MEASURING REPRESENTATION IN BOLIVIA: IDENTIFYING ETHNIC DIFFERENCES IN LEGISLATIVE SPEECH PATTERNS

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ABSTRACT. In this paper, I argue that three political factors—the extent of party control, the type of party, and the extra-legislative institutional environment—condition the link between descriptive representation and legislative behavior. To test this theory, I create a new measure of legislative behavior using automated content analysis of legislative debates to empirically capture patterns in speech. This makes it possible to identify if different types of descriptive representatives systematically exhibit unique forms of political representation in the way they defend policy to those who hold them accountable. More unique patterns reflect a strong divide between categories of legislators. I first show that this measure systematically varies with the strength of the government-opposition divide during the development of the Bolivian party system since 1985. I next test one of the hypotheses from my theoretical argument. I find that Indigenous legislators in the 2010 Bolivian legislature do indeed express different patterns of legislative behavior, but only after controlling for the types of factors that are known to condition differences between descriptive representatives. This analysis provides evidence that helps us isolate the political context that shapes unique forms of political representation among descriptive representatives.
In this paper I develop an original proxy measure of political representation using automated content analysis of legislative debates and show how that measure can be used to approximate the strength of the government-opposition divide in legislative behavior for all legislative terms in Bolivia since 1985. I show that this measure empirically captures our intuition regarding the development of the Bolivian party system overtime. I next use this measure to evaluate the extent to which Indigenous legislators in the 2010 Bolivian legislative period express different forms of political representation during legislative debates. I find that descriptive representatives—in this case, Indigenous—do indeed express different perspectives along a broad set of issues than those legislators elected from traditionally represented groups—in this case, mestizo. These differences are muted when legislative behavior is explored across parties.

These findings are part of a much larger project—my dissertation—that explores the conditional link between descriptive representation and legislative behavior in Bolivia, Ecuador, and Peru. Distinct legislative behavior should be conditional on the types of institutional mechanisms designed to enhance descriptive representation, the types of parties descriptive representatives belong to, and, more importantly, the strength of party control over their behavior. This project examines how the political context conditions legislative behavior and determines the extent to which we should—and, should not—observe distinct forms of legislative behavior between descriptive and more traditional representatives. This paper presents the broader theoretical argument of the project, explains the intuition behind the empirical approximation I use to measure unique forms of legislative behavior, and explores one of the expectations from the theoretical argument.

**Descriptive Representation and Institutional Design**

Increasing descriptive representation is extremely valuable for groups that have been historically absent from the political environment and have consequently been unable to advance their interests in the policy-making process. ‘Descriptive’ representatives and their constituents are expected to have shared common life experiences, even if they may not have identical policy preferences. Therefore, increasing the descriptive representation of underrepresented groups is expected to introduce new ‘perspectives’ and ideas into the deliberative process and improve the quality of debate (Mansbridge 1999). That is, scholars generally expect that representatives of underrepresented groups are able to use their unique experiences to judge policy in a manner that legislators not representing those groups are incapable of doing. This suggests that political representation should change when new types of legislators are incorporated into the policy-making process. In other words, we should expect a link between descriptive and political representation.

To increase the level of political representation, Mansbridge (1999, 632-633) makes the case for a selective form of descriptive representation to compensate specific groups for past obstacles—cultural and institutional—that have historically “reduce[d] the proportions of certain groups below what they would [have] achieve[d] by chance.” Oftentimes, this means designing institutions to increase descriptive representation. Such an argument has been used to justify the modification of geographical boundaries to create majority-minority districts in the U.S. (Lublin 1997); to justify the creation of ethnic reserved seats in New Zealand

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1See also Dovi (2002).
and parts of Latin America (Reynolds 2005, Reynolds, Reilly & Ellis 2005); and to justify the use of gender quotas in proportional representation electoral systems in Latin America and other regions (Jones 2009, Schwindt-Bayer 2009).

The Link Between Descriptive & Legislative Representation. As mentioned above, scholars believe descriptive representation is important insofar as it affects representative behavior. On an individual level, representative behavior might include bill introduction, committee service, bill cosponsorship, and participation in legislative debates. Each behavior is associated with a particular type of ‘content.’ For example, where the behavior is bill introduction and bill cosponsorship, the content is the type of policy introduced (e.g., one increasing social welfare benefits vs. one decreasing social welfare benefits). Where the behavior is participation in legislative debates, the content is the substance of their language used (e.g., the use of speech to espouse unique policy views). Whatever their representative behavior, we should expect to see two types of changes reflected in content when there is an increase in descriptive representation: 1) new issues and priorities on the political agenda and 2) new perspectives on other important policies at key stages of policy deliberation (e.g., at the debate and voting stages of the policy-making process).

New Issues and Priorities. Scholars have uncovered empirical support for the theoretical argument that increasing descriptive representation leads to the introduction of new issues onto the political agenda and that descriptive representatives bring new priorities to the attention of the legislature (Bratton 2005, Canon 1999, Carroll 2001, Carroll 2002, Dodson & Carroll 1991, Jones 1997, Htun & Jones 2002, Lublin 1997, Mezey 2008, Ross 2002, Schwindt-Bayer 2006, Swers 2005, Taylor-Robinson & Heath 2003, Thomas 1991, Tolleson-Rinehart 1992). This linkage has been identified using surveys and evaluating the types of bills that descriptive representatives introduce and cosponsor. For example, research has shown that legislatures adopt policy identified as ‘women’s issues’ (Kittilson 2008, O’Regan 2000, Schwindt-Bayer & Mishler 2005) and ‘racial and ethnic issues’ (Preuhs 2006) as the number of female and racial and ethnic descriptive representatives increases, respectively. Most importantly, the empirical literature has uncovered substantial support for one of the primary theoretical arguments for increasing the descriptive representation of historically underrepresented groups—they introduce new issues onto the legislative agenda.

New Perspectives on a Broad Set of Issues. The current literature has been unable to establish a link between descriptive and representative behavior outside of the types of issues that have typically been associated with historically underrepresented groups. The first attempts at this have explored voting behavior on non-group related issues, but this literature has shown that “knowing the gender or race of a member will be much less helpful in predicting how that member will vote than knowing the member’s political affiliation” (Mezey 2008, 2

More generally, common institutional methods used for increasing descriptive representation of historically underrepresented racial and ethnic groups include reserved seats (e.g., caste and tribe seats in India, Maori seats in New Zealand, Aboriginal seats in Taiwan, black seats in Colombia, and indigenous seats in Bolivia), reduced vote thresholds for representation (e.g., for national minorities in Germany, Poland and Denmark), minority candidates on proportional representation lists (e.g., minority candidates on lists in Singapore), and race-conscious districting (e.g., black and latino majority-minority districts in the U.S.). Gender quotas are a common institutional method used for increasing descriptive representation of women in proportional representation list systems (e.g., Argentina, Belgium, Costa Rica, Macedonia, and South Korea).
That is, party affiliation plays an integral role in conditioning the voting behavior of legislators, whether they are elected to increase the descriptive representation of a specific group or elected as traditional representatives.

However, this should not necessarily be taken as evidence that descriptive representation is irrelevant for broader issues. Scholars have found in Latin America that, under certain conditions, women are in policy-making positions on committees and in ministries that influence a broad set of issues, like finance and defense (Escobar-Lemmon & Taylor-Robinson 2005, Heath, Schwindt-Bayer & Taylor-Robinson 2005), with similar observations made of racial and ethnic descriptive representatives. But the literature has not explored the effects of this across institutional environments. My research will utilize cross-national evidence to explore how descriptive representatives behave in policy-making across a broad set of issues, not simply on issues corresponding to their identity group’s more narrow interests.

**Political Context and Representation.** Several scholars have shown that the political context influences the incentive structure of representatives, which in turn affects their strategic behavior for achieving future career goals. In systems where party leaders control access to the ballot and the spoils of office, representatives pursue the interests of the party and moderate their own behavior—if it deviates from the party’s—so that the content of their representative behavior reflects the interests of the party. The argument is that representatives fear negative consequences from party leaders, like not being renominated in the next election, if they do not toe the party line. In systems where constituents control access to the ballot and reward legislators at the next election (where reelection is the goal), the content of a representative’s behavior will be moderated towards the interests of the voting constituency (Carey & Shugart 1995, Mainwaring & Shugart 1997). Evidence of this has been established in the U.S. context (for an example of this, see Mayhew (1974)), and in Latin America (Crisp et al. 2004).

The partisan organization of legislative assemblies (Aldrich 1995, Cox & McCubbins 1993, Cox & McCubbins 2005, Rohde 1991) constitutes further evidence of partisan control of individual legislator behavior, and it helps us understand why we do not observe systematic variation in voting behavior across descriptive and traditional representatives in the same party. This is not surprising where we find that majority party leaders can keep divisive issues off of the agenda (Cox, Masuyama & McCubbins 2000, Chandler, Cox & McCubbins 2006, Cox, Heller & McCubbins 2008, Jones & Hwang 2005, Neto, Cox & McCubbins 2003), or where party leaders can control the selection of candidates for office or placement on party lists to enforce party discipline (Schattschneider 1942, Gallagher & Marsh 1988, Katz & Mair 1992, Bowler, Farrell & McAllister 1996, Bowler, Farrell & Katz 1999, Mainwaring & Shugart 1997, Jones 2002, Carey 2008), or where party leaders have formal or informal sanctioning mechanisms for those who break party discipline (Carey 2008).

Thus, there is clear evidence that the political context modifies individual strategies of political representation for legislators generally. Building on this work, I propose a contextual theory of legislative representation that accounts for why the political context should affect the behavior of descriptive representatives in particular, thereby mitigating the link between descriptive and representative behavior.

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3Swers (1998) and Htun & Jones (2002) reflect this sentiment in their own research.
My theory of legislative behavior, like most theories in the legislative literature, assumes that representatives are rational and that their career ambition depends on political context. Unlike most previous legislative theories, I assume that legislators from underrepresented groups have different perspectives than legislators from traditionally represented groups. This is based on literature on descriptive representation, which implicitly assumes that legislators from underrepresented groups have an incentive to advance group interests and that these preferences should be observed on a wide variety of issues. But unlike most theories on descriptive representation, I argue that the content of representative behavior demonstrated by descriptive representatives depends critically on the political context. More specifically, I argue that the extent of party control (e.g., access to the ballot), the type of party (e.g., ethnic or catch-all party), and the institutional mechanism used for increasing descriptive representation (e.g., reserved seats or gender quotas) should influence the ability of legislators from underrepresented groups to represent the interests of their group. This theory applies to the content of all types of representation, although in the empirical analysis, I will focus on only one of these behaviors—the content of representatives’ speeches in legislative debates.

The Modifying Effects of Political Context. The political context is important because it defines who office-seeking legislators are accountable to and how they are held accountable. These components should predictably interact to modify the behavior of descriptive and traditional representatives and, as a result, modify the link between descriptive representation and legislative behavior.

The Institutional Mechanism for Increasing Descriptive Representation. Two primary institutional mechanisms have been adopted to increase the descriptive representation of historically underrepresented groups. One of these is the adoption of reserved seats to guarantee the election of underrepresented racial and ethnic groups. This institutional mechanism requires the selection of candidates based on their ethnic or racial identity, and these candidates compete against one another for the ethnic/racial seat. These candidates must generally make direct appeals to the interests and policy priorities of identity groups in order to win the election. The candidate that appeals most strongly to the interests of the targeted group should win the election. Reserved seat representatives are making direct appeals to a group that has been historically removed from the policy-making process, and their mere election is coupled with the inclusion of new perspectives in that process. That is, we should expect representatives who are elected via reserved seats to distinguish themselves from traditional representatives through different content of their representative behavior.

The second common institutional mechanism is the adoption of gender quotas on party-lists in proportional representation systems. This institutional mechanism requires that a specific percentage of women be on the party’s list. In these electoral environments party quotas are filled by women who are affiliated with that party. For example, liberal parties select liberal women and conservative parties select conservative women, and the size of the female population in the country—about half—makes it possible to be selective. So, party affiliation

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4The extent to which we see quotas leading to an actual increase in descriptive representation varies across enforcement strength and placement requirements (Jones 2009, Schwindt-Bayer 2009).
for national parties tends to have a cohesive effect, resulting in representative behavior that is similar across women and men in the same party. Women in these systems must jump the same hurdles to be on the party list as their male colleagues. However, we should expect there to be some differences between these two groups on issues that are unique to women, since women presumably introduce new perspectives. This suggests that women and men in the same party should have similar representative behavior across most issues, except for those identified as women’s issues. For the same reason, we should expect there to be no difference between women not elected on quotas and women elected on quotas if they are affiliated with the same party. These women are expected to have the same unique perspectives (unique to the female group) and the same ideological leanings. Thus, although gender quotas can be used to increase the number of women in the legislature (which can help get some types of policies passed), the existence of a quota should not influence the strategic behavior of women. That is, it is the political party that structures party members’ strategic behavior in list-systems, and quotas should only play an indirect role in the link between descriptive and representative behavior.

In short, my argument is that the institutional mechanisms chosen for increasing descriptive representation—reserved seats or quotas—have a different effect on the strategies of descriptive representatives (by determining who they are primarily accountable to, their identity group or their party) and therefore have different modifying effects on the link between descriptive and legislative representation. This point has thus far not been explicitly recognized (much less tested) in the existing literature on descriptive representation.

The Extent of Party Control. In line with the prior argument, we should also expect the extent of party control to modify the strategies of descriptive representatives (Carey & Shugart 1995, Mainwaring & Shugart 1997). Party elites with extensive control can remove representatives from the party and deny their reelection. One way of doing this is through nominating procedures, which vary between open or closed primaries and centralized or decentralized party selection. Representatives are accountable to voters in primary nominating procedures and to party leaders in party selection procedures. To achieve ballot access, representatives must appeal to the appropriate group while in office; they are punished (i.e., not reselected to be on the ballot) if they fail to satisfy the target group’s interests. In the case of party control, party elites place party members higher on party lists (increasing the likelihood of election) to reward behavior that is aligned with the party. Partisan control also varies with the incentive to ‘cultivate a personal vote’ (Carey & Shugart 1995). In closed-list proportional representation systems, voters vote for parties, so individual candidates increase the likelihood of reelection when they strengthen the party name. In plurality/majority systems (and to a lesser extent, open-list PR systems), representatives have an incentive to appeal directly to their voters by distinguishing themselves from other candidates, even their own party members. Representatives will behave differently than their party colleagues, perhaps without partisan consequences, in systems where they have an incentive to cultivate a personal vote, because voters directly determine the likelihood of reelection.

This is an important distinction that will allow an examination of the link between descriptive and political representation. When party leaders exercise strong control over the likelihood of reelection, descriptive representatives will tailor the content of their representative behavior to satisfy party elites. When party leaders do not enjoy such control, descriptive
representatives can appeal directly to their identity group without fear of punishment from party elites. This should be clearly observed in systems where ethnic or racial descriptive representatives are elected with traditional partisan affiliations, where descriptive representative’s unique perspectives on policy can still manifest during the defense of a party’s policy position in legislative debates. However, I would argue that women elected on open-lists will act similarly in terms of their actual behavior to women on closed-lists, as well as to their male colleagues across most issues, because of the cohesive strength of prior partisan affiliation.5

The Type of Party. Mansbridge (1999) argues that ‘perspectives’ influence legislative representation and that different perspectives influence legislative representation in different ways. Not all political parties are the same in terms of their policy perspectives. Catch-all parties tend to incorporate many different perspectives in their appeals to the electorate. In contrast, more narrowly defined political parties tend to appeal to a specific perspective (e.g., the collective ‘group identity’ of voters). Given the link that Mansbridge (1999) has suggested between perspectives and the content of representative behavior, I expect that the more traditional parties will have greater variation in the content of their representative behavior than racial or ethnic parties. This should be true across all issue types, not just those that are traditionally associated with a particular race or ethnicity.6

Contextual Hypotheses. I have identified three political contexts that should play a significant role in modifying the link between descriptive representation and political representation. Descriptive representatives are assumed to have different policy preferences that would be observed in political representation if the political context relating to their reelection goals does not constrain their behavior. I will test four hypotheses from my contextual theory of representation.

Reserved Seats Hypothesis: Ethnic descriptive representatives elected via reserved seats will engage in different representative behavior than ethnic descriptive representatives elected on party-lists. This should hold across all issue domains because descriptive representatives from reserved seats are directly accountable to the electorate (based on their ethnic identity), whereas descriptive representatives from party-lists are directly accountable to party leaders.

Gender Quota Hypothesis: a.) Women elected on gender quotas should tailor the content of their representative behavior in the same way as their male colleagues in the party on most issues. Women and men in the same party should differ in their representative behavior only on specific (women’s) issues. b.) Women elected on gender quotas should not demonstrate

5Evidence of this has been uncovered in Crisp et al. (2004), who show how both the ballot type and nominating procedures influence legislator behavior in the assembly. They find that legislators who are directly accountable to constituents are more likely to produce policy targeted at specific constituents, whereas legislators who are accountable to party leaders are more likely to produce more general policy.
6This can currently be observed in Bolivia. During the 2009 election, the Movement to Socialism (MAS) party changed from being an ethnic-based party to making broader appeals to middle-class voters with the introduction of more centrist candidates to the party. This should expand the number of perspectives that are represented in the party. Although MAS is an ethnic-based party, their strategy to expand their voting electorate may have negative consequences on how unified their party message can be during policy-making.
different representative behavior than women with the same party affiliation not elected on gender quotas.

*Party Control Hypothesis* Descriptive representatives nominated in parties with high (low) party control will exhibit fewer (more) differences in the content of their representative behavior than their more traditional colleagues in the same party.

*Party Type Hypothesis* Representatives from ethnic political parties will vary less in the content of their representative behavior than representatives from catch-all parties.

**Representation in Legislative Debates**

Mansbridge (1999) argues that descriptive representatives should influence representation via the quality of deliberations. Therefore, if descriptive representatives are any different than traditional representatives and are contributing to the representation of historically underrepresented groups, then we should see this in the manner in which they debate policy. Descriptive representatives should not only be using different types of words, but the way in which they use these words should be different. That is, there should be differences in the patterns of communication between descriptive and traditional representatives. Legislative debates can be explored empirically to uncover the extent to which legislators share common language to defend policy. We can evaluate what legislators are saying and how their rhetoric reflects differences among their colleagues.

For the most part, party leaders and members use the plenary debate to distinguish themselves from the opposing parties (or even members in the same party where intra-party competition is rife) as a method to communicate strategically to the electorate. Where prior literature has argued and shown that voting behavior among legislators is best terminated by partisan affiliation (Htun & Jones 2002, Mezey 2008, Swers 1998), legislative debates allow us to empirically uncover the extent to which the unique use of language reflects nuanced political positioning that is blurred when we look at behavior as dichotomous vote support or opposition to legislation. I decide to use plenary debates because it is one of few venues where public access to debates allows for the integration of different target audiences (e.g., party leaders and electoral constituency groups) at the same time. It is also a place where legislators have equal opportunity to espouse their opinion along a variety of different issues, not necessarily those that directly affect their target audience. Plenary debates are often used by legislators to communicate directly to their target audience to defend their position for a vote choice.\(^7\) The content of the defense should vary according to the political institutional context.

\(^7\)Legislative interviews conducted in Bolivia, Ecuador, and Peru during Fall 2010 and Spring 2011 clearly indicate that legislators see legislative debates as a way to communicate directly to a target audience. Legislators elected from party-lists tend to recognize the party leader as their target, whereas legislators from open-lists and single member districts tend to identify their constituents as the target audience. Legislators elected from single member districts in the Bolivian legislative assembly frequently mentioned that they are communicating to the cameras and news agencies that are present during the legislative session.
I want a measure that quantifies word use similarities and differences among legislators. Legislators that use a similar frequency of shared, unique words should measure closer to one another than legislators who use different words at opposing high and low frequencies. Those legislators who share some combination of words of varying frequencies should measure somewhere between the two extremes.

I employ Wordscores to accomplish this task (Laver, Benoit & Garry 2003, Lowe 2008). One of the major advantages of Wordscores is the users ability to select ‘reference’ documents, from the corpus of available documents, which can be used to determine the dimension by which legislators should be compared. This assumes that the distribution of words across the reference documents is the ‘true’ distribution. Using a word weight procedure, Wordscores derives a value for each of the remaining ‘unassigned’ documents (i.e., those not selected as a reference document) that makes it possible to empirically identify if a given document sounds more like one reference document than the other(s). To identify differences and similarities between legislators based off of a specific dimension (e.g. Indigenous vs. mestizo), I select the legislative speeches from one legislator on both sides of that dimension as my reference documents. A document is a legislator’s full body of legislative speeches. If speech patterns are common among those legislators on one side of the dimension (e.g., Indigenous), then members who share that characteristic should empirically cluster around their respective reference document. Those legislators should also empirically separate from the reference document that has the opposing characteristic. If the dimension is strong, this clustering should generally be independent from whomsoever is selected as a reference document.

Wordscores is an empirical procedure that uses a word count matrix composed of the count of each word used by each legislator (i.e. each word is a row and a column is a legislator). A cell is the number of times that a legislator said a given word, ranging from zero to the total number of spoken words.\(^8\) To perform the analysis, reference documents are first assigned an arbitrary—and, different—number.\(^9\) Each \(w\)-word from the reference documents, \(r\), along a given \(d\)-dimension is scored a number, \(S_{wd}\). \(S_{wd}\) is an empirical derivation of how unique a word is to a reference document. This is derived from the probability that a word is found in one of the reference documents (\(P_{wr} = \frac{F_{wr}}{\sum_r F_{wr}}\)) and weighted by the user-assigned number \((A_{rd})\) from that reference document. ‘Uniqueness’ is when a word has a weighted score that is proximate to a reference document’s assigned number. The ‘wordscore’ for each word is derived from the following equation:

\[ S_{wd} = \sum_r (P_{wr} \times A_{rd}) \]

\(^8\)The word count matrix was created using the \(JFreq\) software (http://www.williamlowe.net/software). Legislative debates were obtained while conducting field research in Bolivia, Ecuador, and Peru from Fall 2010 to Spring 2011. Documents were converted to an editable text using optical classification recognition. The legislative debates were systematically parsed by legislator across each legislative period using Perl programming language and stored, separately, in a text document.

\(^9\)Indigenous reference documents are assigned a two and mestizo reference documents are assigned an eight.
The expected position of the ‘unassigned’ legislators is determined using the wordscore, $S_{wd}$, for each word and the frequency of that word, $F_{wv}$, in the unassigned legislator’s speech, where $v$ is the unassigned legislator.\textsuperscript{10} The position of the unassigned legislator is the weighted wordscore across all scored words.\textsuperscript{11} This is derived using the following equation:

$$S_{vd} = \sum_w (F_{wv} \times S_{wd})$$

The word count matrix is created for every legislator who speaks in the lower chamber during plenary debates.\textsuperscript{12} Legislators are considered eligible as reference documents if they contribute at least one thousand substantive words to all debates during the legislative term and are considered eligible as unassigned documents if they contribute as least 100 substantive words to all debates during the legislative term.\textsuperscript{13} A unique evaluation is where one reference document from one side of the dimension is compared against one reference document from the other side of the dimension. One evaluation is performed for every pairwise combination among every possible reference document for that dimension.

Among scored legislators, those that share a similar score are collectively more like one legislator than the other. The expectation is that legislators on the same side of the dimension of interest will be distributed closer to the reference legislator that shares that same characteristic than the reference legislator with the opposite characteristic. If this is true, then the means of the distributions of legislator scores for each category (e.g., Indigenous and mestizo) should be significantly different from one another. I empirically determine this using a difference of means test. Differences are classified as significant if $p \leq .10$.\textsuperscript{14} In other words, significantly different distributions between the two categories suggest that the dimension is salient only for that pairwise combination.

For the purposes of this project, I want to determine the strength of the dimension in the legislature. I suggest that the frequency of mean differences across every pairwise combination that are significant can be used to identify the strength of the dimension in the legislature.\textsuperscript{15} Strong dimensions will have a higher frequency of mean differences that are statistically different from one another across pairwise combinations and weak dimensions will have a lower frequency of mean differences that are statistically different from one another.\textsuperscript{16} Although

\textsuperscript{10}Words not shared between training legislators and unassigned legislators are effectively excluded in the analysis.

\textsuperscript{11}These derivations are performed using the Austin package (Lowe 2011).

\textsuperscript{12}Legislative speeches are removed from the analysis when legislators are in an administrative role, where procedural language is dominant. Legislator ‘substitutes’ are included if they participate in debates.

\textsuperscript{13}Substantive words are those words that contribute meaning to language. Stop words, like articles and prepositions, are systematically removed from legislative debates. An extensive list of stop words includes: el, hay, la, nuestro, otro, ser, and tenga. All words were systematically stemmed to their root word.

\textsuperscript{14}Given that reference documents are assigned an ordered value, I perform a one-side t-test to determine significant differences.

\textsuperscript{15}Using an aggregate measure reduces the likelihood that potentially overlapping factors are driving differences between legislators (e.g., regional representation).

\textsuperscript{16}I infer the relative strength of the dimension because there is no absolute threshold for determining the actual strength of the dimension.
I suspect that some reference documents do not separate speech patterns well, I do suspect that if a dimension is strong, then most of the randomly selected pairwise combinations should separate legislator categories along the given dimension.

**Government-Opposition Divide in Bolivia.** Following the procedure described above, I demonstrate how the measure can be used as an empirical approximation for patterned differences in legislative behavior between different types of legislators. I look specifically at majority status to determine if my empirical measurement captures our intuition regarding differences in legislative behavior between members of the government and opposition. And, if the measurement captures the varying strength of that divide over time during the development of the Bolivian party system from 1985 to 2010.

We should expect that legislators in the government should have legislative behavior—specifically, legislative speech patterns—that varies more when the majority is ideologically incohesive. In these environments, it should be difficult to determine a consistent government-opposition divide in legislative behavior that separates members of the government from members of the opposition. In other words, the strength of the government-opposition divide is weak in those political contexts where the majority is composed of multiple political parties, particularly when those political parties are ideologically diverse. Empirically, this should mean that a random selection of ‘reference’ legislators (one government and one opposition) do not effectively classify unique speech patterns in legislative debates between legislators of majority status. Using the development of the Bolivian party system from 1985 to 2010, I first build an intuition that clarifies expectations regarding the impact of the composition of the government on the strength of the government-opposition divide. I empirically show how this measure of speech pattern differences—the strength of the divide—correlates well with the degree of party diversity in the government. As the government-opposition divide has become more ideologically coherent over time—as determined by the types and number of parties in office—we see that speech patterns have become more consistently different between members of the government and opposition. Given that this empirical approach performs as a reasonable approximation to distinguish between legislators who share a common identity—in this case, majority status—I suggest that we can use this measure as a proxy for patterned speech differences between legislators with shared descriptive characteristics (e.g., Indigenous vs. mestizo).

Bolivia provides an excellent source of overtime variation to evaluate how well my empirical proxy conforms to expectations. The type of variation that concerns me is the number of political parties that compose the government and the ideological range of those parties in government. The institutional structure in Bolivia, known as ‘parliamentarized presidentialism,’ requires the legislature to select the president if no candidate-list wins a popular majority of valid votes (Centellas 2008, Mayorga 1997). This creates an incentive to form multiparty post-electoral coalitions to win majority support in order to win the executive post, where support is maintained via the disbursement of cabinet posts. Under this system, Bolivia has experienced two distinct periods of government composed of multiparty governments and single party governments. In the first period, multiparty governments were common during the 1985-2002 period known as ‘pacted democracy’ (Centellas 2008, Gamarra 2008, Lehoucq 2011, Mayorga 1997, Mayorga 2005). The second period starts after the 2005 election. During this period, the traditional party system eroded and a
single party, Movement to Socialism (MAS), has dominated the composition of the government (Centellas 2008, Gamarra 2008, Lehoucq 2011). The government-opposition divide in patterned speech differences should be muted during the period of ‘pacted democracy’ and should be more well defined after the 2005 election. The transition of the party system between 2002 and 2005 should also reflect changes in the direction of a strengthening government-opposition divide.

The period of ‘pacted democracy’ is credited for moderating inter-party conflicts and reinforcing cross-party coalitions that contributed to stabilizing Bolivian democracy during periods of economic turmoil that could have led to democratic breakdown (Mayorga 1997, Mayorga 2005, Mayorga 2006). Though beneficial to democratic stability, these ideologically diverse coalitions should make it difficult to determine a clear government-opposition identity among the legislators. As explained above, party affiliation should play a major role in managing legislative behavior (for both legislators elected on party lists and those from single member districts). Legislators have an incentive to promote the party position in order to advance future career goals. Governments composed of diverse political parties have legislators who are accountable to different party leaders. Partisan diversity in the government, as a result, will consist of legislators demonstrating diverse forms of legislative behavior (or, diverse speech patterns). This diversity weakens the government-opposition dimension in the chamber. Empirically, this means that even though a random legislator may have a distribution of words that are shared with others of the same party affiliation, those words are less likely to overlap with those also in the same government, but different party.

Post-electoral multiparty coalitions dominated government composition from 1985 to 2002. The 1985 election led to a coalition of the two largest parties, known as the ‘Pact for Democracy,’ between the right-wing Democratic Nationalist Action (ADN) and the traditionally leftist Nationalist Revolutionary Movement (MNR). After the 1989 election, the center-left Movement of the Revolutionary Left (MIR) and the right-wing ADN formed an alliance called the ‘Patriotic Account’ to establish a majority government with the populist Conscience of the Fatherland (CONDEPA). This came to a surprise to many given that the MIR originally formed in 1971 in opposition to the Banzer military dictatorship, who subsequently founded ADN (Centellas 2008). The MNR (evolving into a more free-market oriented party), the populist Civic Solidarity Union (UCS), center-left Free Bolivia Movement (MBL), and the left-wing Revolutionary Liberation Movement Tupaq Katari (MRTKL) formed the ‘Pact for Change’ after the 1993 election. Pacts were less common after the 1997 elections, though post-electoral elections still existed. ADN and the center-right New Republican Force (NFR) coalesced for the 1997-2002 legislative term and MNR, NFR, and MBL coalesced for the 2002-2005 legislative period. We should expect the 2002 legislative term to have a stronger divide between government and opposition legislators because the coalition was dominated by the MNR, especially after the NFR left the coalition in 2003. All of this is to show that government coalitions were ideologically diverse and the divide between government and opposition in legislative behavior should be blurred during the period of ‘pacted democracy.’

The strongest division in legislative behavior between government and opposition legislators should be observed when one party controls government composition. After the 2005 election, the traditional party system collapsed and reestablished with MAS as a dominant party. In 2009, the center-right parties (MNR, NFR, and PODEMOS) formed a pre-electoral coalition
to compete under the name Plan Progress for Bolivia-National Convergence (PPB-CN). One single party, MAS, dominated the government during the 2005-2009 and 2010-2015 legislative terms. Empirically, I expect the government-opposition divide to be the strongest during these two legislative periods. Among the two legislative periods, I expect the 2010-2015 legislative period to show the strongest division, when MAS is ideologically the farthest left and when the center-right opposition is organized into one party.

The strength of the government-opposition divide should be conditional on the number of parties in government and the ideological cohesiveness of those parties. The structure of government composition in Bolivia ranges from single-party control to multiparty, ideologically diverse coalitions. I expect my empirical measurement to be negatively correlated with the ideological diversity of the government. For this analysis, I use a rough approximation of the ideological diversity of the government—the effective number of government parties (Laakso & Taagepera 1979). Though this measure does not capture actual ideological diversity, it does capture the number of parties in the government using a weighted average. Given the ideological diversity of each government detailed above, the effective number of government parties should correlate well. The measure will also reflect the disproportionate strength of governing parties, especially when one party is more dominant than other parties. I test my measure using debates from every available legislative period since the transition to democracy in Bolivia, this includes 1986, 1991, 1992, 1993, 1996, 1997, 2002, 2006, 2009, and 2010. The empirical analysis, coupled with the above explanation, should demonstrate enough support to justify the validity of my new measure for capturing the strength of a selected dimensional divide.

2010 Legislative Period Example. I show the derivation of my measure using the 2010 legislative period as an example to help the reader gain a better insight behind its intuition. This measure empirically captures if legislative speech patterns are consistently different across the dimensional divide of interest. The government-opposition divide concerns me for this analysis. A high frequency of iterations where government legislators express speech that is significantly different than opposition legislators demonstrates a strong divide. One evaluation is a random pairwise combination using one government member and one opposition member as a reference document.

There are 130 members in the 2010 legislative period, 88 members compose the government and 42 members compose the opposition. MAS controls the majority without a post-electoral coalition (though four legislators from the Movement Without Fear (MSM) split in April 2010 from the pre-electoral alliance), and the opposition is composed of three parties: PPB-CN with 37 seats; National Unity Front (UN) with 3 seats; and Social Alliance (AS) with 2 seats. Among all legislators, 56 government members and 48 opposition members (2 from AS, 42 from PPB-CN, and 4 from UN) meet the requirement to be a ‘reference’ document and 110 government members and 65 opposition members (4 from AS, 57 from PPB-CN, and 4 from UN) meet the requirement to be an ‘unassigned’ document.17

Figure 1 shows the distributions of estimated legislator positions, separating government and opposition legislators, using four different pairwise combinations as an example. This is just a sample of the total 2,688 different iterations that were performed for this analysis (56 X

17Legislative substitutes are also included if they meet the minimum requirements.
The pairwise combination is indicated at the top of each plot. Descriptive characteristics for each of the training legislators are listed in parentheses. Those characteristics are: party, region, ballot type, gender, and ethnicity. All opposition parties are considered to be to the ‘right’ of the governing party. Bolivia is divided into nine departments (comparable to U.S. states), where a political divide exists between the wealthier eastern departments (Pando, Beni, Santa Cruz, and Tarija) and the western departments (La Paz, Cochabamba, Chuquisaca, Oruro, and Potosi). Legislators are elected from either closed party lists (labeled as ‘Plurinominal’) or plurality districts (labeled as ‘Circ’, followed by the district number). These characteristics help determine potentially confounding factors.

**Figure 1. Government vs. Opposition Iterations**

The top two plots are examples of strong partisan separation. The bottom two plots are examples of weak partisan separation

Some reference documents are effective at identifying differences in speech patterns between government and opposition members, whereas others are not so effective. This should be expected for some reference legislators. Identifying government-opposition separation requires the reference legislators to utilize speech patterns that are different from the opposition and unique to the party. The top two plots are good examples of this. The reference documents in each come from legislators who are informal leaders of the party. Tupa Tupa and Plata Plata have held party leadership positions in the past and frequently espouse the party’s position on the plenary floor. Pierola de Gutierrez performs a similar role for the opposition. She is the most vocal critic of the government. The bottom two plots are examples of weak separation. This is likely due to the degree to which Elio Chavez and Tejada Soruco are accountable to the party. Elio Chavez was nominated from a pro-business Civic Committee, which is traditionally associated with those parties that comprise the opposition. Chavez’s
speech patterns could actually be directed towards a target audience that would traditionally support the opposition, but still attract his constituents to support the governing party. This could cause poor separation among the government and opposition ‘unassigned’ legislators. Tejada Soruco is also somebody who has alternative viewpoints from the members within the majority party. In fact, Tejada Soruco was formerly a legislator from a different party during the 2002-2007 legislative term. She was chosen by MAS party leaders because of her popularity and ability to attract votes in a region where MAS is not particularly dominant. Thus, her legislative behavior is expected to diverge from the party for strategic electoral purposes. Because both legislators must make unique appeals to their constituency group, these two legislators are weak references for separating speech patterns among government and opposition legislators. In other words, the government-opposition divide is weak for these two types of legislators.

Figure 2. 2010 ‘Government-Opposition’ Speech Pattern Separation

If a government-opposition divide exists in speech patterns, government and opposition density plots of legislator scores should be different and, depending on the strength of the dimension, that difference should be consistent across random pairwise combinations. I empirically identify if mean differences between government and opposition legislator scores exist using t-tests. I interpret the cleavage to be identified if the difference is significant (i.e., members in parties are collectively sounding more like a random party member than a random legislator selected from the opposition) at $p \leq 0.10$. I suggest that the frequency of significant differences across pairwise combinations can be used to identify the strength of the government-opposition divide. Although I suspect that some reference documents do not
separate speech patterns well (as explained above), I do suspect that most of the randomly selected pairwise combinations should separate government from opposition legislators when the divide is strong. I perform one-sided t-tests for each of the 2,688 evaluations. Figure 2 plots the t-statistic from each evaluation. The vertical, dotted line indicates where the t-statistic equals $-1.282$. Everything left of the vertical line is significant at the traditional level ($p \leq .10$). Overall, seventy-six percent of pairwise combinations are significant.

**Testing the Strength of the Government-Opposition Divide Overtime.** I apply this same approach to the remaining legislative terms. If the intuition is correct, we should observe a higher frequency of empirical iterations that are significantly different during the more contemporary period of the Bolivian party system and a lower frequency of significantly different empirical iterations during the pacted democracy period of the Bolivian party system. Legislative periods from the same term should have empirically similar results. Table 1 shows descriptive statistics for each of the legislative terms evaluated in this expanded analysis.

<table>
<thead>
<tr>
<th>Legislature Period</th>
<th>Term</th>
<th>Effective Number Gov Parties</th>
<th>Reference Gov</th>
<th>Reference Opp</th>
<th>Unassigned Gov</th>
<th>Unassigned Opp</th>
<th>Iterations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1989-1993</td>
<td>2.46</td>
<td>22</td>
<td>22</td>
<td>44</td>
<td>35</td>
<td>484</td>
</tr>
<tr>
<td>1993</td>
<td>1993-1997</td>
<td>2.24</td>
<td>25</td>
<td>37</td>
<td>53</td>
<td>54</td>
<td>925</td>
</tr>
<tr>
<td>1996</td>
<td>1993-1997</td>
<td>2.24</td>
<td>29</td>
<td>41</td>
<td>52</td>
<td>51</td>
<td>1189</td>
</tr>
<tr>
<td>1997</td>
<td>1997-2002</td>
<td>1.40</td>
<td>13</td>
<td>53</td>
<td>23</td>
<td>72</td>
<td>689</td>
</tr>
<tr>
<td>2002</td>
<td>2002-2007</td>
<td>1.95</td>
<td>52</td>
<td>61</td>
<td>76</td>
<td>84</td>
<td>3172</td>
</tr>
<tr>
<td>2006</td>
<td>2002-2004</td>
<td>1.00</td>
<td>39</td>
<td>52</td>
<td>65</td>
<td>71</td>
<td>2028</td>
</tr>
<tr>
<td>2009</td>
<td>2006-2009</td>
<td>1.00</td>
<td>33</td>
<td>42</td>
<td>51</td>
<td>62</td>
<td>1386</td>
</tr>
<tr>
<td>2010</td>
<td>2010-2015</td>
<td>1.06</td>
<td>56</td>
<td>48</td>
<td>110</td>
<td>65</td>
<td>2688</td>
</tr>
</tbody>
</table>

Figure 3 shows the distribution of t-statistics for every legislative period in the sample. Each bar shows the range of t-statistics: the grey bar captures the range of the middle 90 percent of the data and the black bar captures the range of the middle 50 percent of the data. These bars represent a condensed version of the type of information displayed in Figure 2. The black point is the average value of t-statistics for that legislative period. The horizontal dotted line is the threshold to determine if a t-statistic is significant (or, not significant) at the $p \leq .10$ level. Data distributed below the horizontal line are those iterations with significant differences between the ‘unassigned’ government and opposition legislators.
Figure 3. Consistency of Speech Pattern Separation for ‘Government-Opposition’ Dimension

Figure 4 shows the percent of t-statistics that are significant at $p \leq 0.10$ and the effective number of government parties for each legislative term. The plot in the left panel is of those iterations for each legislative period with t-statistics that are below the horizontal dotted line in Figure 3. The effective number of government parties is derived according to Laakso & Taagepera (1979) using only those members who contributed more than 100 substantive words during legislative debates (i.e., the minimal requirement for inclusion in the sample). At first glance, the results appear to verify our intuition. We see that as the government is composed of fewer parties and is more ideologically cohesive, speech patterns are consistently different between government and opposition legislative debates across a larger proportion of random pairwise iterations. The most distinct of these is the 2010 legislative period, when the government party is composed of just one party and the right-wing portion of the opposition coalesced in one pre-electoral organization.
For empirical validity of the above claim, I employ Ordinary Least Squares on the data, regressing the percent of statistically different t-statistics on the effective number of governing parties for each legislative term. Table 2 presents the results of the analysis. We see that the relationship is indeed negative and is significant at \( p \leq 0.01 \). This is promising given the size of the sample (\( n=10 \)). I take this as evidence supporting the expectation that more ideologically dispersed governments should have less consistently different messages between the government and opposition.

**Table 2. Empirical Strength of Dimensional Measure**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient (Std. Err.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gov. Coalition Diversity</td>
<td>-31.75** (6.52)</td>
</tr>
<tr>
<td>Intercept</td>
<td>98.62** (12.22)</td>
</tr>
<tr>
<td>Total Observations</td>
<td>10</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.748</td>
</tr>
</tbody>
</table>

Significance levels: \( \dagger : 10\% \)  \( * : 5\% \)  \( ** : 1\% \)

Although the effective number of parties does not capture the ideological range of parties in the government, it does capture the types of obstacles that governing parties face in delivering
a consistent message when legislators are accountable to different principals. These obstacles are larger in those situations where parties range the ideological continuum. The empirical data coupled with the anecdotal evidence suggests that my empirical approximation is an appropriate proxy to capture the strength of a categorical divide between legislators who hold different characteristics. I use this measure to evaluate the effects of specific institutional factors on the degree to which we should observe—and, not observe—differences in legislative behavior from descriptive representatives.

Ethnic Descriptive Representation

Consistent with the theory presented above, differences in speech patterns for a broad set of issues between different types of descriptive representatives should only be observable within parties. Parties, even if not completely institutionalized, should provide some organization that makes it possible to distinguish legislative behavior between parties. If this is true, we should be able to see that legislators within parties use more common language than those legislators from opposing parties. The broader distinction between parties should overwhelm any similarities between descriptive representatives who share the same characteristics. Attribution of differences in legislative behavior to the identity of a legislator within the party, however, is complicated by such effects as the basis of election. For example, legislators’ unique forms of legislative behavior could be due to one’s identity or responsiveness to district interests (Mezey 2008). Disentangling these differences requires a research design that can control for the effects of party and the pathway of election for different types of descriptive representatives. Bolivia provides an opportunity to focus on this effect. The objective of this analysis is to evaluate one component of the Party Control Hypothesis and evaluate patterned difference in legislative speech between Indigenous and mestizo legislators in MAS along a broad set of issues in the 2010 legislative period. I use the empirical approximation described above to test the strength of the ethnic divide of MAS party members elected on the same party lists and I show that Indigenous representatives express different forms of political representation, after controlling (via research design) for a number of factors.

MAS began as an ethnically-based party in the late-1990s (Van Cott 2005) and has subsequently adapted to a broader middle-class party since the December 2009 election. MAS party leaders actively participate in the recruitment of candidates, and have expressed a party programme that appeals to broader middle-class interests. This has been observed in the demographic composition of the types of legislators affiliated with the party. Whereas Indigenous legislators were common during the development of the party, middle-class mestizo legislators have demonstrated a substantial growth in the proportion of legislators in the party. I perform five separate analyses with five different samples to determine the strength of the Indigenous-mestizo divide in the legislature, those include: 1) a full chamber evaluation of Indigenous and mestizo legislators; 2) MAS Indigenous legislators and PPB mestizo legislators; 3) MAS mestizo legislators and PPB mestizo legislators; 4) all MAS Indigenous legislator and MAS mestizo legislators; and 5) only MAS Indigenous legislators and MAS mestizo legislators elected on party lists. The ethnic identify of each legislator in the assembly was determined while conducting field research in Bolivia in Fall 2010. Interviewed legislators were asked to identify their ethnic background. I worked with local scholars from think-tanks and non-government organizations to determine the identity of
those legislators who were unavailable for interviews. Table 3 presents descriptive statistics for each analysis.

Table 3. Ethnic Representation Descriptive Statistics

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Type</th>
<th>Parties</th>
<th>ENP</th>
<th>Reference</th>
<th>Unassigned</th>
<th>List</th>
<th>Iterations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chamber</td>
<td>Indigenous</td>
<td>5</td>
<td>1.11</td>
<td>16</td>
<td>38</td>
<td>10</td>
<td>1392</td>
</tr>
<tr>
<td>Chamber</td>
<td>Mestizo</td>
<td>5</td>
<td>2.33</td>
<td>87</td>
<td>135</td>
<td>63</td>
<td>1392</td>
</tr>
<tr>
<td>Indigenous &amp; PPB</td>
<td>Indigenous</td>
<td>1</td>
<td>1</td>
<td>15</td>
<td>36</td>
<td>10</td>
<td>615</td>
</tr>
<tr>
<td>Indigenous &amp; PPB</td>
<td>Mestizo</td>
<td>1</td>
<td>1</td>
<td>41</td>
<td>55</td>
<td>28</td>
<td>615</td>
</tr>
<tr>
<td>Mestizo &amp; PPB</td>
<td>Indigenous</td>
<td>1</td>
<td>1</td>
<td>37</td>
<td>69</td>
<td>31</td>
<td>1517</td>
</tr>
<tr>
<td>Mestizo &amp; PPB</td>
<td>Mestizo</td>
<td>1</td>
<td>1</td>
<td>41</td>
<td>55</td>
<td>28</td>
<td>1517</td>
</tr>
<tr>
<td>All MAS</td>
<td>Indigenous</td>
<td>1</td>
<td>1</td>
<td>15</td>
<td>36</td>
<td>10</td>
<td>555</td>
</tr>
<tr>
<td>All MAS</td>
<td>Mestizo</td>
<td>1</td>
<td>1</td>
<td>37</td>
<td>69</td>
<td>31</td>
<td>555</td>
</tr>
<tr>
<td>List MAS</td>
<td>Indigenous</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>95</td>
</tr>
<tr>
<td>List MAS</td>
<td>Mestizo</td>
<td>1</td>
<td>1</td>
<td>19</td>
<td>31</td>
<td>31</td>
<td>95</td>
</tr>
</tbody>
</table>

The first evaluation is a full chamber analysis that categorizes all Indigenous legislators and all mestizo legislators. Even though five total parties are represented in the entire sample, more than ninety percent of the Indigenous legislators (thirty size of thirty eight) are members of the MAS. This evaluation combines two dimensions: party and ethnicity. This makes it impossible to determine that the differences in speech patterns are an effect of ethnicity, and not, as expected, a much larger partisan effect. I use two additional samples to help tease out this effect: a) MAS Indigenous & PPB mestizo and b) MAS mestizo & PPB mestizo. The MAS Indigenous & PPB mestizo analysis removes overlapping speech patterns shared with MAS mestizos. This should make MAS Indigenous appear more unique (after removing partisan effects from the first analysis) and make PPB mestizos also appear more unique (after removing ethnicity effects from the first analysis). The divide should be the strongest in this analysis. The MAS mestizo & PPB mestizo analysis holds constant ethnic identity and allows variation in party affiliation only. This removes the effects of the ethnic dimension from the first analysis. The strength of this dimension should be smaller than the MAS Indigenous & PPB mestizo analysis and close to the strength of the combined party and ethnicity dimensions from the first analysis. This should not be too surprising given previous research that credits party as the strongest explanatory effect on legislative behavior. These three analyses are collectively intended to demonstrate the strength of the partisan dimension and the extent to which it overwhelms the ethnic dimension at the chamber level.

These last two evaluations control for party and explore the ethnic dimension across ballot type. As mentioned above, the differences among legislators in the same party could be driven by ballot type, where legislators demonstrate unique forms of legislative behavior within the party because of incentives to respond to district interests or because of the unique perspectives associated with different types of descriptive representatives. The fourth analysis explores Indigenous and mestizo representatives in MAS, ignoring ballot type—list legislators and plurality legislators. We should see some separation across categories. The fifth evaluation controls for party effects and ballot type to identify if different types of ethnic descriptive representatives express different views in a party that makes broad appeals. Legislators in
this analysis are accountable to the same party leaders in the chamber and should strategically support the party position to enhance future career possibilities in the party. Though legislators should express similar policy positions, their justification for defense should be unique to their identity, as a result of their unique perspectives (Mansbridge 1999). In this analysis we should be able to determine if Indigenous representatives do behave differently and express different policy views on broader issues than mestizo representatives.

Figure 5 presents the results from each analysis. The left panel is the distribution of t-statistics for each sample comparison. The grey bars are the range of the central ninety percent of the t-statistics from each evaluation, the black bars are the central fifty percent, and the black dots are the average t-statistic values. The dotted line shows the threshold of significance at p ≤ 0.10. The right panel is the percent of t-statistics that each the threshold of significance.

Figure 5. 2010 Ethnicity Empirical Speech Pattern Differences

I interpret these results as supportive of expectations. The first three analyses show a strong partisan and ethnicity dimension that collectively defines legislative speech patterns between legislators. The strongest of these three isolates MAS Indigenous legislators from PPB mestizo legislators. Although an overlapping ethnic dimension strengthens the separation between MAS and PPB legislators, we see that a lot of that separation is driven by partisan effects. Just looking at mestizo legislators (i.e., holding ethnicity constant), we see that seventy-one percent of total iterations are significant between legislators of different parties (MAS vs. PPB). Including an additional ethnic dimension (i.e. MAS Indigenous vs. PPB mestizo) results in a fourteen percentage point increase in the percent of significant iterations. The similarities in the strength of the divide between the first and third analyses suggest
that party effects are driving most of the differences in the first analysis. Collectively, this is evidence that the strength of party control overwhelms the differences and similarities of legislative behavior of descriptive representatives.

More importantly the fourth and fifth evaluations show that there is consistent separation between two types of descriptive representatives—Indigenous and mestizo—in legislative behavior within the party. These two groups demonstrate different speech patterns after controlling for party (in the case of the fourth evaluation) and even after controlling for ballot type (in the case of the fifth evaluation). In the fifth evaluation, forty-nine percent of iterations are significant. This ethnic division is consistently stronger than the government-opposition dimension in six of the seven legislative terms from the period of ‘pacted democracy’ explored above. I interpret this as strong evidence in favor of the Party Control Hypothesis. In systems where there is strong party control of ballot access, we see that legislative behavior between descriptive representatives is somewhat moderated. However, within the constraints of the party, we see that Indigenous and mestizo legislators still express unique forms of legislative behavior.

Future analyses will explore further implications of the theoretical argument in order to demonstrate the strength of the Party Control Hypothesis. However, for now, I take this as a unique finding that controls for many factors that have been known to effect the legislative behavior of descriptive representatives. This analysis shows that under the ‘right’ institutional context, we do indeed see that different types of descriptive representatives express different forms of legislative behavior during the legislative process for a broad set of political issues.

**Conclusion**

This is the first step in determining if Indigenous legislators behave uniquely during the policymaking process. Plenary debates allow us to capture nuanced differences between different types of descriptive representatives that are generally blurred by party effects when looking at other forms of legislative behavior, like roll call votes. This paper presents a contextual theory of legislative behavior that highlights three factors—the extent of party control, the type of party, and the extra-legislative institutional environment—that condition the link between descriptive representation and legislative behavior. I show that my empirical approximation conforms to expectations when tested against expectations regarding the development of the party system in Bolivia since 1985. More importantly, I use this new measure to show that Indigenous representatives demonstrate unique forms of political representation along a broad set of issues, controlling for those confounding factors that are known to have large effects on legislative behavior (party and ballot type).

The future of this project will incorporate Ecuador and Peru (two countries where I have completed extensive field research and collected legislative debates) and evaluate the remaining hypotheses, cross-nationally and over time for gender and cross-nationally for ethnicity. Promising is this new measure that approximates the strength of dimensions that distinguish legislative behavior.
REFERENCES


