‘White flight’?: Opposition to Diversity and Mobility Decisions in Britain, 1991-2012

Eric Kaufmann and Gareth Harris, Department of Politics, Birkbeck College, University of London

Abstract

Tests of the white flight hypothesis have employed subjective surveys or objective mobility data, but not both. British work has yet to distinguish between the material and cultural aspects of neighbourhoods which are associated with white outflow and avoidance. This study combines data from the British Household Panel and Understanding Society surveys with UK census data and findings from a specially commissioned survey of retrospective mobility. It assesses the impact of ethnic diversity and change on white British mobility decisions at ward level between 1991-2012. This is arguably the first study to link individuals' subjective attitudes with mobility data at several points in time, permitting a fuller assessment of the white flight hypothesis than has hitherto been possible. We find that white ethnocentrism and xenophobia matter, but exert only an indirect and marginal effect on white British residential mobility.

White Flight?: The Study of Majority Group Residential Behaviour

The domestic migration behaviour of members of the ethnic majority group is a critical part of the segregation equation (Crowder et al. 2011). In the United States, there is established work on white outmigration from minority neighbourhoods, or 'white flight'. This has its roots in studies of localised white outmigration in response to African-American urbanization during the Great Migration of the mid-twentieth century (Duncan and Duncan 1957; Schelling 1969; Frey 1979). Important work has examined white practices such as the 'redlining' of neighbourhoods which reinforced the economic and ethnic segregation of African-Americans (Massey and Denton 1993). In addition to white flight, researchers have also considered the possibility that whites may avoid as well as flee minority neighbourhoods, exacerbating ethnic segregation (Clark 1992; Quillian 2002).

More recently, scholars have begun to pay attention to the contextual effect of the fast-growing Latino and Asian populations on white mobility. (Frey 1996; Frey 2006; Card et al. 2008; Easterly 2009). For instance, whereas some speak of the 'end of segregation' (Glaeser and Vigdor 2012) due to increased African-American dispersion and the end of all-white neighbourhoods, others chart the growing number of all-minority neighbourhoods in America's most diverse metropolitan areas where whites are the only major group electing not to enter (Logan and Zhang 2011; Alba and Romalewski 2013).

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 et al. (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 our 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 neighbourhood with a large minority population. Counterintuitively, whites seem most averse to remaining in diverse neighbourhoods 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. On the other hand, *increases* in black population are more

salient for white mobility decisions than Asian and Latino growth (Crowder 2000: 245-6). Further studies using the PSID confirm the white flight thesis, but note that whites' likelihood of moving is modulated by the characteristics of adjacent neighbourhoods. Since moves tend to be short-distance, a paucity of whiter surrounding neighbourhoods tends to dampen white flight (Crowder and South 2008; Crowder et al. 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 neighbourhood composition cue cards find that whites are the ethnoracial group with the strongest own-group residential preferences. African-Americans are most integration-minded, while Hispanics and Asians fall in between, but are generally opposed to having a large share of black neighbours (Clark 2002; Charles 2005; Krysan 2002). This finding may be conditioned by 'race proxies': the more plentiful amenities and economic properties of white neighbourhoods (Harris 1999, 2001; Ellen 2000). Having said this, the survey work of Emerson et al. (2001) finds black share significantly deters whites even when other aspects of neighbourhoods are included in the model. What is missing in the current literature, as Krysan notes, is work which connects subjective attitudes to objective mobility behaviour. This omission is driven by a paucity of large-scale longitudinal data on attitudes. Yet only such studies can begin to distinguish between race-proxy and white flight effects. This is where this paper makes its principal contribution to knowledge.

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 indigenous national ethnicity operate strongly. White neighbourhoods 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 which constrain their choice of neighbourhood. It has generally been assumed that patterns of segregation reflect structural constraints and minority preferences rather than majority behaviour (Musterd and De Winter 1998;Arbaci 2007; Andersson 2009). Yet recent data suggests that while immigrants tend to locate near co-ethnics, those in the second generation are more mobile than ethnic majority Europeans (Vidal and Windzio 2011; de Valk and Willaert 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 neighbourhood 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 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 neighbourhoods 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: 85).

The Netherlands' roughly 10.5 percent minority population (as of 2006) is strongly concentrated in four cities - Utrecht, Amsterdam, Rotterdam and the Hague - where they make up a third of the population. An in-depth study of mobility patterns for whiter Dutch and minority groups found powerful evidence that white Dutch are avoiding areas with large shares of minority residents. Thus over 2002-2006, 22 percent of white Dutch left high-minority areas. However, the proportion of black Caribbeans (22%), Turks and Moroccans (18%) and other minorities (23%) leaving these areas was comparable. The big difference is in white avoidance rather than flight. Thus of those leaving high-minority zones, 72% of white Dutch chose whiter areas whereas just 40% of minorities did so - with the remaining 60% opting for other high-minority areas. Minorities also avoided white areas. Of minorities leaving whiter neighbourhood of these cities, 25% of Caribbeans and almost 40% of Muslims chose to move to nonwhite zones as opposed to a mere 7.6% of whites (Bolt et al. 2008).

Other studies find that ethnic groups tend to display own-group residential preferences. Semyonov and Glikman (2009) find that ethnic majority Europeans strongly prefer more homogeneous neighbourhoods, and that ethnocentrism, social conservatism and xenophobia are associated with a preference for more homogeneous areas. For the Netherlands, van Londen (2012), using the same experimental showcard technique as the MCSUI in the US, finds whites to have the most exclusive neighbourhood preferences: as in the US, they are the least willing to live as a minority and tend to prefer white majority areas. White residents of more diverse tracts evince higher comfort thresholds while those who express overtly negative racial attitudes, as in American work, display lower comfort

thresholds for minority group share. The work also shows that whites who express sentiments of ethnic threat are more likely to say they would leave a diverse neighbourhood. Both Semyonov et. al and van Londen reinforce the finding that Europeans are not distinct from Americans in preferring relatively homogeneous neighbourhoods, especially those with conservative or ethnocentric attitudes.

When it comes to actual mobility, there is further evidence for the white flight hypothesis, though the effects are difficult to prise apart from those of minority clustering. Rathelot and Safi (2013) find that in France, native whites are much less likely to move to heavily immigrant municipalities. Among immigrants, increasing the share of co-ethnics by 1 standard deviation reduces outmigration of co-ethnics by 21 percent. In the Netherlands, white Dutch are distinct insofar as the proportion of whites who are dissatisfied with their neighbourhood is 52% in areas that are 'majority minority' whereas minorities in those (often poor) areas only express 35% dissatisfaction. Meanwhile, white Dutch express an 87% satisfaction with very white areas while Muslims living in the same neighbourhoods are only 75% satisfied (Bolt et. al. 2008: 1372-80).

Yet others claim that race-proxy effects are at work. A Dutch survey of intentions to leave one's neighbourhood in Utrecht found that neighbourhood ethnic composition was not a significant predictor of white intentions once neighbourhood reputation, length of residence and other factors were taken into account (Permentier et al. 2009). Feijten and van Ham (2009) find that an increase in immigrant share is associated with white Dutch desires to leave a neighbourhood. However, they discovered that immigrant share washes out of the equation when subjective evaluations of a neighbourhood are taken into account.

Against this, Dutch native whites' neighbourhood comfort thresholds are barely raised when respondents are told that the minorities in their neighbourhood are well-educated: this

suggests race-proxy effects do not account for white aversion (van Londen 2012: 101). Likewise, Bolt et. al. (2008: 1380) claim ethnic differences in neighbourhood choices 'can only to a very limited extent be attributed to differences in socioeconomic status. The reluctance of many native Dutch to live in a neighbourhood with a substantial proportion of members of minority ethnic groups forms a major obstacle for urban policy aimed at countering segregation.'

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. 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 which 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: 579-80). As with American research, material considerations played a more important part than ethnicity in explaining white residential flows while white preference effects appeared to be weaker than in the American case.

Two important elements are missing from the British literature on white flight and avoidance, one of which is also absent from US scholarship. First, in contrast to American and European work, British studies of white mobility have yet to concentrate on the individual as the unit of analysis, nor have they simultaneously accounted for both the ethnic composition *and* socioeconomic character of wards. This article fills this lacuna in our understanding. Second, while American and European studies have probed white respondents' attitudes to integration and modelled actual residential behaviour, no study has brought subjective attitudes and objective longitudinal behaviour together. This work does so while employing a longitudinal approach which tests for reverse causation.

Data

The British Household Panel Survey (BHPS) is an annual longitudinal study of some 5,500 households containing 10,300 individuals in England and Wales which 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 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 5,000 individuals drawn from the five most prevalent nonwhite groups in Britain. We use linearly interpolated 1991, 2001 and 2011 ward-level census data from the Office of National Statistics which is attached to individual survey records in the BHPS and UKHLS. To resolve the problem of boundary changes between the decennial censuses, we use Geoconvert[4] software to match 1991 wards to a common 2001 geography. 2011 wards were aligned to 2001 boundaries by building up from Lower Super Output Areas.[5]

While similar to the Panel Study of Income Dynamics (PSID) in the United States, the BHPS contains modules covering a wider array of subjective measures. Party vote, political participation, political attitudes, reasons for moving, perceptions of neighbourhood, national identity and newspaper readership 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 twenty-year profile of white incomers to, outmigrants from, and stayers in, diverse wards. Our BHPS-UKHLS sample consists of 192,347 person-years of data for 1991-2012 across twenty survey waves. Wave size varies between 6684 and 10,218 for the 18 waves of the BHPS, and the first wave of the UKHLS, which contains a subsample of 7,000 individuals linked to the BHPS. The second wave of the

UKHLS contains a sample of 34,015. 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[6].

Figure 1 traces the set of potential predictors available in the data that impinge on mobility decisions. In addition to contextual variables from the census and demographic parameters at individual level - which have been deployed in the PSID - we add attitudinal measures, offering a new dimension to this kind of analysis.

[figure 1 here]

Given the annual sample size of approximately 10,000 individuals in the Citizenship Surveys and BHPS-UKHLS (even as person-years exceeds 192,000), many of the over 8800 wards of England and Wales have little or no representation in these surveys. Therefore we group wards by diversity, building on the strategy of Simpson (2007) and Simpson and Finney (2010), in which wards in England and Wales are allocated to five quintiles, each containing a fifth of the minority population (see table 1). These are arrayed from the quintile with the highest minority-share (102 of 8850 wards in 2001, 166 of 8571 wards in 2011) to the lowest minority-share quintile (7554 of 8850 wards in 2001, 6722 wards in 2011).[7]

Quintile scores are recalculated for each year based on interpolated census data to attach a quintile score to each person-year in the data (see table 1). Those who move wards

within a diversity quintile are deemed to be non-movers for the purposes of this study. Those who move from low quintiles to higher ones are treated as movers toward diversity, and those who move the other way are considered movers from diversity - as shown by the arrows in table 1. Area change, in which wards change quintile due to *in situ* ethnic shifts, do not affect our results as we restrict our inter-quintile analysis to movers only.

[table 1 here]

The combined BHPS-UKHLS for 1991-2012 yields a total of 192,171 person-years of data, as shown in table 2.

[Table 2 here]

From table 2, we see that 175,403 person-years, 91.3 percent of the sample, did not move in the previous year. Even among the 16,768 moves, 9163 (67 percent) took place within ward. This means only 7.1 percent of the sample involved a move between wards. Note this figure is in person-years, therefore the share of individuals in the survey who moved at least once would be considerably higher - especially among individuals who survived the nineteen waves of the survey (thereby leaving a nineteen person-year footprint each in the data). Our BHPS-UKHLS figure compares well to census figures. The 2001 census finds that 40,614 individuals in a 1% sample of the census (526,458 persons) moved into their ward during the

year 2000-2001 from another ward (ONS LS 2001). This represents 7.7 percent of the population, analogous to our 7.1 percent annual inter-ward move figure.

A further question concerns the diversity of wards. The typical move is between two homogeneous wards in quintile 1. Our focus therefore falls on the 2436 white UK-born moves away from diverse wards and the 2051 white UK-born moves toward them. These 4487 person-years represent about 2 percent of the BHPS-UKHLS sample. Notice that this dataset - among the longest running longitudinal surveys in the world - underpins our contribution to knowledge: without a longitudinal structure to the data, we could not determine moves to and from diversity. In the absence of a large enough sample we could not amass sufficient cases for meaningful analysis of the ethnicity of movers in diverse wards. Note as well that among stayers, some found themselves in wards that shifted quintile in a given year due to *in situ* ethnic shifts.

Table 2. Aggregate Population Flows from BHPS-Understanding Society, 1991-2012 (person-years)

[Table 2 here]

The BHPS-UKHLS permits us to observe the demographic, socioeconomic and attitudinal characteristics of movers. In an ideal world, the dataset would ask a question on attitudes to race or immigration. The survey does not do so, but records a series of items that are well-known predictors of such attitudes (Fetzer 2000) - some in each wave, some only

occasionally. These include modules on political and moral issues, voting behaviour, national identity, newspaper readership, age, education and class.

Methodology

Dependent Variable. We use logistic regression to estimate the likelihood that an individual will move wards away from (1) or toward (0) diversity, with diversity expressed as quintiles 1 through 5. A subsequent formulation employs an ordered logit strategy with the dependent variable running from +4 (move from quintile 1 to 5) to -4 (shift from 5 to 1) as in table 1. Quintiles are used because they allow for comparison with the ONS Longitudinal Study (ONS LS), a census dataset whose confidentiality restrictions force us to band the data.[8] Finally we use an Ordinary Least Squares (OLS) model with a continuous dependent variable for change in percent minorities in ward. While these modelling strategies result in only a partial picture of the motivations driving residential choice, they have the virtue of screening out the myriad factors associated with residential moves in general, such as age, education and income. We control for the clustering of individuals within the same census wards by using robust standard errors in Stata 13.0.

Independent variables. Contextual parameters, from the 1991, 2001 and 2011 census interpolated to the current year, include the proportion of the ward of residence comprised of ethnic minorities, the Carstairs index of multiple deprivation[9] - a measure of the poverty or affluence of an area - and population density. Current and lagged variants of both are included to control for the material properties of individuals' origin and destination ward.

We test a variety of individual-level parameters. Demographic and economic variables include age, marital status, sex, income, education, occupational class - manager/professional, middle, lower supervisory, working, unemployed/never worked; employed or not, tenure (renter, owner, council tenant) and the presence of dependent children.

In addition, we add more subjective variables from the BHPS/UKHLS to explore motivations for moving. Voting, social conservatism and national identity have been found to be associated with white opposition to diversity and immigration in Britain (Ford and Goodwin 2010; Ford 2008). We include a dummy variable for party support, which carries the value of 1 for the Conservative party, 2 for Labour and 3 for Liberal and 4 for non-voters. Another important attitudinal question asks whether respondents identify as English, also associated with English nationalism and opposition to immigration. This takes the value of 1 for those who identify as English, and 0 for other responses. 52.8 percent of white UK-born respondents identified as English, in line with the 40-50 percent recorded in most surveys or 60 percent in the 2011 census.[10] We also test for tabloid versus broadsheet readership, also connected with opinions on immigration.

Occasional questions in the BHPS-UKHLS probe broader feelings towards British nationalism and patriotism: whether the respondent considered British Citizenship the world's best, or if Britain had reasons to be ashamed of its history and foreign policy. Other items examine attitudes to homosexuals and cohabitation, levels of interpersonal trust, and position on a left-right scale. The left-right scale is composed of six questions, which ask about views on economic redistribution, trade union strength, state intervention in the economy and state ownership of public services[11]. In addition, there are a series of questions posed in alternate waves of the BHPS and UKHLS which tap respondents' views on family values and gender relations, and are associated with openness to diversity in other work (e.g. Inglehart 1990).[12]

These have an inter-item correlation of 0.73 and are therefore combined into a single index of social conservatism. On attitudinal items that were asked intermittently in the BHPS, between-respondent variation was overwhelmingly dominant over within-variation thus we felt we could safely interpolate attitudes within individuals across all waves of the survey based on answers recorded in available years.[13] This technique allows us to minimize listwise deletion while generating a wider array of applicable proxy questions for attitudes to immigration. Variables that have been interpolated in this way are identified in table 4.

Results

Results are shown in table 3, with the sample restricted to inter-ward movers. A number of striking findings emerge. First of all, the lagged share of minorities predicts a move away from diversity in the logit model (1a). This is not surprising because the greater the share of minorities in one's previous ward, the fewer the options for moving to even higher minority wards, and vice-versa. Movers to London have generally moved to a more diverse ward as any movement into the city from the rest of the UK tends to bring in people from less diverse places. Lagged and current Carstairs deprivation scores show that individuals moving from better off, low density wards to poorer, built-up ones move toward diversity while those leaving diversity originate in denser, poorer wards and wind up in wealthier, less urban ones.

Among individual-level predictors, race predicts a move toward or away from diversity when controlling for other variables. In addition, the interaction between race and lagged minority share is significant in model 1b while the sign for whites reverses. This suggests whites who originated in diverse wards are more likely than whites from less diverse wards to move in the direction of lower diversity and minorities in homogeneous wards are more likely than whites in the same wards to move toward diversity. This is so even when

taking account of initial ward diversity which suggests high initial ward diversity exerts an added impetus for whites to move away from diversity - or minorities to leave white wards. The strongest association, however, is between private renting and moves to diversity. This reflects both the single skew of the white population in diverse urban wards (an interaction term for white singles is significant in some models) and the high proportion of the immigrant/minority population who are private renters.

The dependent variable in models 1a and 1b is only able to discriminate between moves to and from diversity. Yet there is arguably a difference between an individual who moves from the most diverse quintile (5) to the least (1) as compared to the many whites who shift between moderately diverse quintile 2 and quintile 1, or the many minorities moving between quintiles 3, 4 and 5. Quintile change is a more nuanced measure of change than a simple to/from dummy.

Model 2a presents results for an ordered logit of the same parameters regressed on quintile change. This brings the ethnic variables out more strongly: white/nonwhite is a significant individual-level predictor. Interacting with share of minorities in ward (model 2b) reverses the sign of race as a predictor as before, reinforcing the finding that race is significant in interaction with ethnic context: whites in diverse wards and/or minorities in whiter wards are attracted to wards with higher own-group concentrations. Models 3a and 3b repeat the analysis with an even finer-grained measure, namely change in the percentage share of minorities recorded between previous and current ward of residence. Patterns are the same: white is a significant predictor of a move away from diversity. The negative cross-level interaction coefficient for whites originating in diverse wards and/or minorities originating in white wards has strengthened, indicating important race-contextual interactions.

In these fine-grained models, class and education become significant predictors of a move from diversity. Working class respondents (defined by occupational structure) compared to managerial and professional groups, and those with no qualifications compared to degree holders, are more likely to move in the direction of low diversity. When working class is run as an interaction with white this is also significant in predicting a move away from diversity.[14] This reflects the oft-noted association in the ethnic majority population between higher education or socioeconomic status and more cosmopolitan/tolerant attitudes (Inglehart 1990; Ford 2008).

[Table 3 here]

Figure 2, based on the same model, shows that both white and minority movers tend to move to less diverse wards the more diverse their ward of origin. Yet a significant ethnic gap opens up as the share of minorities in ward of origin exceeds 10 percent. At an origin ward of 50 percent minorities, for example, a white British mover will move to a ward that is 10 points whiter than a comparable minority individual, with other variables held at their means.

[Figure 2 here]

Attitudinal Variables

The foregoing shows that the interaction between race and racial context is a significant predictor of whether one moves to or from diversity. How much of this stems from white racial preferences? To test this we interact white identity with a range of attitudinal predictors which are associated with attitudes to race and immigration in the public opinion and voting literature (i.e. Ford and Goodwin 2010; McLaren and Johnson 2007). Table 4 shows that attitudes and partisanship are not significant: only trust enters the model. Yet this model is not restricted to whites: when we run interactions with whites only, no attitudinal effects remain significant. Thus the few attitudinal effects that are significant in table 4 are trans-racial rather than white-specific. Though conservative whites express a preference for whiter neighbourhoods in survey work (i.e. van Londen 2012), they do not seem to be acting on these preferences. Indeed, their residential choices appear indistinguishable from those of liberal whites. This is in line with American research with voter registration data which suggests partisan motivations exert a limited effect on residential behaviour (Cho et al. 2013).

[Table 4 here]

Though we have 4487 person-years of moves toward or away from diversity, just 529 consist of minority person-years. Though affording ample degrees of freedom, it is important to triangulate against a larger sample of unique individuals. As a robustness check, we examined the ONS Longitudinal Study, a 1% census sample of the population of England and Wales. With some 550,000 individuals per year linked between 2001 and 2011, the number

of unique minority inter-quintile movers over this decade exceeds 3,000, with over 28,000 white British inter-quintile movers.

[Table 5 here]

As in the BHPS-UKHLS, ethnicity is an important predictor, with ethnicity and ethnic context interacting in the expected direction. One difference in this sample is that white British does not reverse its sign when we add a white British interaction with ethnic context. This may be due to the 10-year rather than 1-year time span or the larger minority sample in the ONS LS. Regardless, the findings regarding the power of ethnicity and ethno-contextual interactions in predicting the ethnic makeup of origins and destinations receives validation here. English national identity and religion (Christian or none) are the only attitudinal predictors in the census.[15] Among white British movers, neither is associated with having chosen a less diverse ward. White British who identify as English rather than British are consistently more likely to oppose immigration and support anti-immigration parties such as the British National Party (BNP) or UK Independence Party (UKIP) (Ford and Goodwin 2010). Yet there is no significant difference between White British inter-ward movers who identify as English and those identifying as British or Celtic when it comes to the change in minority share between origin and destination ward. Given the size of this dataset, this furnishes a further piece of evidence against the white flight hypothesis. Among ethnic minorities, however, English identifiers are significantly more likely to move to whiter areas than minorities who ticked the British or 'other' national identity box on the census. Minorities who mark their religion as 'none' are also significantly more likely than other minorities to move to whiter wards.

It is however the case that white British people who were intermarried or living in mixed-ethnicity households in 2001 are significantly less likely than other white Britons to have left diverse wards and more likely to have moved into them during 2001-2011, echoing the findings of previous American research (Iceland 2009: 124-40; Ellis et. al 2007; Clark & Maas 2009). Being intermarried or living in a diverse household is an indicator of trans-racial social networks as well as a high ethnic comfort threshold. Minorities in the household also shape the mobility of whites in the dwelling. It is therefore not possible to use this as a proxy for white tolerance.[16] Our conclusion therefore remains that white opposition to diversity may prompt an avoidance of integration in showcard studies but has little *de facto* impact on mobility patterns.

Longitudinal analyses show that conservative British whites are no more likely to seek out white spaces than liberal whites. Still, the questions asked on the BHPS-UKHLS and census are indirect measures of racial conservatism - as such they may be viewed as imperfect measures of racial attitudes. In order to more directly address the constructs of interest, we commissioned a Yougov survey of 1,869 nationally-representative British adults in late July 2013.[17] Respondents included 1,638 white British individuals. This tool was used to bring respondents' racial attitudes together with their perceived mobility history. Accordingly, after being told that council wards contain approximately 10,000 - 30,000 people, respondents were asked if they had moved ward in the past ten years. 384 white British individuals answered yes. These individuals were prompted, 'as far as you know, did the last local council ward in which you lived have a) more people from an ethnic minority background, b) fewer people from an ethnic minority background or c) about the same?' Those in the first category are treated as having moved away from diversity, those in the second towards it, and those in the third group have remained in wards of the same diversity (See Appendix 2 for further details).[18]

Attitudinal questions examined respondents' comfort levels with minorities across a range of roles including spouse, friend, boss, and even Prime Minister. 20-33 percent of white British respondents expressed discomfort with minorities in these roles, depending on the question. We also asked about respondents' views of immigration, using a standard module on the subject deployed in the Department of Communities and Local Government's Citizenship surveys (ONS and Home Office 2007-2011). Responses are in line with those in other datasets and surveys, with 75 percent of white British respondents in favour of reducing immigration, and 57 percent desiring that immigration be reduced 'a lot.'

Finally, we asked a question on individuals' ethnic comfort threshold for their neighbourhood. Respondents were initially queried as to whether they were comfortable with the current level of minorities in their neighbourhood. If they answered in the affirmative, they were next asked whether they might become uncomfortable if the proportion of minorities increased or decreased beyond a certain point. 737 (58.5%) of white British respondents who gave a response said they would become uncomfortable if the share of minorities exceeded a certain limit. The other 524 white British respondents (41.5%) either said there would be no point at which they might become uncomfortable or said they would become uncomfortable if the share of minorities decreased. Such respondents were grouped together for the purposes of analysis.

Those that said they would become uncomfortable at some point were then asked, 'at which point would you become uncomfortable about the number of ethnic minorities.' Responses broadly follow the strategy of the MCSUI, beginning with minority shares of over 75% and moving through to less than 1%, an 11-item scale. Responses have been aggregated into six categories in figure 2 for ease of interpretation. Results of a crosstabulation between the question on whether an individual had moved away or toward a diverse ward, and the question on ethnic comfort threshold, is presented in figure 2. For interpretive purposes, those

moving away from diversity are labelled 'white flight', those moving toward it 'gentrifiers', and those moving to a similarly diverse area as 'same diversity.'

[Figure 3 here]

What is striking is how tightly the three lines cluster through most of the ethnic comfort distribution. This signifies that individuals' prospective ethnic comfort thresholds for their ward had no effect on whether they moved toward, away from, or within identical levels of ward diversity. Lines begin to move in the predicted direction after the 50 percent threshold is breached and start to diverge only beyond the one-quarter mark for minority share in ward. Approximately 15 percent of white British respondents who reported they moved to less diverse areas over the past decade indicated they would be uncomfortable in neighbourhoods with a quarter or fewer minority residents. Notice, however, that the lines increasingly spread as one moves from the 17-25 percent maximum comfort threshold to 10 percent or below. 11 percent of white British movers simultaneously left diverse wards and expressed a tolerance threshold of ten percent minorities or less. Here, then, we find concrete evidence for a white flight effect, albeit in a limited sample using self-reported retrospective mobility data.[19]

Graphed trends are reflected in the models in table 4. The first two models attempt to predict whether a white respondent has moved toward or away from a diverse ward. When we take a quadratic of ward ethnic comfort threshold (cubing or fourth power), the coefficients strengthen, reflecting the non-monotonic nature of the relationship between comfort threshold and mobility behaviour. The first includes those who said there was no point at which they would become uncomfortable with the share of minorities in their ward. The second excludes these individuals because question wording makes it possible to

interpret this as a 'don't know' or because social desirability may be coming more strongly into play with this question. Coefficients are markedly stronger in the second model than in the first. Model 4 compares white British respondents who moved to wards of similar diversity with those who moved to more diverse wards and finds those moving toward diversity to have significantly higher ethnic comfort thresholds. Finally, model 4 compares movers to diverse wards with stayers, which produces a much larger sample and shows that stayers - more so than those leaving diversity for whiter areas - have lower ethnic comfort thresholds than those heading to diverse wards.

[Table 6 here]

How important is the white flight effect for segregation? It is worth bearing in mind that the effects of ethnic discomfort are associated with actual 'flight' from diversity among just 3.5 percent of white British movers in the sample (2.5 percent if we consider only those at the 10 percent threshold or below). Moreover, attitudes to race and immigration explain only part of the variation in ethnic comfort thresholds.[20] The path from conservatism to racial attitudes to actual mobility is therefore indirect: running from ideology to race-specific attitudes to racial comfort thresholds, and thence to mobility.

To bridge the longitudinal and cross-sectional analyses, our survey asked a series of attitudinal questions to match the BHPS-UKHLS. Of these only Conservative party identity is (barely) significantly associated with ethnic comfort threshold. English national identity, tabloid newspaper readership and education level predict attitudes to immigration but not ethnic comfort threshold. This is why, within our longitudinal studies, we see no significant association between our measures of conservative/liberal attitudes and actual moves to and from diversity. From the foregoing we expect that if an ethnic threshold question was asked

in the UKHLS or census it would likely predict a move to or from diversity. Having said this, we expect the effect would be marginal, not nearly enough to account for the substantial ethnic differences in mobility behaviour we discovered in the longitudinal models in tables 3 and 4.

How, then, to explain the importance of ethnicity and ethnic context for individual mobility? Material constraints are unlikely to provide the answer, as these have been accounted for at both individual and contextual levels. 2011 census results suggest individual minority ethnic groups (i.e. Afro-Caribbean, Pakistani) are deconcentrating but electing to move to wards with a substantial presence of other minorities (Johnston et. al 2013). Compared to white British, minorities are much more likely to leave heavily white areas. Minority preference, or discrimination, could therefore be driving the model. Yet the share of white movers from highly diverse wards opting for whiter wards is so much larger than for minorities that white preferences cannot be discounted. One possibility is that whites seek different amenities from minorities (i.e. pubs and nature trails rather than ethnic markets or proximity to a mosque), and these are correlated with a ward's ethnic makeup. As Thomas Schelling remarked, if blacks are Baptists and whites Methodists, the two will be segregated on a Sunday morning even if there is no conscious ethnic avoidance taking place (Schelling 1978: 137).

Since white attitudes are not a significant predictor of where whites move, it may be that minority, rather than white, dynamics underlie the white-minority difference in relocation destinations we encountered in tables 3-5. This need not be about minorities sticking together, but could be caused by the availability of ethno-specific amenities. Houses of worship, for instance, are an important correlate of ethnicity for minorities. Consider figure 4. The proportion of ethnic minorities who say their ethnicity is 'important to my sense of who I am' is 45 percent in the whitest wards, rising to 55% in wards with the highest share of

minorities. This is a statistically significant finding that holds when we control for age, education, birthplace, region, income and other factors.

[Figure 4 here]

Yet when we limit our analysis of Citizenship Survey data to minority individuals who have moved neighbourhood in the previous four years, strength of ethnic identity is no longer a significant predictor of area diversity. Religion, on the other hand, remains significant. Minorities who identify strongly with religion account for only a third of minorities in the whitest wards, but this rises to almost two-thirds for those living in the strongly minority wards where most reside. The strengthening of religious identity in own-group areas is a powerful effect independent of age, education, income, birthplace, marital and housing status, region or length of residence. It holds as strongly for those who have moved into an area within the past four years as it does for those who have lived there their entire life.

The pattern is partly explained by the availability of religious facilities, partly by the pull of community norms, and also by individual conviction. Minorities who attend services once a week or more live in wards that average 58 percent minorities, whereas those who attend less than once a month live in wards averaging 52 percent minorities (UKHLS 2009-12). 70 percent of Muslims in heavily white wards in the Citizenship Surveys claim to be practicing as against 84 percent in the diverse wards where the vast majority of Muslims live (ONS and Home Office 2007-2011). Clearly religious amenities are a factor which contributes to unconscious residential segregation because minorities who have moved recently have a similar level of ethnic attachment in minority and white areas. The big difference is access to religion. Since religious amenities are correlated with ethnicity, those

who want easy access to a mosque, Hindu temple or African pentecostalist church will be drawn to an area even if they have no desire to live near their own group.

It may be objected that the aforementioned data are strictly cross-sectional. Rather than more religious and ethnically-minded minorities clustering in minority areas, it could be that community pressure in minority areas causes people to become more ethnically and religiously attached. Understanding Society (UKHLS) is a longitudinal survey which contains questions on religious observance and has a large ethnic minority sample. Minority movers who attended religious services infrequently in wave 1 (2009-10) moved to whiter wards in waves 2 (2010-11) and 3 (2011-12) than minorities who had attended regularly. This holds with controls for religious affiliation, age and other factors. This suggests that minority places of worship, especially but not only for non-Christians, are more difficult to access outside minority-rich areas. All of which affects minority mobility.

Minority familial and social ties are also important. Yet these only furnish part of the story since these connections pertain to individual ethnic groups rather than minorities as a whole. In both the BHPS/UKHLS and ONS LS, ethnic minorities are attracted to their own areas. Nonetheless, even when we control for the change in the share of Afro-Caribbeans experienced by an Afro-Caribbean mover - and likewise for Bangladeshis, Pakistanis and White British - a significant white-minority difference remains.

This could be down to minority skittishness about moving to highly white neighbourhoods: in London, a Caribbean person may prefer a superdiverse ward (i.e. in Croydon) to a strongly white one (i.e. in Bexley). Discrimination and information asymmetries may also play their part. There is a long literature on housing discrimination, especially against African-Americans (Denton and Massey 1993). We find the white-minority gap in the ethnic composition of origins and destinations holds for both renters and

owners, though it is stronger for the latter. This suggests that if discrimination or steering of minorities to certain areas is in play, it is prospective sellers or estate agents who are discriminating more than landlords. Minorities may lack the information or contacts to easily settle hitherto white areas, but one would expect this to fade significantly among the second generation. Yet the effect of being UK-born, holding a British passport or speaking English as one's native language on the likelihood of a minority individual moving to a whiter area is small. Minorities who identify as English, however, are significantly more likely to have moved to white wards. This intimates that a sense of deep integration, or the confidence to see oneself as part of the nation, is a more important determinant of minority residential behaviour than a mere familiarity with British life.

Are there any clues to white British mobility? Among white British people who have recently moved into an area, national, religious and ethnic identity, along with immigration attitudes, are broadly similar across wards (UKHLS 2009-12).[1] However, social ties - which link whites to whiter wards while minorities are pulled toward diverse ones - matter. For instance, figure 5 shows that white British people who moved to a more diverse ward during 2009-12 moved further away, on average, from their mothers and see them less often than other White British. The reverse is true for minorities. White British who moved to a whiter ward in the same period tended to move closer to their mothers and see them more often (UKHLS 2009-12). This is a significant effect that holds when controlling for many of the usual drivers of mobility such as age, income or education. It loses significance when we control for the urbanity and deprivation of origin and destination wards, but diverse urban wards tend to be deprived, so this does not rule out the observation that family networks may explain part of the gap in destinations between minorities and whites.

[1] when other characteristics are taken into account

[Figure 5 here]

Hedman (2013) shows that family networks are an extremely robust predictor of destination choice in Sweden, with the odds of moving to a neighbourhood increasing four times if family members are present. Though the effect is greater for ethnic minorities than whites, the presence of family members exerts a substantial effect for all groups. This does not eliminate the independent predictive power of ethnic composition for mobility, but Hedman notes that for immigrants in Uppsala, Sweden, the share of immigrants in a prospective neighbourhood would need be 2.5 times the mean to equal the attractive effect of a family member (Hedman 2013: 42).

Friendship networks count too. Since friends tend to be located in whiter areas for the white British population, following them tends to mean relocating to a whiter area. Again, an unconscious motive propels segregation. For White British respondents in the UKHLS, those who move to wards with more minorities are significantly more likely to have friends of a different race than those who moved to whiter areas. The question was asked only once in UKHLS so the data do not however permit us to discern whether moving to a more diverse ward increases inter-ethnic friendship or inter-ethnic friendship networks affect destination choice. However, the pattern is much stronger for White British than minorities. Also, the finding that inter-ethnic friendship affects white mobility would corroborate results shown in table 5 - that White British living in mixed-ethnicity households in 2001 are significantly more likely to have moved to a diverse ward by 2011 and less likely to have opted for whiter wards (ONS LS 2011). Amenities may also count. White British may be drawn to pubs, garden centres or rugby grounds while minorities seek proximity to group-specific places of worship or ethnic markets. None of this need be linked to a conscious desire to defend and

enhance ethnic boundaries - minorities, as we have seen, are considerably more attached to their religion than their ethnicity in wards where they are concentrated.

Just as important is that white British seem to be more attached to, or to rate the reputation of a neighbourhood more highly, when it is more strongly white. The race proxy thesis in the American mobility literature argues that material amenities and economic properties of white neighbourhoods make them more attractive to all (Harris 1999, 2001; Ellen 2000). A similar claim is made by some geographers in Britain, i.e. Catney and Simpson 2010; Simon 2010. Yet material properties are not the full story. Emerson et al. (2001) finds black share in the US significantly deters whites even when one accounts for prosperity, crime and other objective aspects of neighbourhoods. Revealingly, a Dutch survey of intentions to leave one's neighbourhood in Utrecht found that ethnic composition was not a significant predictor of white intentions once neighbourhood 'reputation' was taken into account (Permentier et al. 2009). Feijten and van Ham (2009) find that an increase in immigrant share is associated with white Dutch desires to leave a neighbourhood. However, immigrant share is no longer important once subjective evaluations of a neighbourhood are taken into account. We seem to repeatedly encounter a mysterious aspect of reputation which cannot be captured by material criteria and affects whites more than minorities. Van Londen (2012: 101) finds that white Dutch neighbourhood minority comfort thresholds are barely raised when respondents are told the minorities in their neighbourhood are well-educated. Again it appears that intangible properties correlated with ethnicity are shaping whites' neighbourhood evaluations.

Contrast figures 6 and 7. These show that white British in white wards manifest higher neighbourhood identity than those in more diverse wards. This gap of nearly fifteen points across ward diversity deciles has only a weak analogue among minorities, though they,

too, are less attached to diverse neighbourhoods than white ones. In statistical models, the strength of the effect is greater for white British respondents than for minorities.

[Figure 6 here]

[Figure 7 here]

White British who have recently moved neighbourhoods are less attached to their areas than long-term residents, but even here, those in whiter wards are significantly more attached than those in minority-dominated wards. This holds with all the usual controls for age, education, income, marital and housing status, and region. White British identification with religion, by contrast, differs only slightly between wards, though there is an interesting uptick in diverse wards, which may reflect a positive effect of minority evangelicalism or white conversion to non-Christian faiths.[2] It may be that unconscious, behaviouralist processes - Kahneman and Tversky's (2011) 'type 1' thinking - is operating, whereby whites unconsciously perceive minority areas as less desirable. Yet if this is true, it is unclear why evaluations should differ so much between white British in their twenties and those in older age groups.

Discussion

[2] Of 262 White British respondents living in the most diverse quintile of wards who answered the religion question on the UKHLS, nearly 20 percent described their faith as Muslim. For the Citizenship Surveys, the proportion is 4 percent in the most diverse decile, though the degree of diversity in the most diverse decile is much lower in the Citizenship Surveys than UKHLS. Either way, an important number of White British people in diverse areas adhere to non-Christian faiths.

We show that, contrary to much British literature but in line with American and European research, ethnicity matters for residential mobility in Britain. Do white flight or race-proxy explanations best account for the role of ethnic majority behaviour in shaping patterns of segregation? Our research shows that white British ethnocentrism and xenophobia has a very limited effect on white mobility.

The white flight/avoidance literature in Europe and the United States has relied on separate studies of subjective attitudes and objective mobility behaviour, but has not demonstrated a connection between the two. A principal aim of this paper was to bring these two perspectives together by harnessing the power of longitudinal British datasets. Our results show that conservative whites are no more likely than liberal whites to move to homogeneous wards. Longitudinal survey questions measure racial attitudes imperfectly, so we commissioned a survey of retrospective mobility behaviour with a rich sample of racial attitude items. Here we find evidence of racially-motivated self-reported residential behaviour among whites, but only at the margins. We therefore argue that white ethnocentrism and xenophobia exert a limited, indirect effect on mobility decisions and are thus not an important driver of segregation in England and Wales. Socioeconomic disparities between ethnic groups do not explain the patterns. Instead, we suggest cultural preferences and social ties correlated with ethnicity may be producing ethnically distinct patterns of mobility and settlement. Further research on residential mobility should focus, as far as data allow, on isolating the independent effect of cultural preferences and social ties from those of ethnic boundary maintenance.

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Figure 1: Flow Diagram of Mobility Decisions, BHPS-UKHLS

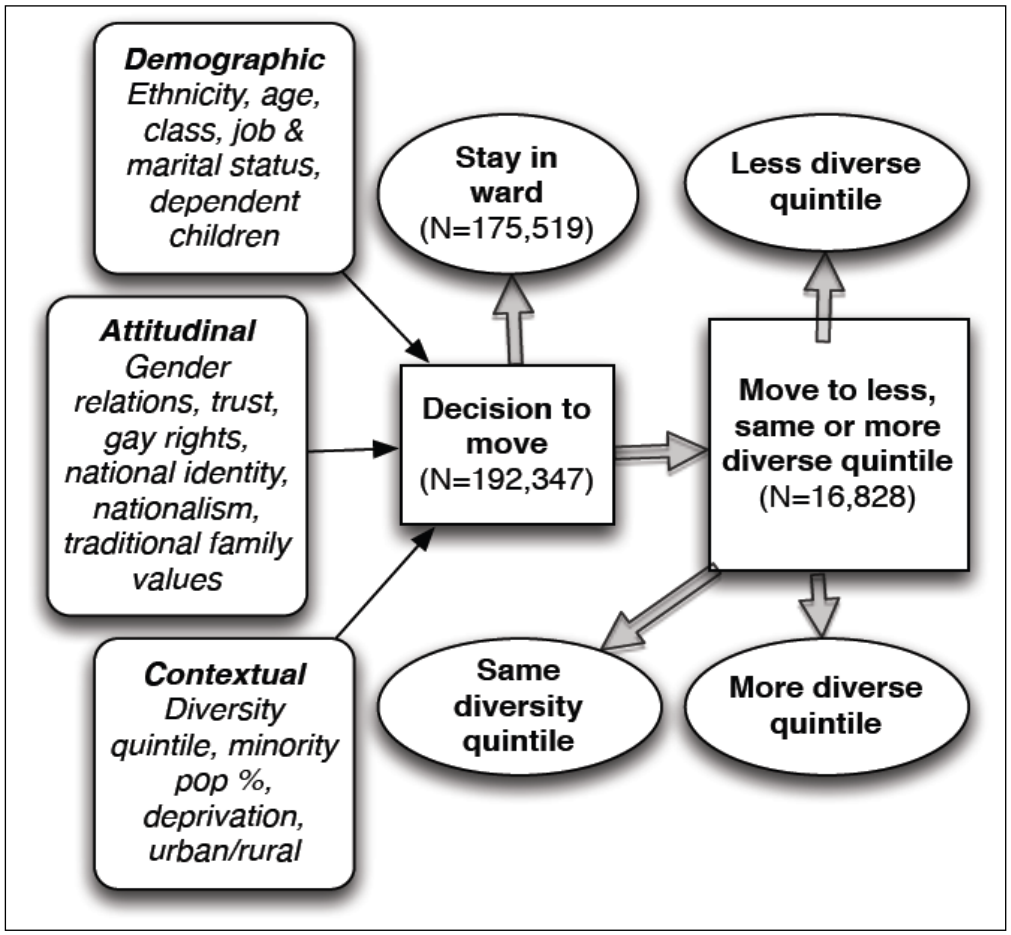


Table 1. Wards by Diversity Quintile for 2001 and 2011 Census

Selection away from diversity

Selection toward diversity

	Wards 2001	% White 2001	Wards 2011	% White 2011
Whitest Quintile 1	7554	98	6722	94
Quintile 2	726	87	1029	79
Quintile 3	288	73	406	58
Quintile 4	180	57	248	40
Least White Quintile 5	102	33	166	21
Total	8850	88	8771	82

Source: Simpson 2007; ONS Census 2011.

Note: To allow comparison the 2011 census data has been converted to 2001 frozen ward boundaries, 79 wards were lost in the process.

Table 2. Mover Classification from BHPS-UKHLS Data

	Change in diversity				
Mover status	Same	Less	More	Total	Share
Stayer	171430	1949	2042	175403	91.3%
Inter-ward mover	9163	2436	2051	13650	7.1%
Intra-ward mover	3083	38	42	3118	1.6%
Total	183631	4423	4117	92171	10.0%

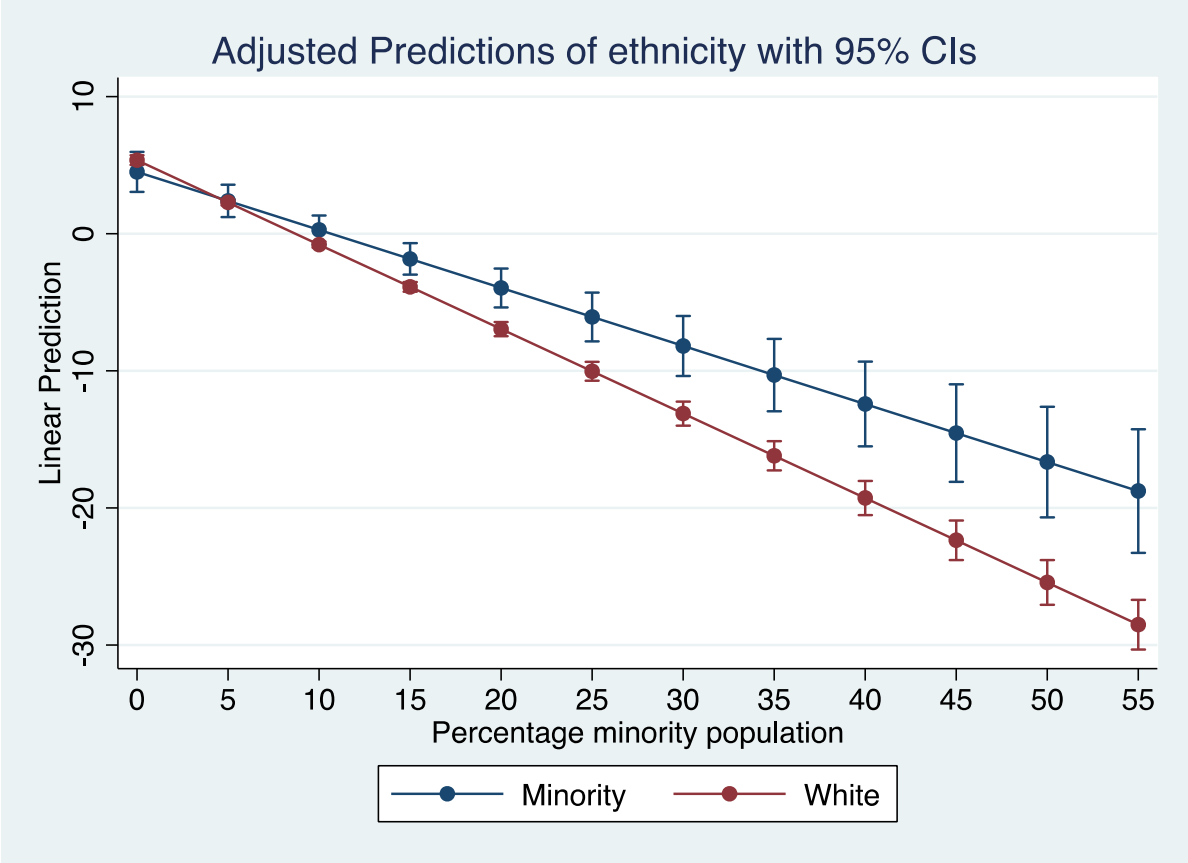
Source: BHPS 1991-2008; Understanding Society 2009-12. N.B.: A number of wards changed diversity quintile hence stayers or intra-ward movers can experience change in their diversity.

Table 3. Predictors of Inter-Ward Mobility, 1991-2012. Material Factors Only.

	Model 1a *Away (1) v Toward (0) Diversity*	Model 1b *Away (1) v Toward (0) Diversity*	Model 2a *Away from Diversity (Quintile Change)*	Model 2b *Away from Diversity (Quintile Change)*
White x minority pop.		.07 (.01)***		.05 (.01)***
Lagged minority pop. (ward)	.10 (.01)***	.06 (.01) ***	.09 (.00)***	.06 (.01)***
White (versus nonwhite individual)	.60 (.21)***	-.95 (.27)***	.71 (.13) ***	-.47 (.16) ***
Income	.04 (.04)	.02 (.05)	-.00 (.02)	-.01 (.02)
Female	-.02 (.09)	-.01 (.09)	-.00 (.04)	-.02 (.04)
London	-.76 (.22)***	-.78 (.22)***	-1.25 (.14)***	-1.28 (.14)***
Lagged Carstairs Deprivation (ward)	.17 (.02)***	.17 (.02) ***	.10 (.01)***	.10 (.01)***
Lagged pop. density (ward)	.03 (.00)***	.03 (.00) ***	.01 (.00) ***	.01(.00)***
Current Carstairs Deprivation	-.32 (.03)***	-.32 (.03)***	-.22 (.01) ***	-.21 (.01)***
Current pop. density	-.04 (.00)***	-.04 (.00)***	-.03 (.00)***	-.03 (.00) ***
No qualifications (degree ref.)	.27 (.21)	.32 (.21)	.15 (.09)	.19 (.09) *
Age	-.01 (.00)	-.01 (.13)	-.00 (.00)	-.00 (.00)
Working class (Upper ref.)	.23 (.16)	.31 (.16)	.19 (.07)***	.20 (.07)***
Middle class (Upper ref.)	.31 (.13)**	.33 (.13)**	.12 (.06)*	.11 (.06)
Employed (not employed ref.)	-.15 (.13)	-.16 (.13)	-.01 (.06)	-.00 (.06)
Has children (None ref.)	.06 (.14)	.04 (.14)	-.01 (.06)	.02 (.06)
Single (couple ref.)	-.17 (.13)	-.24 (.13)	-.17 (.06)***	-.21 (.06)***
Social housing (Owner ref.)	.16 (.20)	.13 (.20)	-.06 (.08)	-.07 (.08)
Private renter	-.60(.14)***	-.63 (.14)***	-.43 (.06) ***	-.44 (.06)***
Pseudo R^2	.46	.47	.20	.21
Adjusted R^2				
N	3498	3498	10828	10828

*p<.05,**p<.01,***p<.001. Source: BHPS 1991-2008; Understanding Society 2009-12.

Figure 2. Predicted probabilities of moving towards diversity by lagged percentage minority population



Source: BHPS 1991-2008; Understanding Society 2009-12.

Table 4. Predictors of Inter-Ward Mobility, 1991-2012. Material and Attitudinal Factors.

	Model 1 *Away v Toward Diversity*	Model 2 *Away from Diversity (Quintile Change)*	Model 3 *Away from Diversity (change in % minority)*
Lagged % minority pop.	.08 (.02)***	.07 (.01)***	.43 (.05)***
White (individual)	-.88 (.49)	-.44 (.22)**	-1.01 (.74)
White x minority % pop.	.07 (.02)**	.05 (.01)***	.21 (.05)***
Religious (non-religious ref.)	-.07 (.16)	.03 (.07)	-.13 (.23)
Labour voter (Conservative ref.)	.36 (.20)	-.17 (.08)*	.38 (.29)
Liberal voter	.09 (.24)	-.03 (.09)	-.13 (.32)
Non-voter	-.23 (.24)	.02 (.09)	.15 (.31)
Gay rights wrong (disagree ref)	-.11 (.18)	-.00 (.07)	-.16 (.24)
Cohabitation wrong (disagree ref.)	.08 (.29)	-.08 (.10)	-.26 (.33)
British citizenship best (agree ref.)	-.06 (.28)	.11 (.08)	.33 (.46)
Britain history shame (agree ref.)	.17 (.27)	.01 (.10)	.48 (.26)
English identifier	.15 (.14)	.04 (.06)	.27 (.20)
British identifier	.17 (.15)	.05 (.07)	.17 (.23)
Low trust (high trust ref.)	.20 (.16)	.17 (.06)**	.67 (.20)***
Traditional family values	.28 (.19)	.06 (.07)	.14 (.24)
Left/right ideology scale	-.06 (.16)	-.07 (.07)	-.26 (.23)
Class is not important to identity	-.19 (.15)	-.09 (.06)	-.34 (.19)
Pseudo R^2	.55	.25	.60
Adjusted R^2			
N	2253	7041	7041

*p<.05,**p<.01,***p<.001. Source: BHPS 1991-2008; Understanding Society 2009-12.
Note: also includes parameters from table 3, which are not reported for reasons of space.

Table 5. Ordered Logit Model predicting move toward less diverse quintile of ward, 2001-2011

	B	S.E.
Population density 2011 (ward)	.946***	.006
Carstairs deprivation index 2011 (ward)	-.097***	.005
Move to vs. from London 2001-11	-.791***	.017
Distance moved 2001-11 (km)	.002***	.000
White British	1.035***	.032
White British x 2001 ward diversity	.389***	.034
White British in mixed ethnic household	-.380***	.039
Mixed ethnic household	.121***	.029
English national identity	.007	.012
Minority x English	.176***	.047
Age	.003***	.001
Aged twenties	.215***	.042
White British x aged twenties	-.444***	.043
Renter, ref: owner	-.309***	.015
Social housing tenant, ref: owner	-.228***	.019
Rent free, ref: owner	-.243***	.053
Middle class, ref: professional/managerial	.057**	.017
Working class, ref: professional/managerial	.176***	.021
White x middle or working class	.137***	.017
Self-employed, ref: employee	.007	.020
Unemployed, ref: employee	.095**	.033
Economically active student, ref: employee	-.333***	.051
Retired, ref: employee	.179***	.026
Economically inactive student, ref: employee	-.349***	.049
Homemaker, ref: employee	-.002	.028
Permanently sick, ref: employee	.210***	.033
Other inactive, ref: employee	-.035	.044
Not aged 16-74, ref: employee	-.292***	.062
Dependent children	.622***	.051
Married, ref: single	.220***	.016
Separated/Widowed/Divorced, ref: single	.108***	.020
O level (age 16), ref: no quals	.031	.021
Apprenticeship/vocational, ref: no quals	.022	.028
A level (high school), ref: no quals	-.014	.024
Degree, ref: no quals	-.131***	.022
Minority share quintile 2001 (ward)	-1.279***	.008
Deprivation quintile 2 (2001), ref: most deprived	-.006	.018
Deprivation quintile 3 (2001) , ref: most deprived	.080***	.020
Deprivation quintile 4 (2001) , ref: most deprived	.140***	.023
Least Deprived quintile 5 (2001), ref: most deprived	.126***	.026

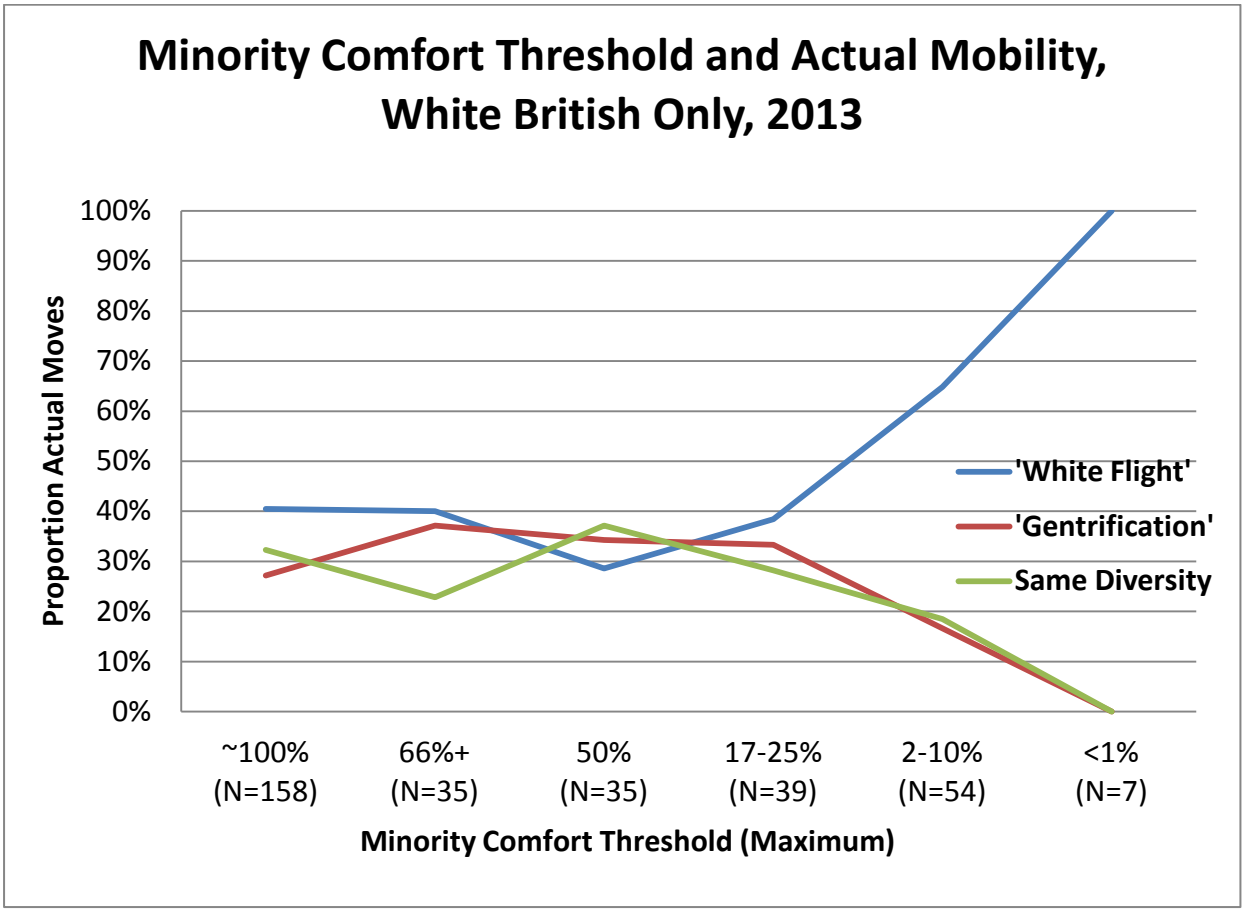
Density quintile 2 (2001), ref: least dense	1.098***	.021
Density quintile 3 (2001) , ref: least dense	2.069***	.020
Density quintile 4 (2001) , ref: least dense	2.793***	.024
Densest quintile of ward 5 (2001), ref: least dense	3.582***	.034
/cut1	-7.063	.060
/cut2	-5.295	.055
/cut3	-3.737	.053
/cut4	-2.101	.051
/cut5	.356	.051
/cut6	2.064	.052
/cut7	3.618	.053
/cut8	5.387	.057
Pseudo R^2	.243	
N	115,504	

NB: All variables at 2011 except where specified. White x English is a negative predictor of move away from diversity, and cannot be run alongside minority x English, thus not reported.

Source: Data are derived from the ONS Longitudinal Survey, 1991, 2001 and 2011 waves. This is a linked, restricted use, 1 percent sample of the census. Sample restricted to those who move wards only. A consistent geography for 1991-2001-2011 at ward level, developed by Dr. Gemma Catney of the University of Liverpool, has been used which permits us to distinguish moves to/from diversity from in situ area change.

The permission of the Office for National Statistics to use the Longitudinal Study is gratefully acknowledged, as is the help provided by staff of the Centre for Longitudinal Study Information & User Support (CeLSIUS). CeLSIUS is supported by the ESRC Census of Population Programme (Award Ref: ES/K000365/1) clearance # 401003. The authors alone are responsible for the interpretation of the data. The results presented are based on a test version of the LS database incorporating 2011 Census data. Figures may be subject to change when the final version of this database is released in November 2013.

Figure 3.



Source: Yougov Survey, 29-30 July 2013. N= 384 white British movers out of total sample of 1,638 white British respondents.

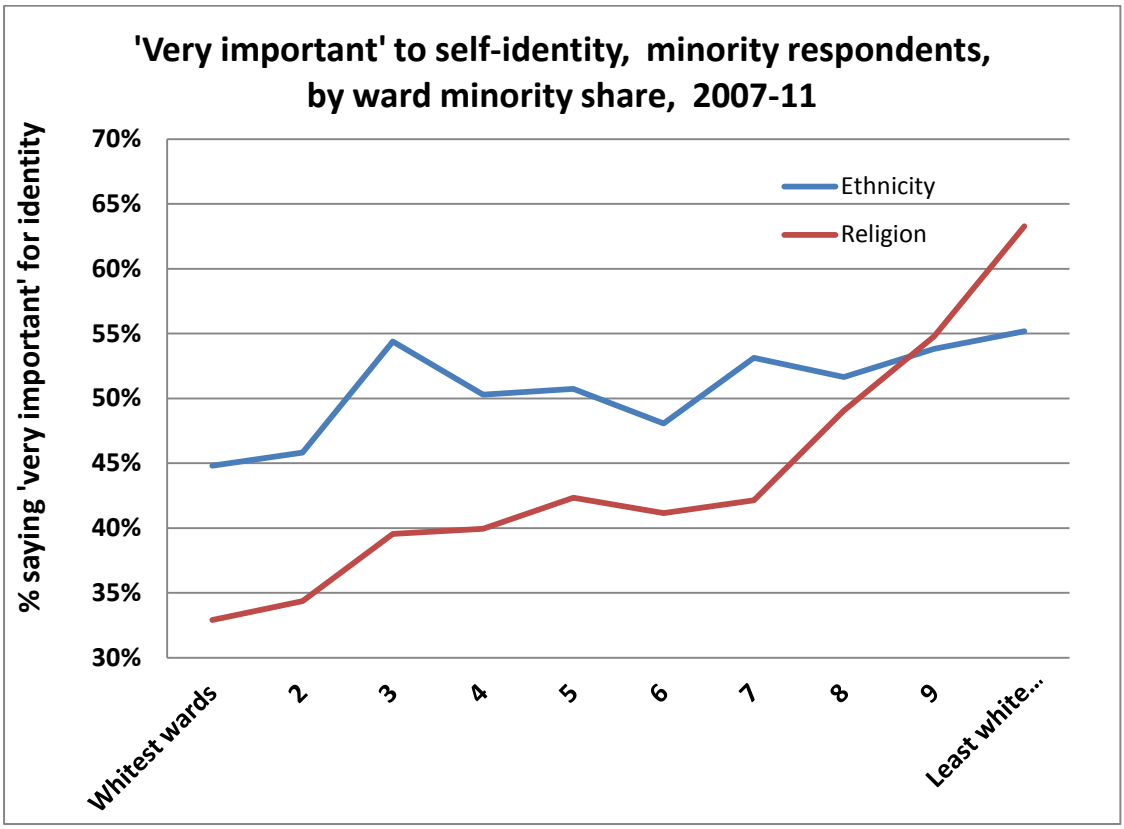
Table 6. Models Predicting Mobility (White British only), by Ward Ethnic Properties, 2013

	Mover to More Diverse (1) vs. Less Diverse (0) ward	**More Diverse vs. Less Diverse (Restricted Dataset)**	**More Diverse (1) vs. Same Diversity (0)**	**Mover to More Diverse (1) vs. Stayer (0)**
Ward Ethnic Comfort Threshold (4th power)	-.003 (.002)*		-.005 (.002)**	-.138 (.062)*
Ward Ethnic Comfort Threshold (cubed)		-.025 (.009)**		
% Singles in Ward	.073 (.016)***	.073 (.024)**	-.012 (.015)	.027 (.007)***
Age	.001 (.012)	.010 (.016)	-.006 (.011)	-.014 (.012)
University	-.226 (.340)	-.046 (.445)	.336 (.313)	.811 (.232)***
_cons	-2.811 (.897)**	2.636 (1.249)	-.980 (.855)	-.493 (.590)
Pseudo R^2	.139	.174	.056	.063
N	198	113	212	1126

ǂp<.1; *p<.05; **p<.01; ***p<.001

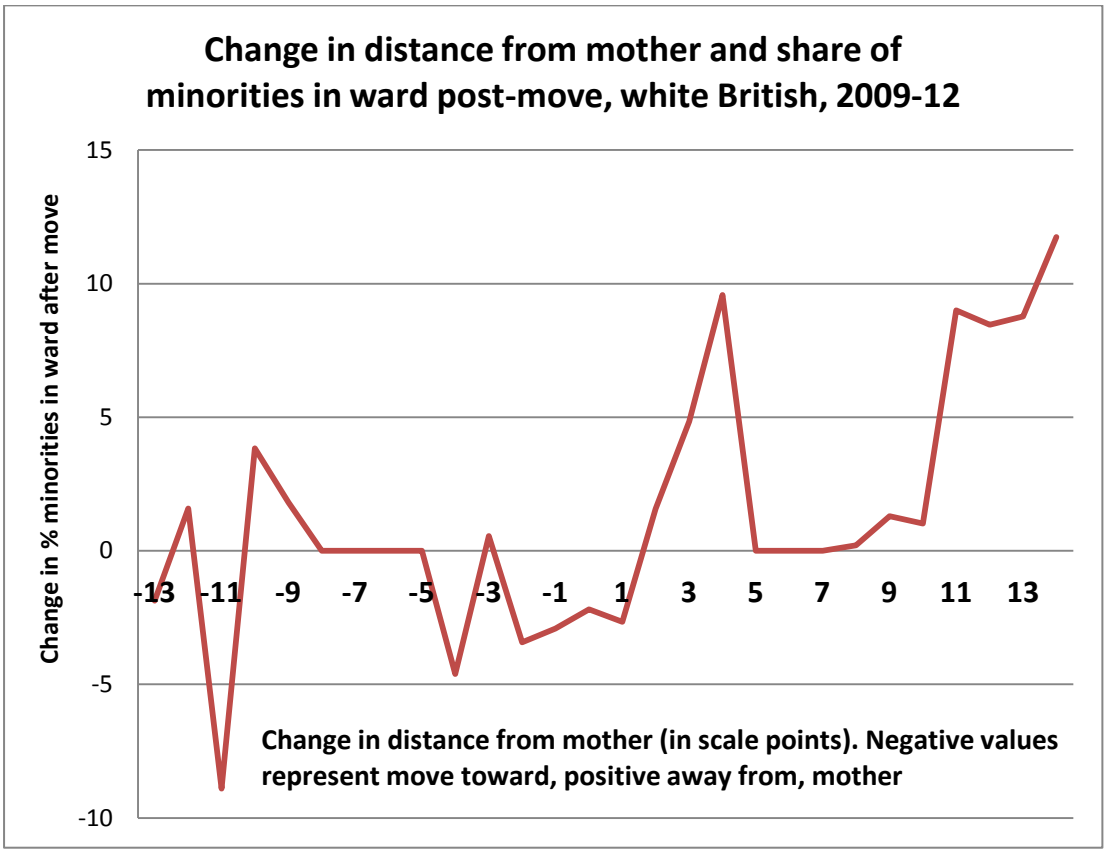
Source: Yougov Survey, 29-30 July 2013

Figure 4.



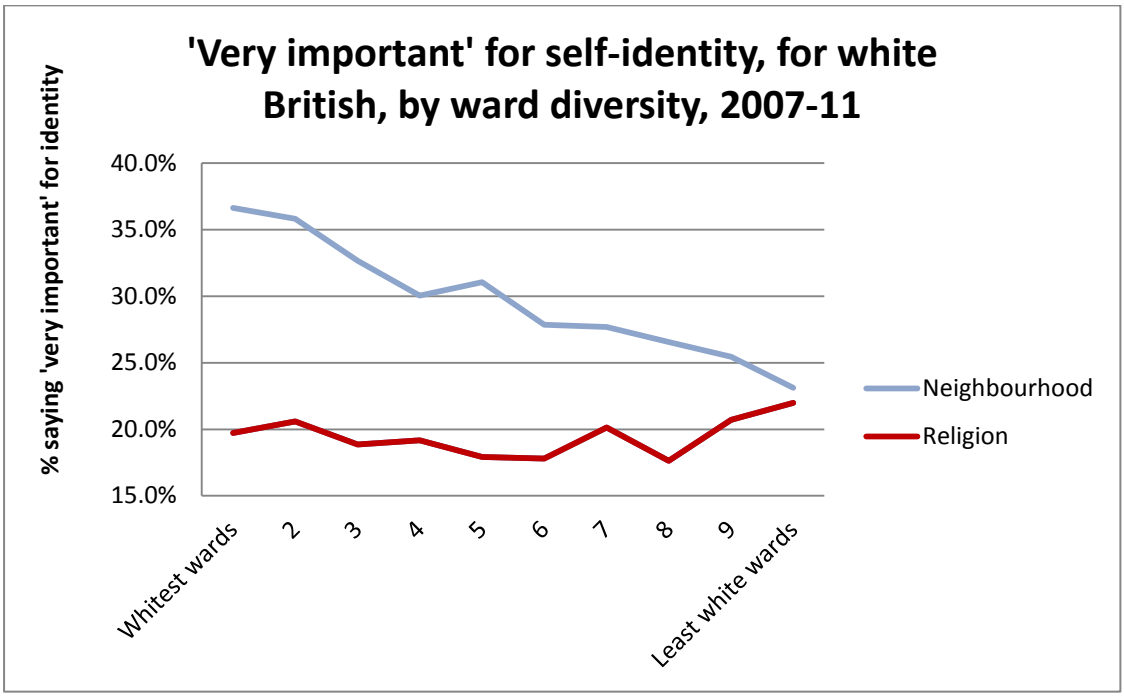
Source: Citizenship Surveys 2007-11 (amalgamated) (ONS and Home Office 2007-2011).

Figure 5.



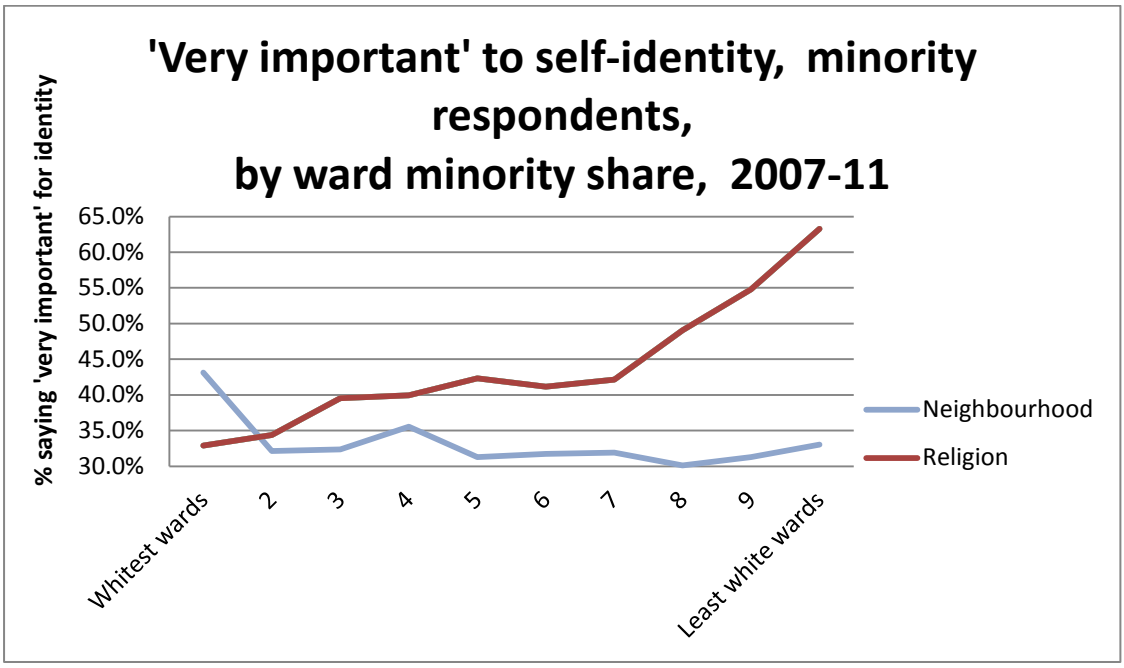
Source: UKHLS 2009-12

Figure 6.



Source: Citizenship Surveys 2007-11 (amalgamated) (ONS and Home Office 2007-2011)

Figure 7.



Source: Citizenship Surveys 2007-11 (amalgamated) (ONS and Home Office 2007-2011)

Appendix 1

Descriptive statistics for key variables

	Mean	Standard deviation	Minimum	Maximum
Minority % population	9.94	15.55	.11	95.5
Carstairs Index of deprivation	.71	3.32	-5.25	21.24
Population density per hectare	25.55	26.77	.03	261.23
Age	47.50	18.02	18	103
Family values	2.76	.48	1	4.75
Left Right scale	2.68	.50	1	4.67

Appendix 2. Selection of Relevant Yougov Survey Questions, August 2013

[EK1]{single}Do you think the number of immigrants coming to Britain nowadays should be increased, reduced or should it remain the same?

<1> Increased a lot

<2> Increased a little

<3> Remain the same

<4> Reduced a little

<5> Reduced a lot

<6> Don't know

[EK2a]Local Council Wards in the UK have a population of about 10,000 to 30,000 people. Have you moved Local Council Ward to live somewhere new at any time in the past ten years?

<1> No

<2> Yes

<3> Don't know

[EK2b if EK2a ==2]As far as you know, did the last Local Council Ward in which you lived have…?

<1> More people from an ethnic minority background than the ward I live in now

<2> Fewer people from an ethnic minority background than the ward I live in now

<3> About the same number of people from an ethnic minority background than the ward I live in now

<4> Don't know

[EK3a]Thinking about YOUR NEIGHBOURHOOD, how comfortable or uncomfortable do you feel about the number of people from ethnic minorities who live there?

<1> Very comfortable

<2> Fairly comfortable

<3> Neither comfortable nor uncomfortable

<4> Fairly uncomfortable

<5> Very uncomfortable

<6> Don't know

[EK3b if not EK3a in [4,5]]{single order=randomize}Which of the following statements best describes your views about the number of people from ethnic minorities living in YOUR NEIGHBOURHOOD?

<1 fixed> I will always be comfortable with the number of people from ethnic minorities living in my neighbourhood

<2> If the number of people from ethnic minorities increases I might feel uncomfortable at some point

<3> If the number of people from ethnic minorities decreases I might feel uncomfortable at some point

<4 fixed> Don't know

[EK3d if EK3b == 2]When do you think you would start to feel uncomfortable about the number of people from ethnic minorities living in your neighbourhood? Would it be when people from ethnic minorities made up roughly . . .?

<1> More than three quarters (over 75%) of all people in your neighbourhood

<2> Three quarters of all people (75%) in your neighbourhood

<3> Two thirds of all people (66%) in your neighbourhood

<4> Half of all people (50%) in your neighbourhood

<5> One in every four people (25%) in your neighbourhood

<6> One in every six people (17%) in your neighbourhood

<7> One in every ten people (10%) in your neighbourhood

<8> One in every twenty people (5%) in your neighbourhood

<9> One in every fifty people (2%) in your neighbourhood

<10> One in every hundred people (1%) in your neighbourhood

<11> Fewer than one in every hundred people (less than 1%) in your neighbourhood

<12> I am uncomfortable with any people from ethnic minorities living in my neighbourhood

<13> Don't know

How comfortable or uncomfortable do you think you would feel if the following people you may come into contact with were from an ethnic minority?

-[EK6_g1 if not 1 in EK5] Next door neighbour

-[EK6_g2 if not 2 in EK5] Boss at work

-[EK6_g3 if not 3 in EK5] Doctor

-[EK6_g4 if not 4 in EK5] Friend

-[EK6_g5 if not 5 in EK5] Work colleague

-[EK6_g6 if not 6 in EK5] spouse/partner

-[EK6_g7 if not 7 in EK5] House cleaner

-[EK6_g8 if not 8 in EK5] Child's teacher

-[EK6_g9 if not 9 in EK5] Babysitter

-[EK6_g10] The Prime Minister

<1> Very comfortable

<2> Fairly comfortable

<3> Neither comfortable nor uncomfortable

<4> Fairly uncomfortable

<5> Very uncomfortable

<6> Don't know

[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.
[2] Austria and Switzerland ask a question about religion, but only Britain collects ethnic data. Others only collect birthplace - or parental birthplace - data.
[3] See BHPS website for details: https://www.iser.essex.ac.uk/bhps/about/sample.
[4] Geoconvert is a geographical conversion tool that allows the conversion of data between different historical and geographical boundaries administered by the UK Data Census Services Support. See http://geoconvert.mimas.ac.uk/ (accessed on 25/09/2013)
[5] Output Areas are the lowest building blocks of census geography used since 2001, by using data counts at Lower Super Output Areas (LSOA) we were able to match 2011 census data to frozen 2001 ward boundaries. For further information, see (ONS 2012)
[6] Separate censuses are collected for Scotland and Northern Ireland.
[7] Note that a marked increase in ethnic minority population from 4.5 million in 2001 to 10.1 million in 2011 as well as its diffusion accounts for the notable difference in white share within each quintile between the two years.
[8] Please see http://celsius.lshtm.ac.uk/what.html for details.
[9] The Carstairs index of multiple deprivation, developed by Paul Norman, is an index of four components from the census. Namely, share of: residents without cars, male unemployed, low status occupational groups, overcrowded households. For methodology of Carstairs Index, see http://cdu.mimas.ac.uk/related/deprivation.htm (accessed March 17, 2013).
[10] The most common alternative among white respondents is British, but could also include Scottish, Welsh, Irish or 'Other'.
[11] The left right scale reported a Cronbach's Alpha of 0.7, and ranged from one to six, with six the most politically conservative.
[12] Questions include: a) 'Pre-school child suffers if mother works' ; b) 'Family suffers if mother works full-time' ; c) 'Husband and wife should both contribute' ; d) 'Woman and family happier if she works' ; e) 'Full-time job makes woman independent' ; f) 'Single parents are as good as couples'.
[13] The analysis was repeated on the un-interpolated variables and the significant differences ran with the same magnitude and direction.
[14] The coefficients for white x working class interactions are: In model 2b, 2.42 (1.02); in model 3b, 2.32 (1.03).
[15] National identity was only asked in 2011. Religion was asked in 2001, but this is not significant either.
[16] See http://www.sneps.net/white-flight for census models.
[17] Full details at: http://d25d2506sfb94s.cloudfront.net/cumulus_uploads/document/kf5d231qce/YG-Archive-ESRC-Demos-Birkbeck-results-300713.pdf. See Appendix 2 for question wording.
[18] Assessments are subjective and we lack longitudinal data on respondents' actual mobility history. Nonetheless, geocoding of respondents' wards shows that those who claimed they currently lived in diverse wards did in fact do so. Those who said they had moved away from diversity lived in less diverse wards than those who indicated they had moved to more diverse wards. It is of course possible that respondents incorrectly estimated the share of minorities in their ward, but losses in fidelity to actual census demography are offset by the fact *perceived* boundaries and ethnic mixture is often more important for behaviour than actual ethnic morphology.
[19] Full question wording is available in Appendix 2.
[20] Bivariate R^2 for regression of ethnic comfort threshold on immigration and racism questions ranges from .07 to .08.