In this paper, we use redistricting to examine the relationship between representatives and a unique group of the public: individual campaign contributors. By way of a continuous measure of district change, we examine 20 years of congressional elections data to test how incumbent campaign fundraising activity changes after redistricting. We find that as the geographic constituency changes, members receive larger shares of contributions from outside their districts. When we look at the parties separately, the immediate effect is larger for Republicans but returns to pre-redistricting behavior in the last period before districts change again. The impact is smaller for Democrats but always remains significant in each election after redistricting. This result is important because contributors who reside outside Fenno’s concentric circles of representation live in areas that are different compared to other donors. In addition, larger shares of outside donations are positively correlated with more extreme voting behavior.
“That is agony. I thought: All these relationships! All these friendships! All this service! You know, what is it all about?”

- U.S. Rep. Timothy Johnson (R-IL) (quote appears in Fahrenthold (2011))

The relationship between a legislator and her supporters is the foundation upon which much politics rests. In this regard, Richard Fenno’s *Home Style* masterfully conveyed the connections that members of Congress have with their districts and constituents when he noted that representatives often describe their districts in terms geographical space-and-place (Fenno 1978, 2). This foundation, however, is prone to move over time. The decennial process of reappointment and redistricting, much like the movement of tectonic plates, may cause slight tremors in some districts and wreak havoc on the political landscape elsewhere. Although most of a district remains intact after redistricting, some parts of the district may be removed while other areas are added. New district boundaries present both challenges and opportunities to members of Congress. For some, like Rep. Johnson, redistricting severs bonds they have carefully cultivated through years of service and personal contacts. For others, redistricting offers the opportunity to grow new relationships and establish electoral security, but developing relationships with new constituents takes time and effort. As Representative Susan Davis told her new constituents, “We’ll need your help introducing us – telling us who we should know and when to get together with folks and what meetings are going on” (quote appears in Stone 2012).

In this paper, we will use redistricting to examine the relationship between representatives and a unique group of the public: individual campaign contributors. By way of a continuous measure of district change, we use 20 years of congressional elections data to test how a member modifies her campaign fundraising behavior after her district is altered. In short,
we find that the more a district changes, members receive larger shares of contributions from
outside their districts. Moreover, even 10 years after redistricting, members do not turn back to
their pre-change behavior. This result is important because representatives who take money from
non-constituents may start to create a bond with individuals who reside outside Fenno’s
concentric circles of representation.

In the next section, we briefly review redistricting and campaign finance literature in
order to develop theory and hypotheses about individual campaign contributions to incumbent
members of Congress originating from different geographic locations. Building on this, we are
able to determine the influence of redistricting on a member’s ability to fundraise and present
results that show a difference between the two parties. Next, we show how contributors who give
to members outside their districts differ from other donors. Finally, we conclude and offer
suggestions for future research.

Previous Research

Responses to Redistricting

Redistricting can influence the relationship between a member of Congress and her
constituents in many ways. For example, the simple act of drawing new citizens into a district,
even fellow co-partisans, can cause electoral difficulties for an incumbent (Murphy and
Yoshinaka 2009, Yoshinaka and Murphy 2009) that in turn can weaken representational ties
(Yoshinaka and Murphy 2011). Altering an incumbent’s district can initially lower the “personal
vote” or incumbency advantage a member has accrued (Ansolabehere, Snyder and Stewart 2000;
Desposato and Petrocik 2003; Hood and McKee 2008) partially due to voters not knowing their
representatives (McKee 2008a; Hayes and McKee 2009; Hood and McKee 2010). While “new”
constituents are less likely to turn out to vote (Hayes and McKee 2009), over time, members can bring those voters back into the fold (Rush 2000).¹

Others have demonstrated that while members will alter their voting behavior to reflect their new constituencies (Glazer and Robbins 1986; Stratmann 2000; Boatright 2004; Bertelli and Carson 2011), representatives do not always adapt in predictable ways when population change is especially large (Crespin 2010). Since voters may not recognize or know much about their new member and, in turn, representatives do not always adapt to represent the median of their redrawn districts, it seems likely other important aspects of congressional campaigns, such as making contributions, could be affected by redistricting.

Individual Campaign Contributors

A large share of the campaign fundraising literature focuses on political action committees (see e.g. Jacobson 1980; Wright 1985; Hall and Wayman 1990; Cigler and Loomis 1991; Romer and Snyder 1994; Smith 1995; Stratmann 1995; Wright 1996; Herrnson, Shaiko and Wilcox 1998; Box-Steffensmeier, Radcliffe, and Bartels 2005; Herrnson2007; Jacobson 2012) and overlooks individual campaign contributions, even though they make up over half of all contributions to congressional elections (Herrnson 2007; Jacobson 2012). Some of the earliest to study individual contributors were Jones and Miller (1985) who found that voters, people who were interested in politics and respondents who felt a high degree of civic duty contributed to candidates. Grenzke (1988) took a more geographic approach and demonstrated that over 50

¹ Scholars examining old and new voters have presented evidence of partisan implications (Petrocik and Desposato 1998, McKee, Teigen, and Turgeon 2006, McKee 2008b).
percent of individual and nearly all PAC contributions come from outside of members’ districts. However, most of the out-of-district money did come from inside the member’s state.²

In perhaps the most comprehensive study of individual donors to date, Francia, Green, Herrnson, Powell and Wilcox (2003, 105) observed that, “Geography is the most important factor influencing contribution decisions.” They also found that contributors were, for the most part, rich, highly educated white males. However, reasons for contributing were quite varied. They stylize three types of contributors, “investors” who gave for financial gain; “ideologues” who gave for more broad societal reasons and finally “intimates” who gave for reasons of solidarity, such as a personal relationship with the candidate or their fundraising surrogates.³

Descriptive accounts of individual fundraising (Grenzke 1988; Herrnson 2007) point out that a significant portion of funds come from outside a member’s district with a non-trivial fraction originating outside of the state. Since candidates need money to win elections they will act as expected to raise funds. Research shows that money is clustered geographically (Gimpel, Lee and Kaminski 2006; Bramlett, Gimpel and Lee 2011) and flows to competitive races for partisan advantage (Gimpel, Lee and Pearson-Merkowitz 2008). Until recently, redistricting scholars have not paid much attention to how altering district boundaries can influence campaign fundraising. Exceptions include Boatright (2004) who demonstrated that candidates increase their total fundraising (PAC and individual) in response to partisan and racial changes in their districts and Kirkland (nd) which shows line drawers take wealth concentration into account during the redistricting process.

²Grenzke’s study included the 1981-82 election cycle that encompassed 1982 redistricting but she did not take this into account.
³See Snyder (1990) and Baron (1994) for more discussion on investors and Rosenstone and Hansen (1993), for ideologues.
Redistricting and Campaign Contributions

Geography is an important determinant of individual contribution (Cho and Gimpel 2007), but donor networks do not develop in a vacuum. Individuals do not give simply because they reside in the same district as the member. Many give because they expect something in exchange for their contributions (Snyder 1990). These donors are deemed “investors” by Francia et al. (2003). These types of contributors are in search of narrow benefits for their particular industry, company, or even their personal financial situation.

However, it may not be correct to assume that all donors are seeking tangible benefits. Francia et al. (2003) also found that others, deemed “intimates”, give for solidary or social motives. Similar to the interest group literature (e.g. Olsen 1971), these contributors donate for the psychological rewards that come from the social aspect of giving. Consistent with solidary motivations, this type of contributor will give when invited to a fundraiser or directly asked by the candidate or a close friend. Some intimates stated “that friendship with a candidate or a solicitor was always important in helping them to decide to contribute” (Francia et al. 2003, 47). Other intimate contributors acknowledged that local community ties played a major role in their decision calculus. In other words, there needs to be a strong social or local connection between the contributor and the campaign for an intimate to donate.4

While donors may give for different reasons, Francia et al. (2003) and Cho and Gimpel (2007) both find a strong link between geography and contributions. To date, nearly all research on individual campaign donations seems to ignore the question of what happens to contribution patterns after redistricting changes a member’s geographic constituency and some of the links

---

4Francia et al. (2003) also mention issue-based donors. We do not discuss them here because their contributions are not tied to geography in ways similar to intimates and investors.
are severed. This event provides a unique opportunity to test the strength of the links between representatives and contributors.

Given what the previous research says about donors, what can we say about the influence of redistricting on contributions? Our initial hypothesis is simple and intuitive. Since previous research indicates contributions are based on relationships tied to geography in some fashion, then in elections after redistricting we expect patterns to change. Immediately following a redistricting (i.e. elections in 1992 and 2002), we expect to find members representing districts with many new constituents to collect a smaller percentage of donations from inside their districts relative to other areas of their states. This is because new constituents have not had time to get to know the member and may not wish to make a contribution. In addition, many members will likely still ask “old” constituents who no longer reside in the district to cut them a check.\(^5\) In subsequent elections, we expect the effect to lessen because members have had time to build relationships with new constituents and potential donors inside their districts. Meanwhile, old donors may begin to give to new candidates. The pattern should then repeat itself when redistricting comes around again.

Although the initial hypothesis is straightforward, we can use what we know about different investor types – investors and intimates – to make secondary hypotheses. Arguably these hypotheses are not as clear-cut but we feel important to test them anyway. It seems consistent with the motivations for investors that they will contribute for maximum returns. If this is indeed the case, then geographic ties should matter less for this class of donors; when investors find themselves in another district, they may still send a check to the “old” member.

\(^5\) Unfortunately, we cannot parse out the two reasons with our research design. It is likely they are reinforcing each other as members do not know who to ask for donations from the new constituents and absent an “ask,” some potential donors will not give. However, since we are looking for overall changes, we leave it to future work to deal with this issue.
addition, Francia et al. (2003, 43) suggest that investors may give a contribution as a reward for past behavior such as supporting a particular piece of legislation. This means investors give in a retrospective fashion and may wait and evaluate a new member before making a contribution. In essence, investors operate under a “try before you buy strategy”. Finally, investors may continue to give to the old member hoping rewards will continue to flow their way. If they do not, the contributions will likely stop.

Combined, this implies a member relying on investor class contributors will have to wait before receiving any sort of benefit from new constituents, but might continue to receive contributions from previous investor type contributors who now reside outside the district. This translates to an initial decrease in in-district contributions relative to the rest of the state.

When it comes to intimates, who give based on existing social ties, we expect the influence of redistricting to be smaller compared to a member who is dependent on investor type donors. This is because intimates still have the same social network after redistricting. When members collect most of their contributions from intimates, we still expect to see a decline in in-district contributions but the decline should be less than a similar member who depends on investors.

According to the Francia et al. (2003, 105) study, intimates and investors differ in other ways that are useful to explaining changes in contribution patterns. Their survey found these two types of contributors were not evenly distributed across the two major parties. Democrats gave largely for solidary reasons while Republican focused on material gains. Since 75 percent of contributions did not cross party lines, it is reasonable to assume that Democratic members get most of their individual contributions from intimates while Republicans receive donations based on material rewards. Since Democratic donors are more likely to be intimates and Republican
contributors investors we can project our hypotheses discussed above about investors and intimates onto members from the two parties. Simply put, in an election following a redistricting, we expect the effect of redistricting to be larger for Republican members. Republicans should collect more out-of-district contributions following redistricting compared to Democrats.

**Data and Research Design**

To test our hypotheses, we created variables that measure aggregate individual campaign contributions as well as a variable that captures how much a district changed after the redistricting in 1992 and again in 2002. In order to measure fundraising, we start by examining the nearly 4.5 million individual contributions reported to the Federal Election Commission made to incumbent members of Congress for re-election campaigns from 1992 to 2010. During this time period, the FEC identifies the contributor’s name, zip code, and the name of the candidate who received the contribution. By manipulating these data with geographic information systems and using zip codes as the link between different geographic areas, we can analyze the geography of individual campaign contributions.

In order to match zip codes with districts, we used the Missouri Census Data Center MABLE/Geocorr Geographic Correspondence Engines for the 1990 and 2000 census data. The engine provides a listing that overlays 5-digit zip codes with corresponding congressional districts. If a zip code fell into multiple congressional districts, the output indicated the

---

6See http://mcdc2.missouri.edu/websas/test/geocorr2k.html for the 2000 census and http://mcdc2.missouri.edu/websas/geocorr90.shtml for the 1990 census. We use district boundaries drawn following the 1990 Census to account for contributions to 1992, 1994, 1996, 1998 and 2000 campaigns. FEC data and maps created following the 2000 Census allow us to determine how much support members received from their districts, states and other states in 2002, 2004, 2006, 2008 and 2010 congressional elections. We exclude districts subject to mid-decade redistricting, including districts in Georgia from 2004 to 2010 and Texas from 2006 to 2010, because these cases are atypical and a relatively small portion of the data sample. We do not specifically address whether the contribution patterns reported here with respect to decennial redistricting following the Census are also observed following mid-decade redistricting.
proportion of population in separate congressional districts.\footnote{We find that approximately 13\% of contributions originate from zip codes divided between two or more congressional districts.} We then use those proportions to weight total contributions for the corresponding congressional districts from split-district zip codes. Since we know where each contribution came from and where it went, we can use this information to create sum totals for each member of in-district, rest-of-state, and out-of-state contributions. In our analyses, we largely focus on the ratio of in-district contributions relative to total in-state contributions but examine the out-of-state contributions as a “control” since these areas did not receive the “treatment” of redistricting and these contributions should not be influenced by district changes. Specifically, our main dependent variable is the ratio ranging from zero to 100 of a member’s total in-district contributions to the member’s total in-state contributions (which includes in-district contributions).\footnote{We do this for several reasons. First, total dollars are likely to vary based on challenger behavior and include an upward trend over time due to the increase in the cost of campaigning. This trend and changes from year to year based on race specific factors would then have to be controlled for in our analyses. We use a ratio of in-district to rest-of-state instead of the simple percentage from each of the three areas to avoid the compositional data problem discussed in Brehm, Gates and Gomez (1998, 1) where the analysis of one category must take into account the balance in another. If we were to go down the path of using simple percentages then the solution to this problem proposed by Katz and King (1999) and Aitchison (1986) is to convert those percentages to ratios anyway. Since we do not use simple percentages, we hopefully avoid the problem. We do note that if we were to incorrectly use a measure that simply captures the percentage of in-district contributions the results are largely similar.}

In order to measure redistricting, we use a technique similar to others (Crespin 2005; McKee 2008b; Yoshinaka and Murphy 2009; Bertelli and Carson 2011) and once again turn to the Missouri Census Data Center. This time we intersect the congressional district boundaries in the pre and post-redistricting years. The output here provides us with a measure of the population that is continuous to each congressional district after changes are made. We then divide the continuous population number by the total district population to create a percent “continuous” measure. Finally, we subtract the percent continuous from 100 to create our main independent
variable, % New. Thus, we have one measure for percent new following the 1990-92 changes and another one for 2000-02.

In the elections immediately following redistricting, we created a variable % New_{t+1} that is coded percent new for elections in 1992 and 2002 and zero otherwise. We then generate a series of variables for each of the subsequent elections (i.e. % New_{t+2} for 1994 and 2004, % New_{t+3} for 1996 and 2006, and so on) where the variable is coded with the percent new figure (based on the 90-92 and 2000-02 changes) for the relevant elections years and zero in the other years. Our expectation is as % New increases, the ratio of in-district contributions to total in-state contributions should decrease. As elections get further away from the redistricting year, the effect should diminish.

In addition to the main variables of interest, we include several controls that are specific to the incumbent, the particular election, and the district or state. Factors that are specific to the incumbent include their seniority, the committees they serve on and their party affiliations. Most of these variables are relatively standard in the congressional literature. A member's Seniority is measured as the number of terms that an incumbent has served. We expect that the more senior the member, the larger his or her contribution network will be and hence more contributions should come from outside the district.

Another member factor that may influence incumbents’ fundraising abilities is their committee assignments. Members on “constituent committees” should be well placed to provide particularized benefits to their constituents who should be more likely to give to their own representative. Representatives serving on “prestige committees” deliver goods that are not as geographically concentrated. Therefore, they should earn more money from beyond their districts’ borders. If a member served on a constituency committee in the term of Congress
preceding reelection, then the dichotomous variable *Constituency Committee* is coded one, zero otherwise. *Prestige Committee* is also coded one if the member served on a prestige committee.\(^9\) Because prior research suggests different styles of contributing predominate among Democrats and Republicans, we also include a variable *Democrat* that is equal to one if the member is a Democrat, zero otherwise.

Factors particular to the election include the natural log of *Challenger Spending* and if the incumbent faced an experienced, or *Quality Challenger*.\(^10\) If a member is facing a well-funded and/or quality challenger, a cue that the incumbent is vulnerable (Jacobson 2012), then he or she will have greater demand for contributions and may devote more time and effort to raising funds.

There are also factors related to the member’s district that may influence where a candidate raises funds. If a member is from a relatively wealthy district, then he or she should be less likely to look outside the district for money. To control for this, we included *District Median Income* which is the median household income for the member’s district.\(^11\) We also expect members from relatively small districts to look elsewhere for contributions so we also include a control for *District Population*.\(^12\) Members from districts that lean one way or the other politically may also need to look somewhere else for funds to bolster their re-election chances.

\(^9\) Following the guidance of Smith and Deering (1990) and Alvarez and Saving (1997) we coded Appropriations, Budget, Commerce, Financial Services, Rules and Ways and Means as prestige committees and Agriculture, Armed Services, Interior (Natural Resources), Transportation and Infrastructure, Science and Technology, Small Business and Veterans’ Affairs as constituency committees. Committee and seniority data for 103\(^{rd}\) to 111\(^{th}\) Congresses are from Stewart and Woon (2011) and Clerk of House of Representatives (1992) for the 102\(^{nd}\) Congress.

\(^10\) Spending and quality challenger data were provided by Gary Jacobson.

\(^11\) Data obtained from the US Census www.census.org. The Bureau’s 1990 Census and 2000 Census data included estimates of median family income by congressional district for 1989 and 1999 respectively. The Bureau’s American Community Surveys reported household median income data for many districts in 2004 and all districts in 2006, 2008 and 2009. We interpolated income values for electoral cycles occurring between Census Bureau reports by assuming a linear trend between known quantities and extrapolated income values for 2010 as a linear trend between 1999 and 2009 measures. Unfortunately, income data from the 2010 Census was not publicly available at the time of this study.

\(^12\) Although congressional districts within a state must have equal populations, district sizes vary considerably among states.
This possibility is tested with a variable that measures the two-party share of the district’s *Incumbent Presidential Vote* for the incumbent’s party from the prior presidential election. We also include a variable that measures *State Population* since members from larger states have more opportunities to ask for contributions from in-state residents.

Finally, because contribution limits have changes over the time period of this study, we control for this by specifying the legal limit of individual contributions as a variable in the model. After the 2002 midterm elections, the Bipartisan Campaign Reform Act (BCRA) went into effect. This Act increased individual contribution limits from $1000 to $2000 per election cycle with incremental increases to follow in the 2006, 2008, and 2010 election.

Our research design is then essentially an unbalanced panel with dropout restricted to incumbent members of Congress who experienced a redistricting and ran for reelection. Once a member loses, they are dropped and newly elected members are only included if they are running for reelection after redistricting. We then estimate our models using fixed effect regressions for panel data where the panel variable is set for each incumbent.

### Results

The results from our estimations are presented in Table 1 and Figures 1 through 3. We provide model one as a baseline and model five to determine if out of state contributions are affected by redistricting. The negative and significant coefficients on each of the % New variables in model two indicate that the more districts change the ratio of in-district contributions

---

13 We obtained data on incumbent party’s vote share in prior presidential election from *CQ’s Politics in America* as well as Gary Jacobson.

14 This means, for example, a member elected in 1994 who loses in 2000 is never included in our analysis and a member elected after 1992 but prior to 2002 is only included starting in 2002.

15 A Hausman test indicated fixed effects are preferred over random effects.
to the state total decreases. Since these coefficients represent marginal changes, we can multiply them by the mean % New for each period to get an idea of how this influences the average member.\textsuperscript{16} In the election just after redistricting, the average member sees the ratio decline by just over 7 percent. This drops to 2.4 percent in the middle election, and 1.2 in the election just before the new round of redistricting. These results support our hypothesis that redistricting will lead to a relative decrease in in-district campaign contributions. We should also point out that even in the last period ten years after redistricting the effect of district change while small, is still significant. This means contribution patterns never revert back to their pre-redistricting norms.

The predicted effect of district change on the typical incumbent’s ratio of in-district contributions during the 1992 to 2010 congressional election cycles is presented in Figure 1.\textsuperscript{17} This figure is particularly illustrative of the importance of measuring change as a continuous variable and not treating all redistricting equally. We see that the financial support a member could expect to receive from his or her district declines the more his or her district changed as the result of redistricting. Members that represent districts with little to no change actually see an increase in the amount of in-district contributions after redistricting relative to districts with a lot of change. The impact of district change on local support is particularly severe immediately following redistricting, producing a cyclical pattern over these election cycles.

The coefficients on the control variables are also instructive. As we can see from Figure 2, as seniority increases members get larger shares of their contributions from parts of their states outside of their own districts. This is consistent with Fenno’s (1978) idea that members have an

\textsuperscript{16} The mean actually decreases each year suggesting members with more new constituents have dropped out of our sample because they lost or decided to retire. It ranges from 27 percent in the election immediately after redistricting to a low of 11 percent in the year before the new redistricting.

\textsuperscript{17} To produce Figure 1, we calculate the mean values of all variables other than district change for a typical member in each election cycle.
expansionist phase of their careers but adds the additional aspect that members do more than just reach out to new voters that reside in the geographic constituency. The results also indicate that members will earn contributions from outside their districts when they face well-financed challengers.\textsuperscript{18} When the incumbent share of the presidential vote is not in their favor, representatives get more of their contributions from outside the district. Finally, members from larger districts and states get larger ratios of in-district contributions. It also appears that a member’s committee memberships do not significantly influence fundraising from individual donors. This result differs from the PAC literature that argues members are able to leverage campaign contributions based on committee assignments.

When we separate the sample by party in models 3 and 4, we begin to see some important differences. In order to make comparisons easier for our main independent variable, we created Figure 3. Figure 3 provides 95 percent confidence intervals for the coefficients so we can determine if there are meaningful differences between the two parties. We see that in the period immediately following redistricting, the effect for Republicans is nearly twice as large and significantly different when compared to Democratic incumbents. This means that as districts represented by Republican incumbents change, members are receiving a smaller ratio of in-district contributions.\textsuperscript{19} This supports our hypothesis that investors will try before they buy, cautiously observing their new representatives before contributing to their reelection campaigns. It is also consistent with the idea that investors will reward their “old” representatives for past behavior. Over time, the results show that for Republicans, the first period effect is large, decreases in the second period and by the last period the coefficient is not different from zero. In

\textsuperscript{18} We should be a bit cautious here given the relationship between challenger spending and facing a quality challenger.

\textsuperscript{19} We examined the \% New variables for differences between the parties and found they were not statistically significant.
contrast, the effect for Democrats is nearly the same for each of the post-redistricting elections. The Democrat’s relationships with individual contributors suffer less initially but recover more slowly following district change compared to the Republican’s. These results are consistent with our secondary hypotheses.

Some of the control variables also highlight interesting partisan differences. Returning back to Table 1, we see the coefficient on the seniority variable is over twice as large for Republicans. This means they get better faster at attracting contributions from outside their districts. As BCRA went into effect and the maximum contribution increased, it appears that Democrat members benefited with more money coming from donors inside their districts while the effect ran in the other direction for Republicans. Finally, in model 5, we find that district changes had no influence on contributions from outside the state. This makes sense because the contributors did not receive the redistricting treatment.

**Discussion**

In the preceding sections, we discussed a model and presented results that showed redistricting correlates with members receiving more out-of-district contributions. Does this matter at all? We think it does and agree with Madison’s statement in Federalist 52 titled, *The House of Representatives*:

"As it is essential to liberty that the government in general should have a common interest with the people, so it is particularly essential that the branch of it under consideration should have an immediate dependence on, and an intimate sympathy with, the people."²⁰

---

²⁰ Referenced 12-1-12 http://www.constitution.org/fed/federa52.htm
Although Madison goes on to reference frequent election as the cure, we argue his thoughts are applicable here as well. The phrases "immediate dependence" and "intimate sympathy" seem to capture what Fenno (1978) was referring to when he discussed the concentric circles of representation that start with the geographic constituency. To us, donors residing outside the district are neither immediate nor intimate, especially if they differ from regular constituents or even the normally outlying group of contributors.

In order to explore this topic, we present a few pieces of information culled from zip code level census data. In Figure 4, we provide a breakdown of individual contribution amounts by income category. In each category, we show how much money was contributed from our three groups, in-district, rest-of-state, and out-of-state contributors. As expected, relatively little money comes from the lower income levels and a great deal comes from the richest 10 percent of zip codes. Across the first eight levels, there are no vast differences between the three groups. Once we get to the highest income category, however, we find substantially more contributions to out-of-district representatives. In some ways this is not surprising since donors are limited on how much they can give to one member and individuals who want to make several contributions will have to send money outside their district to do so. The result is that lots of money from wealthy zip codes, with potential demands attached, is flowing into other districts and this pattern is aggravated by redistricting.

Next, Figure 5 presents similar data, this time looking at the number of children per household in contributor zip codes. These results show that areas with few children are contributing large sums of money to members living outside their districts. This is not just a function of the age of the donor as we do not find similar results when we look at contributions

---

21 Ideally we would have individual level data on donors but we do not. This sets up an ecological inference problem that we should point out to the reader.
based on the median age in a zip code. This result is interesting especially given the recent voting gaps present between families and single individuals in the 2012 presidential election. In both of these cases donations that are coming into congressional districts originated from economically and socially distinct geographies.

Finally, we think it is worth exploring the relationship between where members collect contributions and their voting behavior. To examine this possibility we again turn to the panel regression but instead of using the ratio of in-district to rest-of-state contributions as the dependent variable, we use it as an independent variable. We also included an additional control from before, the district’s Incumbent Presidential Vote for the incumbent’s party from the prior presidential election. The dependent variable here is the absolute value of the incumbent’s first dimension DW-NOMINATE score (Poole and Rosenthal 1997) where members become more extreme as this variable increases.\footnote{Scores are available from Keith Poole at http://www.voteview.com. DW-NOMINATE scores enable us to compare the relative extremism of members over time. If a member switched parties during the term preceding election, we used the ideal point estimate the legislator received while a member of the party he or she adopted prior to re-election.}

The results in Table 2 show a small, but statistically significant relationship between the ratio of in-district contributions and how a member votes, controlling for underlying district preferences. As this ratio increases, meaning an incumbent is receiving a larger share of contributions from inside his or her district, the member votes in a less extreme fashion.\footnote{We continue to find this effect if we look at the two parties separately.} While these results are not causal, they once again point to differences between in and out of district contributions and redistricting.
Conclusion

In this paper, we demonstrated that the more districts change, members of Congress bring in larger shares of individual campaign contributions from outside of the districts they were elected to represent. As time passes, the effect grows smaller, but it never returns to pre-redistricting levels for the average member. We also found the effect was larger for Republicans in the election immediately following redistricting but not significant by the time of the next redistricting. The effect was smaller, but consistently significant for Democrats in each of the five elections following a change in district boundaries. We also showed that contributions that come from outside the district originate from zip codes that are in the top ten percent of wealth and have households with relatively few children. These results suggest that redistricting affects the fundamental relationship between a representative and his or her supporters in a manner that has not been previously reported. District change tends to reduce a member’s reliance on his or her own geographic constituents and increase the member’s financial ties to outside sources with distinct political interests.

Although these results are instructive, we feel there is still more work to be done. In particular, we want to move beyond the aggregate member level results we presented here and focus on individual donors. This will require using “big data” techniques and match names within zip codes over time. This is potentially problematic because reports to the FEC are not always consistent and a donations listed from Robert Smith in one year may be labeled as coming from Bob Smith in another year. If we can accomplish this task, we will be able to better understand how redistricting influences not just members, but the individuals who reside on the changing districts.
References


Clerk of the House of Representatives. 1992. List of Standing Committees and Select Committees and their Subcommittees of the House of Representatives of the U.S. Together with Joint Committees of the Congress with an Alphabetical List of the Members and their Committee Assignments, One Hundred Second Congress, Sept. 9th


Herrnson, Paul S., Ronald G. Shaiko and Clyde Wilcox. 1998. The Interest Group Connection, New Jersey: Chatham House


Murphy, Chad and Antoine Yoshinaka. 2009. “Are Mapmakers Able to Target and Protect Congressional Incumbents?: The Institutional Dynamics of Electoral Competition,” American Politics Research 37: 955-982


Rush, Mark 2000. “Redistricting and Partisan Fluidity: Do We Really Know a Gerrymander When We See One?” Political Geography 19: 249-260


Table 1 – Panel Regression of Redistricting on Individual Campaign Contributions

<table>
<thead>
<tr>
<th>Variables</th>
<th>DV = % In District / % State Total</th>
<th>DV = % Out of State</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>-0.26*</td>
<td>-0.18*</td>
</tr>
<tr>
<td></td>
<td>(0.023)</td>
<td>(0.034)</td>
</tr>
<tr>
<td></td>
<td>-0.16*</td>
<td>-0.11*</td>
</tr>
<tr>
<td></td>
<td>(0.025)</td>
<td>(0.037)</td>
</tr>
<tr>
<td></td>
<td>-0.15*</td>
<td>-0.12*</td>
</tr>
<tr>
<td></td>
<td>(0.026)</td>
<td>(0.037)</td>
</tr>
<tr>
<td></td>
<td>-0.12*</td>
<td>-0.12*</td>
</tr>
<tr>
<td></td>
<td>(0.028)</td>
<td>(0.039)</td>
</tr>
<tr>
<td></td>
<td>-0.11*</td>
<td>-0.12*</td>
</tr>
<tr>
<td></td>
<td>(0.030)</td>
<td>(0.041)</td>
</tr>
<tr>
<td>Seniority (terms)</td>
<td></td>
<td>[1]</td>
</tr>
<tr>
<td></td>
<td>-2.05*</td>
<td>-2.21*</td>
</tr>
<tr>
<td></td>
<td>(0.26)</td>
<td>(0.27)</td>
</tr>
<tr>
<td></td>
<td>-0.021</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>(0.89)</td>
<td>(0.87)</td>
</tr>
<tr>
<td></td>
<td>-0.27</td>
<td>-0.41</td>
</tr>
<tr>
<td></td>
<td>(0.83)</td>
<td>(0.81)</td>
</tr>
<tr>
<td></td>
<td>-10.9</td>
<td>-3.84</td>
</tr>
<tr>
<td></td>
<td>(15.0)</td>
<td>(14.6)</td>
</tr>
<tr>
<td>Chal. Spending (ln)</td>
<td></td>
<td>[1]</td>
</tr>
<tr>
<td></td>
<td>-0.29*</td>
<td>-0.33*</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.13)</td>
</tr>
<tr>
<td></td>
<td>0.042</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>(0.71)</td>
<td>(0.69)</td>
</tr>
<tr>
<td></td>
<td>1.52*</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td>(0.74)</td>
<td>(0.77)</td>
</tr>
<tr>
<td>Family Income (in $1,000)</td>
<td></td>
<td>[1]</td>
</tr>
<tr>
<td></td>
<td>1.26*</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>(0.46)</td>
<td>(0.48)</td>
</tr>
<tr>
<td></td>
<td>-0.18*</td>
<td>-0.17*</td>
</tr>
<tr>
<td></td>
<td>(0.059)</td>
<td>(0.057)</td>
</tr>
<tr>
<td>District Pop. (in $10,000)</td>
<td></td>
<td>[1]</td>
</tr>
<tr>
<td></td>
<td>0.21</td>
<td>0.52*</td>
</tr>
<tr>
<td></td>
<td>(0.11)</td>
<td>(0.12)</td>
</tr>
<tr>
<td>State Pop. (in $10,000)</td>
<td></td>
<td>[1]</td>
</tr>
<tr>
<td></td>
<td>0.014*</td>
<td>0.011*</td>
</tr>
<tr>
<td></td>
<td>(0.0031)</td>
<td>(0.0030)</td>
</tr>
<tr>
<td></td>
<td>41.0*</td>
<td>29.0*</td>
</tr>
<tr>
<td></td>
<td>(11.0)</td>
<td>(10.8)</td>
</tr>
</tbody>
</table>

Observations/Groups 3138/794 3138/794 1663/427 1475/368 3138/794
R^2 Within .04 .09 .06 .18 .21
F-stat 9.42* 15.04* 5.10* 15.58* 39.03*

*p < .05, standard errors in parentheses. Panels are by member.
Table 2 – Panel Regression of Contributions on Incumbent Voting Behavior

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient (Standard Errors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% In District / % State Total</td>
<td>-0.00034* (0.000076)</td>
</tr>
<tr>
<td>Inc. Pres. Vote</td>
<td>0.00050* (0.00022)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.41* (0.013)</td>
</tr>
</tbody>
</table>

Observations/groups = 3,138/794
R² Within = 0.011

*p < .05, standard errors in parentheses.
Dependent variable is absolute value, DW-Nominate Panels are by member.
Figure 1 – Effect of Percent New on Fundraising by Election Cycle for Average Member
Figure 2 – Marginal Effects with 95% Confidence Intervals, Model Two
Figure 3 – Comparison of Marginal Effects for % New by Party
(with 95% Confidence Intervals)
Figure 4 – Zip Code Income Percentiles by Contribution Group

Contributions by Individuals (in Millions)

Contributed to Own Member
Other Member in State
Out-of-State Contributions

Income of Zip Code (Median Family, in 1999)
Figure 5 – Zip Code Children Percentiles by Contribution Group