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Social diversity and social cohesion in Britain

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Abstract

We use data from a large-scale and nationally representative survey to examine whether there is in Britain a trade-off between social diversity and social cohesion. Using six separate measures of social cohesion (generalised trust, volunteering, giving to charity, inter-ethnic friendship, and two neighbourhood cohesion scales) and four measures of social diversity (ethnic fractionalisation, religious fractionalisation, percentage Muslim, and percentage foreign-born), we show that, net of individual covariates, there is a negative association between social diversity and most measures of social cohesion. But these associations largely disappear when neighbourhood deprivation is taken into account. These results are robust to alternative definitions of neighbourhood. We also investigate the possibility that the diversity--cohesion trade-off is found in more segregated neighbourhoods. But we find very little evidence to support that claim. Overall, it is material deprivation, not diversity, that undermines social cohesion.

KEYWORDS

constrict theory, multilevel models, social cohesion, social divesity

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1 | A PROGRESSIVE DILEMMA?

Are diverse societies more fractious? Is there a trade-off between social diversity and social cohesion? The answers to these questions, according to David Willetts, a Conservative peer and former cabinet minister, are yes. Here he is, in a round-table discussion on the welfare state, explaining why diversity undermines social solidarity.

The basis on which you can extract large amounts of money in taxation and pay it out in benefits, is that most people think that benefit recipients are people like themselves facing difficulties which they themselves could face. If values become more diverse, if lifestyles become more differentiated, then it becomes more difficult to sustain the legitimacy of a universal, risk-pooling welfare state. People start asking: why should I pay for them, when they are doing things I would never do? This is America versus Sweden. You can have a Swedish welfare state provided that you are a homogeneous society with intensely shared values. In the US you have a very diverse, individualistic society where people feel fewer obligations to fellow citizens. Progressives want diversity but they thereby undermine part of the moral consensus on which a large welfare state rests.

(Willetts quoted in Meadows, 1998)

Willetts' view has come to be known as 'the progressive dilemma' (Goodhart, 2004). It has some academic support. For example, Alesina and his colleagues show that in the US investment in public goods, participation in social activities, and inter-personal trust are all lower in racially and ethnically diverse communities (Alesina et al., 1999; Alesina & La Ferrara, 2000, 2002). In an influential paper, and subsequently a book (Alesina & Glaeser, 2004), on why the US does not have a European-style welfare state, they argue that '[r]acial fragmentation in the United States and the disproportionate representation of ethnic minorities among the poor clearly played a major role in limiting redistribution' (Alesina et al., 2001, p. 247).

Equally influential is a paper by Putnam (2007). Drawing on survey data from the US, he argues that 'in ethnically diverse neighbourhoods residents of all races tend to "hunker down". Trust (even of one's own race) is lower, altruism and community cooperation rarer, friends fewer' (Putnam, 2007, p. 137). Putnam labels this the 'constrict theory'.

As immigration is likely to contribute to greater ethnic and racial diversity, these results have seeped into the often heated debate about migration and multiculturalism in Western societies. Indeed, the idea that there is a trade-off between social diversity and social cohesion has become part of the received wisdom in political punditry.

For example, Eatwell and Goodwin (2018, p. 163), citing Putnam, argue that in ethnically diverse neighbourhoods 'citizens will, at least in the short term, become less trusting of others, less willing to co-operate, build fewer bridges with other people and withdraw from the wider world ... immigration can produce a decline in mutual regard and trust.' Kaufmann (2019, p. 423), citing Alesina, writes that 'more diversity equals less solidarity. As the West becomes more diverse, support for the welfare state and trust in government will erode.' Collier (2014) refers to a 'trade-off between the benefits of greater variety and the costs of reduced mutual regard.' He suggests that 'moderate migration is liable to confer overall social benefits, whereas sustained rapid migration would risk substantial costs' (Collier, 2014, p. 63). Goodhart (2004), citing Willetts, argues that 'sharing and solidarity can conflict with diversity. This is an especially acute dilemma for progressives who want plenty of both solidarity ... and diversity' (see also Goodhart, 2014).

In an opinion piece for *The Times*, Phillips writes about the persistently high level of immigration to the UK. Although there are fewer EU migrants in the UK post-Brexit, many more are coming from the rest of the world. For Phillips, this is regrettable because '[m]any ... feel they no longer recognise the area or even the street in which they live ... if shared historical or cultural values and practices start to disappear, the links that bind everyone begin to snap, people stop looking out for each other and community cohesion becomes impossible' (Phillips, 2022).

Robert Jenrick, then immigration minister, invokes many of these themes in a recent speech about asylum seekers. Citing Kaufmann and Collier, he maintains that '[t]here is an extensive body of research that demonstrates the damaging effects on social trust and cohesion from uncontrolled migration ... excessive, uncontrolled migration threatens to cannibalise the compassion of the British public. And those crossing [the English Channel in small boats] tend to have completely different lifestyles and values to those in the UK – and tend to settle in already hyper-diverse areas, undermining the cultural cohesiveness that binds diverse groups together and makes our multi-ethnic democracy successful' (Jenrick, 2023).

2 | EMPIRICAL EVIDENCE

The empirical evidence on the constrict theory (or, equivalently, the progressive dilemma) is actually very mixed. In a review paper of 90 studies that examine the association between ethnic diversity and social cohesion, van der Meer and Tolsma (2014) report that 26 of these studies support the constrict theory, 25 contradict it, and 39 report mixed results. In another review paper that surveys 87 studies, Dinesen et al. (2020, p. 441) conclude that 'few clear answers have been reached in the sprawling literature' on whether 'ethnic diversity erode[s] social trust'. And while they accept that '[o]n average, social trust is lower in more ethnically diverse contexts', they also point out that the effect size is small, which means that the 'apocalyptic claims regarding the severe threat of ethnic diversity for social trust in contemporary societies are exaggerated' (Dinesen et al., 2020, p. 461). The upshot, then, is that on the supposed trade-off between diversity and cohesion, the jury is still out.

2.1 | British research

Mixed results have been reported for Britain too. Drawing on their analysis of the 2005 Home Office Citizenship Survey, Laurence and Heath (2008, p. 8) conclude that it is 'deprivation that undermines cohesion, not diversity'. Letki (2008, p. 118) analyses data from the 2001 Home Office Citizenship Survey and finds that 'low neighbourhood status has a detrimental effect on all four [dimensions of social capital]', namely opinions about neighbours and neighbourhood, informal sociability, formal volunteering, and informal help. By contrast, 'racial diversity negatively influences only one aspect of social capital: neighbourhood attitudes' (Letki, 2008, p. 118). Sturgis et al. (2010, p. 57) analyse data from the 2005 Taking Part Survey and find 'no effect of ethnic diversity on generalized trust.' Although they also report 'a statistically significant association between diversity and a measure of strategic trust, ... in substantive terms, the effect is trivial and dwarfed by the effects of economic deprivation and the social connectedness of individuals.'

Other scholars are more sympathetic to the constrict theory, albeit with qualifications. For example, Fieldhouse and Cutts (2010) analyse data from the 2005 Home Office Citizenship Survey as well as Putnam's data and conclude that 'in both the US and in the UK, diversity is negatively associated with social capital' (Fieldhouse & Cutts, 2010, p. 306). That said, they also accept that 'diversity is only one of a number of factors that are equally important in accounting for variations in social capital ... important role [are] played by other neighbourhood characteristics associated with diversity, especially poverty' (Fieldhouse & Cutts, 2010, p. 307).

Similarly, Laurence (2011, p. 70) analyses data from the 2005 Home Office Citizenship Survey and reports that 'while increasing diversity does have a negative impact on social capital, it simultaneously improves perceptions of, and relations between, ethnic groups ... it is disadvantage which has the most detrimental impact, undermining both social capital *and* interethnic relations.'

Finally, Stolle et al. (2008) argue that residential segregation is a key structural factor that shapes the nature of inter-group interaction. With segregation, there are limited opportunities for inter-group contact. In such a context, diversity breeds mistrust and a feeling of threat from out-groups. By contrast, in non-segregated contexts diversity

may even be associated with greater social cohesion (Uslaner, 2012). To test this idea, Laurence (2017) analyses data from the 2000-01 General Household Survey and the Metropolitan Police Public Attitudes Survey from 2006-07 and 2007-08. He reports that '[i]ncreasing neighbourhood diversity only negatively impacts neighbour-trust when nested in more segregated wider-community. Individuals living in diverse neighbourhoods nested within integrated wider-communities experience no trust-penalty' (Laurence, 2017, p. 1011). Similarly, Sturgis et al. (2014, p. 1290) argue that '[a]n ethnically diverse area can be either highly integrated or highly segregated and it is in the latter rather than the former case that we should expect to find a negative effect on cohesion and trust.'

2.2 | Methodological issues

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The conflicting results of this literature can, at least in part, be attributed to several methodological issues. Let's start with the key independent variable, social diversity. This is often operationalised as the fractionalisation index: $d_i = 1 - \sum s_{ij}^2$, where s_{ij} is the share of group *i* in neighbourhood *j*. This index is potentially problematic because, as

Abascal and Baldassarri (2015) point out, it is 'colour-blind'. Consider two neighbourhoods, one is 80% white and 20% black, and the other is 20% white and 80% black. On many sociologically relevant dimensions, these two neighbourhoods are probably very different. But they will have the same score on the fractionalisation index. Given this, Abascal and Baldassarri (2015) suggest using the shares of the ethnic/racial groups (i.e., s_{ij}) instead. They show that '[o]nce analyses account for the fact that native whites, who are disproportionally represented in homogeneous communities, also score higher on prosocial indicators, negative associations with ethnic diversity are strongly reduced and even disappear' (Baldassarri & Abascal, 2020, p. 1184). Following Abascal and Baldassarri, we will employ both the fractionalisation index and the share of minority groups as measures of diversity in this paper.

Secondly, turning to the dependent variables, scholars have used a range of measures of social cohesion, including inter-personal trust, perceptions of neighbours and neighbourhood, and behavioural measures such as volunteering. Their results do differ depending on which dependent variable is used. Fieldhouse and Cutts (2010), for example, argue that support for the constrict theory is 'less clear cut' for behavioural measures of 'community participation' than for attitudinal measures of 'neighbourhood norms'. Letki (2008) also reports stronger support for the constrict theory with 'neighbourhood attitudes' than with volunteering, informal help, or sociability (see also Demireva, 2019).

As social cohesion is a multi-dimensional concept, there is no single measure that is perfect for it. Given this, it seems advisable to use a range of different measures, behavioural as well as attitudinal; and instead of focussing on just one particular parameter, our assessment of the constrict theory should be based on the overall pattern of results.

Thirdly, '[d]ifferences ... in level of geographical analysis explain many divergences in empirical findings' (Steele et al., 2022, p. 17.1). Some scholars measure diversity at the level of regions (e.g., Gundelach & Traunmu"ller, 2014) or even countries (e.g., Hooghe et al., 2009). But local population profiles often differ quite significantly from the national or regional average; and they are arguably more salient to people. So it is debatable whether analyses pitched at the regional or national level is appropriate. At the other end of the geographical scale, Dinesen and Sønderskov (2015, p. 550) analyse linked population register and survey data from Denmark, and conclude that 'ethnic diversity in the micro-context affects trust negatively, whereas the effect vanishes in larger contextual units.' The micro-context that they refer to has a radius of 80–180 m. In the course of people's daily lives, for example, going to work, taking children to school, taking a walk in the local park, going to the supermarket or even the local shops, ... most people regularly go much further than 180 m of their front door. So a micro-context on such a small scale does not seem sociologically meaningful either. That said, Dinesen and Sønderskov (2015) are right to stress that geography matters. We will carry out our analyses at two geographical scales, to check how sensitive our results are to alternative definitions of neighbourhoods.

Finally, van der Meer and Tolsma (2014, p. 466) argue that the more rigorous studies that they review 'control for ethnicity at the individual level, ... control for alternative economic explanations at the macro level, and ... take the nested structure of their data into account.' Given this, we will employ in our analyses multilevel models (specifically, random intercept models) that control for the full range of relevant individual-level and neighbourhood-level characteristics.

3 | DATA, MEASURES, AND ANALYTICAL STRATEGY

3.1 | Data

We use data from wave 1 through wave 3 of Understanding Society, which is a large-scale and nationally representative household panel survey.¹ When it was launched in 2009, nearly 48,000 individuals from over 30,000 households were interviewed.² Some of the variables that we use in this paper are measured twice or more in the panel survey, and so are amenable to longitudinal analysis. We will report the results of our longitudinal analyses in a companion paper. In this paper, however, we analyse the data as though they were cross-sectional in nature. We also restrict our analyses to respondents residing in England, Wales, and Scotland. Given the history of sectarian violence in Northern Ireland, we think it is best to treat it separately in another paper.

3.2 | Defining local neighbourhoods

We define local neighbourhoods in two ways: as Middle Layer Super Output Areas (MSOAs) and as Local Authority Districts (LADs). MSOA is the third smallest geographical unit of the UK Census. LAD is an administrative area for which a local government is responsible. In 2011, there were 8480 MSOAs and 378 LADs in Britain. Each MSOA has a population of between 5000 and 15,000 people, with a mean of about 7800.³ The size of LADs is very variable. But, on average, they are about 20 times bigger than MSOAs, with a mean population of just over 162,000 people.

Laurence et al. (2019, p. 1037) report that '[c]ognitive testing suggests individuals broadly conceive of their local area ... as an area 15–20 min from their home ... This conforms more closely to the MSOA level.' Table A1 in the appendix reports how our respondents are distributed across MSOAs and LADs. For the six dependent variables (see below), there are, on average, 3.6–6.5 respondents per MSOA, and 52.1–88.5 respondents per LAD.⁴

3.3 | Dependent variables

We use six dependent variables to capture different aspects of social cohesion. The first of these is a binary variable on trust. This comes from the following question in wave 1 of the survey: 'Generally speaking would you say that most people can be trusted, or that you can't be too careful in dealing with people?' There are three response categories: 'Most people can be trusted', 'Can't be too careful', and 'Depends'. We combine the last two categories and contrast it against the first.

The second dependent variable is the Buckner's neighbourhood cohesion index (Buckner, 1988). This is based on the following eight Likert-type attitudinal items, also from wave 1 of the survey.

- I feel like I belong to this neighbourhood.
- The friendships and associations I have with other people in my neighbourhood mean a lot to me.
- If I needed advice about something I could go to someone in my neighbourhood.

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- I borrow things and exchange favours with my neighbours.
- I would be willing to work together with others on something to improve my neighbourhood.
- I plan to remain a resident of this neighbourhood for a number of years.
- I like to think of myself as similar to the people who live in this neighbourhood.
- I regularly stop and talk with people in my neighbourhood.

The summative score of these items (Cronbach's alpha = .88) has been rescaled such that it ranges from 1 to 5, with higher values denoting greater neighbourhood cohesion, that is, better relationship with neighbours and stronger attachment to the neighbourhood.

The third dependent variable is the Neighbourhood Cohesion Scale developed in the Project on Human Development in Chicago Neighbourhoods (PHDCN). This is based on the following four Likert-type attitudinal items from wave 3 of the survey.

- This is a close-knit neighbourhood
- People around here are willing to help their neighbours.
- People in this neighbourhood can be trusted.
- People in this neighbourhood generally don't get along with each other.

The summative scale derived from these items (Cronbach's alpha = .78) ranges from 4 to 20, with higher values, again, denoting greater neighbourhood cohesion, that is, more positive perception of the neighbourhood.

The fourth and fifth dependent variables are binary measures on volunteering and charitable giving respectively. They come from the following two questions in wave 2 of the survey: 'In the last 12 months, have you given any unpaid help or worked as a volunteer for any type of local, national or international organisation or charity?' and 'In the last 12 months, have you donated any money to charities or other organisations?'

The last dependent variable concerns inter-ethnic friendship. In wave 3 of the survey, respondents are asked to think of up to three closest friends and to provide some basic demographic information about each of those friends, including their ethnicity. By comparing the respondents' own ethnicity and those of their closest friends, we construct a binary variable indicating whether the respondent has at least one close friend who is of a different ethnicity to his/her own.

3.4 | Independent variables

Public debates in Britain about social diversity have several related but distinct dimensions, including race and ethnicity, immigration, and religion. Using aggregate data from the 2011 Census, we try to capture these concerns with four indicators, calculated for each MSOA and LAD.⁵ The first two indicators are fractionalisation indices by ethnicity and religion respectively. We distinguish five ethnic groups (White, Asian, Black, Mixed, and Others) and eight religious groups (Christian, Buddhist, Hindu, Jewish, Muslim, Sikh, No faith, and 'Others + not stated'). Roughly speaking, a higher score on the ethnic (religious) fractionalisation index implies a greater probability that two individuals drawn randomly from the neighbourhood are from different ethnic (religious) groups.

We use the fractionalisation indices so that our results can be compared with previous research. But given the issue raised by Abascal and Baldassarri (2015), we also include the share of two minority groups as alternative measures of diversity.

The first minority group that we consider are Muslims. Events and controversies in Britain as well as conflicts across the world over the past few decades have exacerbated Islamophobia. These include the protests against Salman Rushdie's *The Satanic Verses* in the late 1980s (Modood, 1990), Britain's involvement in the wars in Iraq and

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Afghanistan, and jihadist attacks in Britain and elsewhere. The exploitation of these conflicts by extremists, whether from the far-right or militant Islamist groups, further aggravated hostility against Muslims. Indeed, Storm et al. (2017, p. 421) analyse data from the British Social Attitudes surveys and show that despite an overall decline in racial prejudice in Britain, 'Muslims stand out ... as the only group which still faces widespread hostility from across the white population.' For this reason, we include the percentage of Muslims in local neighbourhoods as a diversity measure.

The fourth diversity measure that we use is the percentage of foreign-born. Immigration has long been a divisive issue in Britain (Winder, 2013). In the period covered by our data, the number of EU migrants in the UK was a key topic in the Brexit debate (see e.g. Chan et al., 2020).

Finally, we use the Townsend index of material deprivation, which is again measured for both MSOAs and LADs. It is based on four local indicators: levels of (1) unemployment, (2) home-ownership, (3) households without a car, and (4) overcrowding (Norman, 2016).⁶

3.5 | Measuring residential segregation

The former head of the Commission for Racial Equality, Trevor Phillips, has warned of the risk of Britain 'sleepwalking into segregation'.⁷ But the empirical evidence is that as Britain becomes more diverse, ethnic segregation is actually falling. For example, Catney et al. (2023, p. 1) analyse data from the 1991, 2001, 2011, and 2021 Censuses and report that 'segregation has steadily declined over time, for all ethnic groups and across multiple spatial scales, from the local to the regional' (see also Finney & Simpson, 2009).

Against this backdrop of declining segregation, we will investigate whether ethnic segregation moderates the association between diversity and cohesion. We use the information theory index (H) to measure, for each LAD, how segregated the five ethnic groups are according to their distribution over the constituent MSOAs.⁸ Following Reardon and Firebaugh (2002), H can be represented as follows:

$$H = \sum_{j=1}^{J} \frac{t_j}{T} \left(\frac{E - E_j}{E} \right),$$

where *j* indexes MSOAs within a LAD, t_j the population size of the *j*th MSOA, *T* is the LAD's population, that is, $T = \sum_{j} t_j$, *E* is Theil's Entropy index for the LAD, and E_j is the entropy index for the *j*th MSOA. *E* and E_j are given by the following expressions:

$$E = \sum_{m=1}^{M} \pi_m \ln\left(\frac{1}{\pi_m}\right), \qquad E_j = \sum_{m=1}^{M} \pi_{jm} \ln\left(\frac{1}{\pi_{jm}}\right),$$

where π_m is the share of the *m*th ethnic group in the LAD, and π_{jm} is the share of the *m*th ethnic group in the *j*th MSOA.⁹

3.6 | Analytical strategy

As noted above, the conflicting results in this literature are related to several methodological choices: how neighbourhoods are defined, whether the fractionalisation index is used, and how social cohesion is measured, etc. As there is no consensus among researchers on these issues, our strategy is to use multiple measures of both social cohesion and social diversity, as well as two definitions of neighbourhoods. These variables all have their own

strengths and weaknesses. But together they provide a more comprehensive assessment of the supposed trade-off between social diversity and social cohesion.

We have six measures of social cohesion and four measures of social diversity. So we fit 24 sets of multilevel models to our data. (Where the outcome measure is binary in nature, i.e. for trust, volunteering, giving to charity, and inter-ethnic friendship, multilevel logistic regression models are used). Each set contains two models. Model 1 includes the individual covariates plus one of the four diversity measures, while Model 2 is Model 1 plus the deprivation measure (i.e., the Townsend index). The parameter of interest is social diversity: whether it is negatively associated with social cohesion, net of individual covariates, and what happens to that association once we take local deprivation into account. All analyses are weighted by the relevant cross-sectional weight.

The individual-level covariates that we control for are age, sex, marital status (3 categories), housing tenure (3 categories), regions (11 categories), ethnicity (5 categories), employment status (3 categories), educational attainment (6 categories), and social class (5 categories). Descriptive statistics of the covariates can be found in Table A2 in the appendix.

Having examined the overall association between social diversity and social cohesion, we will then explore the diversity—cohesion association in contexts of high- versus low-level of segregation. We do so by stratifying our sample according to the multigroup segregation index, *H*, and repeating the analyses on each of the sub-samples.

4 | RESULTS

4.1 | Social diversity and social cohesion

We begin our analyses by treating MSOAs as neighbourhoods, though, as we will show in Section 4.2 below, LADbased analyses give very similar (if anything, even stronger) results. Figure 1 reports the results for our first dependent variable, that is, generalised trust. Net of the covariates, individuals living in neighbourhoods that are more diverse, however measured, are less trusting of other people (model 1). But once we control for local deprivation, these negative associations disappear (model 2). This result lends support to the view that it is 'deprivation that undermines cohesion, not diversity' (Laurence & Heath, 2008, p. 8). Full regression results are reported in Tables A3–A26 in the appendix.

Broadly the same results hold for the Buckner's index (see the top-left panel of Figure 2) and the PHDCN scale (top-right panel). That is to say, people living in more diverse neighbourhoods tend to report poorer relationship with neighbours, weaker attachment to the neighbourhood, and more negative perception of it (model 1). Once local deprivation is taken into account (model 2), these 'diversity deficits' are substantially attenuated. Indeed, in 5 out of 8 cases, we either cannot reject the null hypothesis of no association or observe a positive and statistically significant association between diversity and neighbourhood cohesion.

As regards volunteering (the bottom-left panel of Figure 2) and charitable giving (bottom-right panel), there is no evidence that social diversity, however measured, is associated with these two behavioural measures under model 1. And once local deprivation is taken into account (model 2), diversity is actually associated with *higher* level of volunteering and charitable giving.

In the top panel of Figure 3, we report the results for inter-ethnic friendship. Here, living in a more diverse neighbourhood is associated with a higher probability of having at least one close friend who is from a different ethnic group. This is true under both model 1 and model 2, and it holds for all four measures of social diversity.

It is, of course, easier to form inter-ethnic friendship if there are more opportunities to meet people from other ethnic groups. In other words, opportunity structure matters. But this might work differently for different groups. Specifically, as ethnic diversity in a neighbourhood increases, the opportunity for inter-ethnic encounter increases

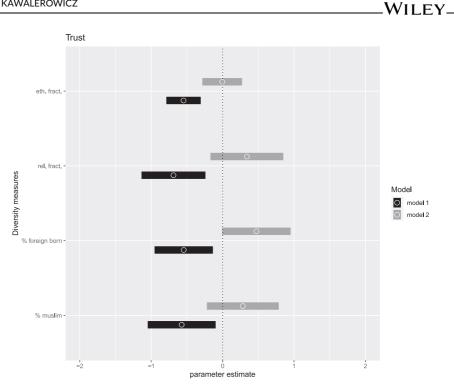


FIGURE 1 Estimates of social diversity parameters with 95% confidence intervals in multilevel logistic regression models predicting generalised trust. Model 1 includes the individual covariates plus one of the four diversity measures; Model 2 is Model 1 plus the deprivation measure.

for the white majority, but decreases for ethnic minorities. So we repeat the analyses for white respondents and non-white respondents separately.

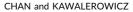
The result for white respondents (the middle panel of Figure 3) is very similar to that for all respondents (the top panel). If they live in more diverse neighbourhoods, they are indeed more likely to have at least one close friend who is non-white. This is true whether or not we control for local deprivation.

For non-white respondents (the bottom panel), however, social diversity is negatively associated with interethnic friendship under model 1 (except where diversity is measured by religious fractionalisation). But once we take local deprivation into account (model 2), those negative associations disappear. That is to say, so far as close friendship is concerned, there is no evidence that members of ethnic minorities are confined within their own community, even if they live in socially diverse neighbourhoods.

4.2 | Residual associations between fractionalisation indices and the neighbourhood cohesion scales

Recall that in Figure 2 there is some residual association between ethnic (or religious) fractionalisation on the one hand and the Buckner index on the other, even after local deprivation is controlled for. The same is true of the association between religious fractionalisation and the PHDCN scale. What should we make of these residual associations?

First, we should point out that local deprivation accounts a very large share of those associations under model 1: 68% of the association between ethnic fractionalisation and the Buckner's index, 62% of that between religious



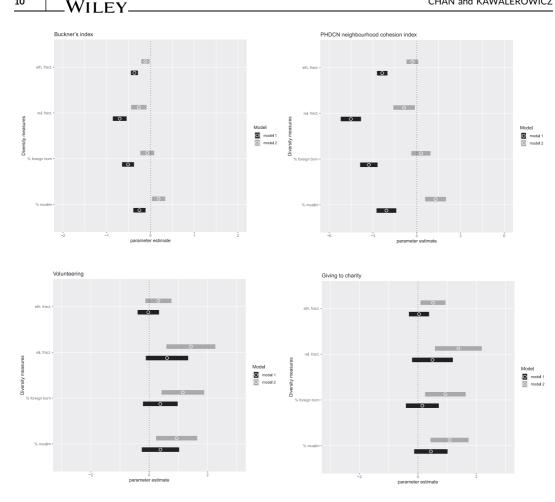
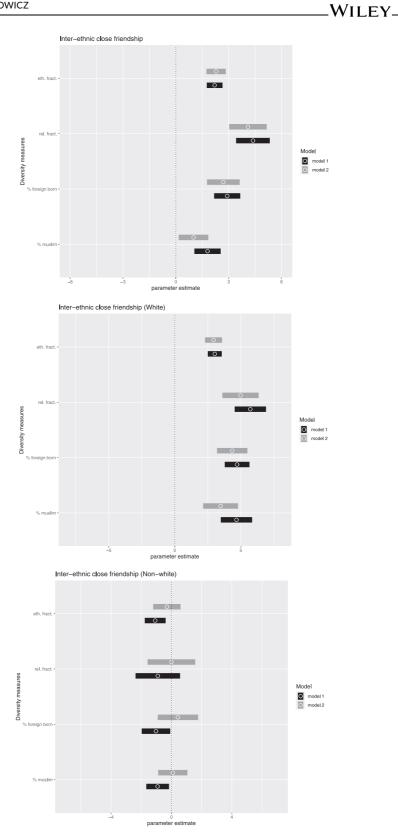


FIGURE 2 Estimates of social diversity parameters with 95% confidence intervals in multilevel (logistic regression) models predicting score on the Buckner's index (top-left), score on the PHDCN neighbourhood cohesion scale (top-right), volunteering (bottom-left), and charitable giving (bottom-right). Model 1 includes the individual covariates plus one of the four diversity measures; Model 2 is Model 1 plus the deprivation measure. Multilevel logistic regression models are used in models predicting volunteering and charitable giving.

fractionalisation and the Buckner index, and 81% of that between religious fractionalisation and the PHDCN scale.¹⁰

Secondly, there is evidence that these residual associations might in part be methodological artefacts. In the left panel of Figure 4, we plot the percentage of Muslim in the 8480 MSOAs in Britain against their religious fractionalisation score. There is a clear and quite striking curvilinear relationship between these two variables. The range of 'percentage Muslim' at the MSOA level goes from 0 to over 80. MSOAs that are over 80% Muslim are not that diverse. They have very similar fractionalisation score as many MSOAs on the left of the graph, despite being very different types of neighbourhoods (cf. the 'colour-blind' point of Abascal and Baldassarri (2015), see also Abascal et al. (2023)).11

Among the 378 LADs in Britain, the highest share of Muslim is 35% (right panel of Figure 4). And although the relationship between religious fractionalisation and percentage Muslim at the LAD level is still curvilinear, it is not as extreme as for MSOAs. Indeed, repeating the analyses at the LAD level, all the associations between social



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diversity and the two neighbourhood cohesion indices are explained away by the Townsend index of local deprivation (see the top-right and middle-left panels of Figure 5).

4.3 Residential segregation as a stratifying factor

Sturgis et al. (2014) and Laurence (2017) argue that we are more likely to see a trade-off between social diversity and social cohesion in segregated neighbourhoods, because 'segregated areas provide fewer opportunities for meaningful social contact between groups and tend to reinforce in-group identities and social networks' (Sturgis et al., 2014, p. 1290).

To test this idea, we divide each of our samples into two, according to whether the respondent lives in a LAD that is above or below the median level of segregation, as measured by H. We then repeat our analyses on these subsamples, and the results are reported in Figure 6. Overall, the results for those above-median and below-median subsamples are very similar to each other, and to the main results above. There are a couple of instances where, under model 2, there is some residual negative association between religious fractionalisation and the neighbourhood cohesion scales in more segregated LADs. But the estimates of the diversity parameters are substantially reduced in those cases, and in view of the overall picture of Figure 6, our view is that, pace Laurence (2017) and Sturgis et al. (2014), there is little evidence for a negative diversity--cohesion association, even in more segregated settings.¹²

5 SUMMARY AND DISCUSSION

Many scholars and political pundits argue that there is a trade-off between social diversity and social cohesion. They believe that in more diverse neighbourhoods people are less trusting of each other, less likely to feel connected with each other, and the social fabric will begin to fray.

We point out that the evidence for this view is actually very mixed. Furthermore, many of the existing studies in this literature are plagued by methodological issues, to do with how social diversity and social cohesion are measured, and how the local neighbourhood is defined, and so on.

To remedy these shortcomings, we consider a broad range of measures of both cohesion and diversity. Specifically, we use six measures of social cohesion: generalised trust, the Buckner social cohesion scale, the PHDCN cohesion scale, volunteering, charitable giving, and inter-ethnic friendship. As regards social diversity, we use ethnic fractionalisation, religious fractionalisation, percentage Muslim, and percentage foreign-born. While each of these measures is imperfect in its own way, together they provide a more comprehensive assessment of the diversitycohesion association. We also consider these associations at two geographical scales: MSOAs and LADs.

Drawing on data from Understanding Society, we show that people living in more diverse areas, however measured, tend to report lower levels of generalised trust, and to hold more negative views about their neighbours and neighbourhood. In addition, non-whites in the more diverse neighbourhoods are less likely to report inter-ethnic friendship. But once we control for the level of material deprivation, these negative associations disappear. As regards volunteering and charitable giving, they are not associated with diversity to begin with. Controlling for local deprivation, we actually see higher levels of volunteering and charitable giving among

Estimates of the social diversity parameter and 95% confidence intervals in multilevel logistic FIGURE 3 regression models predicting inter-ethnic friendship for all respondents (top panel), white respondents (middle panel), and non-white respondents (bottom panel). Model 1 includes the individual covariates plus one of the four diversity measures; Model 2 is Model 1 plus the deprivation measure. Multilevel logistic regression models are used in models predicting inter-ethnic friendship.

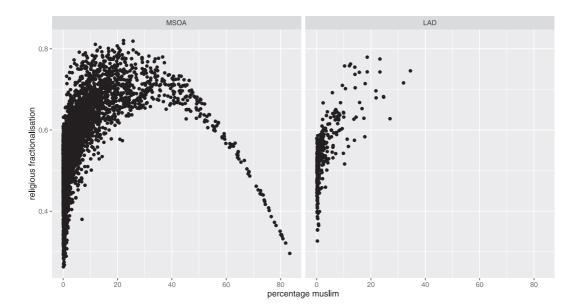


FIGURE 4 Religious fractionalisation index by percentage Muslim at MSOA level (left panel) and at LAD level (right panel).

people living in more diverse neighbourhoods. Finally, we investigate the possibility that the diversity-cohesion trade-off can be found in more segregated communities. But there is, again, very little empirical support for that view.

Overall, there is no evidence to support the constrict theory in the British case. If diverse neighbourhoods in Britain appear to be less cohesive, it is because they tend to be more deprived. It is material deprivation, not diversity, that threatens to stretch and tear the social fabric.

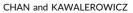
As noted above, the findings of previous research in this field are very mixed. So what accounts for the consistent results of this paper? There are two sets of issues to consider. The first has to do with research practice. Had we reported in a first paper the association between religious fractionalisation and the Buckner index at the MSOA level, and then in a second paper the association between the percentage of foreign-born and the Buckner index, then there would be support for the constrict theory in the first paper, but not in the second paper. What we have shown here is that if we are (1) cognisant of the potential issues of the fractionalisation indices and also of geographical scales, (2) prepared to carry out careful and systematic testing of multiple measures of diversity and outcomes, and (3) pay attention to the overall pattern of results rather than cherry-pick one particular parameter, a clear and consistent pattern can be discerned, at least for Britain.

Secondly, the differing results in the literature might in part reflect reality. It is possible that the association between diversity and cohesion is variable across countries. For example, with the toxic legacies of slavery and Jim Crow, racially diverse neighbourhoods in the US might really be more fractious (though the research of Abascal and Baldassarri cautions against that view). Closer to home, the history of sectarian violence in Northern Ireland might imply that the constrict theory is more applicable there than in mainland Britain. This is an empirical question that we intend to pursue in a separate paper. One way to put this is that politics and history matters. Unless there is a history of community conflicts and/or systematic state oppression of minorities, diversity per se need not be a source of schism and discord.

As with most research in this literature, this paper is based on cross-sectional analyses, though we recognise their limits when it comes to assessing the constrict theory. For one thing, the levels of local diversity are not unchanging givens. Instead, they often change over time as a result of social forces that drive

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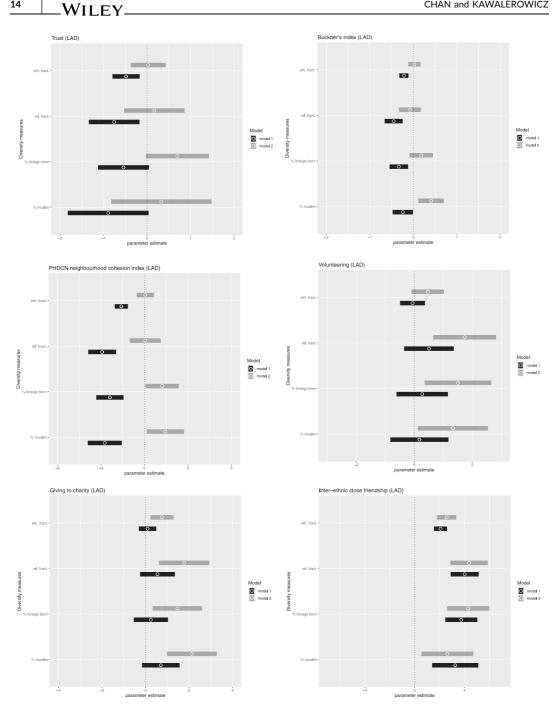


FIGURE 5 LAD-level analyses; parameter estimates with 95% confidence intervals of social diversity parameters in multilevel (logistic regression) models predicting trust (top-left), score on the Buckner's index (topright), score on the neighbourhood cohesion index (middle-left), volunteering (middle-right), charitable giving (bottom-left), and inter-ethnic friendship (bottom-right). Model 1 includes the individual covariates plus one of the four diversity measures; Model 2 is Model 1 plus the deprivation measure. Multilevel logistic regression models are used in models predicting trust, volunteering, charitable giving, and inter-ethnic friendship.

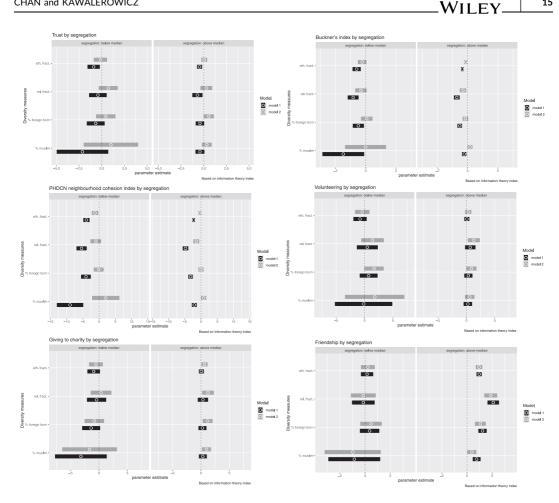


FIGURE 6 Estimates of social diversity parameters with 95% confidence intervals in multilevel (logistic regression) models predicting the six cohesion measures for LADs below (left) or above (right) the median level of segregation. Model 1 includes the individual covariates plus one of the four diversity measures; Model 2 is Model 1 plus the deprivation measure. Multilevel logistic regression models are used in models predicting trust, volunteering, charitable-giving, and inter-ethnic friendship.

international migration (Sturge, 2023) or the movement of people within the UK (Chan & Kawalerowicz, 2022). Moreover, people can, within limits, choose the neighbourhood in which to live. In other words, there are multiple processes of selection and self-selection that sort people into more (or less) diverse neighbourhoods. The same is true of local deprivation. It would be important to take these processes into account in assessing the constrict theory.

As aggregate data from the 2021 Census have recently been released, we could compare them with the 2011 Census to track how neighbourhoods have changed over that decade. Moreover, because Understanding Society is a panel survey, we could follow its respondents over time, and find out whether they have moved between neighbourhoods over the panel period. And since there are repeated measurements of some of the social cohesion variables, we could study whether they vary as neighbourhood becomes, say, more diverse and/or when respondents move to a different neighbourhood. In other words, we could put the findings of this paper to more stringent tests with panel data analysis. We will report these results in a companion paper.

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CONFLICT OF INTEREST STATEMENT

There is no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in UK Data Service at https://ukdataservice. ac.uk.

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ENDNOTES

- ¹ The Understanding Society data (University of Essex, Institute of Social and Economic Research, 2023a, 2023b, 2023c) that we analyse are available from UK Data Service at https://www.ukdataservice.ac.uk. Stata and R codes are available from the authors on request.
- ² Understanding Society has a complex sample design. In addition to the General Population (GP) sample, there is also an Ethnic Minority Boost (EMB) sample. In wave 1, the GP sample comprises 41,046 individuals from 26,057 households and the EMB sample comprises 6683 individuals from 4060 households.
- ³ The second smallest and the smallest geographical units in UK Census are Lower Layer Super Output Area (LSOA) and Output Area (OA) respectively. The average population of LSOAs in England and Wales in 2011 is 1614, and that for OAs is 309 (Office for National Statistics, 2012). To put this in an international perspective, US census tracts have an average population of 4000 and a range of 1200 to 8000 people (see https://www2.census.gov/geo/pdfs/educatieon/ CensusTracts.pdf).
- ⁴ We have considered, but ultimately decided against, treating LSOAs as a third definition of local neighbourhoods. This is because there are very few respondents per LSOA. Across the six dependent variables that we use, and among those LSOAs that actually contain Understanding Society respondents, between 26% and 33% of the LSOAs contain just one respondent, and 56%–64% contain no more than two respondents. So there is very little information on within-LSOA variation. More practically speaking, when we tried to use LSOAs as level-2 units, some of our multilevel models would not converge.
- ⁵ The census data are taken from https://infuse2011gf.ukdataservice.ac.uk.
- ⁶ An alternative deprivation measure is the Index of Multiple Deprivation (IMD). In this paper we prefer the Townsend Index to the IMD for the following reasons. First, IMD is measured separately for England, Wales, and Scotland. So it does not support Britain-wide analyses. Secondly, IMD for MSOAs is available for 2019 only, whereas the Townsend index is from 2011, closer in time to the social diversity measures that we use. Thirdly, IMD is calculated using 39 different indicators from 7 domains. Some of these domains, for example, crime level, might be considered endogenous with social cohesion, whereas the Townsend index is about economic deprivation only. In any case, we have repeated our analysis, for England only, using the IMD, and the results that we obtain are broadly comparable to those reported here. Details are available from the authors.
- ⁷ See http://news.bbc.co.uk/1/hi/uk/4270010.stm.
- ⁸ Next to the Dissimilarity Index (*DI*), the information theory index, *H*, is one of the popular measures of residential segregation. While both indices tap the evenness of the distribution of different groups, *H*, unlike *DI*, can be calculated for multiple groups.

- ⁹ The Theil index is often used as a measure of economic inequality. In the present context, it gauges the level of ethnic diversity within geographical units. We used the 'seg' package in Stata to calculate *H* (Reardon and Townsend, 2018).
- ¹⁰ This is calculated as 100 $\times \frac{\hat{\beta}_{m1} \hat{\beta}_{m2}}{\hat{\beta}_{m1}}$, where $\hat{\beta}_{m1}$ and $\hat{\beta}_{m2}$ are the estimates for the diversity parameter under model 1 and model 2 respectively.
- ¹¹ We find a similar pattern between percentage Muslim and ethnic fractionalisation index at the MSOA level. Details are available from the authors on request.
- ¹² Following a reviewer's suggestion, we have used an alternative strategy to test for possible segregation--diversity interaction effect on social cohesion. Under this alternative approach, we keep the sample together and enter a segregation--diversity interaction term in our models. The results that we obtained with this alternative approach are very similar to those reported in the paper. Details are available from the authors on request.

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