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ORIGINAL ARTICLE

White flight from immigration?: Attitudes to diversity and white residential choice

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Abstract

Background: Work on whites' mobility behavior finds that they tend to move to less diverse neighborhoods than minorities. Work on white mobility preferences finds that whites who dislike diversity prefer less diverse neighborhoods. Do liberal whites practice what they preach, and do conservative whites really avoid diversity?

Objective: Combine data on white ethnocentrism and migration behavior to analyze liberal and conservative white mobility in the United Kingdom and the United States.

Method: Ordered logit and Ordinary Least Squares (OLS) models of destination choice predicted by attitudes toward Brexit, Trump, and immigration.

Results: Whites select significantly less diverse neighborhoods than nonwhites, but there is little or no racial difference in the destinations that white liberals and conservatives, British Brexiteers and Remainers, and American Trump supporters and opponents move to.

Conclusion: Ethnicity matters for segregation, but conscious white ethnocentrism is much less important. Future work could explore unconscious ethnocentrism, differing ethnic information about neighborhoods or ethnically divergent amenities as potential explanations.

The domestic migration behavior of members of the ethnic majority is a critical part of the segregation equation (Crowder, Hall, and Tolnay 2011). In addition to white flight, researchers have also considered the possibility that whites may avoid as well as out-migrate from minority neighborhoods, exacerbating ethnic segregation (Clark 1992; Quillian 2002). American scholars have also focused on the contextual effect of the fast-growing Latino and Asian populations on white mobility, in addition to traditional concerns with black–white dynamics (Card, Mas, and Rothstein 2008; Easterly 2009; Frey 1996, 2006). While some speak of the "end of segregation" (Glaeser and Vigdor 2012) due to increased African-American dispersion and

the end of all-white neighborhoods, others, mindful of the rise of nonblack minorities, chart the growing number of minority neighborhoods in America's most diverse metropolitan areas where whites are the only major group electing not to enter (Alba and Romalewski 2013; Logan and Zhang 2011). In examining the white response to such shifts, this article focuses not only on race but on subjective attitudes and perceptions. This article therefore asks how important white ethnocentrism is in explaining actual white neighborhood choice; specifically, whether it accounts for the "white avoidance" that some hold to be the most important source of residential segregation (Andersen 2017). This analysis uses longitudinal data linking mobility and ethnocentric attitudes to bridge the current gap between work that focuses on subjective attitudes and studies that examine mobility behavior.

To address the limitations of aggregate analyses, there have been a growing number of studies using individual-level mobility data. Kritz and Gurak (2001) uncover only a weak relationship between Latin American immigration to a state and native-born whites' propensity to leave. Frey and Liaw (2005), however, find ethnoracial drivers second only to geographic distance in predicting individuals' interstate migration patterns. Others view socioeconomic forces as the main agent of change: American-born, English-speaking Hispanics and Asians are better integrated with whites than their immigrant co-ethnics, for instance (Iceland 2009). Massey, Rothwell, and Domina (2009) add that income has displaced ethnicity as the principal axis of segregation in America.

A growing literature combines individual and tract-level contextual data. Closest in scope to this work is that of Kyle Crowder and Scott South. These researchers have been pioneers in using the longitudinal Panel Study of Income Dynamics (PSID) to study inter-tract migration by race and nativity. Their work, which pays important attention to white outmigration, finds that whites are more likely to leave a neighborhood with a large minority population. Counterintuitively, whites seem most averse to remaining in diverse neighborhoods with multiple minority groups. Controlling for a tract's share of minorities, whites are significantly more likely to leave those with strong representation from all three major American minority groups (Crowder 2000, pp. 245–246). Further studies using the PSID note that whites' likelihood of moving is modulated by the characteristics of adjacent neighborhoods. Since moves tend to be short-distance, a paucity of whiter surrounding neighborhoods tends to dampen white flight (Crowder and South 2008; Crowder, Hall, and Tolnay 2011). Though these studies seem to confirm the white flight hypothesis, authors are careful to note that even for whites, ethnic preference exerts a weaker effect on mobility than age, marital status, home ownership, and other material constraints.

An important drawback of the PSID is its lack of data on the subjective motivations of individuals. Therefore, studies of residential mobility have been complemented by attitude surveys and experiments. Scholarship based on the Multi-City Study of Urban Inequality (MCSUI) using neighborhood composition cue cards find that whites are the ethnoracial group with the strongest own-group residential preferences (Charles 2005; Clark 2002; Krysan 2002). What is missing in the current literature, as Krysan notes, is work that connects subjective attitudes to objective mobility behavior. This omission is driven by a paucity of large-scale longitudinal data on attitudes. Yet only such studies can begin to distinguish between materialist "race-proxy" and the racial effects that underpin the white flight hypothesis. This is where this article makes its principal contribution to knowledge. Some work using Britain's Understanding Society (UKHLS) has now taken place (Clark and Coulter 2015, 2019), but no prior work of this kind that I am aware of has explored the role of ethnocentric attitudes in mobility behavior. This study uses national populist voting and immigration attitudes as a proxy for white attitudes to minorities, assessing whether immigration restrictionist white movers are more likely to select whiter areas than liberal white movers.

The European context

Majority ethnic groups in Europe are generally more preponderant in their nation-states than non-Hispanic whites in the United States.[1] Both ethnic status systems and myths of native majority ethnicity

[1] Even where this is not the case, native ethnic groups tend to dominate in their home regions, such as Flanders in Belgium, Catalonia in Spain, or Scotland in Britain.

operate strongly. White neighborhoods tend to have a wider range of amenities than more diverse ones. One would thereby expect—despite the absence of a tradition of nonwhite segregation—whites from Europe's majority ethnic groups to exhibit residential proclivities similar to those held by American whites. Work on ethnic segregation in Europe has primarily concerned itself with aggregate patterns, paying close attention to the movements of minority groups and the structural barriers that constrain their choice of neighborhood. It has generally been assumed that patterns of segregation reflect structural constraints and minority preferences rather than majority behavior (Andersson 2009; Arbaci 2007; Musterd and De Winter 1998). Yet recent data suggest that while immigrants tend to locate near co-ethnics, those in the second generation are more mobile than ethnic majority Europeans (de Valk and Willaert 2011; Vidal and Windzio 2011). This raises the possibility that patterns of segregation are being generated not by minority concentration and white stasis, but, at least in part, by white flight and avoidance.

Work on white residential responses to diversity in Europe using individual data at neighborhood level is beginning to develop despite the limitations of census questions.[2] A pioneering study in this regard is that of Bråmå (2006), which uses Swedish register data to specify individuals' migration patterns in diverse locales, using the place of birth as a proxy for ethnic origin. This work demonstrates that ethnic Swedes are tending to avoid diverse satellite high-rise communities such as Husby, on the periphery of Stockholm. At the same time, Bråmå found scant evidence of disproportionate ethnic Swedish outmigration from Husby, leading her to conclude that much of the shift in the ethnic composition of formerly Swedish-dominated neighborhoods could be attributed to majority avoidance, minority preference, and higher in situ rates of minority natural increase. Subsequent research adds that ethnic residential segregation "is a result of decisions taken by the Swedish majority, who tend to cluster in Swedish-dense neighborhoods and avoid immigrant-dense housing estates" (Andersson 2009, p. 85).

European work stresses the importance of white avoidance of diverse destinations among movers rather than increases in white flight stimulated by diversity. An in-depth study of mobility patterns for white Dutch and minority groups found powerful evidence that the former are avoiding areas with large shares of minority residents. Thus, from 2002–2006, 22 percent of white Dutch left high-minority areas. However, the proportion of black Caribbeans (22 percent), Turks and Moroccans (18 percent), and other minorities (23 percent) leaving these areas was comparable. The big difference was in white avoidance rather than flight. Thus, of those leaving high-minority zones, 72 percent of white Dutch chose whiter areas, whereas just 40 percent of minorities did so—with the remaining 60 percent opting for other high-minority areas. Of minorities leaving whiter neighborhoods of these cities, 25 percent of Caribbeans and almost 40 percent of Muslims chose to move to nonwhite zones, compared to a mere 7.6 percent of whites (Bolt et al. 2008). Another study finds that white Dutch are distinct in being more dissatisfied with minority areas than nonwhites (Bolt et al. 2008, pp. 1372–1380). Rathelot and Safi (2013) report that in France, native whites are much less likely to move to heavily immigrant municipalities. Andersen (2017) likewise shows that white Danes who move tend to avoid diverse neighborhoods far more than minorities, even when controlling for socioeconomic factors associated with the "race proxy" hypothesis.

On the attitudinal side, as with the MCSUI in the United States, European studies find that majority ethnic groups display own-group residential preferences. Semyonov and Glikman (2009) show that ethnic-majority Europeans prefer more homogeneous neighborhoods and that ethnocentrism, social conservatism, and xenophobia are associated with favoring more homogeneous areas. For the Netherlands, van Londen (2012), using the same experimental showcard technique as the MCSUI, finds whites to have the most exclusive neighborhood preferences: as in the United States, they are the least willing to live as a minority and tend to prefer white majority areas. Critically for the purposes of what follows, extant research demonstrates that whites who express sentiments of ethnic threat are significantly more likely to say they would leave a diverse neighborhood. Hence, white Europeans resemble white Americans in preferring relatively homogeneous neighborhoods, and those with ethnocentric attitudes have a greater tendency to say so. The question this article seeks to answer is whether stated ethnocentric preferences result in *actual* differences in mobility behavior between cosmopolitan and ethnocentric whites.

[2] Austria and Switzerland ask a question about religion, but only Britain collects ethnic data. Others only collect birthplace—or parental birthplace—data.

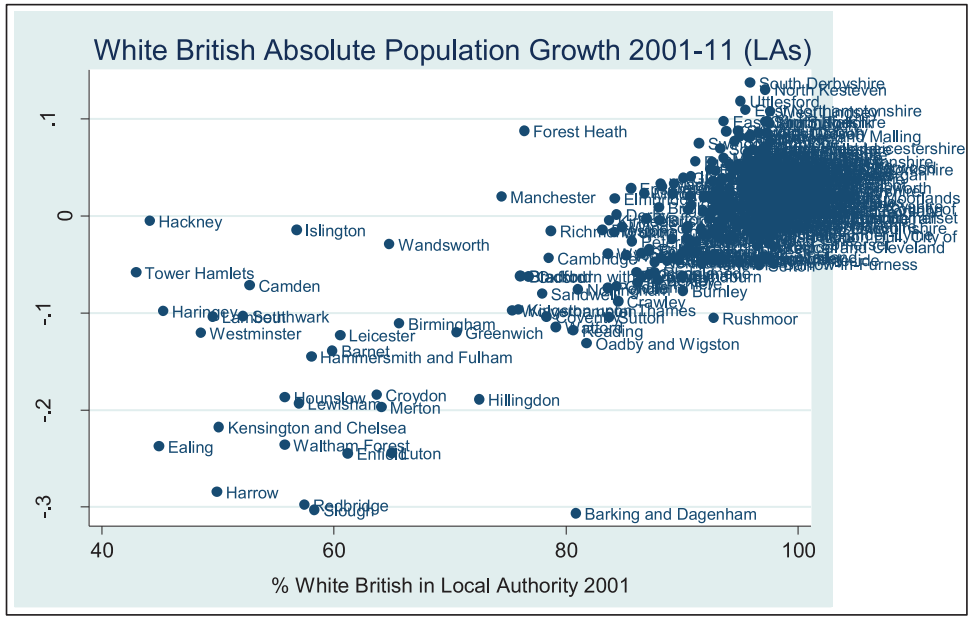

FIGURE 1 White British absolute population growth 2001–2011 (local authorities [LAs]).
Source: Office of National Statistics (ONS) Census of England and Wales 2001, 2011. The universe is LAs with positive population growth.

White flight in Britain?

There has also been research on this question in Britain, one of only three west European countries to collect census data on ethnicity. Aggregate census data in Figure 1 shows that among local authorities (LAs) in England (averaging around 250,000 population) that experienced population growth during the 2001–2011 intercensal period, the white British population increased mainly in LAs that was over 85 percent White British in 2001 while declining fastest in the most diverse LAs.

Could this be an artifact of socioeconomic group differences? Simpson and Finney (2010), using aggregate analysis, demonstrate that both whites and minorities are leaving areas of minority concentration; however, they do not evaluate the relative weight of socioeconomic and ethnocultural characteristics of wards in accounting for majority and minority migration decisions. Simon (2010), who cites a paucity of work on the white majority in Britain, takes this analysis further, using specially commissioned Office of National Statistics' (ONS) aggregate tables. She finds that white British are the only major ethnic group moving toward, rather than away, from areas where they are concentrated. However, whites are concentrated in desirable, lower-density wards that are attractive to all. Simon therefore explains ethnic majority patterns as stemming from material circumstances rather than ethnic preferences, though her data cannot parse structural from cultural ward characteristics to answer this question definitively.

Work by Catney and Simpson (2010), also using specially commissioned aggregate census tables, calculates the log odds of whites moving out of areas of minority concentration. While their findings broadly confirmed the materialist thesis, lower-class whites living in diverse wards were more likely than lower-class minorities to depart for whiter areas. This effect was especially marked in London (Catney and Simpson 2010, pp. 579–580). As with American research based on the race-proxy hypothesis, material considerations were held to play a more important part than ethnicity in explaining white residential flows, while ethnocentric preference effects appeared to be weaker than in the American case.

Two important elements are missing from the British literature on white internal migration, one of which is also absent from U.S. scholarship. First, in contrast to American and European work, British

studies of white mobility rarely concentrate on the individual as the unit of analysis. Those that have done so show that white British and minority mobility behavior differs significantly, even when controlling for individual and area social characteristics (Clark and Coulter 2015, 2019). Second, while American and European studies have probed white respondents' attitudes to integration and modeled actual residential behavior, no study I am aware of has brought subjective ethnocentric attitudes and objective longitudinal behavior together. This work seeks to fill this gap in our knowledge base.

Analytical strategy

This article focuses on nested individual-level data on destination choice, proceeding in three steps. First, it seeks to establish whether ethnocentric motivations matter for destination choice in Britain. Second, restricting the analysis to white Britons and using Brexit support, voting, and national identity as attitudinal proxies, it asks whether anti-diversity white movers select less diverse wards to move to than pro-diversity whites. Finally, it uses geolocated Twitter data and geotagged survey data to replicate the analysis for the United States.

Data

The main body of the analysis uses two major U.K. longitudinal data sets. The British Household Panel Survey (BHPS) is an annual longitudinal study of some 5500 households containing 10,300 individuals in England and Wales that began in 1991. The sample is a stratified clustered design drawn from the Postcode Address File, and all residents present at those addresses at the first wave of the survey were designated as panel members. These same individuals are re-interviewed each successive year, and if they split off from their original households to form new households, they are followed, and all adult members of these households are also interviewed. Similarly, new members joining sample households become eligible for interview, and children are interviewed as they reach the age of 16.[3] Attrition of cases reached 11 percent in the transition from Waves 1 to 2, but since then, recontact rates have remained high, generally well above 95 percent. In 2009, the survey merged into the Understanding Society Longitudinal Survey (UKHLS), which builds on the BHPS sample and contains 40,000 respondents per wave, including a minority oversample of 5000 individuals drawn from the five most prevalent nonwhite groups in Britain. The BHPS and UKHLS permit us to examine both people's mobility desires and their actual mobility.

While similar to the PSID in the United States, BHPS and UKHLS contain modules covering a wider array of subjective measures. Party vote, political participation, political attitudes, reasons for moving, perceptions of neighborhood, national identity, newspaper readership, and opinions on whether Britain should leave the European Union are included in at least some survey waves. This permits a fuller examination of the cultural and political subjectivity of whites who leave, enter, and remain in diverse areas, enabling us to generate a longitudinal profile of white incomers to, outmigrants from, and stayers in diverse wards. Wave size varies between 6684 and 10,218 for the 18 waves of the BHPS, including the first wave of the UKHLS, which contains a subsample of 7000 individuals linked to the BHPS. The UKHLS contains a sample of approximately 40,000 individuals, tracked across eight waves from 2008 to 2016. This permits a fuller examination of the cultural and political subjectivity of whites who leave and enter diverse areas, enabling the researcher to link subjective motivations with objective mobility decisions. To maintain comparability with contextual data derived from the 1991, 2001, and 2011 censuses, the sample is restricted to those subjects living in England and Wales.[4]

I also use longitudinal individual-level census data from the ONS Longitudinal Survey (ONS LS), a restricted-access 1 percent sample of the census followed every 10 years since 1971. Due to confidentiality

[3] See BHPS website for details: https://www.iser.essex.ac.uk/bhps/about/sample.

[4] Separate censuses are collected for Scotland and Northern Ireland.

requirements, minority share in an individual's ward of residence has been converted to a set of quintiles. This is based on sorting wards on the basis of their nonwhite share into five groupings in which there is an equal number of minorities in each, following Simpson (2007). The minority population is highly concentrated, to the point that in 2011, minorities form a majority of the population in the most diverse two quintiles. The ONS LS, as a representative 1 percent sample of the census, contains over 550,000 individuals, including 114,000 white Britons who moved between 2001 and 2011. Note that UKHLS, based on annual moves, captures more frequent movers while ONS LS, with its decennial measure, includes individuals who move at any point during a decade.

I model destination choice, considering ethnic and ideological, as well as material, influences on where people move. This work follows the convention of using ward or census tract as an approximation for neighborhood, bearing in mind that in any given instance, these will be imperfect representations of subjective neighborhood (Hall and Crowder 2014, p. 2184). The white flight hypothesis leads to the following predictions:

H1. White British individuals will move to less diverse neighborhoods than minority individuals, controlling for other characteristics of individuals and both origin and destination neighborhoods.

H2. White British individuals who oppose immigration will move to less diverse neighborhoods than white British individuals who support immigration.

Dependent variable

The change in ward minority share due to a move, a measure of ethnic destination preference, is calculated by taking the difference in minority share between destination and origin wards as per Hall and Crowder (2014). ONS LS is a largely complete sample, while the BHPS-UKHLS makes strenuous efforts to track movers such that very few are lost from the sample when they move.

Independent variables

Independent variables include individual-level dummy variables for ethnicity, private renter, and being single. Ethnicity variables, asked periodically after Wave 12 of the BHPS, are assumed to be time-invariant and are thus spread across the data set to limit listwise deletion. Age and income are continuous variables. University degree is taken as the main measure of educational qualification. Contextual measures at the ward level, drawn from the 2011 census (for UKHLS) or from 1991, 2001, and 2011 censuses—with linear interpolation (for BHPS analyses) are also included. These cover population density, share unemployed, and the proportion of non-European minorities in the ward.

Attitudinal variables

In the UKHLS, 79.3 percent of the sample is white British, 17.8 percent non-European, and 2.8 percent white European. White Europeans are predominantly foreign-born and tend to live in similar areas to nonwhites; thus, our analysis focuses on white British and nonwhite minorities. Unless specified, the term "minority" in the U.K. context will refer to non-European origin population. UKHLS political variables include party voted for, or supporting, which are asked of different halves of the sample in each wave and thus can be combined into a single measure to maximize sample size in any given year. Support for Britain leaving the European Union ("Brexit") was asked in Wave 8 (2016), with approximately half of the respondents answering the question before, and half after, the referendum on June 23 of that year. The measure has been recoded into a binary variable for support or opposition to Britain leaving the E.U. Respondents' answers are used as one measure of their attitudes to immigration and imputed backwards through Waves 1–7.

E.U. support is highly correlated with immigration attitudes and thereby a useful proxy measure for attitudes to diversity (Clarke, Goodwin, and Whiteley 2017). Some may have changed their attitudes to immigration between Waves 1 (2008) and 8 (2016), when the Brexit question appears. However, E.U. support is the best indicator we have of strong opposition to immigration due to its relatively even split of response categories among the sample, and, given the marked age and education gradient to Brexit support, I expect these attitudes to be relatively stable over time.

I also use populist right, that is, U.K. Independence Party (UKIP) or British National Party (BNP), and liberal-left (Labour/Green/Liberal Democrat), party support as alternative measures of immigration opinion to triangulate with the Brexit measure. Due to populist right party vote being a write-in category, only a small share of the sample are supporters; hence, this measure is less statistically powerful as a proxy for diversity-skepticism than the Brexit measure, where there is a relatively even mix of Brexit responses.

There are no attitudinal or voting measures in the ONS LS; however, respondents who identify their national identity as English Only on the census, as distinct from British, have been found to be more likely to favor lower immigration levels and to vote to leave the European Union (Goodwin and Milazzo 2017, pp. 458–459). English identity is used with the ONS LS data as a proxy for immigration-skeptic attitudes.

RESULTS

Might ethnocentrism be playing a role in accounting for the ethnic composition of destination choices? In order to assess this, I run an ordered logistic regression model on the change in minority share attendant on a move, with standard errors clustered on individuals. The sample for analysis in the UKHLS data is restricted to the approximately 5.5 percent of the sample moving wards over the previous year. This is a difference-in-differences model, comparing the change in minority share between individual movers.

Independent variables are similar to previous models except that all predictors are lagged since the parameters of interest are conditions obtained prior to an individual moving. The lagged share of minorities in the ward of origin is especially important because there is a ceiling effect: Those who live in homogeneous white wards can only move to diverse wards and vice-versa. The results, encompassing both UKHLS and ONS LS data, appear in Table 1. Note that minority share quintiles in the UKHLS data are broadly, but not exactly, the same as in the ONS LS. Even so, there is a very similar pattern between the two data sets. These results comport with those of Andersen (2017) and Clark and Coulter (2019), in that even when a range of socioeconomic controls are applied, own-group preference has a significant effect on neighborhood destination choice.

Figure 2 presents the marginal effects of being white British on the change in minority share, drawn from the ONS LS model in Table 1. This reveals that white Britons are more likely to move to whiter wards than other ethnic groups at all levels of origin minority share. Note that this is based on intercensal (10-year) moves between 2001 and 2011. Figure 2 shows that a white Briton who lived in the most diverse quintile of wards (averaging 66 percent nonwhite) in 2001 moves to a ward that is 1.4 quintiles whiter than a nonwhite British person, with individual and ward contextual variables held at their means.[5]

Likewise, the UKHLS model in Appendix Table A1, based on moves in the previous year, shows that in wards with less than 10 percent nonwhites, white Britons who move select destination wards that are 3.6 to 5.3 points whiter than minority groups originating from the same quintile of wards. The difference widens as we move beyond 11 percent minority in the ward of origin. Among movers who originate in highly diverse wards containing over 40 percent minorities, white Britons are predicted to move to a ward that is fully 10.3 points whiter than a minority individual from a similar ward. This offers powerful confirmation of H1 in line with the American findings of Hall and Crowder (2014, p. 2198) and the U.K. findings of Clark and Coulter (2019). Yet it is not clear whether minority or majority mobility behavior is driving these results.

[5] Note that confidentiality restrictions in the ONS LS prevent me using a linear measure for percentage minority, as this may be disclosive for an individual, and thus I can only use quintiles.

TABLE 1 Models of having moved to more diverse quintile of wards, by ethnicity only

	ONS LS	UKHLS
White British person	−1.036***	−2.784**
	(0.044)	(0.871)
Diversity Quintile (ref: Q1)		
Q2	−1.718***	−1.209
	(0.423)	(1.112)
Q3	−3.208***	−3.796***
	(0.496)	(1.114)
Q4	−5.005***	−8.432***
	(0.474)	(0.167)
Q5	−6.284***	−20.306***
	(0.594)	(1.085)
Diversity Quintile (ref: Q1)		
Q2 x White British person	−1.279***	0.390
	(0.245)	(1.148)
Q3 x White British person	−1.571***	−0.660
	(0.259)	(1.176)
Q4 x White British person	−1.432***	−4.309**
	(0.194)	(1.303)
Q5 x White British person	−2.286***	−6.305***
	(0.360)	(1.478)
N	123,106	10,054
Pseudo R^2	0.213	0.229

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Abbreviations: ONS LS, Office of National Statistics Longitudinal Survey.

Source: ONS LS 2001, 2011; Understanding Society, Waves 1–8. Quintile minority shares for ONS LS/UKHLS are Q1 (average 2 percent/0 percent–3 percent), Q2 (13 percent/4 percent–10 percent), Q3 (27 percent/11 percent–20 percent), Q4 (43 percent/21 percent–40 percent), Q5 (66 percent/41 percent–100 percent). Controls (not shown) for income, single, renter, age, and degree. ONS LS controls are for 2001, and UKHLS controls for the year prior to the move.

Whites appear to prefer whiter areas than minorities even with an extensive range of individual-level terms covering the main sociodemographic correlates of neighborhood choice. A similar ONS LS model with added controls at the individual level—for living in a mixed-ethnicity house, being aged 20–29, moving to London, and distance moved from a diverse quintile—do not greatly alter the main effects (see Appendix Table A2). Likewise, controlling for changes in ward deprivation index and ward population density does not change the broad patterns in Table 1.

Attitudes to immigration and white mobility behavior

The above findings confirm an ethnocentric effect but could be a function of minority preference, white preference, or both. The next question, therefore, is whether whites who desire lower immigration are more likely to select a whiter area to move to than whites who support current or higher inflows. Results in Appendix Table A2, restricted to white British movers, show that various proxies for immigration attitudes generally do not predict a move to a less diverse area. Whites who identify as English rather than British,

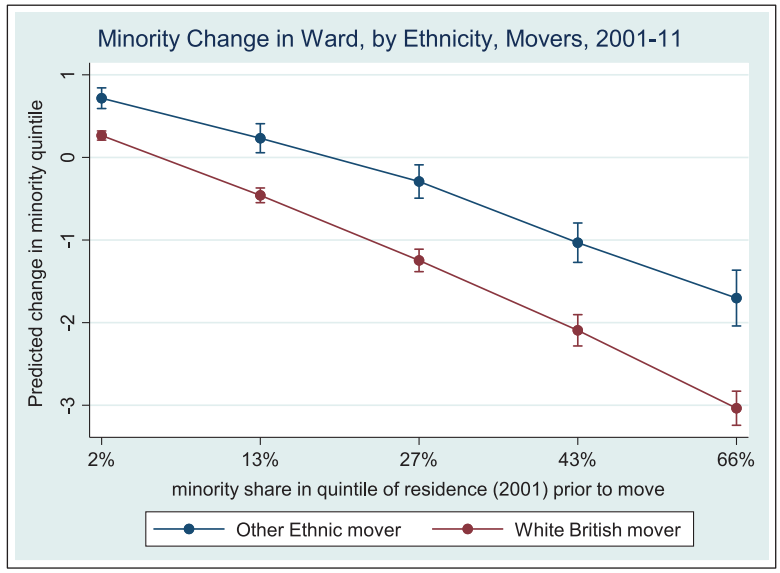

FIGURE 2 Minority change in ward, by ethnicity, movers, 2001–2011.
Source: ONS LS, 2001–2011. See Table 1, Model 1.

support leaving the European Union (Appendix Figure A1), or who voted for populist right UKIP or BNP prior to moving, do not move to whiter areas than more liberal whites. This holds regardless of whether whites originate in diverse or nondiverse quintiles, disconfirming H2. The only evidence for H2 is that whites residing in the most diverse quintile who supported left or liberal parties prior to moving tend to move to somewhat more diverse wards than conservative movers who depart from similar areas (Appendix Figure A2).

For the ONS LS, using English and British identity as proxies for attitudes to diversity, these results produce the marginal effects in Figure 3. The considerable ethnocentrism observed when comparing white British and minority destination choices in Table 1 appears almost wholly unrelated to white views on diversity, with liberals and conservatives making similar residential choices.

This comports with data from the BHPS, the precursor to UKHLS, which contain a wider range of attitudinal items. Appendix Table A3 presents the relationship among movers between choosing a less diverse ward and various proxy attitudes to diversity, asked intermittently across survey waves. The outcome measure is the change in minority share, measured as a binary indicator, a quintile change measure or the raw change in minority percentage. This table shows that while ethnocentrism is a powerful predictor of mobility behavior, attitudes and partisanship are not significant: only generalized trust enters any of the models. Yet even trust falls out of the model when the analysis is restricted to white respondents (not shown). Though conservative whites express a preference for whiter neighborhoods in survey work (i.e., Krysan 2002; van Londen 2012), they do not seem to be acting on these preferences. Indeed, their residential choices appear indistinguishable from those of liberal whites. The dramatic aggregate-level ethnic sorting that took place in Britain in the 2000s cannot, therefore, be attributed to ideologically motivated white avoidance.

United States

As a robustness check, I examine pseudo-longitudinal data to see whether a similar pattern obtains in the United States.

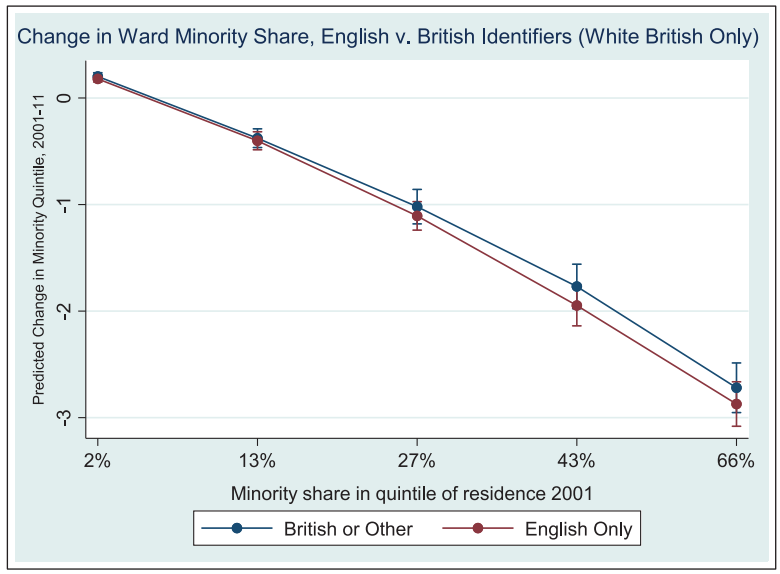

FIGURE 3 Change in ward minority share, English versus British identifiers (white British only).
Source: ONS LS, 2001-2011. See Appendix Table A1, Model 1.

Data and method

The absence of American longitudinal data tracking both ethnic mobility and attitudes to diversity necessitates a different approach. Accordingly, I use both geocoded Twitter data on strong partisans and survey data in which respondents report their current and previous postal codes. Neither is able to measure attitudes prior to a move, but U.K. data—in which UKIP-BNP voting measured prior to moving and Brexit voting measured after a move show similar effects—suggest this is not a serious limitation.

I begin with geotagged Twitter data drawn from Donald Trump supporters and opponents. This analysis, like most academic work using Twitter data, draws on Twitter's API, a sample of approximately 1 percent of tweets available for analysis by the public. Politically active white Trump supporters and opponents are likely to be even more distinctive than the median white Democratic and Republican voters who, in the 2016 American National Election Study, differed by a substantial 47 points in their desire to reduce immigration. To detect the place of residence, I use an established technique based on matching geolocated tweets from morning and evening (Lovelace et al. 2016, p. 67). Only 1 percent to 2 percent of Twitter users have their geotagging activated, but studies show that these users do not differ markedly in key demographics from the broader Twitter API sample (Longley, Adnan, and Lansley 2015; Sloan and Morgan 2015). In order to locate pro- and anti-Trump tweets, I searched popular hashtags for Trump supporters and opponents over an 8-month period between March 4 and November 12, 2016. That is, broadly the period between the start of the Republican primary in February and Trump's election victory on November 8.

This resulted in 142 million tweets from 7.6 million unique users, of which approximately 82,000 users had geotagging activated. Using a sentiment analysis algorithm to screen out tweets that were difficult to categorize or of indeterminate sentiment, and checking Twitter profiles for previous places of residence based on historic Twitter activity, produced a subset of mover profiles for analysis. Profiles were hand-coded for age, race, and gender using Amazon Mechanical Turk (MTurk), yielding a sample of 6215 individual profiles. A total of 4701 could be assigned a racial category according to major U.S. Census designations (white, Asian, Hispanic, black), while 4600 were coded for age and 4700 for gender. The sample is 73 percent white, 13 percent black, 9 percent Hispanic, and 5 percent Asian or other, and thus relatively

representative of the English-speaking adult American population. ZIP-code-level data from the 2010 census is attached to individual-level records. The 2010 census is used due to its comprehensive coverage as opposed to the subsequent American Community Survey's probability sampling.

RESULTS

Analysis shows that whites, as expected, moved toward whiter areas than minorities originating in similarly diverse places. On average, controlling for the ethnic composition of an individual's ZIP code of origin, a white person in the data moves to a ZIP code destination that contains 6.3 points fewer minorities than the destination of a nonwhite individual moving from a neighborhood with similar ethnic characteristics (4.9 points when accounting for changes in area rural-urbanity, income and education attendant on a move). What of ethnocentrism? Trump sentiment is assessed by my machine-learning algorithm on a 5-point sentiment scale from 1, *most opposed*, to 5, *most supportive*. Given the binary nature of much of the sentiment toward Trump, we find that it is strong Trump supporters (6.1 percent of sample) that have the most distinctive mobility pattern. Support for Trump—whether measured on the scale or as a dummy variable for strong (5/5) Trump support, predicts a move to a relatively white area: Indeed, it has only a slightly weaker standardized effect size than being white.

However, when I interact strong Trump support with being white, the interaction points in the opposite direction, indicating that it is minority Trump supporters that are driving the model. When the sample is restricted to whites, Trump support is of only borderline statistical significance in predicting a move to a whiter area. The transition from the strongest white Trump supporters to the strongest white Trump detractors corresponds to a 2.1-point smaller increase in ZIP code white share as a result of a move.

For minorities, by contrast, Trump support predicts a move to a considerably whiter area. Thus, it seems Trump support has its principal effect on nonwhite rather than white movers, influenced by a small number (25) of strong minority Trump supporters in the sample—though there is systematic variation across all 847 minorities in the data. As Table 2 shows, strong Trump supporters who are nonwhite move to neighborhoods that are, on average, 8 points whiter than those they originated from. This compares to almost no origin–destination difference among minority Trump opponents, producing a predicted gap, in the full model in the last column of Table 2, of 7.4 points, compared to the white gap of just 2.1 points. The small number of cases driving this model results, however, in wide error bars as shown in Appendix Figure A2. These results may be driven by minority—especially Hispanic or mixed-race—Trump voters being more likely to identify as white (note that racial identification in the Twitter data is based on external coders rather than self-ascription; Agadjanian and Lacy 2021). This may explain why this interaction was not significant in Table A4 where ethnicity is based on self-identification. Future research could explore this using more fine-grained identity questions in survey data, using a strategy akin to that in Appendix Table A4.

Trump supporters and detractors on Twitter are highly motivated but statistically unrepresentative groups. What about more mainstream Americans? To address this, I triangulate the results above with survey data from a combined sample ($N = 730$) of 11 Amazon MTurk surveys conducted between November 29, 2016, after Trump's election, and March 19, 2017, in which respondents are asked about their current and previous ZIP code (if they moved in the past 20 years). As this is based on retrospective origin and current residence, it is less precise than verified Twitter geocodes. Yet it has the advantage of including more individual-level parameters such as education, housing status, and income. Respondents were asked about their 2016 vote, their warmth toward Trump on a 0–10 thermometer scale, and their preferred level of immigration on a 5-point scale from "increase a lot" to "reduce a lot." Results in Appendix Table A4 confirm those from the U.S. Twitter and U.K. longitudinal survey analyses in that being white (84 percent of sample) rather than minority predicts moving toward a relatively white neighborhood.

However, having voted for Trump, ranking him highly on a 0–10 thermometer or wanting immigration reduced a lot is not significantly associated with having moved to a whiter neighborhood. This is true for both whites and minorities, whereas in the Twitter data, minority Trump supporters showed a

TABLE 2 Models of having moved toward whiter area (U.S. Twitter)

	Model 1	Model 2	Model 3	Model 4	Whites	Nonwhites
Origin white percent	−0.730***	−0.748***	−0.585***	−0.585***	−0.586***	−0.579***
	(0.026)	(0.026)	(0.024)	(0.024)	(0.025)	(0.041)
White person	0.063***	0.062***	0.052***	0.072***		
	(0.014)	(0.015)	(0.013)	(0.016)		
Median area rurality			0.287***	0.287***	0.281***	0.315***
			(0.021)	(0.021)	(0.023)	(0.060)
Median area education change			0.593***	0.593***	0.562***	0.714***
			(0.112)	(0.112)	(0.127)	(0.083)
Median area income change			0.000*	0.000*	0.000*	0.000
			(0.000)	(0.000)	(0.000)	(0.000)
Trump sentiment		0.010**	0.007**	0.018**	0.005*	0.019**
		(0.003)	(0.002)	(0.006)	(0.002)	(0.006)
White x Trump sentiment				−0.013‡		
				(0.007)		
Constant	0.370***	0.365***	0.282***	0.264***	0.336***	0.262***
	(0.023)	(0.021)	(0.020)	(0.024)	(0.029)	(0.029)
N	3938	3201	3092	3092	2480	612
R^2	0.359	0.366	0.505	0.505	0.493	0.550

‡ $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
Source: Twitter, March 4–November 12, 2016. Age and gender dropped from the model to minimize listwise deletion, as not significant.

predilection for whiter neighborhoods. The difference could be due to the fact the Twitter sample selects for a small number of staunch minority Trump activists rather than average Trump voters or because the MTurk survey allows respondents to input previous ZIP codes, which could be from as far back as 20 years ago. Either way, both data sets find a weak to nonexistent effect of white ethnocentrism on destination choice: anti- and pro-diversity whites who start in analogous areas move to destinations containing a relatively similar share of minorities. Again, ethnicity but not immigration attitudes seem to matter for ethnic sorting, especially in diverse wards. This confirms American research with voter registration data, which suggests partisan motivations exert a limited effect on residential behavior and thus cannot explain partisan residential sorting (Cho, Gimpel, and Hui 2013; Martin and Webster 2017; Mummolo and Nall 2017).

DISCUSSION

The literature on segregation shows that whites tend to prefer neighborhoods where their ethnic group is in the majority. Whites with more negative attitudes to diversity tend to express a preference for less diverse neighborhoods than whites who are more positive about diversity. Compared to minorities with similar social characteristics, the results presented here replicate previous analyses that show that whites tend to choose neighborhoods that contain fewer minorities. However, in both America and Britain, anti-immigration whites are only marginally more likely to move to whiter neighborhoods than pro-immigration whites. This is important because it suggests that attitudes toward diversity, which predict mobility *intentions*, do not explain whites' ethnocentric mobility *behavior*. One possibility is that unconscious "fast-thinking" ethnocentric decision making is dominant among *both* whites who espouse and

oppose ethnocentrism. This suggests that "voice," that is, attitudes to national diversity and politics, may operate on a wholly separate cognitive plane from local "exit" and destination choice (Hirschman 1970). This points to a disjuncture between a relatively universal ethnocentrism in the realm of residence (and perhaps friendship and relationships) and a more politically contested ethnocentrism as regards national membership and public life.

Results broadly comport with work showing that the partisan composition of neighborhoods exerts a weak effect on residential choice and that amenities, demographics, and economic forces better explain partisan residential sorting. They also suggest that minority preferences or the network-based approach of Krysan and Crowder (2017) may offer a better explanation of ethnic residential sorting than self-conscious ethnocentrism. For instance, longitudinal census data show that living in a mixed-ethnicity household in Britain 10 years prior to a move has a considerable effect in counteracting a white Briton's general tendency to select a whiter destination. A similar integrating effect is recorded for minorities living in such households (see Appendix Table A2). This may reflect improved information on neighborhoods or the competing preferences of partners in interracial couples as *Understanding Society* data also reveal that whites—but not minorities—whose friends are all of the same race the year before a move choose somewhat whiter destinations than those who had a racially more diverse friendship group prior to moving. Yet neither living in an ethnically mixed house nor having friends of a different race prior to a move greatly reduces the main effect of ethnicity on destination choice. Further research in this area should focus on variation in individuals' weak ties, amenity preferences, or information environments (i.e., Krysan and Crowder 2017, Chap. 4) prior to moving in explaining residential choice.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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