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Migration and Sorting in the American Electorate: Evidence From the 2006 Cooperative Congressional Election Study

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Abstract

Migration is a significant factor in the composition of U.S. electoral constituencies, including U.S. House districts. Does migration contribute to geographic homogeneity, and does the result contribute to political polarization in a significant way? This article considers this question using the 2006 Cooperative Congressional Election Survey. To determine individual-level migration patterns, residence information from individual survey respondents is matched to the U.S. Postal Service's change of address database. This technique provides precise information about respondents' migration history that follows the preferences expressed in each individual's survey response. I find support for the claim that migrants are more likely to move into a congressional district that matches their ideological preferences even after controlling for the partisanship in the district of origin. This result emerges for both major parties in two sets of model specifications: multinomial logit models restricted to migrants and a selection model that includes all respondents.

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Introduction

When does domestic migration contribute to the clustering of political preferences in the United States? The process that links migration to clustering, and its potential significance, is simple and intuitive. Given the right conditions, migration can reconfigure electoral constituencies by consolidating individuals with shared preferences into closer proximity, both locally and nationally, even if individual preferences remain unchanged. Migration can also change every relevant consideration about the social context and its effect on preferences and behavior. This possibility has special significance in the United States, thanks to its geographic diversity and the enormous array of communities and single-member electoral districts throughout its majoritarian legislative systems.

Residential mobility is a defining characteristic of the American experience, and Americans generally regard changing residences as easy and unremarkable. But the flow of internal migration in the United States is steady and its effects are cumulative. The 2000 census reports that 31.6% of all native-born Americans now reside in a state that does not include their birthplace. Although the rates have declined slightly in recent years, the percentage of all Americans who move to a new state has never fallen below 2% in any single year from 1947 to 2006, while the annual percentage of residents moving between counties has never dropped below 7.9%.

To understand the effects of migration, changes in both the composition and size in any given location must be taken into account, even if we suppose that political preferences of migrants persist from one place to another. Factors that change aggregated political preferences cited in the domestic migration literature are well documented and include individual wealth, age, job prospects, family status, ethnicity, and variables that can be generalized as matters of taste (Emerson, Chai, & Yancey, 2001; Massey & Denton, 1993). This complexity is further compounded to the extent that the factors are shaped, though not completely defined, by the ongoing migration decisions of other people. An important body research in political behavior has considered the possibility that migration patterns in recent decades has lead to self-segregation that, in turn, homogenizes electoral constituencies and contributes to increased

political polarization (Glaser & Ward, 2006; Oppenheimer, 2005). While migration undeniably leads to patterns of self-segregation, particularly visible in patterns of race and wealth, the political consequences of domestic migration are not well understood nor easily generalized.

Using data from the Cooperative Congressional Election Study of 2006, I examine the proposition that an individual migrant's self-reported ideology predicts the destination's partisanship. Within this dataset, which matches individual survey respondents to migration data, I find significant evidence that an individual migrant's self-reported ideology helps predict the migrant's destination. Specifically, migrants who label themselves as liberal are more likely to move, during 2006 and 2007, to U.S. congressional districts that supported the presidential candidacy of Democrat John Kerry, while self-labeled conservatives tend to choose districts that favored Republican George W. Bush, even after accounting for the partisanship of their originating district.

To produce this dataset, the survey data were matched, post hoc, to the U.S. Postal Service's change-of-address database. The study then compares political preferences of individual respondents to migration decisions that follow the survey response. The research design examines both migrants in exclusion from other respondents in the survey and also combined with nonmovers in a selection model. This design provides two significant advantages over the usual self-reported migration data. First, even though this study does not apply a panel design, I can model migration decisions that follow the individual's survey response, rather than preceding it. This means that I can observe a respondent's political preferences before they might be shaped by their new destination. Second, thanks to the precision of the migration data, I can apply the respondent's origin and destination to any geographic subunit. In this case, I have chosen to isolate respondents who changed U.S. congressional districts, but the dataset would support further analysis using any other degree of granularity.

This evidence of shared ideology among a destination's migrants does not necessarily imply that the destinations chosen by migrants necessarily aggregate into greater homogeneity. A host of other forces, such as departing migrants, generational replacement, and different sensitivity to short-term electoral forces will blunt or exaggerate the effect of migration. But the prospect of migrants favoring districts with shared ideology, sometimes described as *homophily* (McPherson, Smith-Lovin, & Cook, 2001), suggests that migration may contribute to district homogeneity in many specific instances, particularly in places that see significant inbound migration over a short period of time. A homophily based thesis of migration also complements explanations of social

networks (Huckfeldt & Sprague, 1995) and contextual considerations (Gimpel & Schucknecht, 2001). Migration can seed or reinforce social network effects and interactions that homogenize constituencies.

Theory

Homophily and Network Interaction

Although migration has a long pedigree in American political behavior research, it has never been categorically established as a mechanism that sorts political preferences, in every instance. For example, Converse (1966) launched an extensive literature on the effect of northern migration into the south and its effect on the gradual decline of Democratic strength there. Converse argued that the initial preferences of northerners persisted in the south; this persistence was an important reason for Republican emergence and greater class and income distinctions in southern voter preferences. Elazar (1970, 1986) presented a theory about regional diversity based on the cultural norms of various streams of migrants into different destinations. Several studies followed the lead of Campbell, Converse, Miller, and Stokes (1960) in exploring the impact of postwar migration into the American south, which helped set the stage for the south's emergence as a Republican base of support (Baybeck, 2001; Brown, 1988; Gimpel, 1999; Glaeser & Ward, 2006).

An important theoretical breakthrough emerged from the work of Schelling (1971, 1978), who proposed a series of agent-based models in which individual members of two groups migrate to achieve some degree of proximity to other residents of similar type. Schelling's models show that, given even a modest expectation of similar types for the members of two groups in a dyadic relationship will produce extensive or complete segregation under most conditions, well beyond the requirements of most of the model's individual agents. This means that migration can lead to completely segregated communities, only because individuals seek to live near a relatively small percentage of other individuals with shared attributes.

These theoretical propositions can generate testable hypotheses related to migration and sorting, but they do not, by themselves, account for an explanation as to why clustering in the U.S. may have increased in recent years or generate tests to evaluate this claim empirically. Three additional forces, which at first seem unrelated to one another, can also provide help theoretical understanding of migration's clustering potential. First, scholars have established that geographic and social context interacts with migration, combined

with the argument that migrants and their political preferences are more fluid and impressionable (Brown, 1988). Second, the factors that motivate migration may correlate differently to political preferences at different times. The alignment of migration's drivers and political preferences fluctuate. Sometimes, migrants will be identifiably aligned behind a clear agenda, while at other times, their political preferences will be diverse or inchoate. A closer alignment between migration and political preference may be explained by a theory of postindustrialism (Bell, 1973; Inglehart, 1977), which supposes that the industrial base that fueled the U.S.'s economic expansion in the mid-20th century transformed into an economy driven by information technology and service employment. Consequently, distinctive demographic tendencies based on wealth, skills, and taste may be the defining feature of successful modern metropolises (Florida, 2003). Migration could increase the geographic variation of preferences, to the extent that migration patterns and motivations do, in fact, correlate to political preference. For example, Gimpel and Schucknecht (2001, 2003) suggest that if a person's likelihood of migration is strongly correlated with personal income, then migration should increase variation in political preference to the extent that income and preference are correlated.

The link between geographic expansion and clustering is suggested, though not proven, by the recent electoral strength of Republican candidates in places with significant population growth. Since the 1990s, presidential elections have shown a positive relationship between the population growth of a county or congressional district and its level of Republican support. This relationship was conspicuous in the 2004 presidential election and abated only slightly in 2008. In the 50 congressional districts with the most growth, Bush won an electoral majority in 45. In 2008, despite winning in 240 of 435 districts overall, Obama won majorities in only 13 of the 50 fastest growing districts. Overall, despite the fact that Bush beat Kerry in a significant number of districts (255 to 180), the average growth rate in Bush districts was 8.9% between 2000 and 2006. The growth rate of Kerry districts was 2.75%. None of these measures implies that the overall level of support for Republicans has grown as a consequence; in districts where he won, Kerry's margin of victory was generally substantial, consistent with the observation that Democratic support is more concentrated in urban areas (Chen & Rodden, 2009; Rodden, 2010).

Sorting and Convergence

Migration can either increase or decrease the homogeneity of preferences in a given location. I apply the terms *sorting* and *convergence*, respectively, to

describe this distinction (McDonald, 2009). More precisely, sorting implies that the correlation between a political preference and geographically defined districts has increased, and migration has made regions and districts more reliably partisan or ideological. Convergence implies that the correlation between preferences and a categorization has decreased, which means that the distributions of preferences across subgroups, such as geographic units, have become more similar. In his account of post-WWII migration from the north into the south, Converse (1966) showed that migration increased the number of southern Republicans while, at the same time, increased class and income based differentiation by party, in a fashion that was recognizable in the north. In both respects, migration tended to converge preference distributions in the north and south, rather than sort them. Thus, postwar migration slowly made the south resemble the north in terms of its partisan distribution. Convergence can be defined as the opposite of sorting; it is the result of migration that tends to make preference distributions more similar between locations.

The granularity of locations will affect any prediction of sorting or convergence. When we examine relatively small area units, such as neighborhoods, or even the suburban component of a metropolitan area, we may find sorting that is undetectable within and between large regions, counties, or states. Our ability to observe and evaluate either sorting or convergence depends completely on the unit of analysis, and the particular consequences also depend completely on how we choose to aggregate.

Finally, sorting and convergence are dynamic and variable forces, and the consequences are easily confounded by temporal considerations. The effects of migration may not mean very much in a single shot. But as the composition of a migrant population changes, their effect on a new destination is endogenous, and a given wave of migration with uniform characteristics may tend to converge a destination at one stage and then sort it later. Suppose we identify a single stream of migration that, over time, redefines the electoral composition in a place like Idaho or Montana in the 2000s. In the early going, this stream may change these destinations into more heterogeneous places and later on, without any change in the migrant composition itself, make them more homogeneous and markedly different than before the migration wave began. For this reason, it is impossible to say that any given instance of migration either sorts or converges with consistency. Furthermore, it is safe to assume that, in any given moment of time, migration generates sorting in some places and convergence in others, even if the prevailing trend favors sorting over convergence, or vice versa. Because of this distinction, it is difficult to generalize

about overall sorting or convergence trends by simply examining one instance of migration or even one kind of migration.

Despite this potential ambiguity, it is possible to determine empirically if migration is more likely to contribute to sorting, as opposed to convergence. The analysis in this article considers the narrow but important claim that migrants tend to sort, rather than converge, when we consider a single dimension of self-identified ideology. Once we have established a method that can measure this tendency, we can ultimately apply it to a variety of conditions that reveal when the sorting pattern is more likely to prevail, along with the pattern's robustness and sensitivity to migration volume, composition, and underlying motivation. This article launches this pursuit by establishing the claim that migration drives ideological sorting in the aggregate.

Polarization

The prospect of sorting raises important questions about the meaning of political preference changes that are central to the debate about mass polarization. The electorate's polarization, in the aggregate, does not necessarily imply that the preferences of individuals within the electorate has radicalized accordingly (Fiorina, Abrams, & Pope, 2006; Levendusky & Fiorina, 2006). Migration provides one potential mechanism that could increase polarization between regions and electorates, even if individual preferences are persistent or unchanging. At the same time, this possibility does not imply that the electorate hasn't polarized for other reasons. Generational forces, the effect of people entering and leaving the electorate, or endogenous factors triggered by changes in the choice set, can induce or reveal polarization at the individual level.

Method and Data

If migration leads to ideological sorting, we would expect linkage between migrants' ideology, measured at the individual level, and the political characteristics of the destinations they choose. For example, migrants from Republican districts would be more likely to choose Democratic districts if they are liberals. The models presented here estimate the partisanship of migrants' congressional districts, for those migrants who moved into a destination that changed their district. The dependent variable is the destination district partisanship, based on a 109th Congress district's Democratic vote share in the 2004 presidential election. These models predict the partisanship of a migrant's new

congressional district, based on respondents' self-reported ideology, partisanship of the originating district, and change of urban percentage of the new district relative to the originating district.

Migration questions, if asked at all in survey research, are generally limited in specificity or do not specify the places that people migrate from, or when they migrated. In some cases, respondents may be asked where they were born, or where they lived 5 years ago. In particular, we generally cannot combine political preference data with detailed migration information at the individual level, particularly data that provide specific information about the source and destination of migrants. The U.S. Census does provide individual-level data for Public Use Micro Areas (PUMA) and asks respondents to identify the place they left, but only at the U.S. state level of detail. In any case, the census does not provide individual-level political preferences. Inferences about the preferences of migrants are difficult to extrapolate from aggregate data, because we cannot compare an individual's own preferences, and the correspondence between these preferences and those that prevail in the migrant's destination or origin. Usually, migration is analyzed using states or counties, partly because the data are available at those levels, and partly because states essentially do not change boundaries. Some research has applied voter registration data (Cho, Gimpel, & Hui, 2009), which is useful because of registration collects partisanship data even though it collects no other information about political preferences.

Using the U.S. Postal Service's address matching database with the 2006 CCES, we can link political preferences with very precise information about their migration patterns. Thanks to this precision, we have an unusual opportunity to choose the geographic unit of analysis to determine where sorting or convergence prevails in the data. The unit of analysis is 109th U.S. Congressional districts in the 2000-2006 time frame based on responses to the 2006 Cooperative Congressional Election Study (CCES). The survey was conducted over the course of 2006 and 2007, with both pre- and postelection responses. Developed by a consortium of 30 U.S. universities, CCES includes 36,421 respondents and asks a variety of questions related to the 2006 midterm election and relevant preferences and demographics. The CCES records were then matched, by name and address, to the U.S. Postal Service's change-of-address database covering the period between 2006 and 2007. The change-of-address database is a commercially available dataset used by the Postal Service to forward mail, based on the information provided by residents who complete change of address forms. Businesses and researchers can purchase this data to track customers and support demographic research.

By matching the addresses in the change-of-address database to respondent addresses in the survey database, we find more than 4,000 matches, generating nine-digit zip code data for originating and destination addresses. The nine-digit zip code provides block-level precision that ensures accurate mapping of both originating and destination congressional districts. I filtered these matches to include only respondents who moved far enough to change congressional districts, generating 1,361 matches of respondents with complete records in the survey. Each district is defined as either Democratic, Republican, or Swing based on results from the 2004 presidential election. Democratic districts and Republican received 55% or more of the two-party vote share for their respective parties; in Swing districts, each party received at least 45% of the two-party vote.

The models shown here predict individual-level probability of moving to a district with a particular partisanship, based on the multinomial logit specification (Greene, 2003). All of these models, including the baseline version, account for self-reported ideology, partisanship of the originating district, distance of the move, and a handful of basic demographic variables, including race, gender, and age. I estimate models for all respondents and the subset of respondents who moved at least 200 miles to the new destination.

The models also consider whether any increase in ideological homophily results from a relationship between ideology and urbanization. Is the effect of ideology just an artifact of a corresponding change in the level of urbanization of the district? To consider this possibility, I then add the migrant's change in the urban area percentage based on census data. Finally, I add a fixed effect for each migrant's originating region.

The summary of the full specification includes the following.

Logit(Migrant's Destination District Partisanship) =

$$
\begin{aligned}
&\beta 0 + \beta 1 * \text{Ideology} + \\
&\quad \beta 2 * \text{Origin Democratic District} + \\
&\quad \beta 3 * \text{Origin Republican District} + \\
&\quad \beta 4 * \text{Black} + \\
&\quad \beta 5 * \text{Hispanic} + \\
&\quad \beta 6 * \text{Age} + \\
&\quad \beta 7 * \text{Distance of Move(log)} + \\
&\quad \beta 8 * \text{Increase of Urban \%} + \\
&\quad \beta 9 * \text{NE Origin} + \\
&\quad \beta 10 * \text{South Origin} + \\
&\quad \beta 11 * \text{West Origin.}
\end{aligned}
$$

The models estimated include

- Model 1: Coefficients β0-β7
- Model 2: Same coefficients in Model 1, restricted to migrants moving more than 200 miles
- Model 3: Coefficients β0-β8
- Model 4: Coefficients β0-β11

Each estimate tests the hypothesis that the coefficient of the ideology variable, β1, is statistically significant and signed in the expected direction: liberal or conservative ideology increases the likelihood of moving into a Democratic district or Republican district, respectively.

Congressional district as unit of analysis

The size of the CCES database, and the research design used in this study, present an unusual opportunity to use U.S. congressional districts as a unit of analysis. Surveys based on congressional district must contend with the large number of individual districts and the relatively small number of respondents per districts. In addition, congressional districts, unlike states and counties, are moving targets: in the contemporary setting, all districts must be redefined every 10 years, at minimum, and often substantially. These changes pose serious problems for cross decade comparisons between congressional districts. In addition, congressional districts, counties, and states or any geographic definition risks the *modifiable areal unit problem*, in which the effect of a phenomenon like sorting result from an aggregation bias based on the way lines are drawn. Congressional districts are not organized randomly but are instead designed, at least in part, to serve political purposes, regardless of whether we believe that redistricting contributes significantly to incumbency advantage or protection of seats for a particular party.

Despite these drawbacks, there are significant advantages for this analysis by using congressional districts in comparison to either states or counties. First, congressional districts are relatively consistent in terms of population size. Following a reapportionment, district population sizes are expected to be identical within states and reasonably consistent within a fairly narrow range across states. This means that the likelihood of migration is less likely to be correlated to the size of a particular unit. In contrast, the variation of county size is greatly affected by region; in particular, counties are vastly larger and more populous in western states compared to the rest of the country. In addition, any inference about sorting based on a county-level analysis risks bias in the

direction of the effects generated by the large number of counties with very small populations. For example, the number of Americans residing in landslide counties has doubled since 1976 (Bishop & Cushing, 2008), which means that nearly half of Americans reside in a county that supports the winning candidate with 60% or more of the two-party vote. We must account for the fact that a relatively small outmigration from rural residences to cities and suburbs and can dramatically change an election outcome for a large number of counties without effecting most voters in counties with more people.

In comparison to the states, congressional districts are both more uniform and more granular. A sorting pattern that may be hidden within a state such as Colorado in the years between 1990 and 2009, which may have become more competitive at the state level in national politics, becomes more visible at the congressional district level. Since very large, urban or western counties may contain multiple congressional districts, we may see patterns emerging in these places by using districts instead of counties or states.

Finally, examination of sorting at the U.S. Congressional district level blends naturally into an analysis of sorting and potential constituency effects on the behavior of Congress members. For example, can we see evidence that sorting of preferences, where it occurs, generates a different kind of behavior in congress members that reflects, rather than initiates, radicalization of the aggregated preferences within their constituencies? Ultimately, the research in this article helps reveal whether or not geographic sorting induces, or at least facilitates, polarization in aggregated electorates, and consequently, in state legislatures and the Congress.

Descriptive Results From 2006 CCES

To show the partisan distribution of CCES migrant data, I computed the number of movers from different categories of districts by individual-level partisanship. Based on CCES's three-point partisan identification question, Tables 1 and 2 report the partisanship of movers against the aggregate preferences of districts, both at the origin and destination.

From the survey responses, each respondent is coded as a Democratic identifier, Republican identifier, or Independent. Irrespective of the migrant's originating district, movers to Democratic districts appear to be disproportionately Democratic, as shown in Table 2. To a lesser degree, the same is true for Republicans and movers to Republican districts. In other cases, the percentages suggest possible partisan sorting. For instance, nonmoving Democrats comprise 41.4% of the respondents in Democratic districts. But 51.5% of those

Table 1. Count of Migrants by Partisanship of District of Origin and Destination

Origin type	Destination: Democratic district	Destination: Swing district	Destination: Republican district	Total
Democratic	165	85	182	432
Swing	104	97	144	345
Republican	137	125	378	640
Total	406	307	704	1417

Table 2. Migrant Democratic and Republican Party Identifiers by District Type

	All moves			Move > 200 miles		
Democratic Identifiers	To Democratic district	To Republican district	Total	To Democratic district	To Republican district	Total
From Democratic district	131	96	227	37	40	79
From Republican district or swing district	87	128	215	30	53	81
Total	218	224	442	67	93	160
Republican identifiers	To Republican district	To Democratic district	Total	To Republican district	To Democratic district	Total
From Republican district	186	75	261	88	34	121
From Democratic or swing district	96	51	147	49	9	58
Total	282	126	408	137	43	180

moving from one Democratic district to another Democratic district are Democrats. Only 11.5% of this kind of movers is Republican, but Republicans comprise 21.2% of the nonmovers in Democratic districts. These patterns hint at the possibility of sorting; migrants appear to be increasing the percentage gap between Republican and Democratic identifiers in Democratic districts. However, 27.7% of those moving from Republican Districts to Democratic

districts are Republican. In contrast to the Democratic districts, Republican districts arguably are converging because of migrants, which means the percentage gap between Democrats and Republicans will shrink. Even so, the shrinkage of the gap will be less than if the percentage reflected the presence of Republicans as a whole, or all Republicans moving from Republican districts, which would be the case if party had no relationship to destination whatsoever.

Results From the Multinomial Logit Models

The proposed multinomial logit models attempt predict the likelihood of an individual migrating to a particular type of district characterized by its overall party preference. For the sake of simplicity in these models, I do not include any destination place attributes in the explanatory variables, or apply any kind of hierarchical model, although I do include variables associated with the migrants' district of origin. I treat originating districts, combinations of originating and destination districts, and originating district attributes as individual-level variables.

Since the models need to predict the probabilities in a polytomous choice set, and the explanatory variables are based on individual attributes, I chose the multinomial logit functional form. Multinomial logit models have two important properties. First, multinomial logit estimates generate a coefficient for every variable for each choice of the dependent variable, excluding a base alternative. This feature means that statistical significance for one party is visible even if the other is not, and vice versa. Second, multinomial logit models provide a relatively strenuous test of parameter significance.

In these models, ideology is based on the 5-point Likert-type scale used in the CCES (rescaled to –2 = *very liberal* and +2 = *very conservative*). I also represent Democratic partisanship and Republican partisanship as separate binary variables, both as dependent variables and as controls. In doing so, I imposed a relatively strict test of statistical significance, and I can also show whether or not the effects of Democratic partisanship differ from Republican partisanship.

The results of all four models are reported in Table 3, which reports the logit-based coefficients of Models 1 to 4. When the ideology coefficient is signed properly and is statistically significant, it supports the claim that an individual migrant's ideology predicts the partisanship of the destination, while controlling for the partisanship of a mover's place of origin.

Across the different variations of the model, the hypothesis is supported, even when controlling for the prevailing ideology of a migrant's originating

Table 3. Multinomial Logit Estimates of Destination District Partisanship

	Model 1: baseline		Model 2: moves > 200 miles		Model 3: w/urban % change		Model 4: w/urban % change and regions	
	Democratic district	Republican district	Democratic district	Republican district	Democratic district	Republican district	Democratic district	Republican district
Ideology: conservative	−0.166* (.078)	.158* (.070)	−.311* (.132)	.023 (.109)	−.175* (.079)	.158* (.071)	−.160* (.080)	.166* (.072)
Democratic originating district	.358 (.204)	.354 (.193)	−.192 (.393)	−.134 (.334)	.694** (.215)	.152 (.199)	.653** (.217)	.169 (.202)
Republican originating district	−0.018 (.196)	.683** (.171)	−.433 (.347)	−.387 (.285)	−.161 (.202)	.822*** (.176)	−.216 (.210)	.541** (.185)
Black	1.02** (.510)	.380 (.259)	1.44** (.464)	.502 (.446)	.954*** (.262)	.485 (.261)	.969*** (.265)	.377 (.265)
Hispanic	0.510* (.255)	.315 (.239)	.466 (.394)	.021 (.356)	.544** (.259)	.317 (.242)	.484 (.262)	.251 (.246)
Age	−0.005 (.005)	.007 (.004)	−.009 (.009)	.005 (.007)	−.005 (.005)	.007 (.005)	−.005 (.005)	.007 (.005)
Move distance (log)	−0.124** (.036)	−.006 (.032)	−.003 (.189)	−.005 (.007)	−.121** (.036)	−.018 (.033)	−.126** (.036)	−.006 (.033)
Increase in urban % of mover's new district					1.87*** (.293)	−1.43*** (.242)	1.98*** (.298)	−1.34*** (.244)
Northeast originating							.158 (.256)	−.698** (.246)
South originating							.376 (.233)	.621** (.195)
West originating							.700** (.236)	−.016 (.209)
Constant	1.16** (.370)	−.432 (.345)	.421 (1.39)	4.02*** (1.12)	.997** (.376)	.478 (.242)	.681 (.401)	−.582 (.369)
Log Likelihood	−.1340.6		−506.6		−1249.3		−1220.8	
N Respondents	1,361		537		1,361		1,361	

Note: Coefficients are multinomial logit regression values; standard errors are in parentheses. Base category is swing districts.
*Significant at $p < .05$ two-tailed test. ** Significant at $p < .01$ two-tailed test. *** Significant at $p < .001$ two-tailed test.

district. This means that liberal migrants are more likely to arrive in Democratic districts and conservative migrants are more likely to arrive in Republican districts, even after we control for the fact that each kind of migrant is also more likely to originate in these kinds of districts. In each of the four variations of the multinomial logit model, the coefficient estimate of the individual respondents' ideology is statistically significant and properly signed, with only one exception: the Republican district destination in Model 2. Otherwise, the expected result emerges, with almost no change to the coefficient estimate and standard error. We see this result persist in Models 3 and 4, even though the change in urban area percentage has a powerful effect and the fixed effect of particular region is often significant. By comparison, and surprisingly, similar partisanship of respondent's origin district emerges as a significant variable only when the change in urban percentage is added to the model. Moreover, adding ideology to the model increases the number of correct predictions from 725 to 732 in the baseline model and from 807 to 819 in Model 4.

Heckman Selection Model

We know that migrants are not selected randomly from the population at large: as a group, they tend to be younger, wealthier, and better educated. Using the entire CCES dataset, I use a Heckman selection model to determine whether the observed significance of individual ideology results from selection bias using the variables from Model 4.

Table 4 reports the results of the selection model, based on age, income, education, home ownership, and marital status to estimate likelihood of moving to a new congressional district. In this instance, I estimate two sets of probit models: one model that uses a probit estimate of the likelihood of moving to a Democratic or Republican district among movers, and another model that uses the Heckman selection process to estimate the same likelihood amongst all respondents, accounting for the initial likelihood of actually moving.[1] The same result shown in Models 1 to 4 persists in these probit models. The coefficient of the ideology variable is statistically significant for both parties although the coefficient estimates are slightly attenuated in the selection model.

To show how Model 4's prediction changes for different values of the ideology variable, Figures 1 and 2 show kernel densities for the predicted probabilities of migration into Democratic and Republican districts for each of the five values of self-reported ideology (Very Liberal, Liberal, Moderate, Conservative, and Very Conservative). The graphs show the distribution of predictions for the dataset and the model's sensitivity to ideology.

Table 4. Heckman Probit Selection Models Applying Model 4 in Table 3

	Moves only		Moves only	
	Democratic destination	Selection model	Republican Destination	Selection model
Ideology: conservative	−.156 (.039)	−.142 (.039)	.146 (.036)	.128 (.036)
Democratic originating district	.331 (.108)	.314 (.107)	−.099 (.103)	−.089 (.097)
Republican originating district	−.317 (.104)	−.288 (.101)	.389 (.096)	.359 (.092)
Black	.439 (.115)	.400 (.115)	−.137 (.115)	−.098 (.109)
Hispanic	.200 (.121)	.172 (.119)	.009 (.115)	.023 (.110)
Age	−.006 (.003)	−.001 (.004)	.006 (.002)	.001 (.003)
Move distance (log)	−.069 (.018)	−.062 (.018)	.035 (.016)	.029 (.016)
Increase in urban % of Mover's new district	1.657 (.146)	1.543 (.172)	−1.350 (.123)	−1.247 (.142)
Northeast originating	.306 (.137)	.286 (.132)	−.475 (.133)	−.424 (.127)
South originating	.004 (.114)	−.011 (.109)	.268 (.100)	.258 (.095)
West originating	.436 (.118)	.393 (.116)	−.217 (.107)	−.177 (.102)
Constant	.168 (.200)	.659 (.341)	−1.020 (.187)	−1.539 (.260)
Selection model				
Age		−.008 (.001)		−.008 (.001)
Income		−.009 (.004)		−.009 (.004)
Education		.072 (.009)		.073 (.009)
Homeowner		−.425 (.031)		−.422 (.031)
Married		.075 (.029)		.076 (.029)
Constant		−1.321 (.056)		−1.320 (.056)
N	1361	36,421	1361	36,421
ρ		−.342 (.189)		−.394 (.164)

Note: This table extends Model 4 with a Heckman probit selection model for Democratic and Republican districts using the entire database with nonmovers as the censored set. Coefficients are probit regression values; standard errors are in parentheses.

Two results of the models' predictions emerge from these figures. First, the distribution moves decisively, as ideology progresses from Very Liberal to Very Conservative, in the way that the ideology coefficients would imply. Second, the strongest prediction appears in low probabilities associated with conservatives moving into Democratic districts. The prediction distribution

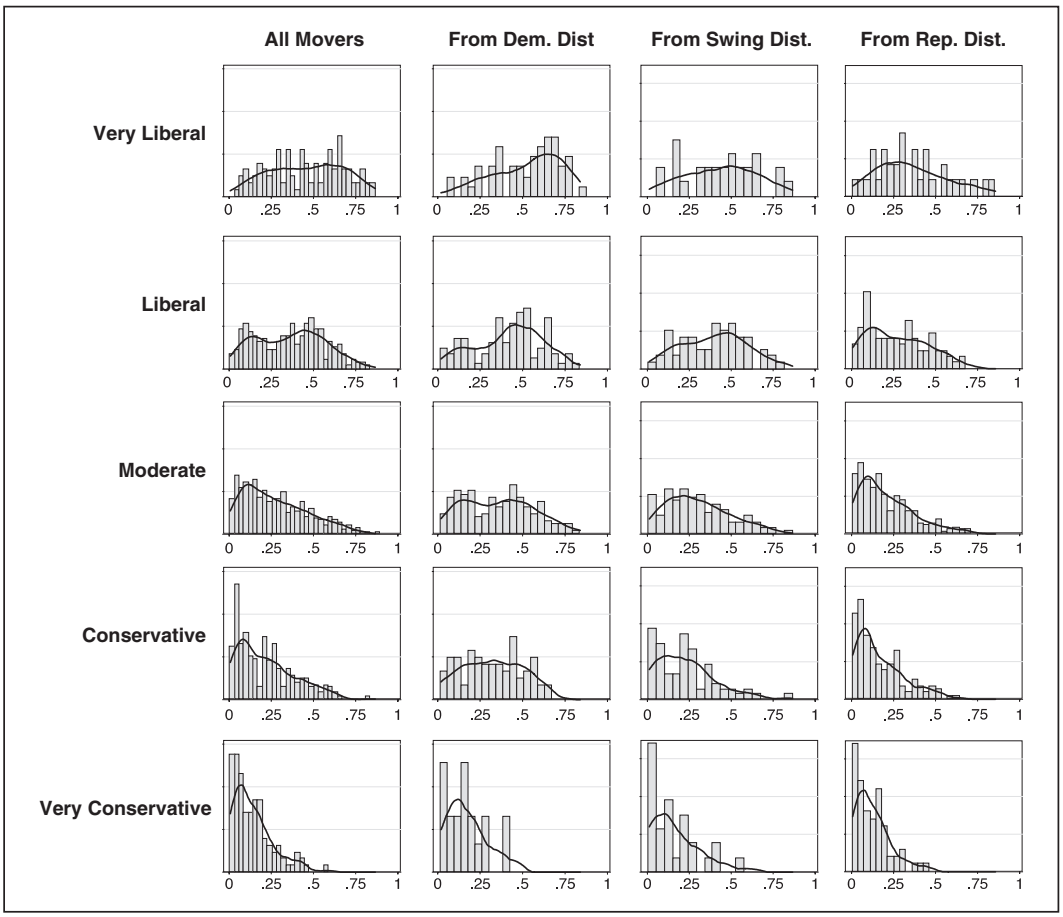

Figure 1. Kernel densities and histograms of probability estimates (Model 4)
Note: Estimates of probability of respondent moving to a Democratic district, by ideology (n = 1,361: Respondents moving to a new district).

for strong conservatives is extremely low, even among strong conservatives moving from another Democratic district. By contrast, strong liberals are more likely to move to a Republican district, irrespective of the district of origin. This result likely reflects the fact that the fastest growing districts tend to be Republican, and if so, supports the tendency for Republican districts to contain more Democrats than Democratic districts contain Republicans.

Discussion

The support shown for the individual-level hypothesis does not suggest that districts are sorting overall once considerations besides inbound migration are taken into account.[2] The analysis doesn't consider the numbers of migrants in particular destinations. Moreover, we may find that the effect of homophily

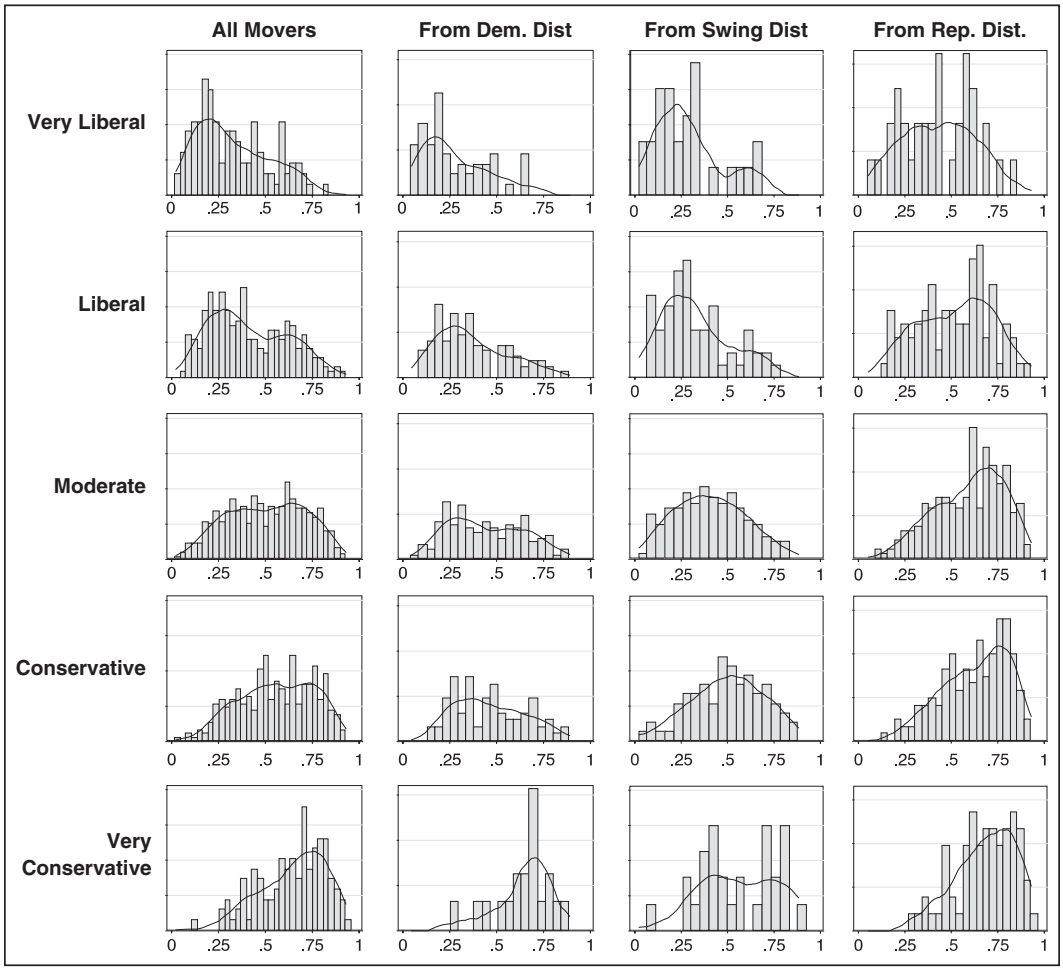

Figure 2. Kernel densities and histograms of probability estimates (Model 4)
Note: Estimates of probability of respondent moving to a Republican district, by ideology (*n* = 1,361: Respondents moving to a new district).

is offset by the effect of migrants who leave. Furthermore, we do not yet know if ideological homophily is the underlying mechanism that drives this apparent sorting tendency. Migrants are likely to be motivated by exogenous factors associated with different destinations along with straightforward ideological homophily. However, the estimates provide support for one necessary condition to the claim that migration leads to sorting: ideological homophily is measurable and robust, given the presumption that partisanship and ideology are consistent. The results shown here raise questions about the definition of homophily: when is it just an observable outcome, and when is it fully formed causal mechanism? While the goal of this research is to simply establish empirical evidence, a more complete treatment of its relationship to a causal mechanism would consider underlying drivers of migration and their relationship to

political ideology. For instance, if access to more land predicts the likelihood of migration, and the demand for land predicts ideology, then a model of this underlying consideration would refine the prediction shown here. At the same time, the empirical result in this study, should it persist, is still sufficient to show migrants will tend to homogenize electoral constituencies, irrespective of the underlying drivers of migration.

If we find consistent support for the claim that homophily does predict the effect of migration, at least two important consequences on electoral outcomes are worth serious exploration. First, it is important to note that migration effects are not evenly distributed around the country. The intradecade increase in the fastest growing congressional districts is radically different from the rest of the country and, as noted above, has been disproportionately directed toward districts that favored the Republican presidential candidates in 2000 through 2008. Moreover, domestic migration has most dramatically affected a handful of states in the last two decades: Texas, Nevada, Arizona, Georgia, and Florida. Are migration effects suggested in this study conditional on the presence of larger numbers of migrants? Does migration change the partisan and ideological composition of these places in a way that facilitates greater partisan polarization? The study results suggested here might point toward a particular focus on the amount of migration as a underexamined variable that effects the link between the electorate and representatives.

Second, research by Rodden (2010) and Chen and Rodden (2009) highlights the importance of urbanization of Democratic constituencies and the configuration of legislative districts. In recent history, districts that elect Republicans are less likely to provide the kind of lopsided margins seen in heavily urbanized Democratic districts. Unless partisan balance is an explicit goal in the configuration of these districts, the relative dispersion of Republican support creates electoral bias for Republicans. If this premise is true, we should ask whether migration increases or ameliorates the tendency. The models in this study show, as expected, that the change in the urban area percentage of a migrant's new congressional district, relative to their old one, strongly predicts the new district's partisanship. This tendency may coincide with other characteristics that change political composition over time.

Conclusion

This study finds support for the claim that an individual migrant's destination is more likely than not to provide a closer ideological match than the place from which the migrant left. This increased likelihood appears for all types of district partisanships; liberals who leave Republican districts are more likely

migrate into Democratic districts than conservatives, and vice versa. The claim that this evidence shows migrant attraction toward ideologically compatible destinations presumes that district partisanship is a proxy for ideology. This evidence does not extend to the larger claim that migration generally helps creates more homogenous electoral constituencies. Nor does the evidence determine the place of homophily in a causal chain; we do not know if this effect is incidental to exogenous place characteristics, such as cheaper housing, or the extent to which homophily is the desired outcome of many migrants. But the evidence does support one condition for the sorting of constituencies at the aggregate level: partisanship of a destination does help predict migrants' migration choices if we know migrants' self-declared ideology.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the authorship and/or publication of this article.

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Notes

1. See McDonald (2009) for two alternatives to the self-reported ideology variable: a computed ideology scale based on a principal-components factor analysis, and partisanship. The results are comparable to the coefficients reported here.
2. For a time series based analysis of migration effects, see Anasolabehere and Lovett (2008), which uses CCES panel data between 2006 and 2007.

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Bio

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