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Living apart, losing sympathy? How neighbourhood context affects attitudes to redistribution and to welfare recipients

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Abstract. Rising levels of income inequality have been directly linked to rising levels of spatial segregation. In this paper we explore whether rising segregation may in turn erode support for the redistributive policies of the welfare state, further increasing levels of inequality—a form of positive feedback. The role of the neighbourhood has been neglected in attitudes research but, building on both political geography and ‘neighbourhood effects’ literatures, we theorise that neighbourhood context may shape attitudes through the transmission of attitudes directly and through the accumulation of relevant knowledge. We test this through multilevel modelling of data from England on individual attitudes to redistribution in general and to welfare benefit recipients in particular. We show that the individual factors shaping these attitudes are quite different and that the influence of neighbourhood context also varies as a result. The findings support the idea that neighbourhood context shapes attitudes, with the knowledge accumulation mechanism likely to be the more important. Rising spatial segregation would appear to erode support for redistribution but to increase support for welfare recipients—at least in a context where the dominant media discourse presents such a stigmatising image of those on welfare benefits.

Keywords: attitudes, inequality, redistribution, neighbourhood effects, spatial segregation

1 Introduction

In common with many developed countries, Britain has been witnessing rising levels of income inequality in recent decades, notwithstanding the modest fall in the most recent data (DWP, 2012; OECD, 2011). The main driver has been rising inequality in wages, which have not been offset by corresponding developments in tax and benefit systems (OECD, 2011). The growing income gap has been accompanied by increasing spatial segregation, a trend also apparent in many other developed countries (Dorling and Rees, 2003; OECD, 1998). The two are linked through the operation of the housing system: the rise in spatial segregation reflects the increased ability of higher income groups to outbid lower income groups in the competition for more ‘desirable’ neighbourhoods (Cheshire et al, 2003). At the same time, the role of housing and urban policy should not be neglected. In the UK, for example, the most significant policy has been the sale of social housing to sitting tenants which has led to the remaining stock being concentrated into the least desirable areas (Jones and Murie, 2006). Other policy factors include the weakness of planning policies requiring social mix in new housing developments and the limited success of policies to promote social mix in more deprived neighbourhoods (Crook and Whitehead, 2002; Lawless and Pearson, 2012).

A key issue for the UK and other countries is whether any rise in segregation has political consequences, through its impact on welfare attitudes. Does the growing segregation of rich and poor erode the bonds of solidarity or sympathy which help to underpin redistribution through tax and benefit systems? If so, then spatial segregation may act as a ‘positive feedback’ mechanism, undermining support for redistributive policies and further fuelling the rise in inequality. Such geographical feedback would help to explain why the social bases for redistribution are eroded in more unequal societies (Bowles and Gintis, 2000) and would be one means for explaining the path-dependent nature of development within welfare regimes (Pierson, 2000). Hence, the overall aim of this paper is to identify whether and how neighbourhood context influences the development of welfare attitudes.

The literature on welfare attitudes has largely neglected the potential role of the neighbourhood. Rather, the focus has been on the relative roles of individual self-interest and of early years socialisation. This neglect is all the more surprising given the substantial ‘neighbourhood effects’ literature on how neighbourhood context shapes a variety of welfare outcomes (Durlauf, 2004; van Ham et al, 2012; Galster, 2007) as well as a political geography literature on the impacts of neighbourhood context on political behaviours, notably party choice (Cox, 1969; Johnston et al, 2004). This paper draws on both to identify the possible causal mechanisms by which neighbourhood context may shape welfare attitudes. It then uses data from a large-scale survey to provide evidence for the existence of this contextual effect as well as evidence for which kinds of mechanism are producing it.

2 Influences on welfare attitudes

In order to understand the possible influence of neighbourhood context on welfare attitudes, the paper begins by reviewing existing theories of the factors shaping these attitudes. It then draws on the political geography and ‘neighbourhood effects’ literatures to identify possible causal pathways that might link neighbourhood context and attitudes. The paper focuses on two distinct sets of attitudes: more general attitudes to inequality and redistribution by the state, on the one hand; and more specific attitudes to welfare recipients, on the other. There has long been a recognition that the public hold rather different attitudes on these two topics or, to put this another way, that the factors which shape individual attitudes on these topics are rather different (Golding and Middleton, 1982; Hasenfeld and Rafferty, 1989). In the UK there tends to be fairly widespread support for the idea that inequality is too high and that the government should do more to redistribute income or wealth [although the level of support is affected by question wording – Sefton (2005)]. These attitudes coexist with much lower levels of support for increasing welfare expenditures and with low levels of trust in welfare recipients themselves. The gap has widened in recent years, with support for welfare recipients declining while concern about inequality holds more stable (Taylor-Gooby and Martin, 2008).

2.1 Attitudes to inequality and redistribution

Four broad theories attempt to explain why individuals hold particular attitudes towards inequality and redistribution. First, a large number of studies have shown that material concerns or *self-interest* matter a great deal: more affluent people are less likely to express concern about inequality or to support more redistributive policies as they stand to lose personally from any changes (Linos and West, 2003; Piketty, 1995; Sefton, 2005). Other socio-demographic or life-stage factors may therefore be important insofar as they shape the risk of experiencing low income (Svallfors, 1997). Those with more to gain are more likely to support redistributive policies. This can include ‘transfer groups’, such as welfare benefit recipients or those in social housing, as well as those working in welfare services who may gain through employment opportunities (Hasenfeld and Rafferty, 1989; Papadakis and Bean, 1993).

Second, researchers have emphasised the importance of *personal values*. Values are general moral principles which are important influences on attitudes to specific issues as well as on behaviours (Rokeach, 1968). Values are formed largely through socialisation in early years, and are seen as relatively durable and resistant to influence by later experience or knowledge (Stern et al, 1995). In relation to inequality and redistribution, the critical values are those concerned with altruism—where one places concern for others compared with concern for oneself (Hedges, 2005; Park et al, 2007; Sefton, 2005).

Third, studies have cited the importance of *other attitudes or beliefs*, specifically about the causes of inequality or about its consequences, notably for economic performance (Linos and West, 2003; Park et al, 2007; Piketty, 1995). In contrast to values, however, such attitudes and beliefs are seen as less durable and as more easily reshaped by current experiences or new knowledge (Thøgersen and Grunert-Beckmann, 1997). One problem with this work, therefore, is that it is difficult to identify the direction in which causality operates: do attitudes to inequality and redistribution flow from beliefs about the causes of inequality, or are the two simultaneously determined, and influenced by other factors? For example, people may adopt attitudes about the causes of inequality which enable them to reconcile their attitudes to current levels of inequality with their material position; higher income groups may justify the attitude that current levels of inequality are acceptable by adopting the attitude that inequality is inevitable or necessary for economic efficiency. Previous research in this area has been inconsistent in its treatment of directions of causality (Hasenfeld and Rafferty, 1989).

Fourth, attitudes are shaped by the *knowledge* accumulated in daily life. Knowledge is distinct from attitudes or beliefs as it lacks an evaluative component. For attitudes to inequality and redistribution, the relevant knowledge is about existing levels of inequality. In his ‘relative deprivation’ thesis, Runciman (1966) argues that our attitudes to our own situation (and by extension to inequality in general) are based not on an absolute understanding of our economic position but rather on a judgment relative to others in our immediate social network or ‘reference group’. As social networks tend to be limited to people like ourselves, we have constrained knowledge and hence a poor understanding of our true position: richer groups tend to understate their relative affluence while poorer groups understate their relative poverty (Sefton, 2005). One informal experiment found that, when people are presented with new knowledge on the true scale of inequality, their support for redistribution tends to increase (Bamfield and Horton, 2009). Constrained knowledge therefore appears to mute the criticism of inequality by both rich and poor.

2.2 Attitudes to welfare recipients

The literature on attitudes to welfare recipients emphasises a rather different set of factors. First, the effect of material position or income is not only weaker but may even run in the opposite direction, with lower income groups holding more critical views of welfare recipients (Golding and Middleton, 1982; van Oorschot, 2006). This may reflect a more direct sense of competing for scarce resources or a greater anxiety on the part of lower income households to differentiate themselves from a highly stigmatised group.

Second, several studies have challenged the view that support for welfare expenditure or welfare recipients is driven by unconditional or altruistic motivations. Rather, they emphasise that such support is conditional, based on the notion of reciprocity. The willingness to support transfers to welfare recipients is based on beliefs about recipients’ past contributions, and their degree of responsibility for their current situation or the extent of their efforts to support themselves (Bowles and Gintis, 2000; Horton and Gregory, 2009). Such beliefs lead to the well-established hierarchy in judgments of the relative ‘deservingness’ of different social groups which put the ‘elderly’ at the top and the ‘unemployed’ at the bottom (Park et al, 2007;

van Oorschott, 2000). As a result, we do not expect that the value of altruism will be relevant to attitudes to welfare recipients.

Third, there is little evidence that ‘knowledge’—about numbers of welfare recipients or levels of welfare payments—plays a significant role in relation to attitudes to welfare recipients. The media and political discourses do not minimise levels of welfare receipt. On the contrary, they are seen as talking them up but, at the same time, they also present them with a ‘moral’ coating. Coverage of welfare issues in the media is strongly framed in terms of issues such as crime, fraud, and fiscal burden (Golding and Middleton, 1982). In the UK the popular media are thought to have contributed significantly to the hardening of attitudes to welfare recipients in recent years, while the accompanying policy shifts from an emphasis on universalism to one on conditionality and selectivity have reinforced this (Horton and Gregory, 2009; Sefton, 2009). Public discourses influence beliefs about the causes of need, and it is these which shapes attitudes to welfare recipients.

2.3 Neighbourhood context and welfare attitudes

One possibly neglected factor in previous studies of welfare attitudes is the neighbourhood context. Increased mobility and ease of communication may have weakened ties to the neighbourhood, and produced more spatially extensive patterns of interaction, but neighbourhoods are still important places in people’s daily lives. They shape opportunities for regular personal interaction and the building of social relationships or networks, as well as opportunities for more impersonal observation and experience, all of which may shape welfare attitudes. Our concern is with the possible feedback effects of rising spatial segregation. The task here is therefore to explore how residence in richer or poorer neighbourhoods may have systematic impacts on welfare attitudes.

A useful way to approach this is through two literatures on neighbourhood contextual effects. The political geography literature has explored how neighbourhood shapes political behaviours: most notably choice of political party (Cox, 1969; Johnston et al, 2004). The neighbourhood effects literature is broader, concerned with how neighbourhood context affects welfare outcomes or life-chances across domains such as health, employment, or income (Durlauf, 2004; Galster, 2007). For political geography, Johnston et al (2004) summarise Cox’s (1969) foundational work, identifying five possible causal mechanisms linking neighbourhood context to party support, of which three appear relevant here: social interaction, neighbourhood emulation, and environmental observation. For the ‘neighbourhood effects’ literature, a review by Galster (2012) concludes that studies draw on up to fifteen different causal pathways of which four appear most relevant to our work: social contagion, collective socialisation, social networks, and relative deprivation. Broadly, these two schemes both argue that neighbourhood context may shape party support or social welfare outcomes in one of two ways: through the transmission of attitudes directly or through the accumulation of knowledge on which attitudes are formed.

2.3.1 Neighbourhood context and attitude transmission

One way in which neighbourhoods affect attitudes directly is through their influence on social networks: the assumption is that “those who live together, talk together” (Johnston et al 2004, page 369) and this social interaction is the means by which individuals move towards local majority views. The equivalent for Galster is ‘social contagion’ which also highlights the importance of local social networks for attitudes. However, attitude transmission may also occur without there being dense local networks. For Galster (2012), the ‘collective socialisation’ mechanism refers to the transmission of norms in this way, while Johnston et al refer to ‘neighbourhood emulation’ where “people who live together act like each other” (page 369). Galster cites studies of the impacts of local role models whose behaviours, and

hence underlying attitudes, may be emulated. Individuals may conform to these local norms without necessarily being aware of them.

The existing literatures see these mechanisms as potential influences on party support and on a variety of personal behaviours: health-related behaviours like drug-taking, or economic behaviours such as participation in the formal labour market, for example. It seems plausible that they could also shape welfare attitudes. Views about inequality or welfare recipients are not necessarily subjects of daily conversation for most people, but they do attract comment and observations. With attitudes to inequality and redistribution, we would expect that people in more deprived neighbourhoods would be surrounded by people who were more likely to support redistribution as individual income is a major influence on these attitudes. If attitude transmission is at work, this should produce a positive effect (ie, increased concern about inequality and increased support for redistribution) on all residents in these areas. With attitudes to welfare recipients, however, individual income is a weaker influence and one which may run in the opposite direction. Living in a poorer neighbourhood could therefore be associated with exposure to slightly less supportive attitudes and hence a weaker, negative effect on residents' attitudes.

2.3.2 Neighbourhood context and knowledge accumulation

The other mechanisms are concerned with the potential influence of neighbourhood context on the accumulation of knowledge. Galster's 'social network' mechanism again assumes that neighbourhood context impacts on social networks, but this time the focus is on the role of such networks in the transmission of knowledge: eg, information about employment opportunities or about welfare benefit systems. As with attitude transmission, however, knowledge accumulation does not rely solely on such networks. People may also pick up knowledge about the population living in their area through more impersonal encounters or observations. In political geography, such observation may permit people to identify the interests of their community and to choose between political parties accordingly—Johnston et al's 'environmental observation' mechanism. In the neighbourhood effects literature, the 'relative deprivation' mechanism implies that people gather information about the relative economic status of neighbours and this in turn informs judgments about their own standing.

The relevance of knowledge accumulation mechanisms for attitudes to inequality and redistribution appears fairly clear: constrained knowledge tends to reduce concerns about inequality and hence support for redistribution. Residence in more deprived neighbourhoods brings greater proximity to low-income groups, potentially increasing knowledge or awareness of the scale of that group or of the conditions in which they live. Furthermore, it seems reasonable to expect that the effect of this additional knowledge on higher income groups will be much greater. Indeed, for low-income groups we would expect to find the opposite effect, with support for redistribution rising where they live in more affluent areas and become more aware of the extent of inequality. In other words, if knowledge transmission is an important mechanism for attitudes to inequality and redistribution, we would expect to find an interaction effect between neighbourhood deprivation and individual income, rather than the uniform effect of neighbourhood deprivation predicted by attitude transmission.

The relevance of the knowledge transmission mechanism for attitudes to welfare recipients is less clear because constrained knowledge is not seen as an important influence on these attitudes. As a result, living in a more deprived neighbourhood may bring greater proximity to welfare recipients, but any additional knowledge is likely to be viewed through the framing of welfare issues by the media described above, potentially provoking greater hostility rather than support. Indeed, one study of attitudes to another stigmatised group—immigrants—argues that greater proximity serves to make people more influenced by dominant media discourses (Hopkins, 2011, page 501). Proximity appears to operate more like a switching

mechanism, heightening sensitivity to an influence which is ubiquitous. The effect would work in the same direction as neighbourhood-level attitude transmission, eroding support for welfare recipients in poorer neighbourhoods. No interaction between income and deprivation would be anticipated in this case.

2.4 Summary

The aim of the paper is to identify whether welfare attitudes are influenced by levels of neighbourhood affluence or deprivation. If such contextual effects exist, rising spatial segregation may result in ‘feedback effects’ in the form of reduced (or increased) support for the redistributive policies of the welfare state. Two potential mechanisms are identified by which neighbourhood context may shape welfare attitudes: attitude transmission and knowledge accumulation. Integrating that work with previous research on welfare attitudes enables us to derive three important hypotheses or propositions.

First, a precondition for attitude transmission to produce a divergence in attitudes between richer and poorer neighbourhoods is that aggregate attitudes must vary with neighbourhood deprivation. From theories about individual determinants, we expect there to be greater support for redistribution in poorer neighbourhoods but less support for welfare recipients, with the latter differences more modest.

Second, if attitude transmission is an important mechanism, we expect residents of more deprived neighbourhoods to show greater support for redistribution than residents of more affluent areas but lower support for welfare recipients (after controlling for differences in individual characteristics). These tendencies should affect higher and lower income groups alike, and the effect should be greater on support for redistribution. With attitudes to welfare recipients, the effect may, however, be bolstered by a separate mechanism, the switching effect, which will tend to work in the same direction.

Third, if knowledge accumulation is an important mechanism, affluent households should be more supportive of redistribution when they live in more deprived areas, and poorer households more supportive in affluent areas—an interaction effect between individual income and neighbourhood deprivation. No such interaction effect is expected in relation to attitudes to welfare recipients.

3 Data and analysis

3.1 Individual data

The paper analyses a dataset on individual welfare attitudes to which measures of neighbourhood context have been added. The attitudinal data come from the 2009 British Social Attitudes Survey (BSAS) which includes a module on inequality and redistribution as well as long-standing questions on welfare recipients (NatCen, 2011). The BSAS is constructed to provide a random sample of the population aged 18 years and over in private households (Park et al, 2010) using a clustered design with primary sampling units (PSUs) chosen by a stratified random sample of postcode sectors. Within each PSU there is a random selection of addresses, then of adults at the address. Responses are reweighted to match the sample to the known population distribution in terms of age, sex, and region. These weights are used throughout. Analyses are restricted to data for England for reasons explained below. In 2009 the achieved sample for England was 2948 cases (a response rate of 55%). Some questions on redistribution were asked only of a random two-thirds subsample of those interviewed, while some on welfare recipients were asked of just one third. Item nonresponse further reduced the number of cases, leaving 1230 and 591 cases, respectively. As with any large survey, there is clearly significant scope for nonresponse or missing data to bias results, although we do not explore that here.

3.1.1 *Dependent variables*

The BSAS has a range of questions potentially relevant for the construction of dependent variables. Exploratory factor analysis suggested that four questions formed a coherent group on attitudes to inequality and redistribution, while another four tapped attitudes to welfare recipients (table 1). All eight used the same five-point Likert scale. Internal consistency was tested using Cronbach's α , giving 0.76 and 0.82, respectively—values generally considered 'acceptable' and 'good'. Since variable loadings for both factors were similar, indices were constructed based on the average of the four scores rescaled to run from 0 to 100. Where one response was missing, the index was based on the average for the remaining three (2% and 1% of cases, respectively). The welfare scale is inverted so that higher values indicate more sympathetic attitudes to welfare recipients. The indices are labelled "support for redistribution" and "support for welfare recipients", with means of 62 and 44 (standard deviations 19 and 20). The correlation between them is 0.17 which reinforces the point that these two sets of attitudes are quite distinct.

3.1.2 *Independent variables*

The BSAS provides data on a range of individual characteristics, including demographic characteristics (gender, age, household situation), education, and housing tenure. The survey collects data on household incomes through a single question with seventeen preset response bands. Incomes were equivalised using the modified OECD scales and band mid-points. In line with theories about the determinants of welfare attitudes, measures were constructed of respondents' altruistic values and their beliefs about the necessity or inevitability of inequality and about the causes of individual need (table 1). On the necessity or inevitability of inequality, the three questions correlate highly and are combined into a single additive index, rescaled to run from 0 to 100 (Cronbach's $\alpha = 0.54$ —generally considered 'poor'). On views about the causes of individual need, the single question was used initially to create three dummy variables with the first response (bad luck) the default. Only the contrast with the 'effort' category proved significant so the results presented below contrast people who provide nonblaming explanations for need (bad luck, injustice, or inevitable) with those who ascribe need to lack of laziness or lack of willpower.

3.2 **Neighbourhood context**

Neighbourhood contextual variables were attached to the individual data in an anonymised form. Matching was carried out by the data custodians and a small amount of random error added for confidentiality reasons. Matching was carried out at the scale of lower super output areas (LSOAs). These 'neighbourhood' units were developed by government for the production of neighbourhood statistics in England. LSOAs were chosen because they are relatively small in scale (average population 1500), giving a finer grained analysis than is possible with electoral wards or postcode sectors (average population around 5000). LSOAs were designed to be relatively homogeneous and to have a fairly consistent size. A database of neighbourhood characteristics was compiled using the 2001 Census and the General Land Use Database. The study was restricted to England to maximise comparability between areas in terms of political, economic, and social context as well as for data reasons. In Scotland the units for neighbourhood statistics (datazones) are significantly smaller (half the size on average) and some key census variables are not comparable (notably on educational attainment). A factorial ecology approach was used to reduce the very large number of neighbourhood measures to five factors. Three of these captured sociodemographic differences (presence of older people, of mobile young adults, and of minority ethnic groups). These did not have any relationship with attitudes in initial explorations, and are omitted. The remaining two factors identified deprivation (loading on a familiar set of variables including unemployment, lone-parent households, low educational attainment, and social housing) and density (loading

Table 1. Survey questions underlying variables.

Variable	Initial statement	Responses (multiple responses)	Percentage who agree or agree strongly
Support for redistribution (dependent)	Please show how much you agree or disagree with each of these statements:	Differences in income in Britain are too large. Ordinary working people do not get their fair share of the nation's wealth. Government should redistribute income from the better-off to those who are less well off. It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes.	75 60 36 58
Support for welfare recipients (dependent)	Please show how much you agree or disagree with each of these statements:	Around here, most unemployed could find job if they really wanted. Many who get social security don't really deserve help. Most people on dole fiddling.	56 34 33
Inequality—necessary	Please say how much you agree or disagree with the following statements. Large differences in	If benefits not so generous, people would stand on their own two feet. ... are necessary for Britain's prosperity.	53 28
Inequality—inevitable	people's incomes:	... are inevitable whether we like them or not. ... give people an incentive to work hard.	77 61
Variable	Initial statement	Responses (exclusive responses)	Percentage of cases
Altruism	Some people think it is important to put yourself first whilst other people think it is more important to think about others. Which of the statements on this card comes closest to your view?	Put yourself first and leave others to do the same. Put yourself first but also consider other people's needs and interests. Consider everyone's needs and interests equally, including your own. Put other people's needs and interests above your own.	4 32 53 11
Need—luck	Why do you think there are	Because they have been unlucky.	12
Need—effort	people who live in need? Of the	Because of laziness or lack of willpower.	28
Need—injustice	four views on this card, which	Because of injustice in our society.	20
Need—inevitable	one comes closest to your own?	It's an inevitable part of modern life.	40
Notes. Inequality consequences: alternative responses were 'neither agree nor disagree', 'disagree', and 'disagree strongly'. 'Don't knows' (1% to 2%) excluded. Altruism: 'don't knows' excluded (0.3% of cases). Causes of need: other responses ('none of these' or 'don't know') excluded (5%).			

primarily on population density but also on greenspace); full details are provided in Bailey (2011). They had a modest correlation (around 0.4) as might be expected given the relative concentration of lower income groups into larger towns and cities in the UK.

3.2.1 *Analysis*

Data were analysed in multilevel models estimated using MLwiN (version 2.25) with restricted iterative generalised least squares estimation (Rasbash et al, 2010). A multilevel approach was employed to allow for the fact that the sample had a clustered design; the PSUs (postcode sectors) constitute our highest level, level 3. Failure to account for the clustering of the sample, and the fact that individuals from the same area are exposed to the same contextual influences and will therefore tend to have correlated outcomes, could introduce significant biases into the analysis. The neighbourhood is included as the second level, identifying individuals who live in the same LSOA. Neighbourhood characteristics of deprivation and density are included at the second level. Individuals make up the lowest level, level 1. The survey data are sparse at level 2, with a relatively high proportion of 'singletons' (level-2 units with just one level-1 case). Simulation research suggests that this design does not affect the validity of the modelling approach. Where the number of higher level units is large (500 or more), neither point nor interval estimates appear biased even with high proportions of singletons and complex data structures (Bell et al, 2008; Maas and Hox, 2005). Survey weights have been used in all analyses (CML, 2011).

For each dependent variable, four models are produced, based on:

Model 1: individual sociodemographic characteristics and altruism;

Model 2a: model 1 plus neighbourhood contextual variables, including interactions with income;

Model 2b: model 2a plus interactions between altruism and contextual variables; and

Model 3: model 2b plus other attitudes and beliefs, and including interactions with income and contextual variables.

The interactions with income were clearly predicted by our theory. The interactions between altruism and context emerged during extensive checks for interaction effects, both within the set of individual variables and between those and the neighbourhood variables. As noted previously, it is less clear that the additions at stage 3 can legitimately be considered as exogenous or causally prior to our dependent variables. It is possible that neighbourhood context shapes attitudes and beliefs about the causes of inequality or welfare receipt at the same time as it shapes attitudes to our two dependent variables. Including these variables in the models may, to some extent, mask the effect of neighbourhood. Separating out the analyses in this way allows results to be judged with and without these factors included.

The key methodological issue which confronts any study of contextual effects is the problem of selection which can also be seen as a special case of omitted variable bias (Galster et al, 2008). Characteristics which affect individual attitudes may also affect the choice of neighbourhood. If we fail to control for all of these characteristics, estimates of the impacts of neighbourhood on attitudes may be biased; the direction of any bias is disputed. Various econometric techniques have been implemented to respond to these challenges, mostly based on longitudinal data (Galster et al, 2008). This paper is restricted to the analysis of cross-sectional data. The extensive range of controls at the individual level is designed to reduce the potential for such bias although it cannot eliminate it. We return to this issue in the conclusions in considering limitations and possible future directions for research.

4 Results

4.1 Variations in neighbourhood context

The first hypothesis is that, for contextual effects to exist, individuals must be exposed to rather different environments by virtue of where they live. As a precursor to modelling, figures 1(a) and 1(b) show the differences by neighbourhood deprivation in average score for a key material and attitudinal variables. Neighbourhoods are divided into ten equal groups (deciles) based on the level of the deprivation factor score. There are strong differences in material circumstance so it is credible to argue that neighbourhood context may be a source of variation in knowledge about these conditions. Average incomes decline as neighbourhood deprivation rises while the proportion of people in receipt of means-tested benefits rises sharply.

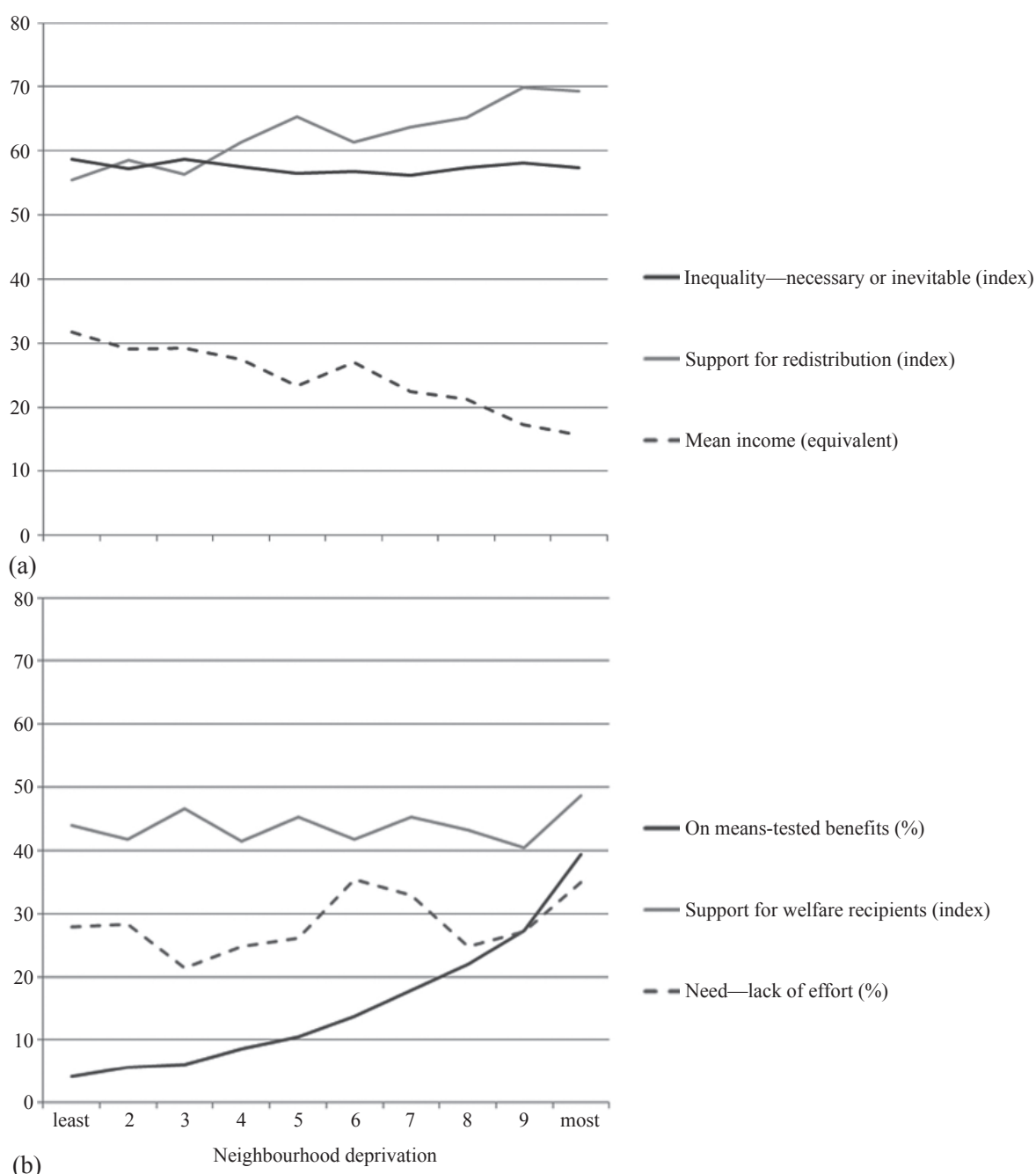


Figure 1. Variations in context: (a) support for redistribution, (b) support for welfare recipients. Note: the proportion on means-tested benefits is taken from administrative data sources, the data for which were attached to the individual survey data.

Differences in attitudes across the neighbourhood spectrum are more modest. There is higher support for redistribution in more deprived neighbourhoods as expected, which suggests that there is scope for attitude transmission to have differential impacts, but there is no difference in the related beliefs about the consequences of inequality. Support for welfare recipients is essentially uniform across the deprivation spectrum; the anticipated negative gradient does not appear. On the other hand, people in more deprived neighbourhoods are more likely to believe that need arises from lack of effort rather than offering ‘nonblaming’ explanations. There is, therefore, some scope here for attitude transmission, albeit weak.

4.2 Attitudes to inequality and redistribution

4.2.1 *Individual factors*

Model 1 (table 2) tests the relationships between individual-level sociodemographic characteristics and support for redistribution, taking altruism into account, but excluding measures of beliefs about the consequences of inequality. The overall fit of the model is relatively modest (14% variance explained) but in line with previous research in this area. Although a comparison with the null model (model 0) shows that some of the apparent differences between areas can be explained by individual factors, about 13% of the variation in the outcome after adjustment for individual characteristics is attributable to differences between areas.

The findings are largely as expected, with income or economic resources a key determinant, supporting the ‘self-interest’ theory. Support for redistribution declines sharply as incomes rise. Support is lower for those with access to a car and higher for those in social renting, suggesting that both of these act as additional markers of income or wealth. The income measure in the survey gives a point-in-time snapshot, but these other measures provide an indication of access to material resources over the longer term. While neither source of income nor occupation appears relevant, employment in the public sector does appear to increase support for redistribution. This could be seen as an expression of a material interest in redistribution through employment benefits, but it could equally reflect a combination of selection and socialisation; the latter would suggest that workplaces would be another area in which to explore ‘contextual effects’.

In contrast to much previous work, women in our sample do not report higher levels of support for redistribution once other factors have been taken into account. Other demographic characteristics have a modest or negligible influence on attitudes, with the exception of having children in the household which appears to reduce support for redistribution, as does having mid-level qualifications rather than higher or lower ones. In addition to sociodemographic characteristics, personal values also appear to play a part: those who identify themselves as more altruistic express higher support for redistribution. This effect is consistent across income groups; the interaction between altruism and income was not significant.

4.2.2 *Neighbourhood context*

In model 2a, measures of neighbourhood deprivation and density are added. Reflecting the hypothesis above about knowledge accumulation effects, interaction terms are included to allow the effects of neighbourhood context to vary by income level. These improve the overall fit of the models significantly (as shown by the χ^2 test for the reduction in deviance) and both the overall deprivation term and the interaction with income are significant. The combined effects of income and neighbourhood deprivation are shown in figure 2. This plots the level of support for redistribution predicted by individual income level and neighbourhood deprivation alone, against level of neighbourhood deprivation; ie, holding all other factors constant (at zero or their default value). Support for redistribution rises with deprivation for those on median incomes, but the interaction term means that it rises much faster for those on higher incomes. Indeed, for the lowest income groups, the interaction is such that

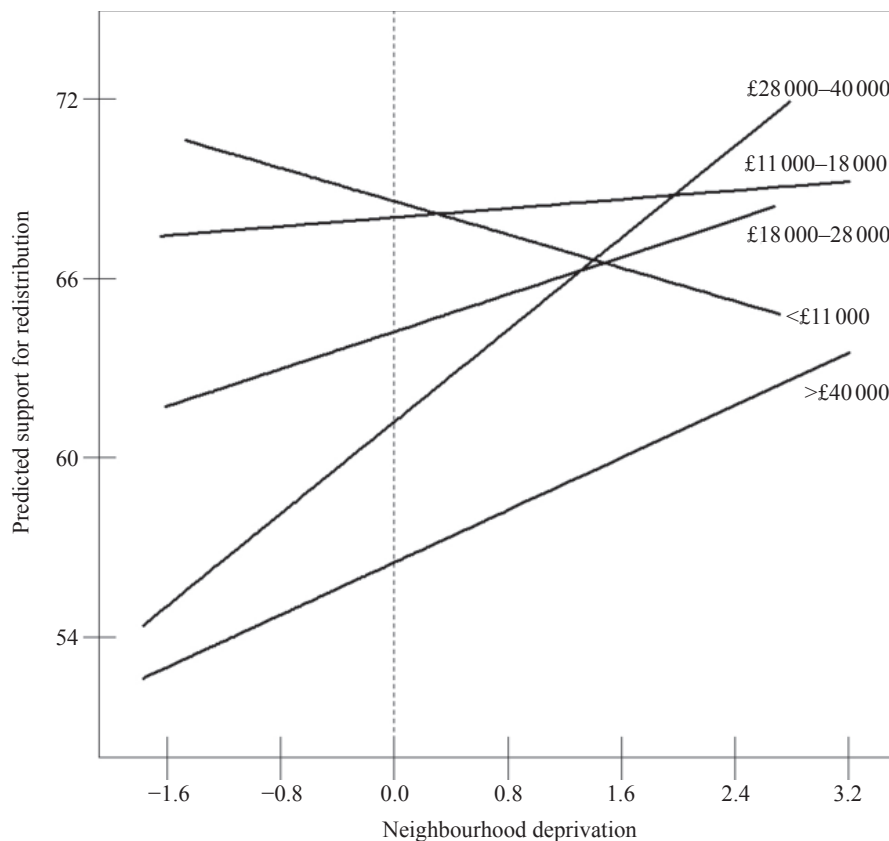


Figure 2. Support for redistribution by neighbourhood deprivation and income. Note: for purposes of illustration, the figure is based on a version of model 2a in table 2 where the income measure is reduced to five bands. Higher score for neighbourhood context variable (x -axis) indicates increasing deprivation.

support for redistribution appears to fall slightly in more deprived neighbourhoods. This interaction effect lends support to the idea that knowledge accumulation is at least part of the story although attitude transmission may also explain the income gradient. The effect of neighbourhood density is positive but, in model 2a, not significant.

One alternative explanation for the interaction effect should be noted here. As suggested already, the current income question does not provide a complete measure of an individual's material position. Although car ownership and social renting status provide additional information, it is possible that neighbourhood deprivation itself acts in part as a measure of unobserved income or wealth; for a given level of recorded income, those in more deprived neighbourhoods may have a lower level of overall income or wealth. This would produce the same kind of interaction effect observed in table 2. This result may be a spurious effect in part or in whole. It should be noted, however, that the effects of other controls for material position (income, car access, and social renting) are little changed after the addition of neighbourhood deprivation. If deprivation was largely indicating material position, we might expect these to have been more strongly affected.

In model 2b, the analysis is extended to explore whether the effects of neighbourhood context are the same for those with higher or lower levels of altruism (figure 3). The effects of deprivation do not appear to vary with altruism but, for density, an important difference emerges so the fit of the model improves significantly (as shown by the reduction in deviance); the proportion of unexplained variance at levels 2 and 3 is now half that of the null model. For less altruistic individuals, living in a denser neighbourhood appears to significantly increase support for redistribution. For those who are more altruistic, however, support does not vary with density. Overall, these results suggest that the neighbourhood context may be

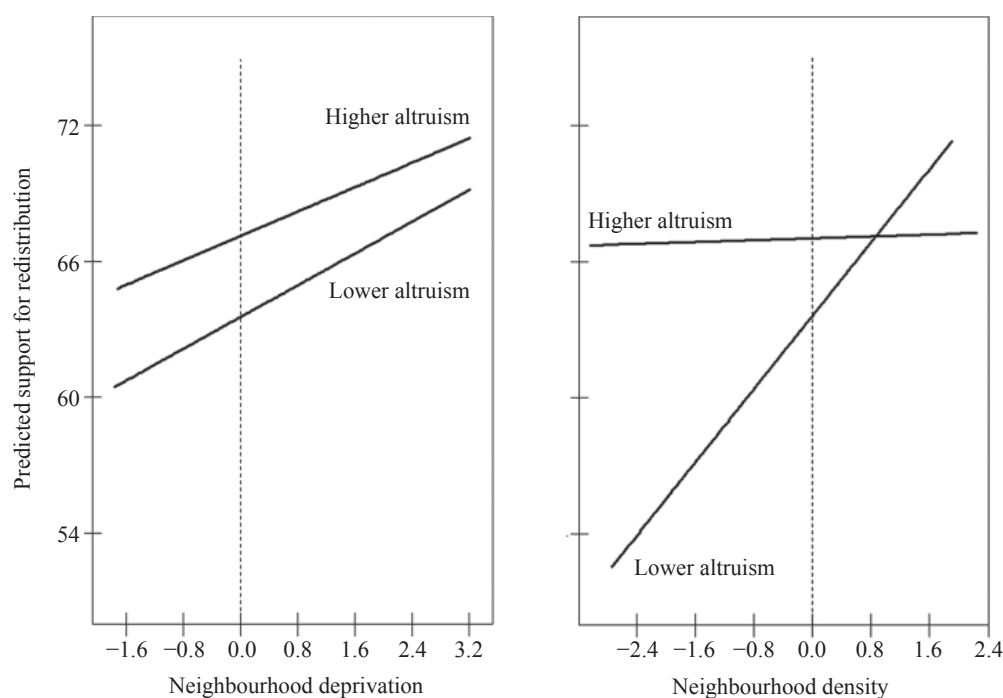


Figure 3. Support for redistribution by neighbourhood context and altruism. Note: higher scores for neighbourhood context variables (x -axes) indicate increasing deprivation or density.

an important influence on attitudes. Deprivation and density both appear to increase support for redistribution, especially for those less inclined to support redistribution in the first place: those on higher incomes and those with a less altruistic outlook. As a result, increased deprivation and density produce a convergence in attitudes to inequality and redistribution.

4.2.3 Other attitudes and beliefs

In model 3 we add a single continuous measure based on the three questions about whether inequality is seen as necessary or inevitable. As with altruism, the impact of this measure on support for redistribution was allowed to vary by income level and by levels of neighbourhood deprivation and density. The explanatory power of the model increases substantially (to 29%) and the unexplained variance at levels 2 and 3 is now down by 68% compared with the null model. However, caution should be exercised before making simple inferences about the causal importance of these additional attitudes. As noted above, it is difficult to be confident about the direction of causality here. Indeed, the size of the increase in explanatory power points towards a degree of circularity or two-way causality.

Those who see inequality as necessary or inevitable express lower support for redistribution, as expected, and the effect is even greater for those on higher incomes. To some extent, these other attitudes replace material factors in the model; the coefficients for income, car ownership and social renting are all reduced in size though all remain significant. In other words, one reason why people on higher incomes express less support for redistribution is that they are more likely to view inequality as necessary or inevitable. The effects of altruism also appear somewhat smaller, suggesting that people's views about the role of inequality in society also reflect their degree of altruism.

Even after controlling for these other attitudes and beliefs, however, neighbourhood context still appears to shape support for redistribution. The deprivation term itself is no longer significant, but the interaction with income remains so, while the effects of density are unchanged. As previously, the impacts are greater for those less inclined to support redistribution in the first place. Those more inclined to see inequality as necessary or inevitable express much lower support for redistribution, but this effect is somewhat reduced

when they live in a more deprived neighbourhood. Living in a more deprived neighbourhood may have a direct impact on support for redistribution but also an indirect one by altering beliefs about the necessity or inevitability of inequality.

4.3 Attitudes to welfare recipients

4.3.1 *Individual factors*

With support for welfare recipients, the most obvious difference in model 1 (table 3) is that material position or self-interest does not appear to be a significant factor; predicted support is slightly greater for high-income groups (indicated by the positive quadratic term) but differences are not significant. This helps to explain the finding in figure 1(b) that support for welfare recipients does not vary systematically with neighbourhood deprivation. Source of income rather than level seems to matter, with those whose main income comes from state benefits or from private pensions expressing markedly higher support than those in paid employment (the default category). Those in social renting are also more supportive. The largest individual effect comes from education, with substantial rises in support for welfare recipients with rising educational attainment. One interpretation is that higher levels of educational attainment are associated with access to a wider range of information sources, and less reliance on 'tabloid' newspapers. Altruism appears to have a modest but significant impact on support for welfare recipients. This finding runs contrary to several papers which have argued that support for welfare recipients is driven by a sense of the 'deservingness' of recipients and hence reciprocity, rather than the one-way transaction implied by altruism. Altruistic motivations appear important, for some people at least.

The impact of neighbourhood on support for welfare recipients appears much smaller than that on support for redistribution; the proportion of unexplained variation attributable to the neighbourhood falls from 3.1% in the null model to just 1.6% following adjustment for individual factors. This may in part reflect the difficulty in estimating a variance associated with the LSOA level when there are on average just 1.2 respondents per LSOA.

4.3.2 *Neighbourhood context*

Model 2a shows the effect of including the neighbourhood context variables as well as their interactions with income, while model 2b allows the effects of context to vary by level of altruism. In general, attitudes to welfare recipients appear less sensitive to neighbourhood context. Model 2a does not provide a significantly better fit than model 1, as shown by the change in deviance, while model 2b is only significant at around the 2% level. However, the lack of significant relationships may partly reflect the smaller sample size; estimated coefficients are often similar in size to those in the previous models, but confidence intervals are much larger. In addition, the overall effect of greater deprivation or density appears to be to promote a divergence in views. Those who are more altruistic express higher support for welfare recipients on average, but the gap widens as deprivation and density increase rather than narrowing (figure 4); only the latter relationship (the interaction between altruism and density) is statistically significant. This suggests a possible refinement to Hopkins's (2011) finding that the relevance of national debates can be heightened by local context. There appears to be an individual component as well. Different groups may pay attention to rather different stories in the media or may take different messages from them, or they may form different judgments of welfare recipients from their local encounters or observations.

4.3.3 *Other attitudes and beliefs*

In model 3 a dummy is added to indicate people who see need as arising from a lack of effort rather than bad luck, injustice in society, or as simply inevitable; interactions with income and neighbourhood context are also included. As with support for redistribution, the explanatory power of the model increases substantially at this stage (from 9.4% to 19.5% of variance

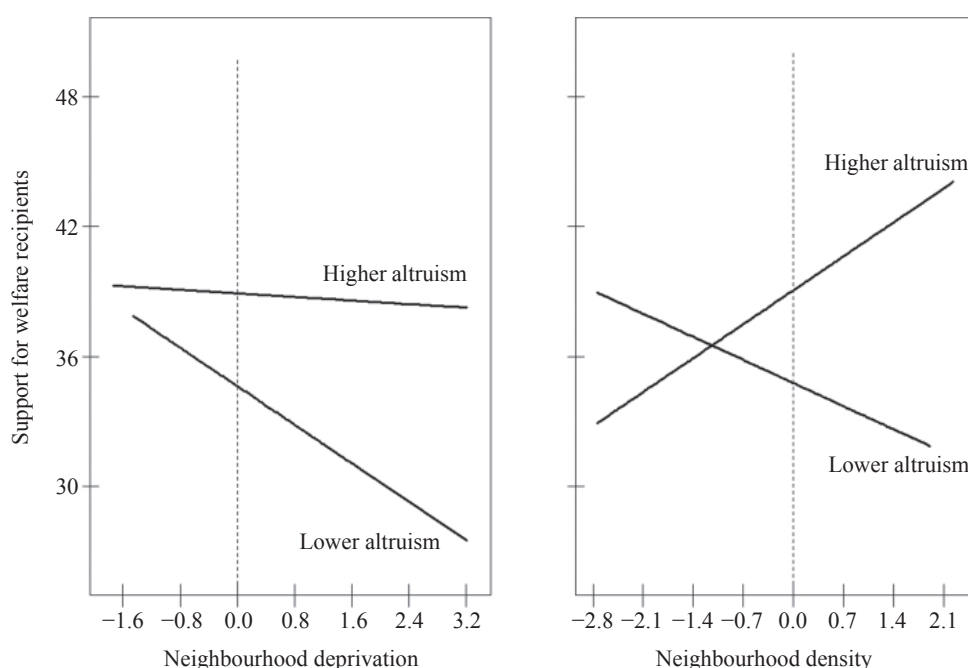


Figure 4. Support for welfare recipients by neighbourhood context and altruism. Note: higher scores for neighbourhood context variables (x-axes) indicate increasing deprivation or density.

explained) and the same caveats apply about the direction of causality. As expected, support for welfare recipients is reduced substantially when respondents believe that need arises from lack of effort. The effects of higher education or greater altruism are reduced slightly once these beliefs are taken into account; both make individuals less inclined to believe that need results from lack of effort in the first place. Support for welfare recipients now falls significantly with deprivation. As deprivation and density rise, attitudes continue to diverge between those who are more or less altruistic; again, only the relationship with density is significant. This is now offset to some extent, however, by the opposite picture in relation to views about the causes of need. People who believe need arises from a lack of effort express much lower support for welfare recipients, but this effect reduces as deprivation increases.

5 Conclusions and discussion

The analyses presented here make a number of contributions to our understanding of the determinants of welfare attitudes, and the role of neighbourhood context in particular. At the individual level, the analyses highlight the very different determinants of attitudes to redistribution and to welfare recipients. Self-interest or socioeconomic status is the key determinant of support for redistribution, but education plays the key role in relation to support for welfare recipients. Contrary to some expectations, a more altruistic orientation appears to increase support for both redistribution and welfare recipients, partly because it makes people less inclined to see inequality as necessary or inevitable, or to see need as arising from lack of effort.

Neighbourhood context does appear to have an additional influence but in contrasting ways for our two sets of welfare attitudes. Support for redistribution rises with neighbourhood deprivation as expected, and also with neighbourhood density. The effects are particularly strong for groups less inclined to support redistribution in the first place: those on higher incomes, those who are less altruistic, and those who see inequality as necessary or inevitable. The overall effect is that rising deprivation and density produce not only greater support for redistribution but also a convergence in attitudes. With support for welfare recipients, the impacts of neighbourhood deprivation appear weaker but also appear to run in the opposite direction; the attitudes of those who are more or less altruistic diverge as density increases.

The effects of neighbourhood density were not highlighted in our initial theoretical framework, which focused solely on neighbourhood deprivation. They may reflect the impact of density on frequency and possibly intensity of local social contacts. A more plausible explanation is that density at the neighbourhood scale acts as an indicator for location within the wider urban system: denser neighbourhoods tend to be found in larger towns and cities. If that is the case, density may function as a proxy for proximity to a greater number of people and to a more diverse population, and, in the UK context at least, to a population which is likely to be more deprived. This may in turn suggest that knowledge accumulation through social encounter and observation are affected both by the immediate neighbourhood but also by the wider urban context in which people live.

The results provide some important clues that the most likely mechanism or causal pathway for these effects is knowledge accumulation. The transmission of attitudes appears unlikely to be the main factor for the simple reason that aggregate attitudes do not show marked variation by levels of deprivation. Furthermore, the differential impact of deprivation on high-income and low-income groups fits well with the hypothesised impacts of knowledge accumulation. The differences between people with higher or lower altruism reinforce this point: people who are less altruistic are less aware of the needs of others in general and therefore find their views altered much more by the neighbourhood context.

The overall implications of this work are that urban form does appear to have consequences for attitudes to redistribution and to welfare recipients but in slightly contradictory directions. Rising segregation and urban sprawl would appear to erode support for redistribution but, to a lesser extent, they may support more positive views towards welfare recipients—at least in the context of a dominant media discourse which is so loaded with negative stereotypes of those on welfare benefits. Overall, this work supports the idea that there is a positive feedback (or self-reinforcing) effect from inequality through spatial segregation. Efforts to promote ‘mixed communities’ and ‘compact cities’ may have important political impacts, in addition to social and environmental ones.

5.1 Limitations and further research

The empirical results presented here come with a number of caveats. First, the results come from an analysis of cross-sectional data and it is therefore impossible to discount the influence of selection effects. Higher income people more sympathetic to the plight of those on low incomes and hence to redistribution may be more prepared to move to or remain in more urban and more deprived areas. Those less sympathetic may put a higher priority on acquiring housing distant from such areas. The range of controls for socioeconomic and attitudinal characteristics does reduce the scope for such selection but cannot eliminate it.

Second, we are reliant on an existing data source with all the limitations that entails. While it provides a range of questions which we believe enable us to measure our key concepts well, some measures are compromises; the controls for altruism and for attitudes and beliefs about causes or consequences of inequality or need are perhaps less than ideal. In addition, while the conceptual distinctions between values, attitudes, knowledge, and interests appear fairly clear, people may not always keep them distinct in their answers to survey questions; as Sefton (2005) notes, the level of support for redistribution varies quite significantly depending on the phrasing of the question. Third, there are issues with data quality as with any large survey, particularly survey and item nonresponse. These are within the usual range for a complex analysis, but they do inevitably raise concerns about potential bias.

One logical extension to this work would therefore be a move to longitudinal tracking of attitudes in relation to places of residence, using bespoke measures for the key concepts. Better controls for income or material position would also be valuable, to reduce the possibility that the apparent neighbourhood deprivation effect is to some extent an unobserved income

effect. An alternative, complementary approach would be through more qualitative research to develop a better understanding of the causal pathways by which neighbourhood context may shape attitudes.

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