Economic Segregation and Unequal Policy Responsiveness*

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Abstract

As levels of residential economic segregation increase in the United States, politicians may have greater incentives to focus their attention on the demands of those living in wealthier communities at the expense of those living in less affluent areas. To better understand the link between economic context and political representation, we develop a measure of economic segregation at the local level and combine public policy preferences and multiple roll call votes in the House of Representatives over several sessions to measure policy responsiveness. Our empirical analysis presents evidence that, regardless of one's individual level of income, citizens who live in an area of concentrated affluence are better represented by their Member of Congress. Conversely, citizens who live in an area of concentrated poverty are poorly represented. Importantly, we also show that the disproportionate focus affluent areas receive from congressional campaigns and the disproportionate campaign contributions that flow from those areas are two possible mechanisms that explain the relationship between economic context and political representation. These findings suggest that growing residential economic segregation in the United States has important implications for our understanding of political equality and the responsiveness of elected officials to public opinion.

Keywords: political inequality, economic segregation, policy responsiveness, poverty

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The share of income going to the wealthiest Americans and the degree of economic inequality in the United States recently reached their highest points since 1928 (DeSilver 2013; Hacker and Pierson 2010). While we continue to learn more about the underlying causes of expanding income differences, it is also important to investigate and understand the potential political and societal consequences of growing economic inequality. In this paper, we argue that expanding inequality is reshaping American politics in important ways. In particular, income disparities are changing community contexts and social interactions in ways that further exacerbate existing political inequalities (Widestrom 2015). To better understand the political ramifications of inequality, we focus on the rise of residential economic segregation, or the degree to which people live among others of similar economic status, which has grown in tandem with income inequality in recent decades (Reardon and Bischoff 2011; Soss and Jacobs 2009; Watson 2009). As the wealthy become more physically isolated from the middle and lower classes, this growing economic segregation can transform the incentives of elected officials who represent the residents of these diverging communities and possibly upend patterns of political responsiveness.

A large and growing literature suggests that the relationship between the public's policy preferences and the policies implemented by government is shaped by economic status. That is, elected officials appear to be much more responsive to the opinions of individuals who are wealthy compared to the middle class and poor when making policy decisions in a variety of political contexts (Bartels 2008; Flavin 2012; Gilens 2012; Rigby and Wright 2013). Our original contribution in this paper is to extend that body of research by examining whether the geographic clustering (or concentration) of incomes affects how well or poorly citizens are represented by their elected officials in the U.S. Congress. In short, we ask if patterns of policy responsiveness

are influenced by the local economic context of where one lives, a factor that has unfortunately received little attention to date in empirical studies of unequal political representation.

We first show how residential economic segregation and economic inequality are related yet distinct concepts and discuss our theoretical expectations about the relationship between economic segregation and patterns of government policy responsiveness. We then explain our strategy for empirically testing these expectations by developing a measure of economic segregation at the local level and then combining public policy preferences and multiple roll call votes in the House of Representatives over several sessions to measure policy responsiveness. Our empirical analysis presents evidence that, regardless of one's individual level of income, citizens who live in an area of concentrated affluence are better represented by their Member of Congress. Conversely, citizens who live in an area of concentrated poverty are poorly represented by their Member of Congress. Importantly, we also show that the disproportionate focus affluent areas receive from congressional campaigns and the disproportionate campaign contributions that flow from those areas are two possible mechanisms that explain the relationship between economic context and political representation. These findings suggest that growing residential economic segregation in the United States has important implications for our understanding of political equality and the responsiveness of elected officials to public opinion.

Background and Theoretical Expectations

Over the past 30 years, economic segregation, or the degree to which people live among others of similar economic status, has grown in the United States (Reardon and Bischoff 2011; Watson 2009). For example, according to one estimate, economic segregation grew over 25% from 1970 to 2000 (Reardon and Bischoff 2011). This means neighborhoods have become more homogeneous, or clustered, suggesting that not only has income inequality expanded during this

period but the geographic distinction between the rich and the poor is also becoming more starkly pronounced. A number of scholars have examined the consequences of economic segregation and have typically focused on the negative effects segregation can have on disadvantaged groups. For instance, those living in concentrated poverty have fewer job prospects, worse overall health outcomes, and are exposed to more crime than those living in more economically heterogeneous communities (Dreier, Mollenkopf, and Swanstrom 2004; Massey 1996).

To date, however, we are unaware of any research that assesses whether economic segregation influences patterns of policy responsiveness among elected officials. One study (Ellis 2013) has examined whether varying contexts of income inequality influence the equality of political representation, showing that economic inequality has the potential to distort how well the opinions of citizens with low incomes are represented. However, it is important to point out that while the over-time trends in income inequality and economic segregation have been comparable in recent years (i.e., both have been increasing), the relationship is certainly not one-to-one. Moreover, income inequality and economic segregation are theoretically distinct concepts. To demonstrate this, Figure 1 displays the economic composition of four hypothetical neighborhoods (e.g., zip codes) across two different geographic areas (e.g., states). In each area we assume that the level of overall economic inequality is exactly the same – the only difference is in how those from various income groups are clustered in each of the neighborhoods. The top panel presents a situation where members from each of the three income groups (low, middle, and high) live among each other in all four neighborhoods, which can be thought of as heterogeneous communities with very little economic segregation. Alternatively, the bottom panel presents a scenario where there is segregation among each of the income groups in three of

the four neighborhoods. In this case, those with lower, middle, and high incomes are largely clustered in their own geographic areas. The main point here is that the context of inequality can be quite different depending on how those from different income groups are geographically clustered.

[Figure 1 about here]

How, then, might residential economic segregation impact patterns of political responsiveness by elected officials? First, with limited time and resources, Members of Congress (MCs) are often required to make tough decisions about how to most efficiently use those resources to maximize the likelihood that they remain in office (Mayhew 1974). These reelection efforts typically include reaching out to constituents to address their concerns and attempting to mobilize them as reliable supporters at election time. Compared to constituents with lower incomes, wealthier individuals can be viewed as more reliable political participants (Verba, Schlozman, and Brady 1995). So, when levels of economic segregation are high and more affluent constituents are clustered together, it is easier for MCs to focus their campaign efforts on these high-propensity voters. Moreover, an economically segregated district presents targeted opportunities for candidates to raise crucial campaign funds. When an MC can target her fundraising efforts in particular areas where wealthier constituents (who are far more likely to contribute to political campaigns compared to poor households) are concentrated, the MC is likely to interact with those constituents more regularly, hear about their concerns, and learn about their policy preferences (Fenno 1978; Grimmer 2013). This micro-targeting can serve to effectively isolate an MC from lower income areas in her district unless she purposively seeks out areas of lesser means while in office.

As one piece of evidence supporting this expectation, Widestrom's (2015) recent detailed study of four metropolitan areas in the United States demonstrates how the political incentives of elected officials can be altered in varying contexts of economic segregation. Using interviews of local city officials, Widestrom is able to trace the logic and strategy politicians use when determining how to allocate their limited attention and resources across the various communities they represent. A common sentiment expressed by the local officials who were interviewed is that it is much easier to focus efforts on neighborhoods where political and social connections have already been established, which are almost always those areas that have a greater concentration of economic resources. Centering attention on these communities allows politicians to more easily mobilize these constituents to become volunteers, to attend fundraisers, and to more generally help with campaigning and reelection efforts. The payoff for citizens in these neighborhoods is that they develop a relationship with their elected officials that provides a convenient means to express their concerns and ask for help when problems arise.

This leads to a cyclical pattern that is advantageous for both the people living in areas of concentrated wealth and their elected officials. Citizens have the economic and organizational resources necessary to help politicians get (re)elected, which leads to strategic decisions by representatives to focus their efforts and resources on communities they perceive as active and reliable supporters. By contrast, for those living in homogeneous communities where resources are sparse, this same cycle creates circumstances where politicians have little incentive to pay attention to the opinions and needs of individuals in these neighborhoods, which leads to the perception that representatives do not care about these communities and that government does not work for the residents living in these areas. In short, greater economic segregation creates an environment for elected officials where it is easier to focus their attention on affluent constituents

who are more likely to contribute to their campaign and more likely to turn out to vote at election time. Conversely, when economic segregation leads to the clustering of the poor in areas of concentrated poverty, politicians can be expected to view those residing in these neighborhoods as politically inactive, difficult to mobilize, and unlikely sources of campaign contributions. The lack of attention given to those living in these areas will lead elected officials to have a limited understanding of the needs and concerns of these individuals, which will presumably result in lower levels of policy responsiveness.

Second, in addition to making it easier for MCs to target affluent constituents for political support (a "top-down" perspective), areas of concentrated affluence are also more likely to communicate clear policy signals to their elected official by, for example, contacting their office and contributing to their political campaigns (a "bottom-up" perspective). Living in an affluent neighborhood and socializing in an environment almost exclusively made up of others from affluent backgrounds helps to crystallize similar political views and opinions on which political issues are more important than others (Baldassarri and Bearman 2007). At the individual citizen level, affluent citizens (compared to disadvantaged citizens) are then more likely to communicate their policy opinions by contacting elected officials and expressing themselves politically through other means as well (Verba, Schlozman, and Brady 1995). Additionally, at the community level, Widestrom (2015, 22) documents an independent effect of neighborhood context whereby affluent areas have the requisite cumulative resources and civic skills to foster a "civic environment" of political engagement and communication with elected officials that areas of concentrated poverty, by comparison, do not possess. Therefore, we expect areas of concentrated affluence will have particularly clear and well-communicated policy preferences that makes it relatively easy for MCs to discern and then respond to these preferences while in

office. By contrast, areas of concentrated poverty will not have clearly communicated policy preferences and, as a result, will be poorly represented by their elected official.

When these two reasons (both top-down and bottom-up) are considered in tandem, economic segregation creates a cascading set of effects that shapes how politicians view the effectiveness and efficiency of focusing their resources in a given community as well as their ability to recognize the interests and preferences of those residing in various neighborhoods. Therefore, to summarize our primary theoretical expectation, we expect better policy responsiveness for citizens living in neighborhoods of concentrated affluence and comparatively worse policy responsiveness for citizens living in neighborhoods of concentrated poverty. As we transition to our empirical analysis, it is important to emphasize that this expectation about the contextual effect of economic segregation is conceptually distinct from the now well-documented effect one's individual income status has on policy representation (Bartels 2008; Flavin 2012; Gilens 2012; Rigby and Wright 2013). In other words, we expect that regardless of citizens' individual income status, their policy opinions will be better represented by their MC when they live in a context of concentrated affluence and worse represented when they live in a context of concentrated poverty.[1]

[1] It is also worth highlighting that our expectations regarding the influence of economic segregation on how well citizens are represented are not specific to any particular set of issues or issue area. The mechanisms we discuss above suggest that segregation should affect overall levels of representation regardless of whether the policies being considered can be categorized as economic, social, foreign affairs, or some other policy area. While our analysis does briefly explore levels of policy responsiveness for some particular policy areas (discussed in the results section below), we believe it would be worthwhile for future studies to carefully develop a conceptual reasoning for why some issue areas may be more or less likely to be shaped by economic segregation.

Data and Measures

To test our theoretical expectations, we first develop a measure of dyadic representation similar to those created in previous research (e.g., Ellis 2013). Specifically, we use the 2008, 2010, and 2012 Cooperative Congressional Election Study (CCES) surveys to match congressional votes on legislation from the House of Representatives to the preferences of individual citizens on the exact same legislation. This is possible because the CCES asked respondents about their stances on particular House bills that were considered leading up to the elections coinciding with each survey (i.e., in 2008, 2010, and 2012). The following prompt is used to assess how individuals view several pieces of legislation: "Congress considered many important bills over the past two years. For each of the following tell us whether you support or oppose the legislation in principle." The surveys then ask about a number of recent House bills considered to be salient and notable.[2]

Respondent support for each of these bills is then compared to the actual roll call vote of each individual's MC to determine whether there is congruence (or not) between citizen opinion and MC behavior. Individuals are considered to have their preferences represented by their

[2] In 2008, the CCES asked about the following bills: (1) whether to withdraw troops from Iraq; (2) an increase in the minimum wage; (3) federal funding for embryonic stem cell research; (4) expanding government surveillance overseas without a court order; (5) expanding the State Children's Health Insurance Program (SCHIP); (6) an amendment to ban gay marriage; (7) offering assistance to homeowners as a result of the housing crisis; and (8) whether to extend NAFTA. In 2010, the bills included: (1) federal stimulus through the American Recovery and Reinvestment Act; (2) expanding the State Children's Health Insurance Program (SCHIP); (3) the creation of a carbon emission cap; (4) comprehensive health care reform; (5) financial reform bill; (6) proposal to end "don't ask, don't tell"; (7) expanding government surveillance overseas without a court order; (8) federal funding for embryonic stem cell research; and (9) the Troubled Asset Relief Program (TARP). Finally, in 2012: (1) the Ryan House budget proposal to cut Medicare and Medicaid by 42%; (2) the Simpson-Bowles House budget proposal to cut spending by 15% for most programs and eliminate many tax breaks; (3) the U.S.-Korea Free Trade Agreement; (4) proposal to repeal the Affordable Care Act (ACA); and (5) approval of the Keystone XL pipeline. More information about the CCES can be found at: http://projects.iq.harvard.edu/cces/home.

district legislator if the respondent and legislator both support or both oppose a given bill. When an individual and his or her representative disagree on a bill – that is, one supports and one opposes the legislation – we record these as instances when a House member was not responsive to the individual. We then use all of the matched roll call votes for each election year to create a *congruence score*, which is simply a percentage of how often each respondent aligned with his or her representative. In 2008, for instance, eight key pieces of legislation were asked about. If an individual agreed with her House representative on six of those eight bills, she would have a congruence score of 75%.

Overall, CCES respondents appear to be reasonably well represented by their House representatives. The median value of our congruence score is 60% for all years, suggesting that individuals agree with their elected officials on key pieces of legislation around 60% of the time. This level of responsiveness is consistent across elections years, with the exception that the median score is slightly lower (57%) in 2010. Of course, policy preferences do not always correspond well with congressional decision making and some constituents experience much better responsiveness than others. Those in the bottom quarter of responsiveness scale, for instance, agree with their representative's key legislation votes only about a third of the time. At the opposite end of the spectrum, individuals at top quarter of the scale have their preferences matched by their House member on 80% of the bills that were asked about. We use this congruence measure as our main dependent variable in the analyses presented below to assess whether some of this variance in responsiveness can be explained by levels of residential economic segregation.

In addition to the measure of congruence, we also examine two other dependent variables as a way to test the mechanisms we argue are most influential in creating the link between the

context of economic segregation and opinion-vote congruence. While data limitations make it difficult to test all of the mechanisms discussed above, the CCES does provide responses to questions about campaign contacts and political donations, allowing us to assess two aspects of how MCs and their constituents interact. To summarize, economic segregation may lead to differences in representation as a result of segregated and affluent areas providing a concentration of resources among residents who are likely to be politically involved. These resources, like campaign donations, give politicians a strong incentive to make connections with these neighborhoods and pay close attention to the priorities and concerns of their residents. Of course, the opposite is true for areas that are segregated and poor.

We use the CCES reports of whether respondents (1) were contacted by a political campaign during the election year and (2) donated money to a candidate, campaign, or political organization in the past year to account for two potential explanations for how economic segregation shapes representation. The two measures are dichotomous and simply indicate if the respondent was contacted by a campaign or if a respondent donated money. These variables provide observations of both the public and their elected officials, allowing us to examine aspects of the "bottom-up" (i.e., donations as constituent behavior) and "top-down" (i.e., campaign contacts as MC behavior) processes that we argue connect neighborhoods to representation. The expectation is that people living in segregated and rich neighborhoods will be more likely to make campaign contributions and congressional candidates are more likely to use their resources to contact residents in these same neighborhoods. Of course, these proxies for assessing the interaction between constituents and politicians have their limitations,[3] but we

[3] First, campaigning is only one aspect of how elected officials interact with their constituents. Second, while campaigns are used to mobilize likely supporters, they may also be used to target people who are not necessarily supporters or likely voters. Also, even though campaign donations are essential to candidates running for national office, they are only one type of political resource available to the public.

believe they offer insight into how neighborhood context shapes where politicians decide to focus their attention.

The CCES is not only well suited for our purposes because it asks respondents about key pieces of legislation, political activity, and campaign exposure, it is also ideal because it regularly interviews tens of thousands of people each election cycle.[4] This allows the CCES to release specific geographic information, like zip code of residence, about its respondents without concerns related to confidentially. This is particularly important for our research since we are interested in understanding how economic segregation (or concentration) at the community level influences levels of policy responsiveness, which would be difficult to assess without examining some form of a local context. The 2008, 2010, and 2012 CCES surveys are used since these years correspond with our measure of economic segregation, our main explanatory variable, which we turn to next.

Ideally, we would like to use a measure of economic segregation that accounts for geographic living patterns of people at the neighborhood level since economic sorting is likely to be masked when examining larger geographic areas. We are able to approximate the economic composition of local neighborhoods by using household income data at the zip code level from the U.S. Census's American Community Survey (ACS) five-year estimates (2008-2012).[5] As our discussion of congressional representation in the previous section suggests, we are largely interested in how areas that are segregated and rich or segregated and poor shape how well the preferences of residents in these areas align with the voting behavior of their MCs.

[4] More specifically, the 2008 CCES surveyed 32,800 people, 55,400 individuals were interviewed in 2010, and 54,535 in 2012.
[5] Use of the five-year ACS data is necessary when zip code population estimates are needed.

Therefore, we rely on a measure of economic segregation that is designed to capture the extent to which the rich and poor are concentrated in a given area. We define rich and poor as the top and bottom income quintiles, respectively, in each state using the standard 16 Census income categories. To account for whether a neighborhood is segregated and rich or segregated and poor, we calculate the ratio of rich to poor in each zip code. The measure is then log transformed such that higher positive values indicate a richer neighborhood with very few poor people, negative values represent a poorer neighborhood with very few rich people, and a value of zero indicates an even balance between the rich and poor. Also, the log transformation reduces the influence of outliers, which can be large in zip codes where there are many rich people and very few poor residents or vice versa. We refer to this measure of economic segregation that has a rich/poor directional component as the *rich insulation index*.

We are able to create the rich insulation index for a large majority of zip code areas in the U.S., which means our analysis is not limited to major metropolitan areas as is the case with other measures of segregation.[6] During the 2008-2012 period, the index ranges from a low of -7.0 and a high of 7.7. The mean value of the measure is approximately 0.8 with a standard deviation of 1.4.

When examining the relationship between local levels of economic segregation and responsiveness, we also consider a number of additional factors that are expected to influence how well someone is represented. At the individual level, the literature has established that the wealthy tend to be better represented than the poor (Bartels 2008; Gilens 2012), so we include a

[6] For instance, recently developed measures by Reardon and Bischoff (2011) and Watson (2009) are restricted to metropolitan areas. To get reasonable estimates of our economic segregation measures, we only calculate measures for zip codes that have at least 100 households. Overall, the measures are calculated for over 29,000 of the 33,000+ zip code tabulation areas created by the Census, which covers approximately 99% of the U.S. population.

measure of household income in our analyses.[7] We also account for whether respondents have the same party identity as their representative, respondent age, and respondent race/ethnicity.

In addition to economic segregation, several other aspects of local context are accounted for as well. The models also include variables measuring the percentage of black residents, percentage of Hispanic residents, income inequality (i.e., the Gini coefficient), and the rural/urban status of each zip code.[8] While economic segregation and income inequality are expected to be related, the rich insulation index and Gini coefficient during this time period are only weakly correlated (Pearson's r = 0.03). This low correlation is, however, not surprising if we suspect that they are measuring two different concepts as displayed in Figure 1.[9]

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[7] Income is measured as the survey weighted income quartile each respondent belongs to so that income is comparable across survey years.

[8] Zip code data for the race and inequality measures come from the Census Bureau's five-year (2008-2012) ACS. The rural/urban indicator is a dichotomous variable that is equal to 1 for zip codes in rural areas and 0 otherwise. The rural/urban status data is available on the Census's Urban Area Relationship Files page (https://www.census.gov/geo/maps-data/data/ua_rel_download.html).

[9] Three potential concerns about our methodology are: (1) mapping MC votes and citizen views onto the same scale, (2) possible reverse causation or omitted variables that would suggest that these findings flow from something other than representation, and (3) the question of whether individuals can really be treated as independent observations (even after employing modeling strategies to account for some kinds of geographic clustering). We do not believe these concerns are particularly problematic, for the reasons we detail below. First, while we agree that situating citizens' opinions and elected officials' roll call votes on the same scale as a means of evaluating policy responsiveness can present an empirical challenge, the 2008, 2010, and 2012 Cooperative Congressional Election Studies (CCES) explicitly aim to avoid the "same scale" problem by asking citizens to report their political opinions on issues for which MCs voted on the exact same issue. Because we have a clear measure of citizen opinion and legislator action on the exact same issue, we argue that we can consider a citizen's opinion represented if their opinion matches their MC's vote, and not represented if their opinion does not match their MC's vote. Importantly, this exact same measurement technique has been used in several recent prominent studies of political representation (e.g., Ellis 2013). Second, while reverse causation and omitted variable bias are certainly potential problems in any study hoping to establish a causal relationship between two variables, that is not our goal in this paper. Instead, our goal is to examine whether there is a statistical association between living in an area of concentrated affluence and political representation. As an attempt to show that living in an area of concentrated affluence is associated with better representation above and beyond other factors that previous studies have shown predict better or worse representation, we statistically control for a series of individual and zip code-level covariates. However, we make no claim to a causal relationship (or a claim that the direction of a causal relationship runs from economic segregation to political representation). Third, the original contribution of our paper is to assess the relationship between local context (specifically, the degree of concentrated affluence or economic segregation) and opinion-policy congruence. Because local (zip code) context is, by definition, measured at the community level, all

Methods and Results

We model our main dependent variable, the opinion-vote congruence score, by pooling the three CCES surveys from 2008, 2010, and 2012 to match our measure of zip code economic segregation, which covers the five-year period from 2008 to 2012. Since the congruence score ranges from 0 to 100 percent and we are interested in factors that shape government representation at both the zip code and individual levels, we use multilevel regression analysis with random intercepts to account for the non-independence among our geographic variables at the zip code level. Random intercepts are also modeled for each congressional district and for each survey year to control for any unobserved heterogeneity within districts or across the three surveys used in the analysis. The same approach is used to model the campaign contact and political donation variables with the only difference being that multilevel logistic regression analysis is used since the variables are both dichotomous.[10]

The results of our three analyses are presented in Table 1, where the effects of individual characteristics on the dependent variables are listed first and followed by the effects of neighborhood factors. First, briefly summarizing the influence of the individual-level variables on our measure of opinion-vote congruence, we can see that one of the most important determinants of how well the preferences of individuals are responded to by their House representative is whether they identify with the same party as their elected representative. In

respondents living within a given zip code have the same value for economic segregation. By running a multi-level model with both individual and community level covariates, we are able to parse out the statistical relationship between living in an area of concentrated affluence and policy responsiveness after accounting for the effects of individual characteristics like income, age, and race/ethnicity.

[10] The multilevel models include random intercepts for zip code, congressional district, and year. Since all zip codes are not necessarily contained within a single congressional district, the random intercepts are modeled as non-nested groups. We also considered modeling random intercepts for zip codes and congressional districts, and including dummy indicators for survey years. The results of these models, presented in appendix Table A1, are nearly identical to those presented in Table 1.

addition, as other studies have found, the results show that income has a positive effect on congruence (Ellis 2012, 2013) but the coefficient in this particular model is not statistically different from zero. We also find that those who are older are better responded to than younger people while those respondents who identify as black or Hispanic experience worse representation than other groups.

[Table 1 about here]

Turning to the zip code contextual effects, the estimated influence of the rich insulation index (i.e., whether one lives in an area of concentrated affluence) on congruence is positive and statistically different from zero, suggesting that residing in an area that is segregated and rich leads to better policy responsiveness regardless of one's own individual income status. We can also see that contextual factors other than economic segregation shape how well individuals are represented. Communities where racial and ethnic minorities make up larger portions of the population appear to be better represented than areas with smaller minority populations, but this effect is only statistically significant for the percentage of the population that is black. This effect is likely due to the ability of black groups to elect minority representatives, thereby providing these individuals with better policy responsiveness. Additionally, living in rural parts of the country and residing in areas with higher levels of income inequality both lead to better representation in our models.[11]

[11] We also replicated the congruence model presented in Table 1 after recalculating our measure of opinion-vote congruence so that roll calls we identified as being related to foreign policy issues were not included. A second replication analysis was also conducted that removes both foreign policy issues and social issues from the calculation of our opinion-vote congruence measure. These models are presented in appendix Table A2. The table includes a note that lists the roll call votes that are included in each dependent variable. When removing the roll call votes related to foreign policy issues to create our congruence score our results are nearly the same. The revised score, without the foreign policy issue included, suggests a slightly higher effect of economic segregation on representation. The model using the revised congruence score (without the foreign policy issues included) as the dependent variable produces an estimated effect of 0.261 ($p<0.05$) for our Rich Insulation Index while the effect of segregation when

Substantively, living in a zip code that is two standard deviations below the average rich insulation index versus living in one that is two standard deviations above the mean leads to a difference in representation of about 1.5 percentage points on the congruence scale. While the effect size of economic segregation may appear to be modest when compared with the influence of individual-level factors like respondents sharing the same party identification as their MCs, the effect is similar in magnitude or larger when compared with the other neighborhood factors in the model. For example, changing a neighborhood Gini coefficient from two standard deviations below average to two above results in nearly the same effect size as economic segregation (approximately 1.5 percentage points), and living in a rural area versus an urban neighborhood changes the congruence scale by only about 0.9 percentage points. Given the fact that several previous studies have documented the relationship between individual-level factors and policy responsiveness while (in comparison) the effect of contextual factors has received little attention, we believe the nontrivial size of the substantive effect of economic segregation suggests that context should also be incorporated when considering predictors of political representation.[12]

using the original score (including all of the key roll call votes) is 0.212 ($p<0.05$). When using the congruence score that removes both foreign policy and social issues, the effect of economic segregation on representation is even higher with an estimated coefficient of 0.390 ($p<0.05$). These results demonstrate that those living in neighborhoods of concentrated affluence are better represented than those living in other areas, regardless of the set of key polices we use for our measure of opinion-vote congruence.

[12] We also explored the possibility of differential effects by MC party. Specifically, we used the same model specification reported in Table 1 with opinion-policy congruence as the dependent variable but ran separate regressions for Democratic MCs and for Republican MCs. The results of these estimations are reported in appendix Table A3. We find that the coefficient for the Rich Insulation Index is (as expected) positive in both models, but only statistically different from zero for Republican MCs. We interpret this as suggestive evidence that the relationship between economic segregation and opinion-policy congruence is primarily driven by Republican MCs, and believe it is a fruitful avenue for possible future research.

The estimates presented in columns 2 and 3 of Table 1 test two of the potential mechanisms discussed above that connect economic segregation to policy responsiveness. The model in column 2 uses whether respondents were contacted by a political campaign as the dependent variable to assess if politicians are more likely to devote their time to constituents residing in neighborhoods that are segregated and rich. Column 3 presents the results of a model that looks at whether individuals made political donations as a way to examine if those living in more segregated areas are more likely to make political resources available to elected officials. The estimated effects for these two models suggest that both mechanisms are at work. The coefficient for the rich insulation index in column 2 is positive and statistically significant, which provides evidence that political campaigns tend to focus their efforts on those residing in segregated and rich neighborhoods. The effect of segregation on whether respondents give money to political groups is also positive and statistically different from zero, showing that people living in areas of concentrated affluence are more likely to make political donations.

Altogether, the results presented in Table 1 demonstrate the importance of economic segregation in shaping the relationship between constituents and their representatives. We provide evidence showing that those who live in neighborhoods that are highly segregated and affluent receive better policy representation from their elected officials than those living in other areas. We argue that this geographic bias in representation occurs for a variety of factors, two of which we are able to account for in our analysis. First, we show that political campaigns tend to focus their efforts in these segregated and rich neighborhoods. Second, the results also show that constituents residing in places that are mostly rich are more likely to donate to political campaigns. The latter two findings support our argument that growing economic segregation influences representation in a cyclical manner – areas of concentrated affluence offer clear

benefits to politicians through their high levels of political resources, leading representatives to focus more of their attention in these segregated neighborhoods. These interactions between rich, geographically insulated constituents and their elected officials creates an environment where politicians have the incentive and ability to know, and likely follow, the policy preferences of these particular groups of constituents.[13]

Conclusion

Increasing economic inequality in the United States has not only raised normative concerns about fairness, it has also been linked to a number of tangible societal consequences. Income inequality may lead to decreases in economic productivity, stability, and growth (Stiglitz 2012), more political power for the wealthy (Solt 2011; Solt et al. 2011), and deficiencies in public health (Wilkinson and Pickett 2011). Additionally, scholars have shown that growing inequality has shaped the geographic living patterns of American families by producing greater levels of residential economic segregation (Reardon and Bischoff 2011; Soss and Jacobs 2009; Watson 2009). This increased clustering of incomes has the potential to reshape politics in a number of ways, and these consequences are likely in addition to the well-documented effects of income inequality.

We argue that one important way that economic segregation influences politics is by changing how elected officials represent their constituents. In general, politicians are largely concerned with reelection since any other goals a legislator may have are contingent on holding

[13] We also examined whether the effect of living in a segregated rich area on opinion-policy congruence is conditioned by an individual's income by including an interaction term between individual income and the Rich Insulation Index. We report the statistical results in appendix Table A4. The estimated coefficient for the interaction term is relatively small in magnitude and not statistically different from zero. This suggests that the contextual effects of economic segregation on representation are experienced similarly by all residents of the area, regardless of individual income.

political office (Mayhew 1974). Elected officials need the support of their constituents in order to stay in power and establishing this support typically requires spending limited time and money on activities demonstrating that these representatives are doing a suitable job. The clustering of incomes across local communities may structure the calculus used by politicians to decide how their scarce resources will be used, particularly when choosing which segments of their community will receive the most attention.

Elected officials will be acutely aware of an area that is very economically segregated and is composed mostly of individuals with high incomes since the people living in this community will have the highest propensity of future political engagement and ability to contribute financially to reelection efforts. Prioritizing the issues and concerns of those residing in these areas is then expected to lead to greater levels of responsiveness to the policy preferences of these individuals. Conversely, increasing economic segregation also leads to the concentration of people with low incomes and makes it much easier for politicians to ignore the residents living in these areas. Unlike the wealthy, those with fewer resources are less likely to be politically involved and do not necessarily have the financial means to support campaigns and fund raising. This suggests the possibility that those living in places where many low-income families are clustered will have very poor levels of policy responsiveness from their elected representatives.[14]

To test these expectations, we created a measure of economic segregation at the local level and then combined public policy preferences and multiple roll call votes in the House of

[14] Moreover, it is likely that this a recursive process such that poor policy representation for citizens living in areas of concentrated poverty leads to alienation from the political system and lower levels of political participation which, in turn, means elected officials have even fewer incentives to actively seek out and represent those constituents' political preferences while in office. We believe this is a fruitful avenue for future research.

Representatives over several sessions to measure policy responsiveness. Our empirical analysis presents evidence that, regardless of one's individual level of income, citizens who live in an area of concentrated affluence are better represented by their Member of Congress. Conversely, citizens who live in an area of concentrated poverty are poorly represented by their Member of Congress. Importantly, we also show that the disproportionate focus affluent areas receive from congressional campaigns and the disproportionate campaign contributions that flow from those areas are two possible mechanisms that explain the relationship between economic context and political representation.

Taken together, the results of this study indicate that the increasing geographic self-sorting of Americans by socioeconomic status has important consequences for how the actions of politicians are structured and, subsequently, whose opinions are reflected in government policy decisions. While income inequality is a large-scale phenomenon that influences many parts of the world, it is also reshaping politics at the local level. The growing segregation of incomes over time in American residential communities offers an important possible explanation for how the political power of the wealthy has continued to expand at the expense of the poor over time and suggests that researchers should more carefully consider the role of economic, social, and political context and geography when assessing the effects of inequality on democratic outcomes.

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Table 1: Effect of Economic Segregation on Opinion-Vote Congruence, Political Donations, and Campaign Contacts

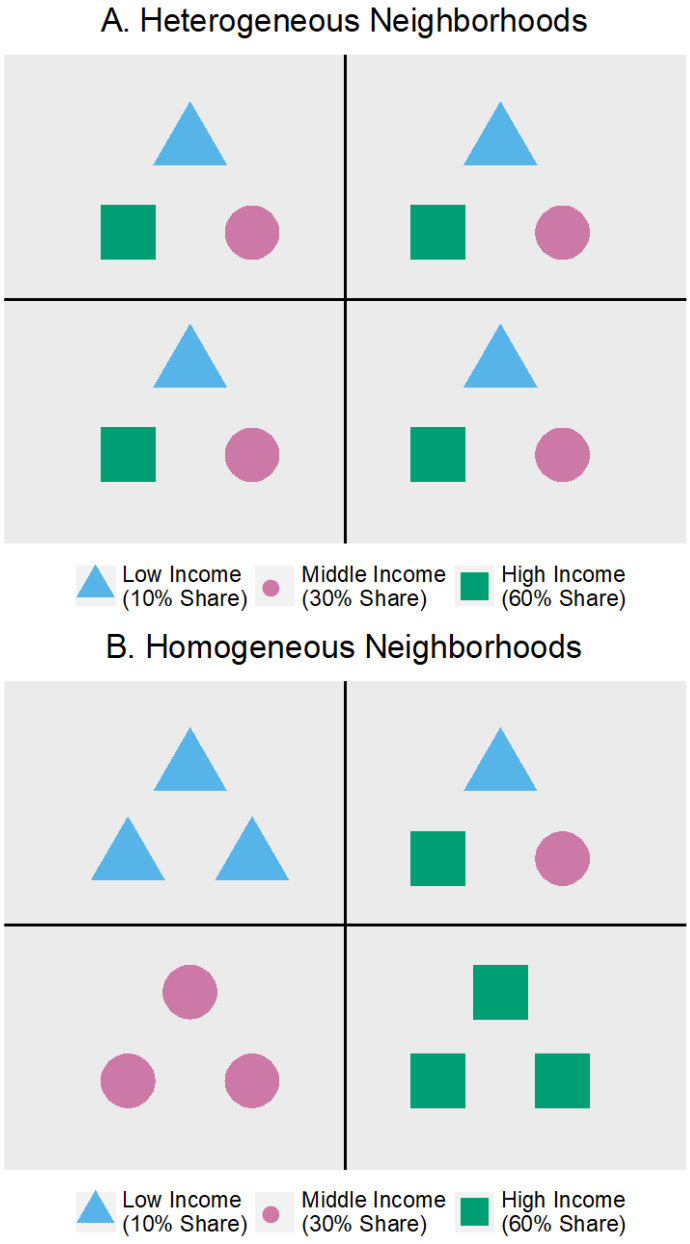
	Opinion-vote congruence *b / (se)*	Contacted by a campaign *b / (se)*	Made political donation *b / (se)*
Individual Level			
Income	0.067	0.360**	0.502**
	(0.073)	(0.008)	(0.007)
Same PID as Rep.	24.302**		
	(0.159)		
Age	0.032**	0.047**	0.036**
	(0.005)	(0.001)	(0.001)
Black	-2.151**	-0.096**	-0.090**
	(0.291)	(0.032)	(0.031)
Hispanic	-0.689*	-0.422**	-0.275**
	(0.325)	(0.035)	(0.035)
ZIP Code Level			
Rich Insulation Index	0.212*	0.047**	0.096**
	(0.102)	(0.010)	(0.009)
% Black	4.653**	-0.078	0.026
	(0.778)	(0.075)	(0.066)
% Hispanic	0.614	-0.172*	0.221**
	(0.851)	(0.078)	(0.065)
Rural	0.851**	-0.041	-0.046
	(0.265)	(0.029)	(0.024)
Gini Coefficient	4.628*	1.285**	2.904**
	(1.830)	(0.195)	(0.161)
Constant	42.411**	-2.827**	-5.178**
	(1.462)	(0.111)	(0.172)
Observations	121,121	79,617	104,870
Log Likelihood	-568,369.400	-41,729.300	-59,055.790

*p<0.05; **p<0.01

Note: Results are from multilevel regression models with random intercepts estimated for zip codes, congressional districts, and survey years. The dependent variable in the first model, our measure of policy congruence between respondents and their representatives, takes on values from 0 to 100. Model 1 results are based on a multilevel linear regression analysis. The dependent variable in the second model captures whether the respondent was contacted by a political campaign during the election year (1 for yes, 0 for no). Model 2 results are based on a multilevel logistic regression analysis. In the third model the dependent variable measures whether the respondent donated to a political

campaign during the election year (1 for yes, 0 for no). Model 3 results are also based on a multilevel logistic regression analysis.

Figure 1: Examples of the Geography of Income and Economic Segregation



Appendix

Table A1: Effect of Economic Segregation on Opinion-Vote Congruence, Political Donations, and Campaign Contacts with Survey Year Modeled as Dummy Variables

	Opinion-vote congruence *b / (se)*	Contacted by a campaign *b / (se)*	Made political donation *b / (se)*
Individual Level			
Income	0.067	0.360**	0.502**
	(0.073)	(0.008)	(0.007)
Same PID as Rep.	24.302**		
	(0.159)		
Age	0.032**	0.047**	0.036**
	(0.005)	(0.001)	(0.001)
Black	-2.148**	-0.096**	-0.090**
	(0.291)	(0.032)	(0.031)
Hispanic	-0.687*	-0.423**	-0.274**
	(0.325)	(0.035)	(0.035)
ZIP Code Level			
Rich Insulation Index	0.212*	0.047**	0.096**
	(0.102)	(0.010)	(0.009)
% Black	4.656**	-0.078	0.026
	(0.778)	(0.075)	(0.066)
% Hispanic	0.617	-0.173*	0.221**
	(0.851)	(0.078)	(0.065)
Rural	0.850**	-0.041	-0.046
	(0.265)	(0.029)	(0.024)
Gini Coefficient	4.630*	1.284**	2.905**
	(1.830)	(0.195)	(0.161)
Survey 2010	-1.210**		-0.548**
	(0.200)		(0.019)
Survey 2012	-4.642**	-0.163**	-0.550**
	(0.201)	(0.017)	(0.019)

Constant	44.357**	-2.745**	-4.812**
	(0.916)	(0.095)	(0.080)
Observations	121,121	79,617	104,870
Log Likelihood	-568,361.100	-41,725.140	-59,045.680

*p<0.05; **p<0.01

Note: Results are from multilevel regression models with random intercepts estimated for zip codes and congressional districts. Survey years are modeled as dummy variables. The dependent variable in the first model, our measure of policy congruence between respondents and their representatives, takes on values from 0 to 100. Model 1 results are based on a multilevel linear regression analysis. The dependent variable in the second model captures whether the respondent was contacted by a political campaign during the election year (1 for yes, 0 for no). Model 2 results are based on a multilevel logistic regression analysis. In the third model the dependent variable measures whether the respondent donated to a political campaign during the election year (1 for yes, 0 for no). Model 3 results are also based on a multilevel logistic regression analysis.

Table A2: Effect of Economic Segregation on Variants of the Opinion-Vote Congruence Measure

	Opinion-vote congruence score:		
	All issues (original measure)	Excludes foreign policy issues	Excludes foreign policy and social issues
	b / (se)	*b / (se)*	*b / (se)*
Individual Level			
Income	0.067	0.959**	1.068**
	(0.073)	(0.084)	(0.093)
Same PID as Rep.	24.302**	20.452**	21.026**
	(0.159)	(0.182)	(0.202)
Age	0.032**	-0.045**	-0.078**
	(0.005)	(0.006)	(0.007)
Black	-2.151**	-4.878**	-4.776**
	(0.291)	(0.334)	(0.371)
Hispanic	-0.689*	-1.210**	-1.167**
	(0.325)	(0.373)	(0.414)
ZIP Code Level			
Rich Insulation Index	0.212*	0.261*	0.390**
	(0.102)	(0.111)	(0.124)
% Black	4.653**	3.151**	4.795**
	(0.778)	(0.833)	(0.923)
% Hispanic	0.614	0.449	1.192
	(0.851)	(0.883)	(0.979)
Rural	0.851**	0.729*	0.487
	(0.265)	(0.298)	(0.330)
Gini Coefficient	4.628*	1.523	4.611*
	(1.830)	(2.019)	(2.233)
Constant	42.411**	44.926**	42.292**
	(1.462)	(3.222)	(5.569)
Observations	121,121	120,856	120,246
Log Likelihood	-568,369.400	-583,704.300	-593,144.700

*p<0.05; **p<0.01
Note: Results are from multilevel regression models with random intercepts estimated for zip codes, congressional districts, and survey years. The dependent variable in all three models are variants of our measure of policy congruence between respondents and their representatives, which takes on values from 0 to 100. Model 1 uses all available key votes used in the CCES and is the original measure used in the main text (see Table 1, model 1).

The congruence measure in model 2 excludes the following foreign policy issues: In 2008, whether to withdraw troops from Iraq; expanding government surveillance overseas without a court order; and whether to extend NAFTA. In 2010, expanding government surveillance overseas without a court order. In 2012, the U.S.-Korea Free Trade Agreement.

The congruence measure in model 3 excludes the foreign policy issues identified in model 2, as well as the following social issues: In 2008, federal funding for embryonic stem cell research; and an amendment to ban gay marriage. In 2010, the creation of a carbon emission cap; proposal to end "don't ask, don't tell"; and federal funding for embryonic stem cell research. In 2012, approval of the Keystone XL pipeline.

Table A3: Effect of Economic Segregation on Opinion-Vote Congruence, MC Party Affiliation Subsample Models

	Opinion-vote congruence score:	
	Republican MC subsample	Democrat MC subsample
	b / (se)	*b / (se)*
Individual Level		
Income	1.586**	-1.441**
	(0.101)	(0.104)
Same PID as Rep.	23.044**	23.461**
	(0.226)	(0.231)
Age	0.107**	-0.047**
	(0.007)	(0.007)
Black	-7.158**	1.609**
	(0.440)	(0.394)
Hispanic	-2.782**	1.048*
	(0.467)	(0.445)
ZIP Code Level		
Rich Insulation Index	0.276*	0.111
	(0.129)	(0.141)
% Black	3.529**	1.522
	(1.249)	(0.903)
% Hispanic	-0.089	-0.531
	(1.118)	(0.999)
Rural	1.300**	-0.201
	(0.329)	(0.412)
Gini Coefficient	-10.857**	20.574**
	(2.447)	(2.534)
Constant	36.781**	47.940**
	(1.405)	(2.151)
Observations	61,668	59,453
Log Likelihood	-288,246.600	-278,818.800

*p<0.05; **p<0.01

Note: Results are from multilevel regression models with random intercepts estimated for zip codes, congressional districts, and survey years. The dependent variable in both models is our measure of policy congruence between respondents and their representatives, which takes on values from 0 to 100. Model 1 only includes respondents with representatives from the Republican Party while model 2 only includes respondents with representatives from the Democratic Party.

Table A4: Conditional Effect of Economic Segregation on Opinion-Vote Congruence by Individual Income

	Opinion-vote congruence
	b / (se)
Individual Level	
Income	0.070
	(0.077)
Same PID as Rep.	24.302**
	(0.159)
Age	0.032**
	(0.005)
Black	-2.152**
	(0.291)
Hispanic	-0.689*
	(0.325)
ZIP Code Level	
Rich Insulation Index	0.188
	(0.189)
% Black	4.651**
	(0.778)
% Hispanic	0.615
	(0.851)
Rural	0.850**
	(0.265)
Gini Coefficient	4.625*
	(1.830)
Income × Rich Insulation Index	0.009
	(0.061)
Constant	42.400**
	(1.464)
Observations	121,121
Log Likelihood	-568,369.400

*p<0.05; **p<0.01

Note: Results are from a multilevel regression model with random intercepts estimated for zip codes, congressional districts, and survey years. The dependent variable is our measure of policy congruence between respondents and their representatives, which takes on values from 0 to 100.