

CCSRNews

The Cathie Marsh Centre for Census and Survey Research (CCSR)
An advanced quantitative methods research centre in the School of Social Sciences

The times are a changing at CCSR

A new Cathie Marsh Institute for Social Research at Manchester will be founded in 2014 through a merger of two dynamic and highly successful research groups within the School of Social Sciences at the University of Manchester – the Institute for Social Change (ISC) and the Centre for Census and Survey Research (CCSR). The ISC and CCSR have strong overlapping substantive and methodological interests and the merger is an important development that is designed to build on and develop their joint strengths. In particular the Institute will provide a focal point for the application of quantitative methods in interdisciplinary social science research and generate a world class research environment that builds on our strong reputation in this area. Although based on the merger of ISC and CCSR, the Institute will seek to engage with other research partners across the University and build capacity in interdisciplinary quantitative social science research across the School of Social Sciences and the rest of the University.



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How is neighbourhood belonging affected by migration and ethnic group population change?

Nissa Finney



Creating a sense of belonging has been part of political projects of community building in recent years. Ethnic diversity and population change (particularly immigration) have been seen as a threat to belonging and community cohesion in political debates. This is based on the idea that population instability reduces place-based connections between people; and the idea that increased ethnic diversity reduces cohesion because residential preferences tend towards living next to 'people like us'. But is this borne out in survey data?

This research analysed the Citizenship Survey (2005 and 2007-8) to examine the relationships between neighbourhood (ward) population change and residents' feelings of neighbourhood belonging. The analyses identified what distinguished people who felt a very strong neighbourhood belonging (around a third of respondents) in terms of their individual characteristics and characteristics of their neighbourhood including population change.

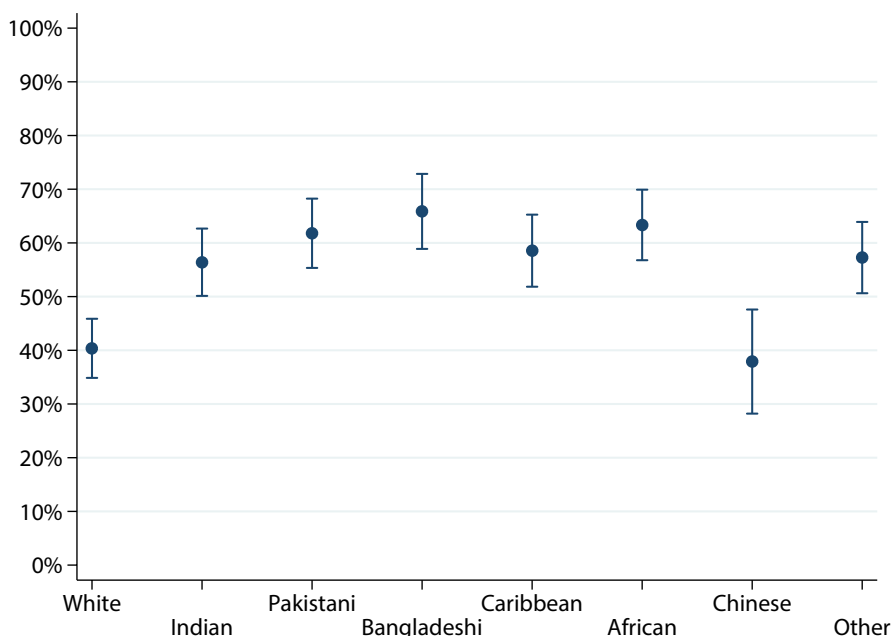
The analyses showed that, without considering the population or type of neighbourhood, wards with a higher level of immigration had lower levels of neighbourhood belonging. However, when population and neighbourhood characteristics such as deprivation were taken into account the relationship between immigration, internal migration and belonging disappeared. The population change that did appear to matter with regard to neighbourhood belonging was White and/or minority population growth due to migration which was associated with higher levels of very strong neighbourhood belonging. These areas can be seen as 'attractor' neighbourhoods, characterised by in-migration and a strong sense of community, or belonging.

This research found no evidence that the ethnic character of population change influences belonging. However, Figure 1 shows there is variation between ethnic groups in levels of very strong neighbourhood belonging: after accounting for demographic, socio-economic and neighbourhood characteristics, Chinese and White have lowest levels of neighbourhood belonging and Bangladeshi have highest levels (statistically significantly higher than White and Chinese). Also, for Pakistanis and Bangladeshis in particular, the likelihood of very strong neighbourhood belonging increases as the concentration of their own ethnic group in their ward increases.

For more information see Finney, N. and Jivraj, S. (2013) 'Ethnic Group Population Change and Neighbourhood Belonging' *Urban Studies*. DOI: 10.1177/0042098013482497



Figure 1: Ethnic differences in the probability of feeling very strong neighbourhood belonging



Notes: Model predicts very strong neighbourhood belonging taking into account ethnic group, age, sex, NS-SEC, marital status, years living in neighbourhood, year of survey, region, percentage of own ethnic group in neighbourhood, deprivation of ward, DEFRA urban-rural indicator, age structure of ward, immigration rate of ward, gross internal migration rate of ward.

Source: Commissioned 2005 and 2007-8 Citizenship Survey

The process of socio-economic constraint on geographical mobility: England 1991 to 2008

Brian Kelly



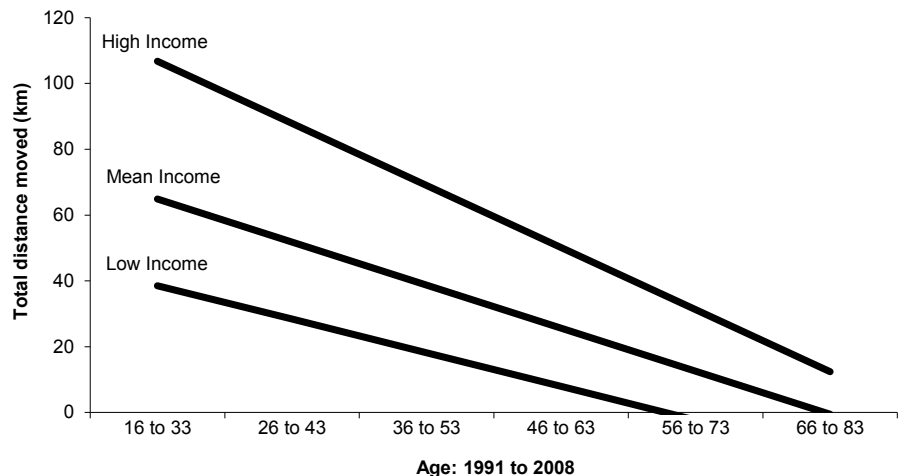
It has been suggested that geographical mobility decreases local social capital, community cohesion and attachment to place. But mobility can also lead to increased connections between individuals and it has been argued that, in the modern network society, lack of connections can reinforce social inequalities. Also not all individuals have transcended place, poorer groups may be more geographically constrained, however an understanding of socio-economic constraint is largely missing from studies of geographical mobility.

This research develops a theoretical framework situating geographical mobility within a life course perspective and tests the hypotheses that individuals with low income are more likely to be geographically constrained and are more likely to be constrained to areas of higher material deprivation. The analysis employs multilevel models and longitudinal data from all 18 waves of the British Household Panel Survey combined with ward level Census data.

The findings provide evidence in support of the hypotheses and for the existence of the process of socio-economic constraint. Figure 1 illustrates how the effect of income varies with age, indicating how the process of constraint may operate across the life course. Generally younger individuals are much more likely to move greater distances. However individuals with low incomes are less likely to move greater distances when they are young and as they age, not only are they less likely to move ward compared to those with higher incomes, but if they do move then they are more likely to be constrained to materially deprived wards (see Figure 2). Individuals with higher incomes are more likely to move greater distances when young and are much more likely to move to less deprived wards, particularly as they get older.

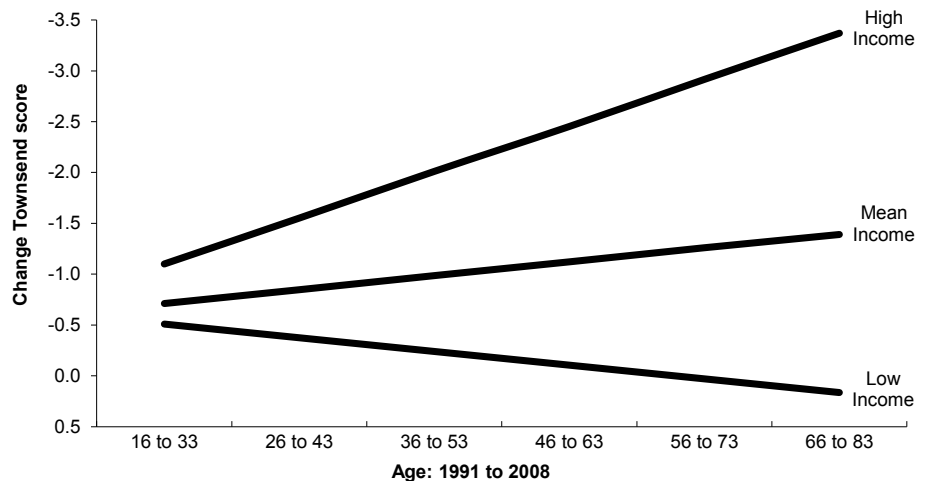
For more information see: Kelly, B. (2013) "The process of socio-economic constraint on geographical mobility: England 1991 to 2008", CCSR Working Paper 2013-08.

Figure 1: Predicted distance moved (km) by income group



Note: Multilevel model controlling for ward level material deprivation. The income groups have been chosen to reflect the range of sample values, see full study for further information.

Figure 2: Predicted change in ward deprivation score by income group for those that moved ward



Note: Multilevel model. The income groups have been chosen to reflect the range of sample values, see full study for further information.

The area determinants of the location choices of new immigrants in England

Kitty Lymperopoulou



Immigration in the UK has changed dramatically in recent years with changes in the numbers and characteristics of new immigrants who are increasingly from countries outside the Commonwealth. New immigrants are often expected to locate in large cities where previous immigrants have settled, where there is a large pool of jobs from which they can benefit, and initially settle in deprived areas to take advantage of the availability of cheap housing.

The existing evidence on the location choices of immigrants, drawn largely from US studies suggests that the presence of ethnic minorities is a stronger predictor of the location choices of immigrants than labour market conditions. However, the relative importance of area characteristics to immigrant settlement is found to vary by migrant characteristics—including country of origin.

To examine the location choices of new immigrants in England this study uses aggregate Department for Work and Pensions National Insurance Number registration data matched to ward and local authority district contextual data. Separate analyses were conducted for four immigrant groups, based on their world area of origin: European Union (EU15), EU Accession, Africa, and Asia.

The results suggest that new immigrants in England are more likely to locate and concentrate in areas with a higher density of immigrants from the same countries of origin and areas with higher ethnic diversity levels. More deprived areas are associated with a higher likelihood of settlement and a higher share of immigrants, with the relationship found to be more pronounced for EU Accession nationals and Africans. New immigrants also tend to locate in areas with poor access to employment and are more likely to settle in areas with higher availability of both private and social rented housing.

However, the impact of social housing is more pronounced on the settlement patterns of African immigrants compared with the other groups. EU Accession nationals, unlike immigrants from more established groups, are found to be less likely to settle in large urban districts and more likely to settle in districts with lower unemployment levels. This is in line with expectations that labour migrants are more likely to base their location decisions on the availability of employment than are other types of migrants.

For more information see: Lymperopoulou, K. (2013) "The area determinants of the location choices of new immigrants in England", *Environment and Planning A*, 45(3), pp. 575 – 592.

Figure 1: Co-ethnic density, households in rented accommodation, availability of low-skill jobs within a 5km radius

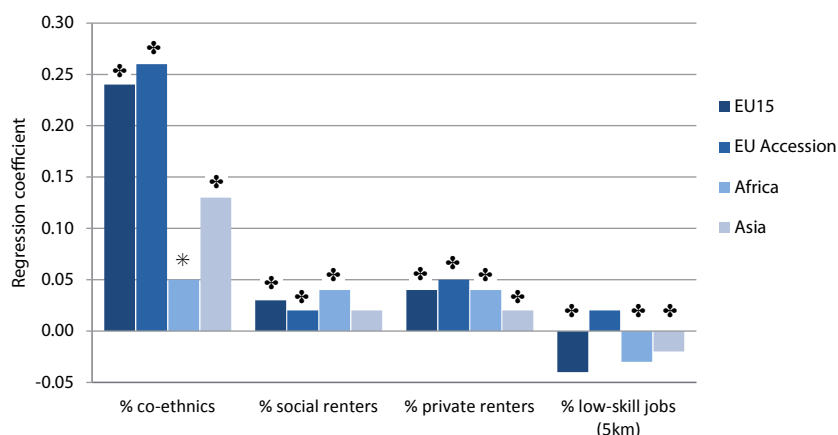


Figure 2: Ethnic Diversity Index

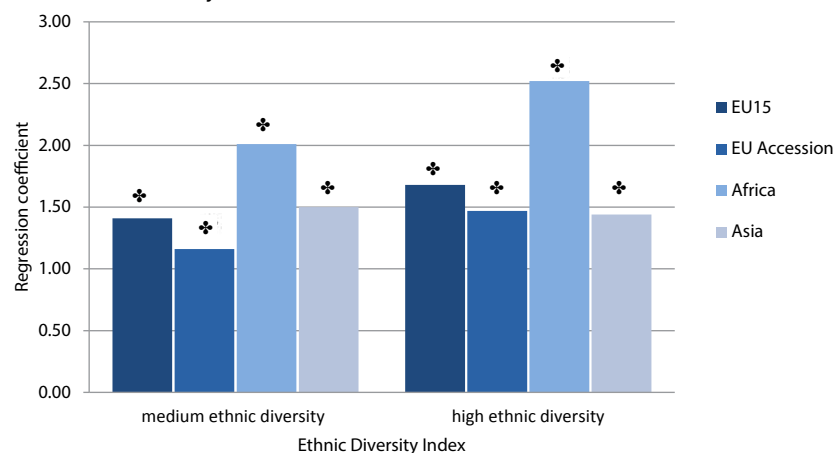
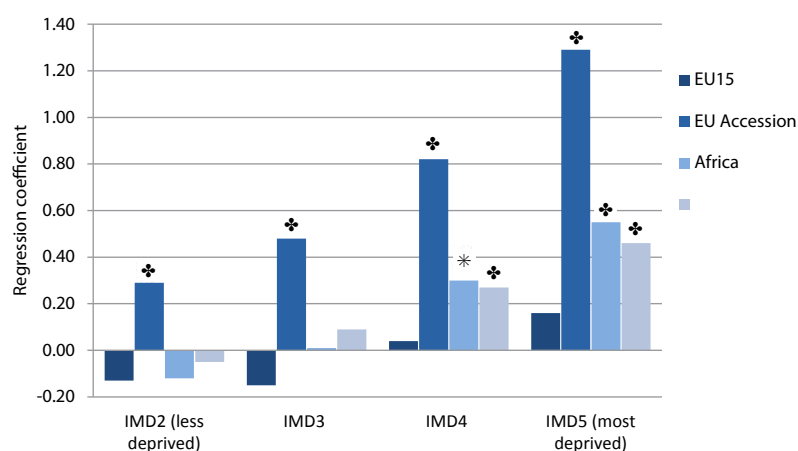


Figure 3: Index of Multiple Deprivation (IMD) Quintiles



Note: (1) The figures show selected ward characteristics from tobit regression models predicting the share of immigrants in English wards. The models also include district level characteristics to account for local employment structure, unemployment rates and urban areas. (2) * $p < 0.05$; * $p < 0.01$.

The high costs of vision loss are felt most by the poorest

Jennifer Whillans



Vision loss is said to be the leading cause of age-related disability. The complex and far-reaching impacts of visual impairment are extensive both for the individual who develops it and for society. However, social determinants of health in the older population and, in particular, social patterning of visual impairment, have received relatively little attention, perhaps partly because measuring socioeconomic status in older age groups presents particular difficulties.

Using the English Longitudinal Study of Ageing (ELSA), the aim of this study was to identify and measure socioeconomic factors associated with the onset of low vision in the older population, having taken into account the effects of a number of other social, behavioural, and medical factors. Visual function was assessed using the following question-and-reply alternatives: Is your eyesight (using glasses or corrective lenses as usual) excellent, very good, good, fair, or poor? 'Low vision' was defined as the reporting of fair vision or worse. Social position was assessed using

household wealth as a measure of economic circumstances. Wealth is argued to reflect command over material resources better than any other measure of socioeconomic status and, unlike education and occupational class, it reflects older peoples' life-time cumulative socioeconomic status.

The study findings indicate that the high costs of vision loss are felt disproportionately by those who are socially disadvantaged. Inequalities in wealth at baseline (that is, inequalities existing prior to the onset of low vision) were found to be associated with a greater risk of the onset of low vision. This finding is vital, and should inform educational health campaigns and the promotion of aids, services, and treatments. Subsequently, those most at risk of low vision could be targeted, thus reducing the extensive and complex direct, and indirect, financial and social costs of vision loss in older people.

This research was funded by the Thomas Pocklington Trust, a leading provider of housing and support for people with sight loss.

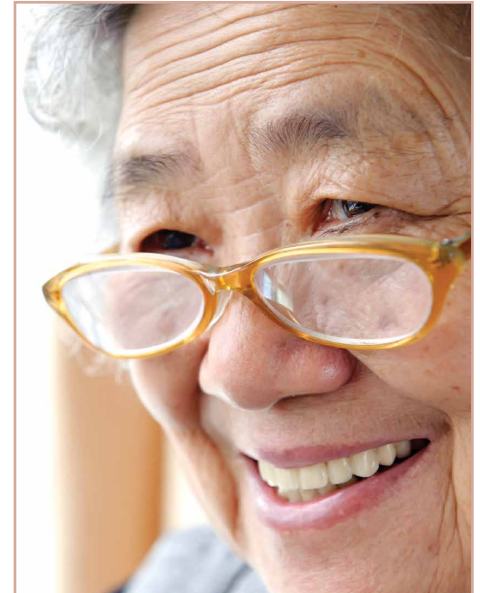
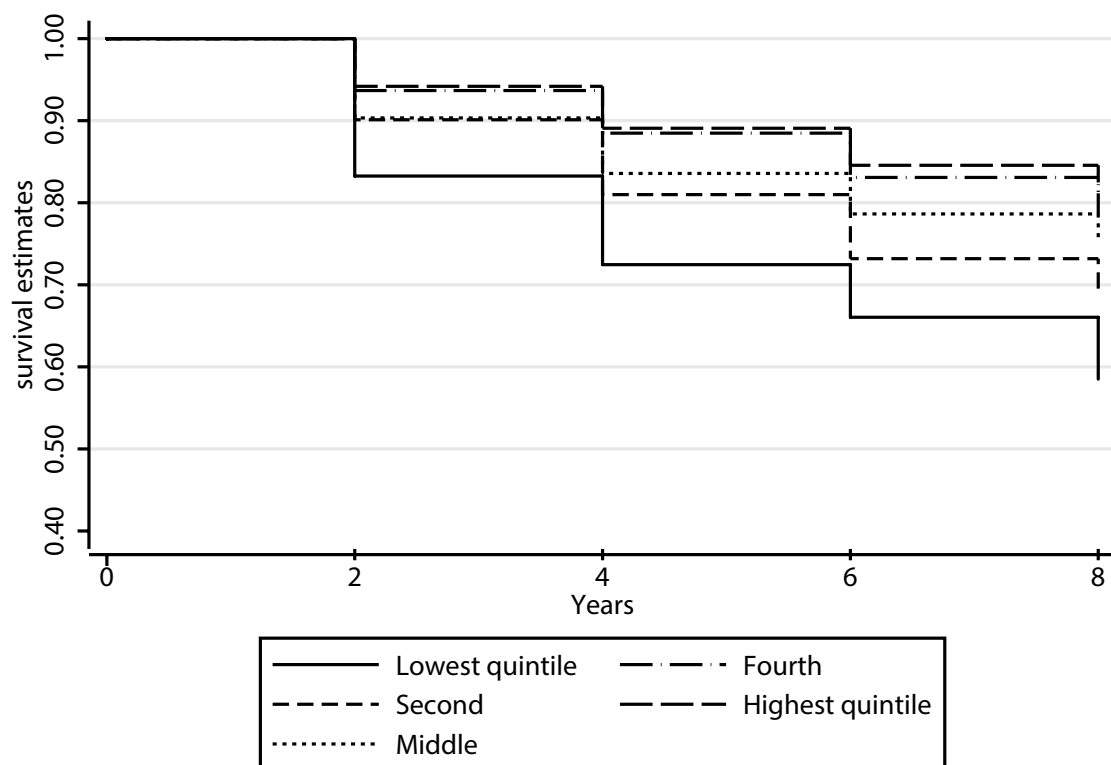


Figure 1: Kaplan Meier survival estimates of the onset of low vision by wealth quintile



Notes: Kaplan-Meier estimates show the probability that respondents remain free from ('survive') low vision, at 2-year intervals, across the 8-year observation window of ELSA. Survival curves are drawn as a step function.

Are school-level effects the only relevant source of variation in Mathematics test scores in Chile?

Patricio Troncoso



School value-added studies are currently a well-established strand in educational research, demonstrating the effects of socio-economic and demographic characteristics of schools and pupils on standardised tests performance. Traditionally, contextualised value-added models (CVA) have been employed to assess variation arising from the schools and pupils. However, recent studies show analyses of schools' and pupils' performance significantly benefit from additional model complexity, including the specification of unexplored levels of variation, either nested or non-hierarchical, such as between classrooms or teachers, between neighbourhoods and local authorities, as well as carry-over effects from primary schools.

Using data from the 2004 and 2006 SIMCE database (Chilean National Pupil Database), an extended CVA model estimating the variation between classrooms (within schools) and between local authorities was implemented. This is in addition to the variation between pupils and schools. The extended CVA model proved effective in reducing bias present in the traditional value-added models. The model controls for prior attainment, household income, gender, grade repetition, school type and average school socio-economic status.

Ranking schools based on a 2-level CVA model (i.e. pupils nested within schools), Figure 1 shows about 43% of schools significantly differ from the national average. When contrasted with the ranking derived from a 4-level CVA model (i.e. pupils nested within, classrooms, schools and local authorities), Figure 2 shows the number of schools performing significantly above or below the national average reduces drastically. In the 2-level model, 20% of schools are found to outperform the national average, while 23% perform below. In a 4-level model, these results are 9% and 8%, respectively.

Movements in the rankings are also large when using the 4-level model compared with the 2-level model. From a total of 2,429 secondary schools, 24% of them moved at least 100 places upwards in the ranking table derived from the 4-level model with respect to the ranking table from the 2-level model

These analyses show that using school averages or even 2-level CVA model is incomplete for the purposes of informing school-level effects, and therefore parental choice and school accountability due to overestimation of school effects and pupils' heterogeneity.



Figure 1: Ranking of school CVA scores in a 2-level model with 95% confidence intervals

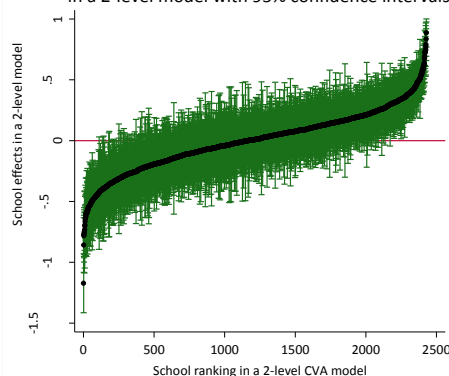
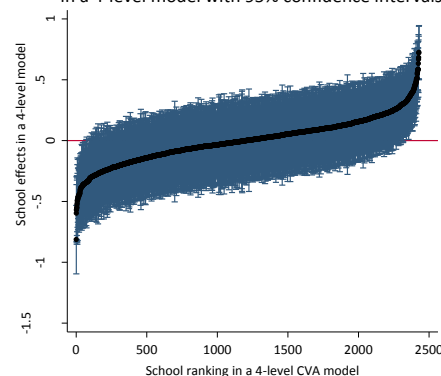


Figure 2: Ranking of school CVA scores in a 4-level model with 95% confidence intervals



Note: The red reference line at 0 in the y axis of both figures represents the national average. A school is different from the mean when its 95% CI does not overlap with this reference line

Acknowledgment: The author thanks the Chilean Ministry of Education for granting access to the SIMCE databases. All results arising from this study are the author's responsibility and do not compromise the Ministry. The author also thanks the 'CONICYT-Becas Chile' Graduate Scholarship Programme for providing the funding for this research.

Who Are the 'Non-Religious'?

Kingsley Purdam



The recent published results from the UK Census have documented an increase from 15% to 25% in the proportion of people identifying themselves as having 'no religion' in England and Wales. Higher rates have also been recorded by robust surveys such as the British Social Attitudes Survey. However, findings from two research projects published by a team including Dr. K. Purdam from the University of Manchester have highlighted the challenges in conceptualizing and researching those people who see themselves as 'non-religious'.

In the English and Welsh Census, respondents are asked 'What is your religion?' and have to define themselves in the negative if they have 'no religion'. Is this equivalent to having no category for female just 'male' or 'not male'? It is notable that variations of the question and ordering of the options is asked in the Scotland and Northern Ireland Censuses.

In the survey conducted as part of one of the research projects reported here 31% of (3,886) students who responded identified themselves as having 'no religion'. Alongside prompts such as: agnostic, atheist, humanist and secular the research facilitated participants to express and self-define their 'non-religious' identities.

The findings from the second research project, which examined equality and unfair treatment in relation to religion and belief including the 'non-religious', also point to the diversity in terms of how so-called 'non-religious' people define and see themselves and also to the dependency between the categories of 'religious' and 'non-religious'.

The definition of religion itself and what beliefs and practices it includes have proved a challenge for policy makers and regulators such as the Charity Commission. The 2010 Equality Act has given increased recognition to people's rights in terms of their religion or belief. This can include beliefs and views which might not of previously been thought of as conventionally religious such as, for example, beliefs about climate change and the environment.

The published findings of these two research projects explore these tensions and ambiguities by highlighting how being 'non-religious' is realised in people's everyday lives. Being 'non-religious' is more complex than just being 'not' something, and can include those who have a framework of belief which informs how they live as well as those who are more overtly secularist. People who have religious beliefs can also support a secular framework for government. Moreover a person's orientation towards, and observance of, religion and the importance it has in their daily life often changes as they grow older.

The publication draws on evidence from two distinct projects which involved: a survey of students in higher education in the UK, a survey of religious organizations and a series of focus groups in five cities across England and Wales with people who see themselves as 'non-religious'.

For more information see: Cheruvallil-Contractor, S., Hooley, T., Moore, N., Purdam, K. and Weller, P. (2013), 'Researching the Non-Religious: Methods and Methodological Issues, Challenges and Controversies', in A. Day, G. Vincent and C. Cotter (eds), *Social Identities Between the Sacred and the Secular*. Aldershot: Ashgate.

Further findings from the research are also forthcoming in Weller, P., Purdam, K. Ghanea, N. and Cheruvallil-Contractor, S. (2013) *Religion Or Belief, Discrimination and Equality: Britain in Global Contexts*. London, Bloomsbury.

Note: the research projects were funded by the Arts and Humanities Research Council and the Economic and Social Research Council under the Religion and Society Programme and by the Equality Challenge Unit respectively.

NEWS AND EVENTS

Population and Society

By Clare Holdsworth, Nissa Finney,
Alan Marshall and Paul Norman

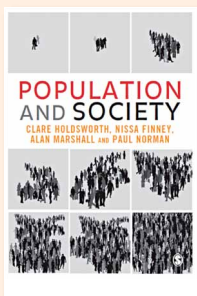
Population and Society is an undergraduate introduction to population that explains the latest trends and debates in population studies.

"This textbook provides an **excellent introduction** to the study of population... While stressing the complexity of population dynamics, it does a fine job of unpacking this... The text is written in a **highly accessible** style... The authors **do not shy away from areas of continuing debate**... Unusually for an introductory text, **this is a book which draws the reader on** and, once started, is quite difficult to put down." **Professor Tony Champion** (*Emeritus Professor of Population Geography, President, British Society for Population Studies*).

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The Universities of Manchester, Liverpool and Lancaster, are guaranteed an annual quota of the Economic and Social Research Council postgraduate studentships (including fees, an annual stipend, and an allowance for research expenses), as a result of our regional Doctoral Training Centre status.

We welcome applications for PhD study at CCSR in the research areas: Social Network Analysis, Longitudinal Data Analysis, Survey Methodology, Multilevel Modelling, Health Inequalities, Ethnicity, Ageing, Civic Engagement, Work & Employment, Confidentiality & Privacy, Cross-national Comparative Research, and Census Data Analysis. See our website for further details and suggested research projects.

How to apply for PhD study at CCSR

Potential PhD candidates should have a first or upper second class degree in a social science subject or in statistics. Exceptional candidates from other backgrounds will also be considered. If you are interested in doing a PhD at CCSR, please contact mark.tranmer@manchester.ac.uk, director of postgraduate research studies, or you can directly contact a member of staff you would like to work with. For information on how to apply, contact Vicky Barnes: vicky.barnes@manchester.ac.uk. To apply online, visit: www.manchester.ac.uk/postgraduate/howtoapply

For more information see: www.ccsr.ac.uk/phd

methods@manchester workshops

Understanding Models using graphics: effect displays

Wednesday 6 November 2013, 2 - 4pm

Room 5.204, University Place, University of Manchester

Ethnography and Observation in Criminological Contexts

Wednesday 13 November 2013, 10 - 12am

Room TBC, University of Manchester

Categorical explanatory variables: Contrast coding, dummy codes and reference categories

Wednesday 13 November 2013, 2 - 4pm

Room 5.204, University Place, University of Manchester

Logit models: modelling ordered and unordered categorical data

Wednesday 20 November 2013, 2 - 4pm

Room 5.204, University Place, University of Manchester

Workshop Series on Advanced Quantitative Methods in Health Inequalities

Workshop 1: Using Latent Variables in Health Inequalities Research

Thursday 5 December 2013

Venue TBC, University of Manchester

For more details: www.methods.manchester.ac.uk/events/workshops

CCSR short courses Nov 2013 – Jan 2014

Course name	Date
Statistical Disclosure Control	6-7 November
Constructing Measures using the Rasch Model	14-15 November
Questionnaire Design	18 November
Multi Item Scales	19 November
An Introduction to Computational Social Science using Big Data	20 November
Linking Data – An Introduction	27 November
Linking Data – Advanced	28-29 November
An Introduction to Statistical Testing in Research	4 December
Social Media Data Analysis	10 December
Statistical Analysis with Missing Data using Multiple Imputation	11-12 December
Introduction to STATA	22 January
Introduction to Bayesian Analysis	23-24 January

To book a place visit: www.ccsr.ac.uk/courses

New staff at CCSR

We would like to welcome to CCSR, Tine Buffel as a Marie Curie Fellow, David Lee as an Age UK Fellow, and Stephen Ashe as a Research Associate on CoDE and Charlene Linton as an administrator on CoDE.

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