

CHANGING IDEOLOGICAL BOOTS:  
ADAPTIVE LEGISLATOR BEHAVIOR IN CHANGING DISTRICTS

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Congressional roll-call votes are often used to investigate legislative voting behavior. To depict adaptive roll-call behavior in response to demographic changes that occur during redistricting, I use issue specific interest group scores from the ADA, NFU, and COPE. This exploits the bias in the selection of the issues that interest groups utilize to rate U.S. representatives, by using them to reflect changes in response to significant demographic fluctuations in the constituency population.

The findings indicate that while party is the most significant factor in whether legislators adapt their voting in favor of certain groups, they do notice group composition changes within district and adapt their voting accordingly. This illustrates the impact of redistricting on policy and legislators' adaptation to changes in district composition.

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## CHAPTER 1

### INTRODUCTION

Representation and constituency influence are focal points in almost any discussion of American democracy. Scholars have tried for decades to develop a sound theory or model for representation. While a large body of literature has accumulated on the subject, many questions remain. There are varying ways to analyze representation. Some studies focus on representation as an issue-by-issue phenomenon, others study competing groups or formulate multi-variate models. Each of these methods are in some way compared with the actions, ideology or votes of the representatives, and there are staggering differences of opinion on which of these factors is most suited for this aspect of comparison as well. Researchers have yet to reach a consensus about any of these measures or find a way to integrate all of them. While agreement or a method integrating all of these factors would be nearly impossible to attain, there remain smaller areas that can be looked at that require further examination and clarification.

Representatives must find some way to signal to their constituencies that they are acting in the districts' best interests. There are several ways to do this, but a major indicator of performance has always been the congressional voting record, whether or not constituencies are aware of this. Studies have shown that constituents in some ways use the voting record to assess incumbents' performance (Lupia 1992). Therefore, the need to please district voters may well influence voting decisions. This can stem from the

desire to build a voting record or reputation, and may also serve as an explanation to the district (Austen-Smith 1992).

Much of this behavior is, in essence, to gain constituent trust, which only comes from having an established record pleasing to the current electorate (Bianco 1994). Although this relationship seems straightforward and the goals clear, what does a representative do in the case of a major disruption to this arrangement?

The Constitution mandates a decennial census count of the population, which often leads to a redrawing of congressional district boundaries. This can be a major “shock” to the electoral circumstances of a representative. Redrawn districts may cause major changes in constituent characteristics. Although it has been found that legislators’ roll-call behavior remain stable after redistricting (Poole 1998), no research has indicated whether they can adapt to specific group changes in their districts while remaining stable on the overall ideological continuum.

This paper began as an investigation into how legislator responsiveness might be seen in a previously unexplored area, policy specific legislative behavior. Upon looking for a good scenario in which to test this, redistricting became the obvious answer. What other time would be better to analyze legislators’ awareness of their constituent group compositions and policy preferences?

While scholars have used redistricting as a test scenario to see whether legislators noticed alterations in the racial composition of the constituency, they have yet to study what other groups may prompt legislator adaptation on policy issues. This has been a common criticism of legislative representation research thus far. Scholars have failed to

recognize the important implications of competing groups within the district (Bishin 2000).

This paper examines legislator responsiveness to redrawn districts by asking the following: Do changes in specific group populations affect legislator roll-call behavior? If so, in what policy domains will these changes be seen? Finally, in what circumstances do changes in the district population prompt adjusted roll-call behavior?

Good representation or legislator responsiveness involves the fundamental question of how well the incumbent's voting behavior matches constituent preferences. Studies indicate legislators are responsive to constituent characteristics (Kingdon 1973; Mayhew 1974; Fenno 1978). If this is the case, it may be that one way legislators do this is to respond to changes in demographic characteristics of their district by adapting to the needs of a changing group population in the district.

This study investigates change in legislator voting patterns and attempts to delineate domain-specific movement. The research diverges from much of the recent redistricting literature, which has concentrated on civil rights, because I analyze several issue domains.

The use of specific interest group scores may help to explain several conflicting findings within the literature. If legislators restrict the changes in their voting behavior to one domain, they may stake out policy positions (Clausen 1973), keep their voting records stable (Poole and Romer 1993, Poole 1998), and keep their party happy while adequately responding to specific populations within the constituency. In other words, they can remain stable on the overall ideological continuum and not disrupt the voting record, while changing their voting behavior in one specific policy area to adapt to the

needs of a new and prominent group in the district. This seems like a plausible explanation, but whether it is actually occurring is unknown. One of the primary goals of this research is to find out.

The theory addresses two questions: (1) What circumstances of change in the district would cause a legislator to feel the need to adapt to the change? (2) What factors would limit the representative's ability or willingness to change? Following the theory is a discussion of the data and testing of our models. The paper concludes with expected findings and a discussion of implications and future research.



## CHAPTER 2

### LITERATURE SURVEY

There have been some fundamental and pioneering studies in the area of representation and constituency influence in general. Specifically, the idea of political linkages, or overlapping ties between representatives and constituents, has been a major focus of study (Key 1963, Kingdon 1973, Fenno 1968, Miller and Stokes 1963). Researchers have attempted to uncover the extent of constituency representation in American government, the rationale behind the type of representation, the variables that are a part of the decision-making calculus, and the appropriate measures for determining district preferences and evaluating adequate representation.

#### Constituency Influence and Electoral Accountability

For decades, debates about to what extent the people are represented have ensued. An important effort at discovering what the proper role for a representative revolved around the theory of Edmund Burke (Miller and Stokes 1963, Hedlund and Friesema 1972). He held the view that it was a representative's duty to do what was good for the people rather than just to obey their commands. His theory on the matter prompted some of the investigations that are the foundation of the research about representation.

In contrast to the Burkean view is the idea of constituency control. Miller and Stokes (1963) investigated this contrast. They question whether representation is in fact what many assume it is, the will of the people being executed by their elected

representatives. They pit both the Burkean way of thinking and the responsible-party ideal against the notion of constituency control, and try to find out whether “a legislator has a single generalized mode or response to the constituency that is rooted in a normative belief about the representative’s role, or does the same legislator respond to the constituency differently on different issues?” (p. 45)

Miller and Stokes’ (1963) findings indicate that representative’s perception of their role as a legislator has no great influence over how they vote. Instead, how the representative votes depends on the issue. Since there is a level of agreement between constituency opinion and legislative voting, this seems to indicate a level of constituency influence over roll-call voting, at least in some issue areas.

A study by Hedlund and Friesema (1972) picks up where the Miller and Stokes study left off, and tries to determine how well legislators of certain role types could perceive constituency preferences. These findings indicate that role orientation again had little effect, but that variables such as strength of party and social and economic distance between representative and constituents tend to inhibit good perception of constituent preferences.

Before researchers turned their focus to determining what enhances perception of constituency opinion, more work was done to establish that representatives actually do consider constituency preferences. Some researchers have looked at role orientation, such as the aforementioned studies, while others have looked at the entire representative decision making process weighing party influence, representative ideology, interest group pressures and re-election considerations as competing variables in representative decision

making. All of the potentially intervening factors make it difficult to assess how well the constituency is being represented (Kingdon 1973, Jackson and Kingdon 1992).

One major work that makes an excellent effort at this is Kingdon (1973). He takes an overall look at how all of the intervening factors affect a congressman's floor vote through a process of issue-by-issue interviews. In his examination of constituency influence, he finds it has a "substantial effect" on congresspersons' votes. This finding has been verified by several other key works and authors in the field (Miller and Stokes 1963, Fiorina 1974, Fenno 1978).

Fenno (1978), in a seminal work on Congress, was another who demonstrated the extent to which legislators form perceptions about the constituencies they represent. He spent much time with legislators while at home with the constituents in the district. His "Home Style" method is especially important when trying to measure how well legislators are in touch with the different group compositions in the district. Like Fenno's work, this research places a high level of importance on finding out how much legislators know about the constituency and its preferences.

Fenno finds much evidence that legislators have and try to maintain this type of information about the constituency. His legislator has firm opinions about who is in his or her district and what it will take to keep them happy. In the area of electoral accountability, Fenno illustrates the bewilderment brought about by large changes in the district as well as adaptations made when an incumbent feels more at risk electorally.

Mayhew (1974) strongly asserts the case for a theory of representation to be founded on the desire for re-election. Regardless of whether legislators have other goals in mind while in office, they need to be re-elected to attain these other goals. For this

reason, Mayhew establishes re-election as the proximate primary goal for members of the U.S. Congress.

This focus on re-election is important for many reasons, but perhaps most importantly for the accountability link it establishes. Regardless of the fact that most constituents have only the “haziest” notion of what an incumbent is doing, Mayhew operates from the assumption that “congressmen’s activities do in fact have electoral impact” (Mayhew 1974).

Others have done this as well. Despite general voter inattention, apathy and ignorance, constituency preferences have been found to matter with representatives for several reasons (Arnold 1990). The most obvious, re-election, is a major factor. Research has shown that effective challengers play a huge role in highlighting an incumbent’s voting record. This is no surprise considering that one of the fundamental characteristics of democracy is the ability to remove bad leaders from office. Challengers attempt to draw attention to indications of bad representation, to increase the chances for their own election (Key 1963, Jacobson and Kernell 1987, Neuman 1986).

Kau and Rubin (1993) also find that legislators must maintain a favorable reputation with the electorate. When examining the extent to which ideological shirking, or voting against constituency preference in favor of incumbent ideology, exists, they find that if it does it is relatively unimportant. This is because when legislators vote against preferences of the electorate, it is often punished with votes. They also find that self-interested, non-ideological shirking exists. I ask the question from the other end. When they need to, are legislators willing to shirk their own ideology and the ideology of the party to keep voters in the district happy?

In this area of electoral accountability constituency influence is directly related to the salience of an issue. Research has proven that regardless of the consistently inattentive and apathetic American public, representatives cannot afford to ignore the voters. Because of the fluctuation of issues into the public eye (Neuman 1986), unfocused opinions can quickly change into an issue with enormous attention and therefore possible electoral consequences (Arnold 1990).

This is especially the case with specific policy interested groups or racial groups, who often have more political clout. Economic groups tend to have monitoring services like interest groups, and racial groups have politically charged issues, which can be easier to create awareness and punish on the basis of. Also, it has been found that representatives often act based on the mere perception of latent or potential issue preferences (Fiorina 1974, Hutchings 1998). Within districts, groups have awareness of issues that they find really important; issues they *care* about are salient. This means that they can or should be salient to the representative as well.

Kingdon (1973) and others also find high issue salience as a major indicator of constituency control. The results of his study show that in issues of very high salience a congressperson will almost always vote with their constituency even while controlling for other major factors. Similarly, the representative's perception of the constituency preference raised considerably in these high salience issues. For example, when a representative knows there are farmers in a district, he or she knows how to vote with them on "farming" issues. This finding is very significant in and supports the argument that a representative is more likely to vote in accordance with what she or he thinks the constituency truly cares about. The constituent group's awareness of the policy issue is a

factor that truly affects a representative's behavior (Kingdon 1973, Miller and Stokes 1963).

Lupia (1992) finds that rather than being informed, voters utilize low cost information cues to determine who to vote for. They draw information from beliefs about preferences, election observation and credible endorsements. They do this because they may have incomplete information about representatives. This illustrates how a legislator may seek credible endorsements from monitoring groups like the NFU. While farmers may not have gathered perfect information, they can look for an endorsement from a group they know is monitoring their interest protection.

Other information problems, such as sophisticated voting, can also be a hindrance in evaluating incumbents. Often, a legislator may use sophisticated voting to avoid the worst possible legislative outcome. This is likely based on information that only a legislator has, and may not be apparent to voters. In this instance, it may appear that the representative is not doing what is in the district's interest. This can be such an electoral problem for incumbents that they instead opt at times for the lesser outcome, to promulgate the false appearance of voting with constituent preferences (Austen-Smith 1992).

This again illustrates the value incumbents find in signaling the right "message" to constituents for re-election purposes, and highlights the importance of reputations and monitoring groups. Voting to "signal" shows the awareness incumbents have about how they are being evaluated by the constituency, and the effort they make to come across well.

Bianco (1994) sums up legislative behavior in a similar way, arguing that it is motivated by earned “trust.” He finds that trust given to legislators is something that is rewarded on a contextual basis. The amount granted hinges on several factors: 1) constituent knowledge of policy outcomes, 2) the representative’s record in that area, 3) constituency perception that the representative shares common interests with them, 4) stereotypes, and 5) salience of the issue.

In light of this theory, the trust argument further states that the representative will feel more constrained in voting when he or she has not established much trust with constituents. In addition, the representative will be less constrained (and may vote more in line with his or her preferences) when constituents have little knowledge in the policy area, or when constituents think they share common interests with the representative. For our purposes, Bianco’s arguments clearly illustrate why following an influx of new (policy goal specific) constituents, they may be more likely to try to quickly establish trust in that area. It can be assumed that groups such as farmers would have knowledge of farming policy outcomes, and the legislator will have no established reputation with the new constituents.

Bishin (2000) finds that one problem causing conflicting results about whether district preferences affect legislator behavior is the failure to consider the sub-constituencies that exist within districts. Studies have continually failed to acknowledge the opposing preferences that exist out side of the traditional electoral groups such as party or race.

Others have also noted that it is erroneous to fail to consider competing groups (Goff and Grier 1993), and that the heterogeneity of some districts must be recognized

and considered during analysis. In fact, these different groups do exist, and depending on which groups are most noted and perhaps most feared by the representative, some may prompt adapted voting behavior while others do not. Similarly, some members may feel particularly vulnerable to certain groups, and unaffected by others (Wright 1989). For instance, if incumbents with previously poor records of voting on civil rights issues have a large influx of African-Americans into the district, they may feel more of an electoral threat due to the bad record.

In addition to the fact that these differences exist among groups within the constituencies, some groups care more about certain issues than others. Legislators do not apply the same consideration to every voter on certain issues. Instead, they pay more attention to certain groups on certain issues (Arnold 1990, Fiorina 1974, Kingdon 1973). This may particularly be the case if a legislator feels that a certain group is unaware of what is going on in regard to certain policies, or that they will not care enough about that issue to base their vote on it.

The aforementioned studies clearly establish the fact that legislators can be punished for bad behavior, that they therefore often act in a way to ensure re-election, and that they are better at representation on issues they know the constituency cares about.

In this paper, I attempt to determine whether considering adaptation to certain groups may help reconcile these findings with others within the literature, which indicate that legislators remain stable in their voting behavior. Measuring behavior in response to certain economic groups, while controlling for some of the legislator's electoral



circumstances may provide some evidence about what circumstances a legislator must be in to want to adapt behavior in favor of a particular policy specific group.

### Redistricting and Roll-Call Stability

Redistricting provides the perfect laboratory in which to examine constituency control and the electoral connection. It is the perfect shock to electoral circumstances, and the most likely time for a legislator to pay attention to district preferences.

Recently, much work has been done on incumbent House members' voting behavior before and after redistricting. Glazer and Robbins (1985) determine that there is a noticeable degree of legislator responsiveness to constituency change prompted by redistricting. Specifically, they find Democrats shift in a liberal direction and Republicans shift in a conservative direction. Interestingly, Glazer and Robbins note responsiveness is more prevalent among senior members of Congress. However, Poole and Rosenthal (1998) replicate this analysis using W-NOMINATE, and find that behavior does not change, and that discrepancy between the findings can be explained by the coarseness of broad-based interest group scores.

Erickson and Wright (1997) claim there is a particular incentive for candidates in competitive districts or in districts where the opposition party has stronger support among voters to represent the ideological preferences of the district. Similarly, Coates and Munger (1995) argue that electorally secure legislators take less account of constituency interests in their voting decision. This indicates the importance of the perception of electoral risk held by the incumbent. Legislators with a really altered district may feel at

risk and therefore adapt to the new constituency's preferences; they especially may adapt in the policy arena of most concern to the new group in the district.

House incumbent responsiveness within specific policy domains is consistent with the notion that legislators act in a way to ensure re-election (Mayhew 1974; Fiorina 1974). Bullock and Brady (1983) find heterogeneity within the district can cause responsiveness to constituency groups that have nothing to do with party. In a largely heterogeneous district, a member may not be able to walk the party line perfectly and stay in office. He or she may be able to defect in one area to keep a certain "electorally important" group happy.

Wolman and Marckini (2000) find that controlling for legislator's party, personal characteristics, region, and constituency characteristics, the type of place a legislator represents has a significant and nontrivial impact on legislator voting behavior. They also find that the more urban a district, the more liberal will be legislator roll-call behavior. Analyzing social welfare legislation, Whitby (1987) finds that party and the urban-rural composition of the district heavily affect the voting decisions of southern congressmen. These studies indicate at least some effort on the part of incumbents to adapt toward the constituency's policy goals.

In contrast, in many recent studies there is some indication that legislator behavior does not shift. Some find that members of Congress remain stable in their voting patterns even in the face of changing electoral conditions. For instance, Clausen (1973) contends legislators stake out policy positions and then deviate little because shifting positions may antagonize supporters. Poole and Romer (1993) and Poole (1998) say legislators' voting

records are essentially stable even after having redrawn districts, so much so that it can be said that legislators “die in their ideological boots.”

Jenkins (2000) attempts to examine this “ideological boots” thesis by looking at another sort of electoral shock to an incumbent. By looking at the Confederate house and using federal invasion as the electoral shock, he finds that voting behavior is moderately stable but seems to be reliant on electoral incentives to vote on an ideological basis. This would indicate that maintaining a relatively stable ideological stance does benefit incumbents, but shows that party is an unnecessary enforcer, and that re-election is important. However, this study does not address specific policy interested groups or vote changes within that area of policy.

Brady and Sinclair (1984) argue that change in voting behavior is an institutional function of turnover and not to individual changes of the heart. Many legislators have a high personal vote and become generally unresponsive to changes in constituency. Once there is an established re-election constituency, there is less of a need to respond to changes in the district. This is because legislators are mostly concerned with their re-election constituency rather than the geographic constituency (Ansolabehere, Snyder and Stewart 2000).

This research attempts to determine what happens when this established re-election constituency is disrupted, and new prospective voters have moved into the district. I argue that changes in the geographic constituency can affect the re-election constituency in a major way.

## Race and Redistricting

Considerable research is devoted to the combined impact of redistricting and race (Bullock 1995; Overby and Cosgrove 1996; Hutchings 1998; Sharpe and Garand 2001). Bullock (1995) tests whether the race of the legislator is related to responsiveness when there is an alteration of racial composition in the district. He finds that following the 1991-1992 redistricting, legislators from districts that experienced an increase in proportion of black population took less conservative positions in 1993 than in the previous Congress. Overby and Cosgrove (1996) find that white incumbents, who lost black constituents due to redistricting, became less sensitive to the concerns of African-Americans.

Sharpe and Garand (2001) indicate that incumbents do respond with their roll-call behavior when the proportion of black constituents alters. They examine a change in the ADA score of the incumbent following a large change in the African-American composition of the district. These changes are more noteworthy in districts undergoing large rather than small changes.

The study was done following the 1992 round of redistricting in which several majority-minority districts were created. After this, there was much debate about whether pulling blacks from districts in which they were a minority, would harm representation for blacks overall by concentrating their preferences in certain districts. Sharpe and Garand (2001) helped provide evidence that this may be the case, as representatives do take note of the African American component of the district.

Hutchings (1998) finds that size of the black constituency was an important determinant of how southern Democratic House members voted on the 1990 Civil Rights

Act. Hutchings did an excellent study, which clearly shows the importance of issue salience in representative decision-making, especially related to electoral consequences. He measured the votes of southern Democratic representatives on two pieces of civil rights legislation. The issues were equal in importance to civil rights, but only one was prominently salient to the public. Interestingly, in the floor vote for the prominent legislation the size of the black constituencies were considered in the vote, and in the vote over the obscure legislation, the size of the black constituency was not considered (Hutchings 1998).

With the civil rights study, the advantage is in the clear-cut nature of the African American constituency preference. This is not to say that civil rights are the only, or even the most important issue to African Americans, but it is intuitive that in general black constituencies would favor civil rights. The study also had the benefit of the differing press coverage of two equally important civil rights issues. The fact is, in real circumstances most representatives must make these choices in an effort to signal good representation.

The findings indicate that on the civil rights bill they thought was not salient to constituents, incumbents felt little pressure to vote with what they felt were district preferences. In fact, they only considered the size of the African-American composition of the district when voting on the civil rights bill they knew was salient to constituents (Hutchings 1998).

These findings illustrate an important, yet singular aspect of legislative responsiveness. The use of race alone leaves several unanswered questions. Responsiveness to racial composition in a district cannot be considered indicative of

general constituency influence. Both the general political history of African-Americans in this country and the historical disenfranchisement of African-American voters make this a unique and politically charged issue. Legislators are fully aware of this and know that failure to adapt to racial changes in the district is less likely to go unnoticed (Hutchings 1998).

In addition, each of the studies mentioned above only examines the effect of changes in the African-American composition of districts. While the historical and volatile nature of the African American voter naturally lends itself to study, it is vital in today's circumstances to look at the affects of changes in other minority constituents as well. This is especially the case with regard to the recent explosion of Latino populations, which was reported by the recent 2000 census.

I argue that legislators are responsive to redistricting. By examining interest group ratings in several specific policy domains and across several racial groups, I expect to see legislator responsiveness to group fluctuations within districts.

## CHAPTER 3

### THEORY

An objective goal of representative democracy is that those elected to office will represent the views of the electorate. One way to measure representation is to gauge congressional roll-call behavior in response to the changes brought about by redistricting. The decennial redistricting alters congressional districts as well as creating and eliminating them. Although many districts completely change, some are left relatively intact but have undergone some substantive changes. For example, district partisan preferences may change in addition to racial and socio-economic characteristics.

Legislators are motivated by re-election (Downs 1957; Miller and Stokes 1963; Mayhew 1974). Fenno (1978) argues that for each legislator there are geographic, re-election, primary and personal constituencies. Legislators rely on support from the last three, and research has shown legislators need to be attentive of constituent preferences (Arnold 1990).

Since voters focus more on high-salience issues, legislators are more likely to adapt to a changed constituency on a well-known legislative vote (Bianco 1994). There is movement among a few high-profile votes that affect prospective constituencies. It can be assumed that groups find everything directly relating to them in certain areas to be highly salient. Conversely, movement of certain groups will be more salient to legislators. This is because they will find the movement of certain groups more important in an electoral sense than others.

For example, farmers will likely be more aware of, and punish or reward on the basis of votes on agriculture bills. It is for this very reason that groups use issue specific interest group scores, to tell whether their representative is a friend of those concerned about the issue.

Along with Fenno's re-election constituency, Bishin (2000) identifies a prospective re-election constituency. Reapportionment provides a legislator the opportunity to assess a prospective constituency, which could potentially become part of the re-election constituency. In order to secure support from the re-election constituency, legislators perceive a need to adapt to their evolving district. This adaptation is necessary because legislators in marginal districts, as well as those with a perception of marginality, will feel they are held accountable for their voting record.

Legislators feel this way because it has been shown that they will be held accountable for their voting record (Key 1963; Jacobson and Kernell 1987). They try to assess what the district would punish them for and often act based upon the mere perception of these latent or potential preferences (Fiorina 1974; Bianco 1994; Hutchings 1998). Despite general voter inattention, constituency preferences have been found to matter with legislators (Newman 1986).

Bishin (2000) indicates legislators consider the views not only of past supporters, but also of swing and moderate voters of the opposing party. As district composition evolves so does a legislator's prospective constituency, and with it the priorities of the district. Because legislators are electorally oriented, a legislator will be most concerned with issues affecting this prospective constituency. While a legislator might have a stable position on the ideological continuum, there will be specific policy domains in which



legislator responsiveness should be seen. These will be issues of concern to the prospective constituency.

I propose that to gain better chances for re-election, a legislator will pay particular attention to the changing needs of his or her post-redistricting population with an eye towards the prospective constituency. Despite the fact that incumbents have been shown to be stable in their behavior (Poole 1998), I argue that redistricting changes their secure circumstances to a situation that is less certain. As a result, legislators will be more flexible than at any other time in regard to their roll-call behavior.

Legislator uncertainty is due to a lack of signals between incumbents and new constituents. An incumbent already has a defined ideal point and, assuming perfect information (Lupia 1992), a legislator knows his present district's ideal point. However, post-redistricting, a legislator is unsure of the new district's ideal point. I contend that selected voting on key policy domains acts as a signal to a legislator's prospective constituency.

Following redistricting, legislators' supportive constituency groups may have shifted, thus making their prospective constituency more vital than before. In order to maintain the support of their core voters, but adapt to specific changes in the district population, they may shift their voting behavior only where they have to, and where it will be most noted by the group, and least noted by others. This is done for a variety of reasons, chief among them the desire for re-election (Mayhew 1974) and constituent trust (Bianco 1994). Adaptive roll-call behavior will give the incumbent a chance to remain consistent while gaining favor from new prospective re-election constituents.

Legislators remain fairly stable along the ideological continuum. The finding that politicians do not cheat in their last period (Lott 1987) serves as an indication that adaptation does not occur haphazardly and should only occur during times of stress to a district, such as redistricting.

Much of the literature shows the need for a voting record as a signal (Kingdon 1973, Austen-Smith 1992, Bianco 1994), but how can legislators rely on this when their district is significantly altered and they are no longer playing to the same electorate or representing the same needs? Although we know that in general legislators' voting records remain stable following redistricting, in some circumstances they must adapt in order to remain in office. A legislator can do this while not changing his/her overall position on the ideological continuum.

The Median Voter Theorem claims that most representatives will try to place themselves on the general political spectrum on or near the same spot that the median voter lies. However, this is only the case when there are clear, consistent preferences of the electorate. In this situation they can detect the group and have a good idea of the preferences. They can afford to do this because there is room for harmless compromise or movement along this spectrum; just "moving over" politically may not harm them.

When there is a marked increase among a group population in the district, the preferences in that group are clear and consistent in that area, and the median voter may shift. In this situation, it is easy for the legislator to identify these preferences and shift to the median voter range in that issue area, provided the cost of this move is lower than the payoffs.

I propose that a representative will change votes in a specific policy arena under the following circumstances: 1) when the new group is significant and detectable, 2) when the new group has a distinct and reasonable policy preferences in one area and 3) when the payoff for the change outweighs the costs/risk of disrupting the opinion of the current constituency.

## CHAPTER 4

### DATA AND METHODS

To demonstrate adaptive legislative behavior, I use Groseclose's inflation-adjusted rating scores from the following interest groups: ADA (Americans for Democratic Action) and adjusted scores that were compiled by the AFL-CIO, COPE (Committee on Political Education). I also calculate scores for the NFU (National Farmers Union) using NFU reported data; these scores are based on votes only. To determine district preferences, I follow Shapiro et al. (1990) and use congressional level data of constituency characteristics.

#### Legislator Data

I propose using domain-specific interest group scores. The use of interest group scores is suitable for this study because most criticisms of interest group ratings argue against their use as measures of legislator ideology or preference. Jackson and Kingdon (1992) argue against the use of interest group scores and other roll-call measures because many other factors, such as constituency concerns, party loyalty, selection bias from committees, interest group pressures and vote trading are used in the legislator's vote-calculus. They claim that these other factors are downplayed in many studies that utilize measures of roll-call voting.

Here, this argument is not applicable. In this research, interest group scores are used only to illustrate changes in a legislator's voting pattern. I do not claim these scores

show either preference or ideology; instead, these scores are simply indicators of shifts in direction of votes. In fact, I use the shift of votes to try to illustrate one of these primary factors that may affect behavior: constituency concerns.

This, of course, brings another problem to the forefront. While I may not be violating any of the concerns brought forth by Jackson and Kingdon, another similar argument will apply to my analysis. *Any* use of interest groups scores as the dependent variable in an equation may cause problems for the explanatory value in a model. As before mentioned, many factors go into the legislative decision-making calculus. I expect that the *R* square for the models may be quite low, as there will be too much noise in the equation, that is, too many factors which inhibit the decision to change votes. For this reason, it is important to make clear that my use of this legislator roll-call data as a dependent variable is because it is the best available one for the time being.

All arguments against such measures are useful in propelling scholars to move forward to find better ones, yet until that time, questions remain. For now, my purpose is only to try to resolve some conflict in the literature about the extent to which constituency changes are observed and adapted to by legislators.

The next question or criticism that may arise about the interest group scores is then, why use interest group scores rather than a spatial estimate, such as NOMINATE? The major problem NOMINATE scores have for the purpose of this analysis, is that they are not jurisdiction specific. Instead, NOMINATE provides illustrations about legislator preferences along the general liberal-conservative continuum, and provides no indication of legislative action on certain policy domains. This type of measure can provide a lot of

information, but cannot tell us how a legislator is responding to certain and specific economic policy groups, such as farmers.

Unlike the studies of Bullock (1995), Sharpe and Garand (2001), Overby and Cosgrove (1996), and Hutchings (1998), which only examine the effects of redistricting on race, I examine the broader spectrum of interest group domains. By employing the scores of various interest groups who report to both racial and economic groups, I expect to see responsiveness to redrawn district lines in a variety of issue domains. For example, to illustrate how a legislator may be adapting to a large increase in rural farming population, I measure the votes they have cast in unison with NFU preferences.

For these reasons it can clearly be seen why the use of NOMINATE or broad based interest group scores can be used to measure shifts in response to groups who may have a general leaning toward either liberalism or conservatism, such as party or race, but cannot be used to measure response to specific economic group interests.

I argue that measuring responses to these specific groups is important, especially in light of findings in the literature about legislative stability. If it is the case that general ideological positions do not shift (Poole and Rosenthal 1985) but do shift in response to changes in the racial composition of the district (Sharpe and Garand 2001), this may be evidence that legislators can be responsive to other specific constituent changes within the district. The use of specific interest group scores should help explain this apparent inconsistency. Where significant changes have occurred in constituency composition, a change may be seen in the related policy domain regardless of whether there was a general shift along the ideological spectrum for that year.

The interest group scores utilized were selected for several reasons. One primary reason was score availability. A more important reason for selection depended on whether the group had a corresponding population within the district that was easily detected and easily measured. Interest groups that have direct policy interests, as well as a related and detectable population were chosen. Agricultural interest groups, civil rights groups, and labor groups fit these requirements.

A problem in utilizing interest group scores is that the ratings tend to assign extreme scores to many more members than those receiving moderate scores (Snyder 1992). For instance, the ADA index is often considered a measure of liberal-conservative ideology, when it is in fact a measure of agreement with one liberal organization's positions (Smith, Herrera and Herrera 1990). Nevertheless, this projection of distribution does not adversely affect our use of interest group scores. Use of the specific interest group's scores, extreme or not, is well suited to the goals of this study. Previous arguments against the use of such scores have been based on the bias that could be created by the votes each group selects on which to base their score.

This is a perfectly acceptable argument if one wants to measure general movement across all policy domains. In this study however, it is this selection bias in particular that I want to exploit. Interest groups choose the votes to determine how well the legislator's behavior matches their policy needs. This means that within the policy domain of interest, i.e. agriculture, the agricultural group's score should be a more accurate reflection of agreement with agricultural policy preferences.

Another potential problem with the use of interest group variables is that they cannot be strictly compared over time. Since the votes groups use to determine

liberalism vary from year to year, this stretches and shrinks the liberal/conservative scale, making comparisons from year to year potentially non-commensurate. To correct for this problem, I utilize Groseclose, Levitt and Snyder's (1993) inflation-adjusted ADA and COPE scores for our models. These inflation-adjusted scores correct the temporal problems and allow for year-to-year comparison.<sup>1</sup>

In the NFU model, since there are no inflation-adjusted scores available for this group, I utilized a bit of a "home-grown" solution to the problem. Instead of using the typical score as normally reported by various groups, I took the selected votes the NFU sends out in their newsletter as the votes on which to base opinion about a legislator's performance on agricultural issues. These votes are coded in the newsletter as R for "right" according to the NFU or W for "wrong" according to the NFU. Using this scale, I calculate the percentage the legislator got "right" for the year. The percent then became a score between 1 and 100 for the legislator.

I am aware that some may find this measure problematic, but again, I only use it to establish a general record of agreement with the NFU, rather than as an indicator of ideology or preference. Until I can apply Groseclose's (1994) inflation adjusted standardization to the NFU data, it is the best measure I have access to.

### Constituency Data

Following Hall and Grofman (1990) I use constituency characteristics as well as roll-call behavior to study legislator behavior. I use selected district characteristics,

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<sup>1</sup> For a detailed discussion of the problem and method for correction, see Groseclose, Levitt and Snyder (1993).



derived from Scott Adler's "Congressional District Data File, [102<sup>nd</sup> and 103<sup>rd</sup> congressional term]." I analyze each district in which I could obtain both legislator and constituency data and that also retained their incumbents 1987-1994.<sup>2</sup>

For each analyzed legislator I examine district level characteristics. I specifically look at the following data because it was particularly well suited to match the use of certain interest group ratings: agricultural population, percent of unionized workers, and percent African-American, Hispanic, "other" and percent total minority.

This is a perfectly acceptable and in fact the only suitable measure for what I am attempting to measure. First, legislator behavior should be guided at least in part by constituency preferences, and in many instances has been found to be mainly guided by this. This is true to the extent that some scholars advocate using constituency characteristics as an indicator of legislator preference (Hall and Grofman 1990).

Second, it seems clear that the best way (although not without problems) to measure changing district preferences, is to look at the changes among group populations within the district. Without having exact measures of preferences such as surveys, projecting certain preferences for groups is an acceptable solution (Jackson and Kingdon 1992).

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<sup>2</sup> Since I am interested in how congressmen adapt their voting behavior in response to change brought about by redistricting, my cases had to be selected from districts that retained their incumbents from at least the 100<sup>th</sup> to the 104<sup>th</sup> congressional sessions.

## CHAPTER 5

### TESTING

I examine roll-call behavior of incumbents who served from 1987 through 1994. I measure roll-call behavior for the two years following redistricting to increase the chances that change measured in Congress is not fleeting but substantive.

The dependent variables in each model are the interest group scores for each incumbent legislator who experienced a redrawn district from the period 1987-1994. I utilize a separate regression analysis for each variable.

One criticism of use of broad-based interest group ratings is that changes seen may just be a result of national ideological tides (Poole and Romer 1993). The argument is that any observed changes are the effect of changes in the mood of the country rather than changes brought about by redistricting or changes in the ideologies of a particular district. I include several variables to control for such effects. If there are district specific changes that occur within the district and there is a greater or different shift than the overall chamber shows, this would indicate that the shifts are a result of something other than an overall ideological shift.

Our core model is postulated as:

$$\Delta \text{SCORE}_{\text{Post-Pre}} = a + b_1 (\% \Delta \text{POPULATION}_{\text{Post-Pre}}) + b_2 (\text{PARTY}) + b_3 (\text{SENIOR}) + b_4 (\text{EMARGIN})^3$$

$\Delta \text{SCORE}_{\text{Post-Pre}}$  = change of interest group following redistricting.

$\Delta \text{POPULATION}_{\text{Post-Pre}}$  = The change in population, measured by post redistricting population – pre population.

**EMARGIN**= Electoral margin for incumbent in last election.

**SENIOR**= Number of years served.

**PARTY**= Member party.

**PRESVOTE**= Percent of presidential vote in district for member's party.<sup>4</sup>

The equations are the same in each of our models. The critical independent variable in each equation is the change in a group population. The dependent variable in each model is the specific interest group score that I intend to link with a change within the district. These variables are included so that I may illustrate the change in the voting pattern that comes as a result of changes brought about by redistricting. The independent variables in each equation are the same.

The four remaining independent variables are included in each model as control variables. The first control variable in the equations is PARTY. Following Sharpe and Garand, I use it as a binary variable coded 1 for Democrat, and 0 for Republican. This variable is included because of the need to control for party. Party is perhaps the

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<sup>3</sup> Models for each interest group score are provided in Appendix A.

<sup>4</sup> This variable has been removed for multicollinearity, but remains in the core model as a point of discussion in the data analysis.

strongest rival for our critical independent variable, as studies have found it to be the best explanatory variable in congressional voting behavior (for instance, Glazer, Grofman and Robbins 1987). There may be a difference in how Democrats and Republicans adapt to various population changes.

The second independent variable is EMARGIN, the electoral margin of the incumbent from the most recent election. This variable is included to try to tap how secure legislators may feel with their current constituency. This may have an impact on how much they are willing to adapt to new prospective constituents who may be entering the district.

The third independent variable is SENIOR. This variable is included so that I may consider whether seniority has an effect on a legislator's willingness to shift roll-call behavior. There is a discrepancy in the literature as to this issue. Glazer and Robbins (1985) find that senior members have more room to adapt, while Poole and Romer (1993) argue that legislators become trapped within their voting histories, and are more stable in their voting patterns (the "ideological boots" thesis).

The fifth variable, PRESVOTE, is the percentage of the district that voted for the member's party in the 1992 presidential election. It is intended to control for partisan shifts within the district. Since I aim to illustrate how specific group changes within the district will result in legislator adaptation in that particular issue domain, I must control for the fact that these are not just changes in response to a partisan shift within the district.

Each interest group rating produces a different model. I utilize the scores from three different groups. I use different group scores to illustrate the change that occurs in

voting patterns brought about by specific group interest changes in the district population. With each significant group change in a district I expect to see a shift in voting behavior that will be captured by the corresponding interest group score. In matching the constituency change with the correct issue arena, I hope to find changes in voting behavior in specific areas.

In the ADA model, I look to see whether a change in the minority constituency composition of the district will result in an increase in the legislator's roll-call liberalism. I look at changes in black constituency strength, Hispanic constituency strength, "other" racial group constituency strength, and the strength of the total minority population within the district<sup>5</sup>.

By running an analysis of all districts as well as only in districts in which there was a certain percent change or better, I expect to see whether the findings of Sharpe and Garand (2001) hold across all groups. If there is a marked difference in adaptation in district with large changes in group composition, then this is as they find a non-linear relationship, with adaptation only occurring when there are big shifts in group populations within districts.

The COPE score is used to reflect legislative voting behavior on employee rights, benefits, and other union-related issues. In the COPE model I intend to show the change in score as a function of the key independent variables, change in percent of unionized workers and blue-collar workers, with the control variables. I anticipate that the distinct

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<sup>5</sup> Other groups, in the hopes of having enough cases for analysis were combined into the category of "other." This category consists of the percentages in each district of any racial group not classified as African-American, Hispanic, or White.

policy interests of unionized and blue-collar workers will show a change in the COPE scores.

Votes of agricultural interest are assessed by the NFU (National Farmers Union). In this issue domain it is easy to see how a change in rural or agricultural population would result in changes in voting behavior. A shift in rural population is easy to measure and to be noted by a legislator. I can assume rural areas have a distinct and important interest in how their legislator votes in relation to agricultural issues and policy.

## CHAPTER 6

### EXPECTED FINDINGS

I have specific expectations for each of our models. Broadly, I anticipate that legislators, since electorally motivated, will respond to changes in their district populations. More narrowly, where there is a significant group change within the district, I expect the corresponding interest group score to shift in the same direction as the change in population.

In our ADA model, I expect to see a positive relationship between an increase or decrease in the different minority populations and a shift in the ADA voting score. As in all of our models, the legislator's voting pattern is subject to member ideology, seniority, electoral margin, and the partisan identity within their district.

In the COPE models I expect a positive relationship between increases in the percentage of unionized workers and the percentage of blue-collar workers in a district and a shift in the COPE scores. As these populations increase, their COPE score should move in a corresponding manner. These models will also be subject to the same control variables.

In the NFU models I expect a positive relationship between increases in population living in rural farming areas and population employed by the farming industry and a shift in the NFU scores. As these agriculturally interested populations increase, the NFU score should increase. These models will also be subject to the same control variables.

The control variables should have predictable effects. Party is included because it may affect willingness to shift voting behavior in certain policy domains (Glazer, Grofman and Robbins 1987). More senior members, who are more secure in their incumbency and also constrained by past voting behavior, will be less likely to move at all (Poole 1998).

I use the district presidential partisan vote because it illustrates the amount of unity between member party and the majority of the district's party. If members feel detached from the district they may shift toward the middle to gain the trust of their opposing party constituency.

With electoral margin, a legislator may feel more pressed to respond to changes to reach out to new and prospective constituents. This is an important variable to pay attention to since Bianco (1994) argues that risk may play an important role in responsiveness, as it prompts a legislator to want to re-establish trust within the district.



## CHAPTER 7

### RESULTS AND DISCUSSION

To test the expected relationships I utilize seven OLS regression models using three interest group scores and different changes in population within each district. Each interest group score is measured against relevant population changes per district.

Following a discussion of control variables, I discuss the findings for each model.

I use a critical independent variable and four control variables in each model.

These variables were chosen on a theoretical basis. The critical independent variable is the percent change in each population group and the control variables are the party of the representative, seniority of the representative, the electoral margin for the incumbent's most recent election, and the percent of votes that the representative's party received in the last presidential election.<sup>6</sup>

I discuss the results by each interest group score. The first models use the ADA score.<sup>7</sup> I test to see whether shifts in minority populations cause a change in representative roll-call behavior in issues monitored by the ADA group. In the model testing ADA scores against changes in the black composition of the district, these changes were positively and significantly related at the .05 level. In the districts where

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<sup>6</sup> My thought in choosing this last variable was to try to capture a general ideological mind set for the district as a whole. In testing the models with diagnostics, however, I discovered that in each model, this variable was too highly correlated with the party of the representative. Using the collinearity statistics, ocular tests, and the Klein Test I was able to determine that this variable cannot be used in the model. After making this adjustment, the models passed each diagnostic test for multicollinearity. I intend to find a way to overcome this problem and introduce the variable again.

<sup>7</sup> Data for ADA models are presented in Tables 1 through 4.

there was a five percent change or more, the relationship was about three times as strong. This corresponds with Sharpe and Garand's finding that larger changes, such as 10% or greater, prompt more response and are more likely to prompt adaptive legislator behavior.

When a change in ADA score is measured against Hispanic and other minority groups, I get quite a different result. The changes in these populations were not related at all to an increase or decrease in the member's roll-call liberalism. This is the case when looking at all districts in the analysis and when looking at districts with a five percent change in Hispanic population or greater.

Interestingly, when I combined all minority groups together, they too seemed to go unnoticed. The change in population was not reflected in a change in ADA score. Again, when analyzing all the districts in the analysis and those with a change of five percent or more the change in population was not a significant factor in whether ADA scores shifted.

With the COPE models, I tried to determine whether a change in the percentage of blue-collar workers prompted a change in representative's COPE scores<sup>8</sup>. The results show that the changes in these populations were not statistically significant with a change in score. Seniority was significant at .05 when I ran all districts. Party was significant at .005 when there was a change of 3% or more<sup>9</sup>.

Despite the size of this group being smaller than the others, there may be more to why the change in blue-collar workers went unreflected in a COPE score change. A

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<sup>8</sup> I find that in the time period analyzed there was no recorded change to unionized population in the dataset. For this reason I could only run the model using blue-collar workers.

change in blue-collar population may be more likely to go unnoticed by a representative. Unlike the agricultural group, blue-collar work is not associated with any particular type of region, neighborhood or land. The theory portion of this paper states that one of the requirements for change is a clearly notable group. It may be the case that unless a district suddenly loses or gains a huge factory or industry, representatives are less aware of fluctuations in this population.

In the NFU models, I find our most interesting results. When measured with change NFU scores, the change in population of those working in the farming industry is significant at .05. Party is significant at .001, and has the strongest impact. This is interesting in that it shows that party is the best indicator of whether members are more adaptive in this situation.

When the NFU scores are measured with a change in population living in rural farm areas, I get yet another set of results, the most favorable. This time, the change in population is positively and significantly related to a change in NFU score. The change in population is significant at the .001 level. This finding goes directly with our hypothesis, and helps resolve the discrepancies in our previous findings. It makes intuitive sense that a change in population living in rural farming areas is an easily notable group with a distinct set of policy goals and interests. However, party is again found to be significant here, and also at the .001 level.

I think the relationship is explained by the fact that there were mostly decreases in farming employed population, so it makes sense that Democrats may be unlikely to

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<sup>9</sup> It should be noted that the mean of movement in COPE scores was only 3.2 points, and the mean of population change was even smaller at 1%. These small changes contribute to the very low explanatory power of the model.

change their voting in the direction away from farming interests. If this is the case, party would again be found to be the strongest determinant of voting behavior.

To explore this question, I divided the cases by party and ran the analysis again. I find when looking at Republicans, the shift in population is highly significant (.005) with a change in score. With Democrats, it is not at all significant. Interestingly too, in both electoral margin became significant (.05). This could correspond with Glazer and Robbins' (1983) assertion that more electoral security allows trust and more voting freedom for incumbents. Clearly there is something going on here. It is very interesting that one party is adapting voting patterns in accordance with a change in farming population while another is not. This could be for a few reasons, further research will have to hash out which.

What I have found to be most interesting about these findings are the differences between each group score change. In some areas, party predicts movement. In others, seniority is the best predictor. With NFU scores, a change in rural farm population and legislators' party prompts adaptation. With ADA scores, I see that a change in the black population prompts adjusted roll-call behavior, but that changes in other minority populations go largely unnoticed, or at the very least are not reflected in interest group. I also find that while the interests represented by the NFU are noted, the interests of the COPE group are not. This is a much smaller group however, and may be a significant reason as to why this is.

## CHAPTER 8

### IMPLICATIONS AND FUTURE RESEARCH

These findings lead to more interesting questions regarding legislative behavior. It seems that a major factor in groups reaching policy goals is whether they are a clearly notable group with distinct and unifying policy goals. I have found race, but not all minorities, to be such a group. As I progress to incorporate the 2000 census data this may change, I will also especially want to pay attention to increases in the Latino population. In addition to race, and our findings seem to indicate that populations surrounding the farming industry are another of these groups.

The idea of race and the ease of recognition for the farming and rural populations may bring another factor to the forefront: salience. For the purposes of this paper, I have considered issues salient to citizens in certain groups just because an interest group protecting their interests has considered it to be and because it relates directly to them. Literature on the subject has shown that this may not entirely be the case. Citizens can be totally unaware of issues and legislator behavior that directly affect them. Legislators may not adapt to certain changes if they feel confident that they will not be held accountable on a low salience issue. One explanation for the different levels of response between race and other groups could be that the politically charged nature of racial interests creates a higher salience level for both citizens and legislators (Hutchings 1998). To incorporate this, I may have to investigate the key votes used by interest groups and consider them on the basis of issue salience to the public.

Another way this study could be improved would be the use of another measure for adaptive legislative behavior. The purpose of interest group scoring is to serve as an indicator of how representatives are doing in certain policy areas. However, when it comes to taking notice of certain groups within the district and trying to illustrate to them that they are “on their side,” there may be a more direct way of observing this. Legislators are thought to use votes as signals, but they may do more obvious “advertising” during campaigns.

One way I would like to capture this is by analyzing campaign propaganda and speeches and whether they emphasize different things following a large change in the district. I can presume that they do, and it will be interesting to see if this activity will be reflected in the voting behavior. It could be the groups are noticed for campaigning purposes, but not when it comes time to vote on policy. This again may be a place where the information from the 2000 census may change things.

In the political realm, it already seems that this awareness of an increasing Latino population is present. Some examples are George W. Bush’s nephew being prominent in the presidential election to help gain confidence and votes from Latinos and the recent campaigns by a candidate for the Texas Democratic senatorial nomination. It seems ridiculous to imagine that following the census and its documentation of exponential increases in the Latino population, campaigning incumbents in certain districts will not think twice about the Hispanic composition within the district, and adapt their campaign propaganda and rhetoric.

The main question I have tried to answer is whether in some small ways (rather than an ideological about face), legislators try to adapt to changes in the district brought

about by redistricting. It seems that they may, although when and why seem to be very constrained by other influential factors, such as party. Overall then, the question turns to exactly when and why legislators perceive and adapt to these changes, and further reconcile our results with the conflicting findings in the literature.

These findings add further questions to the literature, which has also indicated conflicting findings about changes in roll-call behavior. Also, since I find that in a significantly notable group with straightforward policy preferences is adapted to by the representatives, it seems that representatives may not necessarily “die in their ideological boots.” Instead, they may change their ideological boots, depending on which groups are noticed most and perhaps feared most by the representative.

## APPENDIX A

### MODELS



$$\text{ADA}_{\text{post-pre}} = a + b_1 (\Delta \% \text{ MINORITY GROUP}_{\text{Post-Pre}}) + b_2 (\text{Party}) + b_3 (\text{Seniority}) + b_4$$

(Electoral Margin)

$$\text{ADA}_{\text{post-pre}} = a + b_1 (\Delta \% \text{ TOTAL MINORITY}_{\text{Post-Pre}}) + b_2 (\text{Party}) + b_3 (\text{Seniority}) + b_4$$

(Electoral Margin)

$$\text{COPE}_{\text{post-pre}} = a + b_1 (\% \Delta \text{ BLUE COLLAR}_{\text{Post-Pre}}) + b_2 (\text{Party}) + b_3 (\text{Seniority}) + b_4$$

(Electoral Margin)

$$\text{COPE}_{\text{post-pre}} = a + b_1 (\% \Delta \text{ UNION}_{\text{Post-Pre}}) + b_2 (\text{Party}) + b_3 (\text{Seniority}) + b_4$$

(Electoral Margin)

$$\text{NFU}_{\text{post-pre}} = a + b_1 (\Delta \% \text{ FARMING}_{\text{Post-Pre}}) + b_2 (\text{Party}) + b_3 (\text{Seniority}) + b_4$$

(Electoral Margin)

$$\text{NFU}_{\text{post-pre}} = a + b_1 (\Delta \% \text{ RURAL}_{\text{Post-Pre}}) + b_2 (\text{Party}) + b_3 (\text{Seniority}) + b_4$$

(Electoral Margin)

APPENDIX B

TABLES

Table One: Change in ADA Interest Group Rating with Changes in Black Population Following Redistricting.

Model 1  
 Ordinary Least Squares Estimates  
 (Robust Standard Errors in Parentheses)

	All districts	5% Change or more
Constant	-.655 (1.49)	1.32 (3.67)
% Change In Black Population Following Redistricting	.190* (.112)	.273* (.111)
Representative Party	.242 (1.08)	-2.97 (2.37)
Electoral Margin of Representative	-.003 (.023)	-.008 (.048)
Seniority of Representative	.024 (.068)	.117 (.187)
<i>N</i>	202	29
<i>R</i> Squared	0.016	0.21
Adjusted <i>R</i> Squared	-.003	0.08

\*\*\* $p < .001$ , \*\*  $p < .005$ , \*  $p < .05$

Table Two: Change in ADA Interest Group Rating with Changes in Hispanic Population

Model 2  
 Ordinary Least Squares Estimates  
 (Robust Standard Errors in Parentheses)

	All districts	5% change or more
Constant	-1.04 (1.52)	-2.91 (3.24)
Change In Hispanic Population Following Redistricting	.012 (.128)	-.079 (.111)
Representative Party	.406 (1.08)	-1.12 (2.31)
Electoral Margin of Representative	-.001 (.024)	.012 (.045)
Seniority of Representative	.028 (.069)	.378 (.164)
<i>N</i>	202	28
<i>R</i> Squared	.002	0.22
Adjusted <i>R</i> Squared	-0.018	0.08

\*\*\* $p < .001$ , \*\*  $p < .005$ , \*  $p < .05$

Table Three: Change in ADA Interest Group Rating with Change in Other Minority Group Populations

Model 3  
 Ordinary Least Squares Estimates  
 (Robust Standard Errors in Parentheses)

	All districts	5% change or more
Constant	-1.21 (1.50)	-3.99 (2.87)
% Change In Other Minority Population Following Redistricting	.079 (.083)	.073 (.128)
Representative Party	.231 (1.09)	.376 (2.08)
Electoral Margin of Representative	-.003 (.023)	.011 (.041)
Seniority of Representative	.027 (.068)	.140 (.132)
<i>N</i>	202	57
<i>R</i> Squared	.006	0.04
Adjusted <i>R</i> Squared	-.013	-0.03

\*\*\* $p < .001$ , \*\* $p < .005$ , \* $p < .05$

Table Four: Change in ADA Interest Group Rating with Change in Total Minority Population

Model 4  
 Ordinary Least Squares Estimates  
 (Robust Standard Errors in Parentheses)

	All districts	5% change or more
Constant	-1.20 (1.49)	-3.79* (2.02)
% Change In Total Minority Population Following Redistricting	.065 (.049)	.060 (.050)
Representative Party	.239 (1.08)	1.23 (1.56)
Electoral Margin of Representative	-.002 (.023)	-.034 (.035)
Seniority of Representative	.028 (.068)	.212* (.106)
<i>N</i>	202	92
<i>R</i> Squared	.01	0.09
Adjusted <i>R</i> Squared	-.009	0.05

\*\*\* $p < .001$ , \*\*  $p < .005$ , \*  $p < .05$

Table Five: Change in COPE Interest Group Rating with Change in Blue Collar Population

Model 5  
 Ordinary Least Squares Estimates  
 (Robust Standard Errors in Parentheses)

	All districts	3% change or more
Constant	-2.06 (2.50)	-4.41 (5.31)
% Change In Blue Collar Population Following Redistricting	.031 (.480)	-.106 (.433)
Representative Party	-1.63 (1.82)	6.51* (3.61)
Electoral Margin of Representative	-.037 (.038)	-.005 (.087)
Seniority of Representative	.325* (.116)	.001 (.166)
<i>N</i>	204	24
<i>R Squared</i>	.048	0.18
Adjusted <i>R Squared</i>	.029	0.009

\*\*\*  $p < .001$ , \*\*  $p < .005$ , \*  $p < .05$

Table Six: Change in NFU Interest Group Rating with Change in Farming Population

Model 6	
Ordinary Least Squares Estimates (Robust Standard Errors in Parentheses)	
Constant	-6.72* (2.50)
% Change In Farming Population Following Redistricting	2.78* (1.09)
Representative Party	-11.94*** (1.79)
Electoral Margin of Representative	-.008 (.039)
Seniority of Representative	.010 (.113)
<i>N</i>	211
<i>R</i> Squared	0.188
Adjusted <i>R</i> Squared	0.172
*** $p < .001$ , ** $p < .005$ , * $p < .05$	



Table Seven: Change in NFU Interest Group Rating with Change in Rural Population

Model 7  
 Ordinary Least Squares Estimates  
 (Robust Standard Errors in Parentheses)

Constant	-5.97* (2.51)
% Change In Rural Population Following Redistricting	1.79** (.583)
Representative Party	-11.96*** (1.78)
Electoral Margin of Representative	.015 (.039)
Seniority of Representative	-.027 (.112)
<i>N</i>	211
<i>R</i> Squared	0.199
Adjusted <i>R</i> Squared	0.184

\*\*\*  $p < .001$ , \*\*  $p < .005$ , \*  $p < .05$

Table Eight: Change in NFU Interest Group Rating with Change in Rural Population by PARTY

Model 8  
 Ordinary Least Squares Estimates  
 (Robust Standard Errors in Parentheses)

	Democrats	Republicans
Constant	-20.13*** (11.79)	-3.14 (4.09)
% Change In Rural Population Following Redistricting	1.16 (.761)	2.43** (.893)
Electoral Margin	.074* (.046)	-.139* (.067)
Seniority	-.018 (.122)	.176 (.232)
<i>N</i>	124	88
<i>R Squared</i>	.02	.12
Adjusted <i>R Squared</i>	.004	.08

\*\*\*  $p < .001$ , \*\*  $p < .005$ , \*  $p < .05$

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