

# Understanding the social and cultural bases of Brexit\*

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## Abstract

We use data from a large scale and nationally representative survey to evaluate two narratives about the social bases of Brexit. The first narrative sees Brexit as a revolt of the economically left-behinds. The second narrative attributes Brexit to the resurgence of an English nationalism. There is some, albeit not always consistent, evidence that people in relative poverty or those living in areas that have seen greater Chinese import penetration are slightly more pro-Leave. People living in economically deprived neighborhoods are *not* more pro-Brexit. Using the Weberian class-status distinction, it is social status, not social class, which stratifies Brexit support. Individuals for whom being British is important are more pro-Leave. But those who see themselves as British rather than English, and those reporting omnivorous cultural consumption are less supportive of Brexit. Overall, there is empirical support for both narratives. But the weight of the evidence suggests a strong cultural dimension in Brexit support.

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**KEYWORDS**

Brexit, cosmopolitan worldview, English nationalism, left-behind, social status

## 1 | INTRODUCTION

On June 23, 2016 Britain voted by a margin of 52%–48% to leave the European Union. How do we understand the social bases of Brexit? What are the social and cultural underpinnings of Euroskepticism in the United Kingdom?

The support for Leave (or Remain) is multidimensional in nature. A diverse set of issues, including the economic consequences of Brexit, immigration and its impact, Britain's ability to make its own laws, etc. all played their parts, to differing degree and in different mix, in the mind of voters (Curtice, 2016). Correspondingly, there are different narratives about Brexit. But, broadly speaking, they fall into two types.

The first and perhaps dominant narrative starts with the observation that Leave-vote share tends to be higher in economically deprived areas. The inference is then made that many Leave-voters are people who have been left behind by the economic boom fuelled by globalization in general and European integration in particular. This narrative attributes the referendum outcome to voters' material circumstances and how they understand where their material interests lie.

But quite apart from material conditions, there is also a subjective dimension to Brexit. This second narrative speaks to cultural issues and national identity, for example, whether people see themselves as English, Scottish, British, European, and so on. Under this view, Brexit is driven by the resurgence of an English nationalism, the appeal of which goes far beyond the economically left-behinds.

In this paper, we use data from a large scale and nationally representative survey to evaluate both Brexit narratives. We focus on the proximate correlates of Brexit support. And, we provide multiple tests that address the different strands of the two narratives. Among other things, we clarify the conceptual difference between social class and social status, and their contrasting implications for understanding Brexit. We also consider both individual and neighborhood characteristics in our analyses.

### 1.1 | Globalization and the left-behinds

Coyle (2016, p. 23) sees Brexit "as a vote against globalisation and its uneven impact on different parts of the country." O'Rourke (2016, p. 43) describes Brexit as "an anti-globalisation backlash." Hobolt (2016, p. 1,265) argues that "the 'winners' of globalization—the young, well-educated professionals in urban centres—favour more open borders, immigration and international co-operation, whereas the 'left-behind'—the working class, less educated and the older—oppose such openness."

Hobolt's (2016) quote above shows that it is not straightforward to determine just who the left-behinds are. Successive governments have treated the baby-boomers more favorably than they do younger generations (see e.g., Higgs & Gilleard, 2010). So it seems unjustified to consider older people, as a group, as part of the left-behinds.

In the U.S. context, the left-behind argument is powerfully articulated by Autor et al. (2013, 2016). They argue that the spectacular growth of the export-oriented Chinese economy has large impact on local labor markets in the United States. Since local labor markets differ in their initial pattern of industrial specialization, some are more exposed to the Chinese import shock than others. Autor et al. show that the more exposed labor markets have seen higher unemployment, lower wage growth, and depressed labor force participation. The adjustments to the import shock prove to be sluggish, and the lingering economic hardships, in turn, have wider political ramifications. These include political polarization, with "congressional districts exposed to larger increases in import penetration disproportionately removed moderate representatives from office in the 2000s" (Autor et al., 2017a,

p. 1). Moreover, in the 2016 presidential election, “Michigan, Wisconsin, and Pennsylvania would have elected the Democrat instead of the Republican candidate if, *ceteris paribus*, the growth in Chinese import penetration had been 50% lower ...” (Autor et al., 2017b, p. 1). In other words, the Chinese import shock plays a key role in the election of Trump.

Building on the work of Autor et al., Colantone and Stanig (2018) advance a similar argument about Brexit. Their claim has three parts. First, import from China is “a structural driver of divergence in economic performance across UK regions” (Colantone & Stanig, 2018, p. 201). Second, workers displaced by the Chinese import shock have not been “effectively compensated.” They are the left-behinds. Third, regions with a concentration of the left-behinds are more supportive of Brexit.

Empirically, they use a Chinese import shock index proposed by Autor et al. (2013) and measure it for local areas of Britain. This variable is then matched to the data collected in waves 8 and 9 of the British Election Studies Internet Panel. Colantone and Stanig (2018) show that, net of covariates such as age, gender, and education, individuals living in areas that have seen greater Chinese import penetration are more likely to support Brexit. Moreover, they obtain similar results when Chinese import penetration in the United States is used as an instrument for the shock in the United Kingdom. Based on these findings, they conclude that “geographically concentrated economic distress—driven by the Chinese import shock—led to an increase in Leave support” (Colantone & Stanig, 2018, p. 217).

It is worth noting that China did not become a major exporter of manufactured goods in world trade until the 1990s. The deindustrialization of the United Kingdom and the United States began long before that (see e.g., Autor et al., 2016, Figure 1). In the Brexit debate, the local economic distress that is sometimes linked to globalization has more to do with immigration than with the offshoring of industries (Curtice, 2016). Many of the EU immigrants who are said to have depressed British workers’ wages (e.g., the proverbial Polish plumbers) work in the non-tradable sectors of the economy. Having noted these reservations, Colantone and Stanig’s (2018) argument is intriguing, and we will test its validity as an explanation of Brexit in the analyses below.

## 1.2 | Cultural values and national identity

### 1.2.1 | National identity, insular versus cosmopolitan worldview

Kaufmann (2016) argues that “Brexit voters ... are motivated by identity, not economics.” It seems reasonable to think that Leavers hold a relatively insular view of the United Kingdom vis-à-vis Europe, in contrast to Remainers’ more cosmopolitan outlook. One expression of this insular view is a resurgence of an English nationalism.

We recognize that national identity is often complex and multi-layered. Regarding Brexit, it would be ideal to know whether people see themselves as British, European, British *and* European, and so on. Unfortunately, there is no such measure in our data. But if there is a fractal structure in national identity, then it would be instructive to consider whether people identify with Britain as a whole or with one of the four home nations of the United Kingdom.

Numerically, politically, and economically, England is by far the dominant part of the United Kingdom. Residents in England might think of themselves as English, British, English *and* British, etc. What inference can we make about people’s general outlook if they choose one or the other of these identities?

Kumar (2010, p. 475) observes that while the Scots and the Welsh “have privileged their Scottish and Welsh identities over their British ones,” the English have historically been “perfectly content to call themselves equally English and British.” But this “English-British elision” might be coming apart. Bryant (2010, p. 252) argues that “to be consciously English comes more easily to the people of England now than it has for perhaps more than a century” (see also McCrone & Bechhofer, 2015). Kenny (2014, p. 1) posits that Englishness is sometimes “tainted by its regressive, conservative, and ethnically charged character.” To many people, and ethnic minorities and immigrants especially,

Britishness is a more inclusive, less racialized category that they can identify with (see e.g., Kumar, 2010, pp. 479–480). Thus, people who see themselves as *British* rather than *English* are arguably choosing a broader and more inclusive identity. This gives us a handle to test if Remainers (Leavers) hold a more cosmopolitan (insular) worldview.

### 1.2.2 | Omnivorous cultural consumption

A further, indirect, test of the basic outlook of Remainers and Leavers comes from cultural consumption research. Based on a latent class analysis of cultural consumption data, Chan and Turner (2017) and Chan (2019a) identify three types of cultural consumers: (1) cultural omnivores who consume many different genres of music and visual arts, whether they are highbrow, middlebrow, or popular in appeal; (2) univores whose cultural consumption is restricted to popular genres only, and (3) paucivores whose cultural consumption pattern is in-between those of omnivores and univores.

Chan and Goldthorpe (2007b) argue that cultural omnivores might be “essentially tolerant individuals ... who have a general openness to other cultural styles ... perhaps, a desire to experiment with different kinds of cultural consumption.” If this interpretation is correct, then we would expect cultural omnivores, being more open and tolerant people, to be less insular and would take a more positive stance about the European Union.

There is some support for this view. In terms of the Big Five personality traits, Chan (2019a) shows that omnivores are more open to new experiences and less conscientious than univores. Previous research suggests that openness is associated with liberal social and political attitudes, while conscientiousness is associated with conservative views (Gerber et al., 2010). In a meta-analysis, Sibley and Duckitt (2008) link Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO) to lower level of openness and higher level of conscientiousness. Choma and Hanoch (2017, p. 287), in turn, report that “higher RWA and SDO uniquely predicted more favorable attitudes of Trump, [and] greater intentions to vote for Trump.” Given these findings, our expectation is that cultural omnivores are more likely to support Remain.

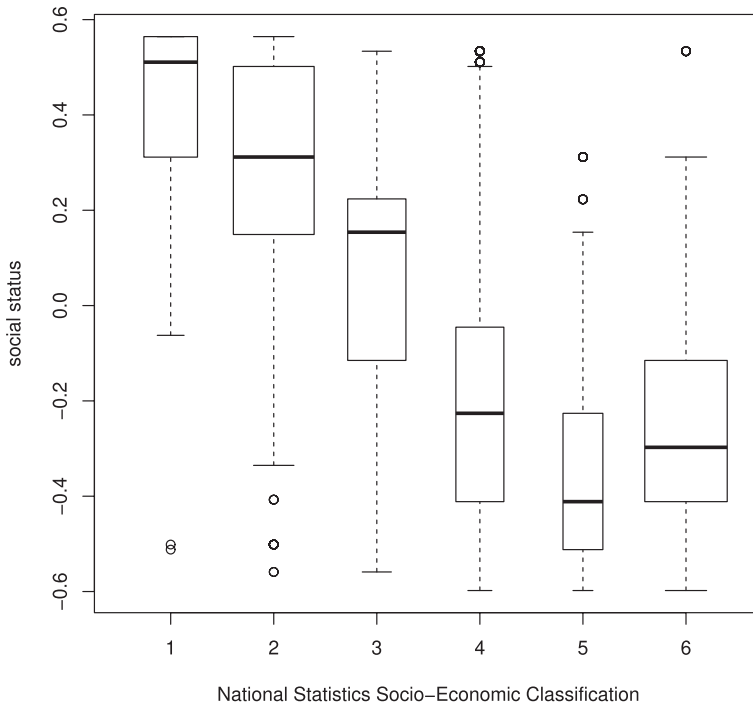
### 1.3 | Social class versus social status

How is Brexit support socially stratified? Scholars often refer to social class or social status in discussion about Brexit. But they typically use these terms rather loosely. For example, on social class, Runciman (2016, p. 5) writes, “[w]hat is it that most fundamentally separates the Remainers from the Brexiteers? Class is one way to cash it out: the relatively affluent voted to remain, the relatively disadvantaged voted to leave.”

As regards social status, Gidron and Hall (2017, p. S57) suggest that “status anxiety [is] a proximate factor that induces support for populism.” The subjective social status (SSS) measure that they use comes from a survey question which asks respondents to place themselves somewhere on a 10-rung social ladder.

Gidron and Hall (2017) report two empirical results. First, people reporting lower SSS are more likely to support right-wing populist parties. Second, they construct, for Australia, the United States, and 10 European countries, an index of the relative social status of men (and women) aged 30 to 65 without a university degree. This is simply the ratio of the mean SSS of this group to the mean SSS of the whole sample. Gidron and Hall (2017, p. S74) observe that “in all but two of these countries, the relative social status of men without a college education is lower today than it was 25–30 years ago.” So their argument is that in many Western democracies less educated, middle-aged men have been losing social status over time. This leads to status anxiety which, in turn, makes them more susceptible to the appeal of right-wing populism.

This is an interesting argument, though the empirical evidence seems less clear-cut on closer inspection. For example, a populist right-wing government led by Orbán has been in power in Hungary since 2010. But it is also the only country in Gidron and Hall’s (2017) sample where the relative social status of less educated men has gone



**FIGURE 1** Distribution of social status within and between social classes

Note: NSSEC class (1): higher managerial and professional occupations, (2): lower managerial and professional occupations, (3): intermediate occupations, (4): small employers and own account workers, (5): lower supervisory and technical occupations, and (6): semi-routine and routine occupations.

up. Moreover, to our eyes at least, less educated men in the United States or the Czech Republic have not suffered a consistent decline in relative social status (Gidron & Hall, 2017, figure VI).

Part of the difficulty here is that the change in relative status seems quite small. How much of it is real social change, and how much of it is measurement error? It is hard to know. This problem is related to a very strong tendency of response-bunching in the middle of the ladder (Evans & Kelley, 2004). The upshot is that we need to know more about the measurement properties of SSS before we could interpret Gidron and Hall's (2017) results with confidence.

A second issue concerns the conceptual basis of SSS. Just what does it measure? Gidron and Hall (2017) refer to Weber's notion of social status. They argue that SSS reflects "the level of social respect or esteem people believe is accorded them within the social order" (Gidron & Hall, 2017, p. S61). But Adler et al. (2008) suggest that SSS is a composite measure of income, education, or wealth, which are not the same as social esteem in the Weberian sense. SSS is often used in health research, where its test-retest reliability and its predictive utility regarding several health outcomes have been demonstrated (Operario et al., 2004). But its conceptual basis has not been clearly established.

We agree that the Weberian class–status distinction is relevant to understanding the social stratification of Brexit support. We treat social class as a structure of inequality that is rooted in the social relations of economic life, that is, relations in labor markets and production units. Accordingly, class should predict economic security (e.g., risks of recurrent or long-term unemployment), economic prospects (e.g., the age–earnings profile), and economic interests (e.g., the class–vote association). There is indeed empirical support for these predictions (Chan & Goldthorpe, 2007a).

In contrast, we understand the status order as a perceived and often accepted hierarchy of social superiority, equality, and inferiority. Weber (1968/1922), p. 305 argues that "status expresses itself through connubium

and commensality." That is to say, intimate relationships, such as close friendship or marriage, are usually formed between people who see each other as social equals. This leads to the idea that by studying the behavioral expression of status equality, the structure of status inequality can be uncovered.

Chan and Goldthorpe (2004) apply multidimensional scaling analysis to a contingency table that cross-classifies the occupations of a sample of individuals and the occupations of their close friend. Based on this analysis, they report that a status order, in the classical Weberian sense, still exists in contemporary British society. One key feature of this status order is that nonmanual occupations rank above manual occupations and, within the nonmanual range, professional occupations tend to rank above managerial occupations.

Although class and status understood in this way are correlated with each other, they are not the same thing. As Figure 1 shows, in terms of its median and inter-quartile range, there is a status gradient across class. But the spread of status within class is often quite large and there is a good deal of overlap in status between classes. Consider a depot manager and an office administrator. They are members of the same social class (what Goldthorpe calls "the salariat"). But since the depot manager works in a blue-collar milieu, she has lower social status than the administrator (Chan & Goldthorpe, 2004, Table 2). Now consider two plumbers, one is self-employed and the other is an employee. The self-employed plumber is of course his own boss. But he is not entitled to sick pay or holiday pay as the employee is. Because of these differences in employment conditions, they are in different social classes, despite having the same status.<sup>1</sup>

Furthermore, Chan and Goldthorpe (2007a) show that it is class, not status, which predicts left-right political attitudes (e.g., income distribution and management-employee relationship); while the opposite is true of libertarian-authoritarian attitudes (e.g., deference, obeying authority and censorship) (Evans & Heath, 1995; Heath et al., 1993). Given these results, our expectation is as follows. If Brexit is primarily driven by bread-and-butter issues, class would be the main dimension of the social stratification of Brexit support. But if it is more a matter of cultural values and national identity, Brexit would be stratified by status, not class.

## 1.4 | Neighborhood effects

The obvious neighborhood variable to consider is the Chinese import shock. But economic deprivation and immigration in the local areas are also relevant. Economic deprivation speaks directly to the left-behind narrative. Colantone and Stanig (2018) argue that voters behave sociotropically in the Brexit referendum. That is to say, people vote not just according to their own wallet, but also to the economic conditions of their neighborhood.

As regards immigration, it might lead to feelings of cultural loss, even a symbolic threat to the British way of life. Concerns over group identity are powerful predictors of political behavior and attitudes. For example, McLaren and Johnson (2007) use British Social Attitudes Survey data to show that symbolic threats of immigration, such as religious diversity and the introduction of non-British customs, are more important predictors than economic variables of anti-immigration attitudes.

In the analyses below, we consider not only the *levels* of economic deprivation and immigration, but also *change in the level* of these variables. The idea is that people might get used to local conditions, but changes to those local conditions could provoke response. Thus, Laurence and Bentley (2016) report that both the *level* of neighborhood ethnic diversity and *change* in the level of diversity affect subjective sense of social cohesion.

## 1.5 | Testing the two narratives about Brexit

To recap, in this paper we assess two narratives about Brexit. According to the first narrative, Brexit is a revolt of the economically left-behinds. One prominent strand of this narrative links the left-behinds to the Chinese import shock. We test this argument using the import penetration index developed by Colantone and Stanig (2018). We

recognize that the left-behind narrative might still be valid even if import from China did not cause local economic distress in the United Kingdom. So in a further test of the left-behind narrative that is entirely agnostic about the root cause of the distress, we use a direct measure of local economic deprivation. So long as voters respond sociotropically to the economic conditions of their neighborhood, there should be an association between Brexit support and deprivation. The left-behind narrative has two further testable implications at the individual level: compared to salaried professionals and managers, people in disadvantaged social classes should be more pro-Leave. The same goes for people in relative poverty compared to people with higher income.

The second narrative attributes Brexit to the resurgence of an English nationalism or at least a more insular view of the UK's place in Europe. The appeal of such a worldview goes far beyond the economically left-behinds. If this narrative is valid, our expectation is that it is social status, not social class, which stratifies Brexit support. Furthermore, direct measures of national identities should also predict Leave-support. And, since immigration might provoke feelings of cultural loss or even a symbolic threat to national identity, we expect local level of immigration to be relevant. Finally, we have an indirect behavioral measure of how insular or cosmopolitan individuals are that is taken from cultural consumption research. Insofar as omnivorous cultural consumption reflects a more tolerant and open disposition, we expect cultural omnivores to be pro-Remain.

By putting both narratives to multiple tests, we hope to provide a more robust assessment of the social bases of Brexit. Each test, on its own, might be imperfect. But we could be more confident of a Brexit narrative if the results of the multiple tests for it are consistent with each other.

## 2 | DATA AND MEASURES

We use data from Understanding Society, which is a nationally representative annual household panel survey that began in 2009–2010.<sup>2</sup> Data are collected through face-to-face interviews, using a stratified random sample. Compared to other data sources, Understanding Society offers some key advantages. Most importantly, several papers and most media commentary on Brexit are based on aggregate-level data (e.g., Becker et al., 2017; Goodwin & Heath, 2016). It is well known that such analyses are potentially subject to the ecological fallacy (Robinson, 1950).

There are other papers on Brexit that draw on individual-level data. For example, Hobolt (2016), Antonucci et al. (2017), and Colantone and Stanig (2018) all use data from the British Election Study Internet Panel (BESIP) and Clarke et al. (2017) use data from the Essex Continuous Monitoring Survey (ECMS). Both BESIP and ECMS are internet panels conducted by YouGov. But as these internet panels are not based on probability samples, data representativeness is a concern, even when the data are weighted to match known population characteristics (Mellon & Prosser, 2017).<sup>3</sup>

### 2.1 | Dependent variable

Wave 8 of Understanding Society includes the question that appears on the ballot paper: "Should the United Kingdom remain a member of the European Union or leave the European Union?", and respondents were given the same binary choice: "Remain a member of the European Union" or "Leave the European Union." The response to this question is our dependent variable.

Note that this variable does *not* measure how the respondents actually voted in the referendum. Instead, it measures their view about the UK's EU membership on the day they were interviewed. But as people's views about the European Union are probably highly correlated with their vote in the referendum (if they did vote), the associations reported in this paper are relevant to understanding the social bases of Brexit.

The fieldwork of each wave of Understanding Society takes more than 2 years to complete. The first set of the wave 8 interviews took place 170 days before June 23, 2016, and last batch of interviews took place 679 days afterward. It is likely that, before the referendum, people's attitude might be swayed by the opposing campaigns and also by various events, including the European refugee crisis which peaked in late 2015 and the murder of the MP Jo Cox on June 16, 2016. After the referendum, people's attitude might be influenced by the outcome of the vote. Given this, it is not a surprise that the distribution of the dependent variable (51.5% Remain to 48.5% Leave) differs significantly from the actual referendum result (48.1% Remain to 51.9% Leave).

There are other reasons that might explain the discrepancy, including sampling variation, a higher survey non-response rate among Leave-voters, and a lower turnout rate among Remain-supporters (e.g., younger people). The Electoral Commission (2016, p. 5) estimates that in December 2015 85% of those who were entitled to have an entry on the electoral register were registered. Among registered voters, the turnout rate in the referendum was 72%. It should be clear that whether people are registered on the electoral roll and, conditional on registration, whether they turn out to vote are not random events. The upshot is that those who voted in the referendum were *not* a random sample of the UK population. Hence, the discrepancy does not necessarily mean that our sample is unrepresentative. It is beyond the scope of this paper to investigate this question further. Suffice it to say that we restrict our analysis to UK citizens aged 18 or over, and we apply the relevant sampling weight.

## 2.2 | Explanatory variables

The Chinese import shock variable is taken from Colantone and Stanig (2018).<sup>4</sup> This variable is measured for each of the 167 NUTS-3 units of Great Britain.<sup>5</sup> The spatial unit of the Understanding Society data set that we have access to is the much smaller Lower Layer Super Output Areas (LSOAs), which is the second smallest spatial unit of the UK census. On average, each LSOA has a population of about 1,500 people, compared to about 370,000 for NUTS-3. So we match each LSOA to the NUTS-3 in which it is embedded and append the Chinese import shock variable to the Understanding Society data.

We measure social class with the sixfold version of National Statistics Socio-Economic Classification (NS-SEC). As regards social status, we use the status scale developed by Chan and Goldthorpe (2004). To determine relative poverty status, we first compute the equalized household income by dividing the total household income by the square root of household size. Following a convention in poverty research (Jenkins, 2011), the relative poverty line is set as 60% of the sample median of the equalized household income.

The two neighborhood characteristics that are particularly relevant to Brexit are economic deprivation and immigration. Our measure of economic deprivation is the Townsend index, which is based on four local indicators: (1) unemployment, (2) home-ownership, (3) households without a car, and (4) overcrowding (Norman, 2016). Immigration level is measured by the percentage of residents in each LSOA who are foreign-born. For both economic deprivation and immigration, the most recent measure that is available is derived from the 2011 census. We also compute the change in the value of these two variables between the 2001 and 2011 censuses.

Our measure on British identity is taken from the waves 1, 3, and 6. Respondents were asked: "Most people who live in the UK may think of themselves as being British in some way ... how important is being British to you?" The response categories range from 0 to 10; "0" means that being British is "not important at all" and "10" that it is "extremely important."<sup>6</sup>

In every wave of Understanding Society, there is a question about British and national identity: "Looking at this card, what do you consider your national identity to be? You may choose as many or as few as apply." The options on the card are: English, Welsh, Scottish, Northern Irish, British, Irish, and Other. As this question allows respondents to report multiple identities, we construct a fivefold typology: (1) British only (2) English only, (3) Welsh, Scottish, or (Northern) Irish only, (4) British and English, and (5) all other combinations. This variable helps to capture the potentially multilayered nature of national identity. As people's contemporaneous view of national



identity might be shaped by the Brexit referendum campaign, we construct this variable with data from waves 1 to 6 of Understanding Society.

The cultural consumption variable is derived from a latent class analysis of eight items of music and visual arts consumption taken from waves 3 and 5 of Understanding Society (see Chan, 2019a; Chan & Turner, 2017). The Online Appendix provides some information about the latent class analysis that generates the three latent classes.

Finally, we include in our analysis the following social-demographic variables that are taken from wave 8 of Understanding Society: age (and a quadratic term of age), sex, ethnicity, marital status, number of children in the household, region of residence, and educational attainment. Descriptive statistics of the variables are reported in the Online Appendix.

## 3 | RESULTS

### 3.1 | Bivariate associations

Let us start with the bivariate associations. We divide the respondents into 10 groups of equal size according to the date of interview (from the earliest to the latest). The top-left panel of Figure 2 shows that prior to the referendum (June 23, 2016 is in group 4), Leave-support had generally been gaining ground. But the post-referendum trend was much less clear. Given this, we control for the date of interview in the regression analyses below.

Figure 2 also shows strong bivariate gradients in Leave-support by age, educational attainment, social class, social status, and relative poverty status.<sup>7</sup> The fact that younger, better educated people are more supportive of Remain is well known from previous research and media reports. What we are able to show with Understanding Society data are that individuals in more advantaged social class positions, of higher social status, or not in relative poverty are also pro-Remain.

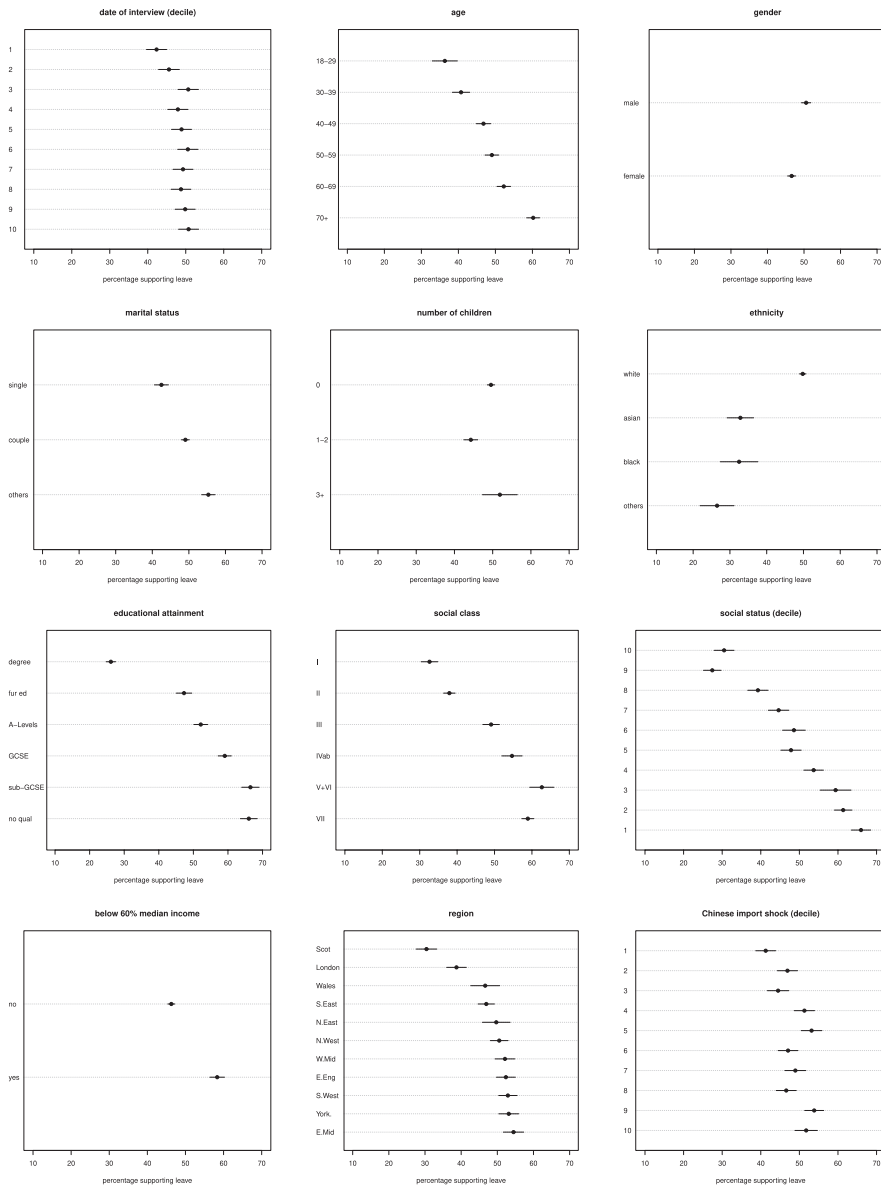
In line with the official results, Figure 2 shows that Scotland is the most pro-Remain region of Britain, and London is the most pro-Remain part of England.<sup>8</sup> In addition, there are large differences by marital status, ethnicity, and cultural consumption pattern. By comparison, the difference in Leave-support by gender or number of children is smaller or unsystematic.

As regards the neighborhood variables, their bivariate associations with Leave-support seem generally weaker. The Chinese import shock index has no clear association with Leave-support. The same is true of the Townsend index score of 2011 or the change in the Townsend score between 2001 and 2011. Individuals living in LSOAs with a higher share of foreign-born are actually *less* pro-Brexit. The same is true of those living in LSOAs that have seen larger increase in the share of foreign-born.

The bivariate association between Leave-support and British identity is quite complex. Generally speaking, people who attach greater importance to being British are more supportive of Leave. But this appears to apply only to those who choose their response from the upper half of the scale (6–10). For those choosing their response from the bottom half (0–5), there is no systematic pattern. Perhaps respondents pick an answer more or less randomly from the bottom half of the scale if they do not think that being British is at least moderately important to them. Finally, Leave-support is higher among those who see themselves as English only or, to a smaller extent, as British *and* English rather than just British.

### 3.2 | Multiple logistic regression analyses

Table 1 reports five logistic regression models in which Leave-support is the dependent variable. Models 1 through 4 each provides a test of one strand of the left-behind narrative. Let us start with the sociodemographic variables.



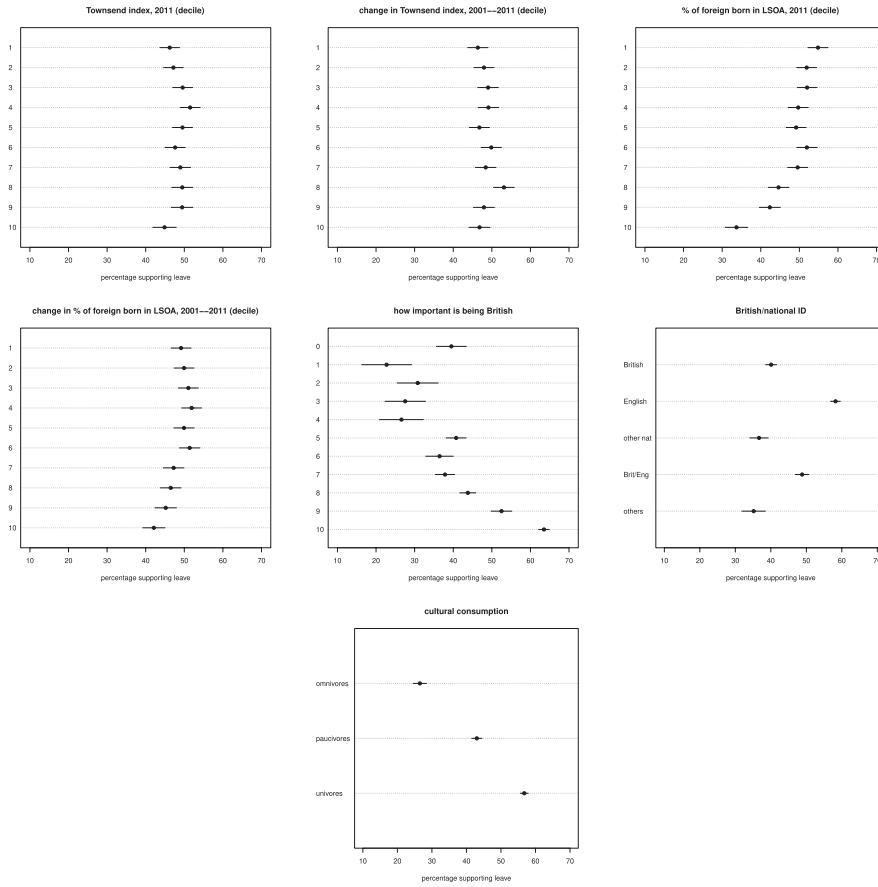
**FIGURE 2** Bivariate association of covariates with Leave-support (group mean with 95% confidence interval)

Consistent with the bivariate associations shown in Figure 2, those interviewed earlier in 2016 are less supportive of Leave, and there is no trend in Leave-support post-referendum.

There are strong gradients by age and education, with older people and those with fewer qualifications being more pro-Leave. The educational parameters are statistically significant, large in magnitude, and nearly monotonic. These results are consistent with previous research and media commentary based on aggregate-level data.

What is *not* consistent with previous findings is that, taking into account the characteristics of individuals living in different parts of the country, six of the eight English regions are not more pro-Brexit than London. People living in Scotland are still significantly less pro-Brexit than Londoners.

Women, ethnic minorities, and individuals without children at home are less likely to support Leave. But there is no difference in Leave-support by marital status.



**FIGURE 2** (continued)

Social class and social status are also included in model 1. While both are associated with Leave-support when considered on their own (see Figure 2), in a multiple logistic regression model, it is social status, not social class, which remains statistically significant.<sup>9</sup> This finding is inconsistent with the left-behind narrative. To illustrate the magnitude of the status effect, we report in the top panel of Figure 3 the predicted probability of supporting Brexit under model 1 for different combinations of educational attainment and social status. For respondents of middling status, their probability of supporting Brexit is .32 if they have a university degree, rising to .59 if they have no qualifications. Seen from a different angle, among those with A-levels, the probability of Leave-support is .43 for those at the top of the status scale, compared to .62 for those with the lowest social status.<sup>10</sup> Thus, the status gradient is not as steep as the educational gradient, but it is still very substantial.

In model 2, we drop social class and social status, but include a dummy variable that indicates whether or not the respondent's equivalized household income is below 60% of the median. Net of other covariates, the relatively poor (19% of the sample) are more likely to support Leave. The middle panel of Figure 3 shows that under model 2, at each educational level, Brexit-support is about 3 to 4 percentage points higher among the relatively poor.

Model 3 shows that people living in areas that have seen greater import penetration from China are more pro-Leave. But note that the relevant parameter is at the margin of statistical significance ( $p = .054$ ). So this result is not as robust as reported by Colantone and Stanig (2018). The bottom panel of Figure 3 reports the substantive magnitude of the import shock effect. For example, for people with A-Levels, their probability of supporting Leave is .51 if they live in an area where the Chinese import shock is at its smallest, rising to .57 if the import shock is at its greatest. This result and that concerning relative poverty provide some support for the left-behind narrative,

**TABLE 1** Logistic regression models predicting Leave-support

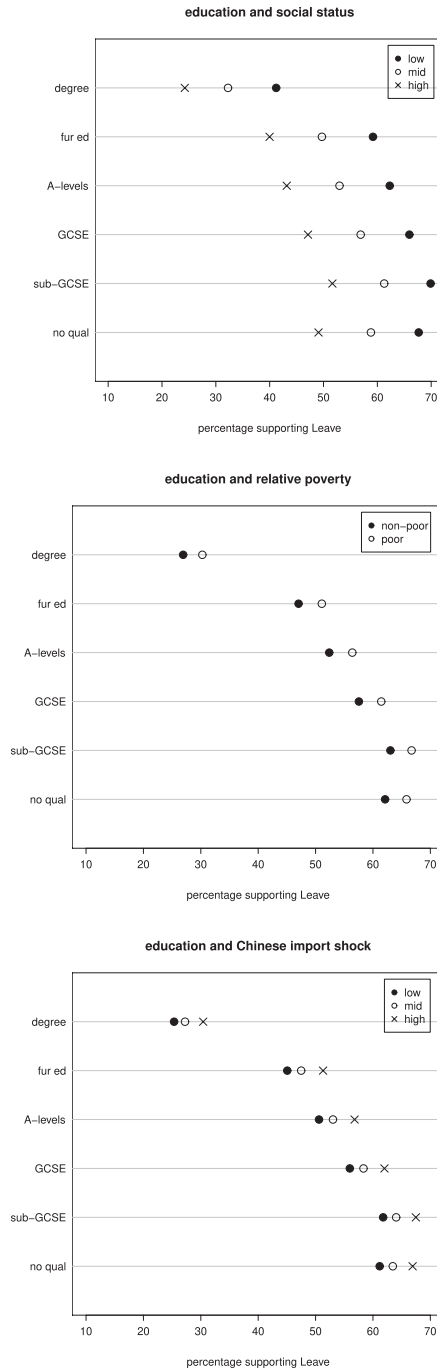
	Model 1		Model 2		Model 3		Model 4		Model 5	
	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE
# Days before	-.002**	.000	-.002**	.000	-.002**	.000	-.002**	.000	-.002**	.000
# Days after	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Age	.038**	.009	.034**	.008	.035**	.008	.034**	.008	.037**	.009
Age-squared/100	-.025**	.007	-.025**	.007	-.024**	.007	-.023**	.007	-.025**	.007
Female <sup>a</sup>	-.167**	.046	-.244**	.042	-.241**	.042	-.240**	.042	-.171**	.046
Single <sup>b</sup>	-.043	.064	-.028	.063	.002	.062	-.007	.063	-.048	.066
Sep/div/wid	.009	.053	.028	.052	.051	.051	.047	.052	.009	.054
1-2 children <sup>c</sup>	.124*	.062	.091	.060	.107	.061	.108	.061	.109	.062
3+ children	.391**	.121	.333**	.119	.366**	.119	.358**	.119	.360**	.121
Asian <sup>d</sup>	-.607**	.133	-.652**	.123	-.647**	.123	-.646**	.126	-.616**	.137
Black	-.547**	.208	-.612**	.204	-.604**	.203	-.625**	.206	-.566**	.210
Others	-.814**	.175	-.814**	.167	-.802**	.168	-.801**	.168	-.804**	.176
North East <sup>e</sup>	.004	.126	.062	.123	.047	.124	.103	.126	-.049	.130
North West	.096	.104	.118	.102	.070	.106	.147	.103	.005	.111
Yorkshire	.194	.109	.203	.106	.185	.107	.237*	.107	.130	.112
East Midlands	.255*	.108	.259*	.105	.165	.117	.292**	.108	.116	.123
West Midlands	.206	.108	.215*	.105	.161	.109	.245*	.107	.119	.115
East of England	.253*	.106	.211*	.104	.178	.105	.232*	.106	.183	.111
South East	.044	.103	.038	.100	.019	.101	.067	.102	.004	.107
South West	.188	.105	.204*	.103	.195	.103	.244*	.105	.141	.109
Wales	-.167	.134	-.125	.130	-.164	.133	-.095	.132	-.245	.139
Scotland	-.810**	.118	-.752**	.115	-.773**	.116	-.728**	.120	-.877**	.124
Further edu <sup>f</sup>	.754**	.070	.904**	.068	.906**	.068	.910**	.068	.751**	.071

(Continues)

TABLE 1 (Continued)

	Model 1		Model 2		Model 3		Model 4		Model 5	
	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE
a-levels	.890**	.069	1.126**	.064	1.135**	.064	1.138**	.065	.886**	.069
gcse	1.055**	.069	1.342**	.064	1.359**	.063	1.354**	.064	1.047**	.070
Sub-gcse	1.244**	.086	1.580**	.079	1.607**	.078	1.600**	.079	1.229**	.087
No qual.	1.137**	.090	1.540**	.079	1.581**	.078	1.572**	.079	1.121**	.091
Lower salariat <sup>e</sup>	.048	.074							.046	.074
Intermediate	.194*	.092							.188*	.092
Self-employed	.086	.104							.071	.105
Manual supervisor	.221	.128							.213	.128
Routine	.144	.102							.137	.102
Social status	-.694**	.099							-.704**	.099
Inc < 60% median			.167**	.056					.100	.058
Import shock					.375	.194			.451*	.200
Townsend 2011							.005	.008	-.005	.008
$\Delta$ Townsend							.003	.022	-.000	.022
Constant	-2.057**	.292	-1.996**	.276	-2.118**	.279	-2.022**	.278	2.102**	-.297
N	13,056		13,543		13,543		13,493		13,006	
R <sup>2</sup> <sub>McFadden</sub>	.1013		.0904		.0900		.0895		.1017	

Notes: Two-tailed tests, \*\* $p < .01$ , \* $p < .05$ . Reference category: <sup>a</sup>male, <sup>b</sup>married or cohabiting, <sup>c</sup>no children, <sup>d</sup>Whites, <sup>e</sup>London, <sup>f</sup>degree, and <sup>g</sup>higher professionals or managers.



**FIGURE 3** Predicted probability of Leave-support by education and social status under model 1 (top panel), by education and relative poverty status under model 2 (middle panel), and by education and Chinese import shock under model 3 (bottom panel)

with the caveat that the support is ambiguous. This is because the effect size of the relevant parameters is relatively small and, as we shall see below, they are often marginally on one or the side of the conventional 5% cutoff of statistical significance.

**TABLE 2** Further logistic regression models predicting Leave-support

	Model 6		Model 7		Model 8		Model 9	
	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE
# Days before	-.002**	.000	-.002**	.000	-.002**	.000	-.002**	.000
# Days after	.000	.000	.000	.000	.000	.000	.000	.000
Age	.038**	.009	.040**	.009	.043**	.009	.046**	.009
Age squared/100	-.025**	.007	-.031**	.008	-.029**	.008	-.034**	.008
Female <sup>a</sup>	-.176**	.046	-.161**	.047	-.167**	.047	-.161**	.048
Single <sup>b</sup>	-.035	.066	-.002	.067	-.031	.067	.023	.068
Sep/div/wid	.004	.054	.035	.055	-.003	.054	.019	.055
1-2 children <sup>c</sup>	.106	.062	.115	.063	.081	.063	.087	.064
3+ children	.367**	.123	.384**	.124	.307*	.121	.342**	.125
Asian <sup>d</sup>	-.380**	.145	-.427**	.139	-.710**	.136	-.324*	.148
Black	-.421*	.212	-.350	.209	-.681**	.208	-.336	.209
Others	-.731**	.176	-.624**	.175	-.834**	.181	-.595**	.179
North East <sup>e</sup>	-.463**	.149	-.025	.134	-.131	.132	-.442**	.154
North West	-.367**	.128	.045	.112	-.055	.113	-.320*	.130
Yorkshire	-.237	.129	.141	.113	.068	.114	-.220	.132
East Midlands	-.224	.136	.120	.125	.064	.126	-.206	.140
West Midlands	-.219	.129	.124	.116	.048	.116	-.221	.131
East of England	-.120	.122	.185	.113	.114	.112	-.130	.126
South East	-.274*	.116	.044	.108	-.042	.108	-.231	.119
South West	-.197	.123	.173	.109	.109	.110	-.139	.125
Wales	-.643**	.155	-.053	.150	-.349*	.141	-.491**	.167
Scotland	-.1291**	.144	-.549**	.139	-.933**	.127	-.954**	.161
Further edu <sup>f</sup>	.730**	.071	.670**	.072	.665**	.072	.582**	.073
a-levels	.861**	.069	.778**	.070	.782**	.070	.670**	.071
gcse	1.016**	.070	.926**	.071	.893**	.071	.769**	.073
Sub-gcse	1.196**	.087	1.069**	.089	1.044**	.089	.883**	.091
No qual.	1.084**	.091	.964**	.093	.892**	.093	.734**	.096
Lower salariat <sup>g</sup>	.036	.074	.031	.075	.050	.075	.025	.076
Intermediate	.176	.092	.174	.094	.172	.093	.148	.095
Self-employed	.060	.105	.084	.106	.099	.107	.097	.108
Manual supervisor	.190	.129	.165	.131	.178	.131	.116	.134
Routine	.110	.102	.139	.104	.114	.104	.095	.106
Social status	-.700**	.100	-.692**	.102	-.612**	.101	-.609**	.104
Inc < 60% median	.096	.058	.089	.060	.075	.058	.062	.060
Import shock	.451*	.200	.430*	.204	.409*	.204	.388	.208
Townsend 2011	.013	.009	.002	.008	-.007	.008	.016	.010
$\Delta$ Townsend	-.009	.023	-.010	.023	-.004	.022	-.018	.024
% Foreign born	-.024**	.004					-.020**	.004

(Continues)

**TABLE 2** (Continued)

	Model 6		Model 7		Model 8		Model 9	
	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE
% Foreign born	.023*	.009					.017	.009
English <sup>h</sup>			.463**	.056			.437**	.057
Scottish/Welsh/ (N)Irish			.065	.100			.047	.102
British/English			.213**	.064			.206**	.065
All others			-.007	.107			.056	.110
Strength of Brit identity			.104**	.008			.099**	.008
Paucivore					-.337**	.050	-.312**	.051
Omnivore					-.880**	.070	-.801**	.070
Constant	-1.617**	.313	-3.082**	.309	-1.906**	.301	-2.451**	.328
N	12,997		12,822		13,006		12,813	
$R^2_{McFadden}$	.1042		.1193		.1132		.1308	

Notes: Two-tailed tests, \*\* $p < .01$ , \* $p < .05$ . Reference category: <sup>a</sup>male, <sup>b</sup>married or cohabiting, <sup>c</sup>no children, <sup>d</sup>Whites, <sup>e</sup>London, <sup>f</sup>degree, <sup>g</sup>higher professionals or managers, <sup>h</sup>British only, and <sup>i</sup>univore.

In model 4, we replace the Chinese import shock index with the Townsend index, which gauges economic deprivation at the much smaller LSOA level.<sup>11</sup> Neither the Townsend index measured at 2011 nor the change in the Townsend index between 2001 and 2011 predicts Brexit support. These two variables correlate modestly at  $r = .35$ . When they are included in the model one at a time, we obtain the same result, that is, neither predicts Leave-support. Finally, we include all four tests for the left-behind narrative in model 5, which tells basically the same story as models 1 through 4. But note that in model 5 the parameter for relative poverty is not significant ( $p = .09$ ), while that for the Chinese import shock turns significant ( $p = .02$ ).

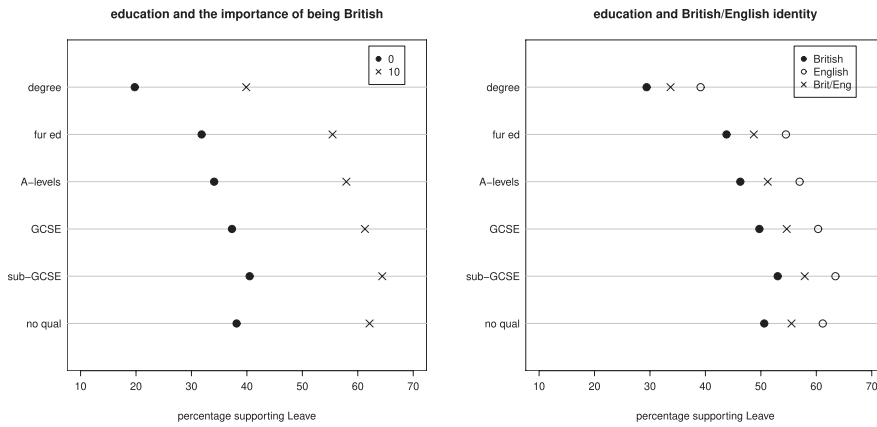
We now turn to examining the cultural values and national identity narrative. In Table 2 we report four further logistic regression models. Model 6 is model 5 plus two covariates on immigration. Net of other covariates, individuals living in LSOAs with more immigrants in 2011 are actually *less* likely to support Leave. But those living in LSOAs that have seen increase in the share of foreign-born are *more* likely to do so (cf. Goodwin & Heath, 2016; Laurence & Bentley, 2016).

Most of the parameter estimates under model 6 are very similar to those under model 5. The main exceptions are the parameters for the English regions: they turn from positive to negative. Indeed, when the percentage of foreign-born in local areas is controlled for, people living in England's North East, North West, or South East are significantly *less* pro-Brexit than Londoners. This is different from the bivariate pattern shown in Figure 2.

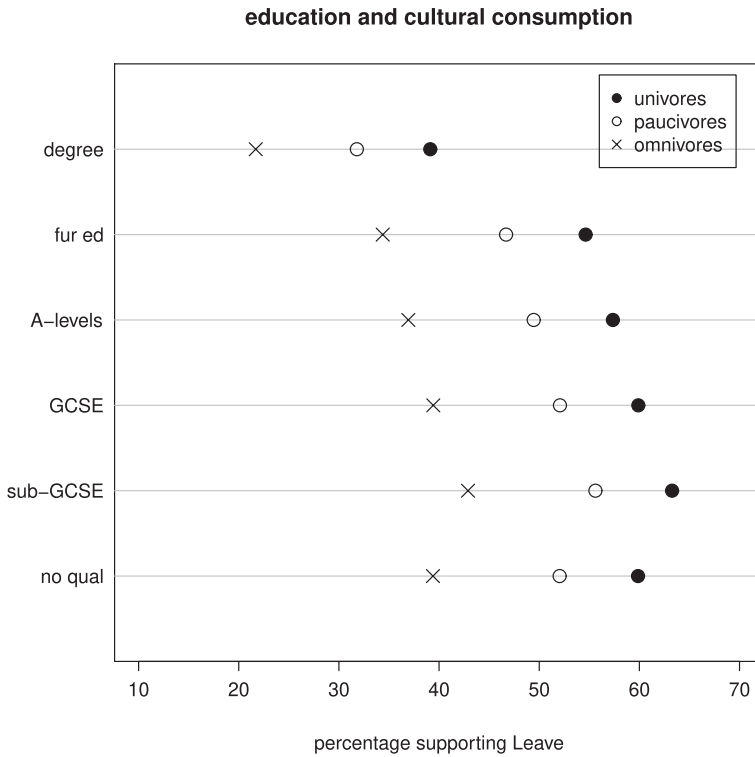
In model 7, we replace the covariates on immigration with those that measure national identity. As might be expected, Brexit-support is higher among people for whom being British is important. The effect is quite large, the left panel of Figure 4 shows that university graduates have a probability of .20 of supporting Leave if they think that being British is not at all important (answer category "0"). But if they regard being British as extremely important (answer category "10"), the predicted probability doubles to .40.

As noted above, national identity is often a multilayered phenomenon. When people are presented with a range of national identities, those who claim to be English only and, to a smaller degree, those who identified as English and British are indeed more pro-Leave than those who say they are as just British. People professing other combinations of national identities are also significantly more pro-Leave. But they comprise only 5% of the sample, and as a residual category, this parameter is hard to interpret. The right panel of Figure 4 shows that among





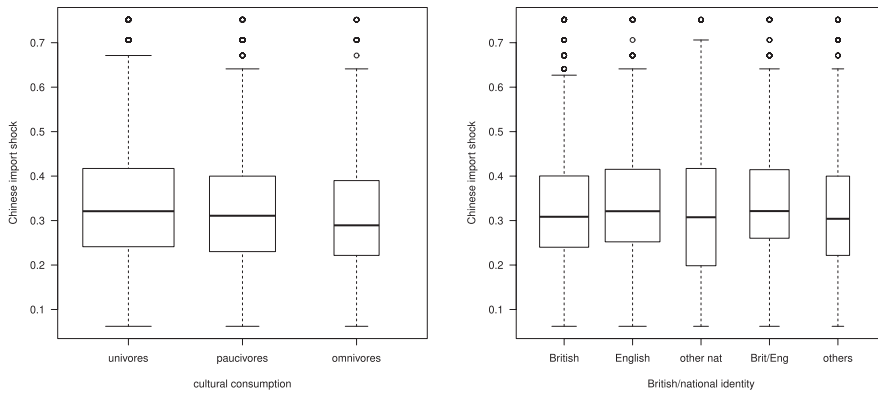
**FIGURE 4** Predicted probability of Leave-support by education and British/national identity under model 7



**FIGURE 5** Predicted probability of Leave-support by education and cultural consumption under model 8

university graduates, 29% of those who see themselves as British only support Leave, compared to 39% of those who say they are English only and 34% of those who say they are British and English.”

Model 8 shows that cultural omnivores and, to a lesser degree, paucivores are less pro-Brexit. Figure 5 shows that the magnitude of these associations is very large: just 22% of graduate omnivores support Leave, compared to 39% of omnivores with no qualifications, 39% of graduate univores and 60% of univores with no qualifications. Chan (2019a) interprets cultural omnivorousness as expressing a cosmopolitan postmaterialist outlook. If that interpretation is correct, our result further underlines the importance of the cultural dimension in the Brexit vote.<sup>12</sup>



**FIGURE 6** Distribution of the Chinese import shock within cultural consumption types (left panel) and British/nationalist identity categories (right panel)

Finally, model 9 contains all the covariates that we have considered. Some of the parameter estimates become smaller when other covariates are taken into account. But, broadly speaking, they tell the same story as models 5 through 8. It is worth noting, however, that relative poverty is now very far from the conventional 5% cutoff of statistical significance ( $p = .302$ ). Also, the Chinese import shock parameter, which is marginally significant in models 5 through 8, is marginally insignificant under model 9 ( $p = .062$ ).

This is *not* because the Chinese import shock effect is now mediated by the cultural value and national identity variables in model 9. Indeed, the Chinese import shock index is practically uncorrelated with social status ( $r = -.04$ ), the importance attached to being British ( $r = .03$ ), the percentage of foreign-born ( $r = -.19$ ), or the change in the percentage of foreign-born ( $r = -.13$ ). Similarly, the boxplots of Figure 6 show that the associations between the Chinese import shock and cultural consumption (left panel) or national identities (right panel) are very weak. This means that we are just as likely to find cultural omnivores, or people who see themselves as British only, or people for whom being British is very important in areas with high or low Chinese import penetration.

#### 4 | SUMMARY AND DISCUSSION

In this paper, we use individual-level data from Understanding Society to assess two narratives about the social bases of Brexit. Our analyses confirm some previously reported results, for example, the age and educational gradients in Leave-support. But we also report some new findings. For example, net of other covariates, regional differences within England in Brexit support are quite small. Indeed, once we have taken into account the immigration level in local areas, support for Remain is *higher* in some English regions than in London. This result rather qualifies the view that the “Leave vote elsewhere in the UK could, to some extent, be explained not only as a backlash against a distant elite in Brussels, but against a capital city ... that has seemed increasingly privileged, distant and alien” (Oliver, 2018).

There is mixed support for the left-behind narrative. Social class, which is a measure of the long-term economic security, prospects and interests, does not predict Leave-support, once social status is included in the model. People living in economically deprived neighborhoods, as measured by the Townsend index, are *not* more pro-Brexit either.

As regards the Chinese import shock index, it has no clear bivariate association with Leave-support. In regression models which take into account other covariates, the Chinese import shock does not consistently predict Brexit support. Moreover, the substantive magnitude of that parameter, even when statistically significant, is relatively small. The same is true of relative poverty.

Our result concerning the Chinese import shock is quite different to that reported by Colantone and Stanig (2018). We believe that this is partly due to the different data sets used. As we argue in Section 2, because internet panel data are not based on probability samples, their representativeness is questionable. A further factor is that we are able to take into account more, and more fine-grained, variables in our analysis. Perhaps it is worth noting that because we have not analyzed any U.S. data, we are agnostic about the validity of the Chinese import shock argument for the United States.

By contrast, there is a good deal of support for the view that Brexit is driven by cultural values and national identity. For example, it is social status, not social class, which predicts Brexit support. Individuals professing stronger British identity, when considered on its own, are more supportive of Leave. But when British identity is juxtaposed with national identities (e.g., English and Scottish), those who claim to be British only are *less* pro-Leave than those who see themselves as English only or British *and* English. Furthermore, omnivorous cultural consumption predicts support for Remain. Together, these findings strongly suggest that Brexit, to a large degree, is about people's worldview: whether they take a more cosmopolitan or a relatively insular view of Britain's place in Europe. In this sense, our results are consistent with the view that Brexit represents a cultural backlash against the progressive value change of the past few decades. As Inglehart and Norris (2017) put it, this is *The Silent Revolution* in reverse.

Overall, then, there is support for both Brexit narratives, though the balance of the evidence tilts toward the cultural values and national identity narrative. People in relative poverty or those living in regions that have seen greater Chinese import penetration are slightly more likely to support Brexit. But Leave-support goes far beyond these groups. Indeed, quite a lot of people in comfortable circumstances or living in leafy neighborhoods support Leave. Many of them do so because they subscribe to a more nationalistic view of Britain's place in Europe. Of course, such a worldview is itself shaped by social and political processes. It remains a challenge to understand the appeal of this outlook to a large section of the British public. But it would be misleading to pin the Brexit vote outcome on the left-behinds alone.

The impact of immigration on Leave-support is quite subtle. People living in areas where there is a concentration of immigrants are actually *less* pro-Leave. This finding is consistent with the contact hypothesis in the intergroup relationship literature (Allport, 1954). But it is also possible that immigrants gravitate toward areas where they expect to face less hostility from the local population. We also show that increase in migration level is associated with a more pro-Brexit stance. This might suggest a local capacity issue for absorbing immigrants, as areas that have seen larger increase in immigration are also those with higher share of immigrants to start with. But it is also possible that because people tend to get used to local conditions, if immigration provokes anti-EU feelings, such sentiments might be transitory in nature. Indeed, as Ford (2019) has shown, there has been a marked shift in public opinion in the United Kingdom toward a more favorable view of immigration since the Brexit referendum.

In this paper, we consider economic and cultural factors as separate proximate correlates of Brexit support. It is quite possible that they interact with each other if we take a longer view. For example, long-term economic decline might make nationalism or populism more appealing to people. We plan to address this question in a future paper.

## DATA AVAILABILITY STATEMENT

The Understanding Society data (University of Essex, Institute for Social and Economic Research, USoc:2019) that support the findings of this study are openly available in UK Data Service at <https://www.ukdataservice.ac.uk>. Stata and R Codes used in the analyses are available from the corresponding author.

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## ENDNOTES

- <sup>1</sup> For further discussion of the conceptual basis, construction process, and measurement properties of social status, see Chan (2010, 2019b).
- <sup>2</sup> The Understanding Society data (University of Essex, Institute for Social and Economic Research, 2019) that support the findings of this study are openly available in UK Data Service at <https://www.ukdataservice.ac.uk>. Stata and R Codes used in the analyses are available from the corresponding author.
- <sup>3</sup> Sanders et al. (2007, p. 257) analyse data from the 2015 British Election Study and argue that 'in-person and Internet data tell very similar stories about what matters for turnout and party preference in Britain.' But they also report some interesting differences between in-person and internet data. In particular, as regards EU decision-making powers, Sanders et al. (2007, p. 267) report that '[i]nternet respondents tend to place the parties more toward extremes of the scale.'
- <sup>4</sup> [dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/AL1A4Q](https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/AL1A4Q).
- <sup>5</sup> NUTS, which stands for Nomenclature des Unités Territoriales Statistiques, is Eurostat's geographical classification system for Europe. The UK is divided into 12 NUTS-1 regions, 40 NUTS-2 units and 174 NUTS-3 units. Because relevant data are not available for Northern Ireland, that province is excluded from their analyses (Colantone & Stanig, 2018, p. 4).
- <sup>6</sup> For variables which appear in multiple waves, we take the non-missing value that is closest to wave 8, unless indicated otherwise.
- <sup>7</sup> In the regression models below, age is entered as a continuous variable. But for the purpose of this bivariate plot, we group all respondents into six broad age groups. We do the same for other continuous explanatory variables, namely date of interview, social status, the Townsend index, the percentage of foreign-born, the Chinese import shock index, and importance of being British.
- <sup>8</sup> Northern Ireland is excluded from the analyses because data on the Chinese import shock index is missing for Northern Ireland. We have repeated the analyses without the Chinese import shock index but with Northern Ireland kept in the data. The results for the remaining covariates are essentially the same as those reported in the paper.
- <sup>9</sup> The exception here is that members of the intermediate class are more likely to support Leave than higher professionals or managers. But this parameter is not significant in models 6 through 9 of Table 2.
- <sup>10</sup> For illustrative purpose, we refer to three of the 31 occupational categories in Figure 3. At the top of this status scale are Higher professionals (estimated scale core being 0.5643), roughly in the middle are Managers and proprietors in services (-0.0453), and at the bottom are General laborers (-0.5979). For details of the status scale, see (Chan and Goldthorpe, 2004, Table 1 and A1).
- <sup>11</sup> The Townsend index and the Chinese import shock index are essentially uncorrelated with each other ( $r = -0.094$ ). This is because the China import shock is measured at a much more aggregated level. Within each NUTS-3 unit, there are some LSOAs that are economically deprived as well as others that are not deprived.
- <sup>12</sup> We have fitted an alternative model that replaces the two parameters for omnivores and paucivores with a linear scale that measures how many cultural items the respondents consume. That alternative specification gives practically the same results as those reported in Table 2.

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## SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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