>
<td>Adj. R2</td>
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Win-Rate Models

Table 10.24 : Win-Rates: Year-Level Multidimensional Models

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<tbody>
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<td>Dist. Floor Uset.</td>
<td>-*</td>
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<tr>
<td>Adj. R2</td>
<td>-0.009</td>
<td>0.096</td>
<td>0.106</td>
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### Table 10.25: Win-Rates: Year-Level Unidimensional Models

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<td>Dist. Floor Med.</td>
<td>-</td>
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<tr>
<td>Adj. R2</td>
<td>0.009</td>
<td>0.045</td>
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### Table 10.26: Win-Rates: Year-Level Multidimensional Models

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<td>Dist. Floor Uset.</td>
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<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
<td>+*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
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<tr>
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### Table 10.27: Win-Rates: Year-Level Unidimensional Models

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<tbody>
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<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Dist. Maj. Med.</td>
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### Table 10.28: Win-Rates: Year-Level Multidimensional Models

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<tbody>
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<td>Dist. Floor Uset.</td>
<td>+</td>
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<td>+*</td>
<td>+*</td>
<td>+*</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
<td>-*</td>
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<td>-*</td>
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<td>0.005</td>
<td>0.219</td>
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### Table 10.29: Win-Rates: Year-Level Unidimensional Models

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<td>Dist. Floor Med.</td>
<td>+</td>
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<td>+*</td>
</tr>
<tr>
<td>Dist. Maj. Med.</td>
<td>-*</td>
<td>-</td>
<td>-*</td>
<td>-*</td>
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<td>0.404</td>
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Table 10.30 : Win-Rates: Year-Level Multidimensional Models

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<td>+*</td>
<td>+*</td>
<td>+*</td>
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<tr>
<td>Dist. Maj. Uset.</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
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<td>Adj. R2</td>
<td>0.732</td>
<td>0.668</td>
<td>0.306</td>
<td>0.462</td>
<td>0.218</td>
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Table 10.31 : Win-Rates: Year-Level Unidimensional Models

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<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
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<tr>
<td>Dist. Maj. Med.</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
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<td>0.318</td>
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Table 10.32 : Win-Rates: Year-Level Multidimensional Models

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<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
<td>+*</td>
</tr>
<tr>
<td>Dist. Maj. Uset.</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
<td>-*</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.52</td>
<td>0.659</td>
<td>0.583</td>
<td>0.732</td>
<td>0.755</td>
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Table 10.33 : Win-Rates: Year-Level Unidimensional Models

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<td>+*</td>
<td>+*</td>
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Table 10.34 : Win-Rates: Year-Level Multidimensional Models

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Table 10.35: Win-Rates: Year-Level Unidimensional Models

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Pooled, Yearly Models

Table 10.36: 1995-2020 Roll-Rate Pooled Models

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***p < 0.001; **p < 0.01; *p < 0.05
### Table 10.37: 1995-2020 Win-Rate Pooled Models

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| R²             | 0.02     | 0.13     | 0.24     | 0.00     | 0.03     | 0.21     | 0.30     |
| Adj. R²        | 0.02     | 0.13     | 0.24     | −0.00    | 0.03     | 0.21     | 0.30     |
| Num. obs.      | 1895     | 1895     | 1895     | 1895     | 1895     | 1895     | 1895     |

***p < 0.001; **p < 0.01; *p < 0.05

**Nested, Period/Year Models**
Table 10.38: Nested Period/Year Models

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\(***p < 0.001; **p < 0.01; *p < 0.05\)
Table 10.39: Nested Period/Year Models

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***p < 0.001; **p < 0.01; *p < 0.05
Models That Include Leadership Positions

Table 10.40: 2003-2020 Win-Rate Pooled Models (Leadership)

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<tr>
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<td>−0.23***</td>
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<tr>
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<tr>
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***$p < 0.001$; **$p < 0.01$; *$p < 0.05$
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