

# CCSR News

The Cathie Marsh Centre for Census and Survey Research (CCSR)

## New head of Social Statistics

We would like to thank Ian Plewis for his invaluable work as Head of Social Statistics between 2008 and 2011. Ian has played a major role in establishing Social Statistics as a Discipline Area at the University of Manchester in the School of Social Sciences.

Ian has led the way with his own research on survey methodology, the analysis of large and complex data sets, multilevel modelling and missing data. Social Statistics now has a strong cohort of PhD students and Ian and his colleagues contributed to the establishment of the North West Doctoral Training College. Head of the School of Social Sciences, Fiona Devine, said that "Ian has been a wonderful person to have around in being kind, patient and generous in his time in dealings with all of his colleagues."

Tarani Chandola took over from Ian as the new head of Social Statistics in January 2012. Tarani describes his journey to this role as a little unconventional, coming from a PhD in medical sociology from Nuffield College, Oxford and a research background in epidemiology and public health at UCL. His main research areas are on the topics of health inequalities and work stress and health, with contributions on the physiological effects of work stress observed in longitudinal cohort studies. Tarani is strongly committed to the

development of advanced quantitative methods in the social sciences and is helped by his role as the co-director of [methods@manchester](mailto:methods@manchester). Tarani commented "I have closely followed the career of James Nazroo, literally, following him to join UCL, and then again to join CCSR. James' stellar career and high impact research activities are one of the reasons why I came to Manchester and I look forward to working closely with him and the rest of CCSR."



Pictured left to right: Pauline McGovern, Krisztina Mekli, Bram Vanhoutte and John McLoughlin.

## New staff and projects at CCSR

We would like to welcome Alan Marshall, Krisztina Mekli and Bram Vanhoutte who have been appointed as Research Associates to work on a new interdisciplinary project funded by the cross-research council Life Long Health and Wellbeing scheme Frailty, Resilience and Inequalities in Later Life.

The project will be lead by James Nazroo in collaboration with a team of leading researchers from across the University of Manchester. The

project will be supported by Sashi Palaniswamy who has been appointed as an administrator based at CCSR.

Pauline McGovern has been appointed as a Research Associate to support the research activities of James Nazroo, and John McLoughlin is taking over responsibilities for IT support for the Economic and Social Data Service and other activities at CCSR.

## CCSR Advisory Board

John Pullinger has chaired the CCSR Advisory Board for the last ten years. He is now stepping down from this role and we wish to thank him for the huge contribution that he has made to the development of CCSR.

John will shortly be taking up the post of President of the Royal Statistical Society and therefore he has to make some space for this very high profile and demanding role. Former CCSR director, Angela Dale said "John will be missed very much as Chair of our Advisory Board and we wish him well in all his future activities."

We would like to extend a warm welcome to our new Chair of the CCSR Advisory Board, Professor Denise Lievesley. Professor Lievesley is the Head of the School of Social Science and Public Policy at King's College. Professor Lievesley recently completed a two-year term as President of the International Statistical Institute (the first woman to hold this office) and she presently chairs the methodology committee of the European Social Survey. CCSR Director, James Nazroo said "We are delighted that Professor Lievesley has taken on this role."

## In this issue...

- 02 Perceived job insecurity during the recession (Ewan Carr)
- 03 It's not too late to get a qualification (Tarani Chandola)
- 04 The most favourite and least favourite subjects of English secondary school pupils (Maria Pampaka)
- 05 Embedding quantitative methods into the social science undergraduate curriculum (Mark Brown)
- 06 The dynamics of religious change: A comparative study of five western nations: Recently awarded PhD (Sarah King-Hele)
- 07 Accounting for regional differences in the employment transitions of mothers of young children: Recently awarded PhD (Pierre Walthery)

# Perceived job insecurity during the recession

Ewan Carr

**It is well established that job insecurity has harmful consequences for individual well-being. People who think they are likely to lose their job in the coming months report, on average, higher levels of depression and anxiety and more problems sleeping. It is also known that during periods of labour market uncertainty more people feel insecure than in periods of growth.**

Taking the starting points that job insecurity is harmful and more people feel insecure during a recession, this study examines whether the consequences of perceived insecurity are more severe when economic conditions are worse. The study uses data from the 2006 European Social Survey (ESS), covering 28,168 employees in 14 Western European countries. Using multilevel modelling the study addresses two questions. First, does the impact of job insecurity on subjective well-being vary across countries? Second, to what extent is this variation explained by the economic climate?

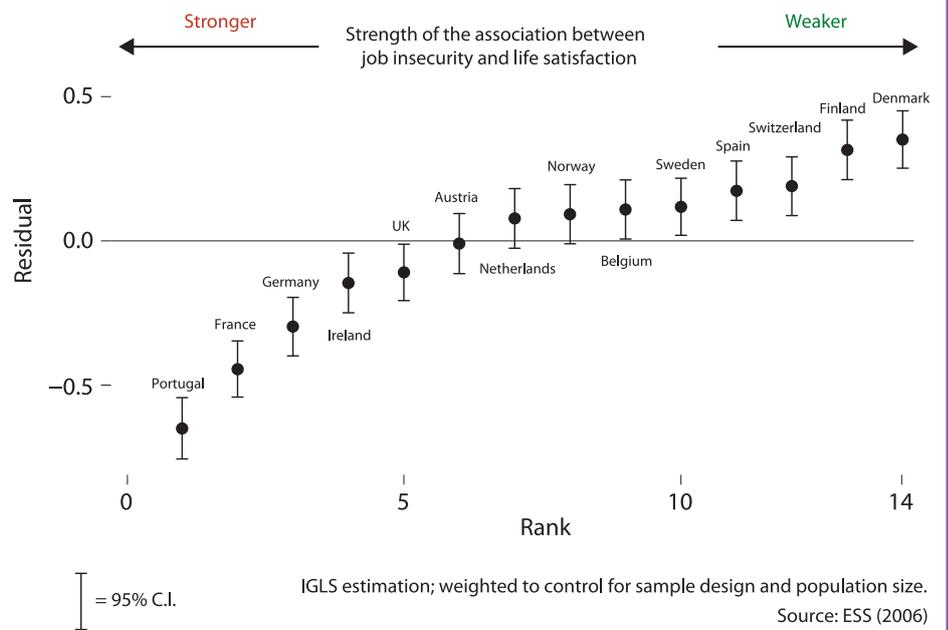
Figure 1 shows the relationship between job insecurity and life satisfaction varies across Europe. A stronger association is observed in countries to the left of the graph; a weaker association in countries to the right. Next we consider whether this relationship is influenced by national economic conditions, such as unemployment and GDP. The analysis showed that in countries with low GDP or high unemployment, the association between job insecurity and life satisfaction is stronger. The same holds true for trends in these measures: where GDP has been falling or unemployment has been rising (on average, over the previous 5 years) the impact of job insecurity is greater.

To give an example, Figure 2 presents the interaction between job insecurity and national unemployment. It shows that as unemployment increases, the penalty associated with job insecurity (that is, the reduction in life satisfaction) also rises. Conversely, in countries with lower unemployment the gap in life satisfaction between those reporting 'high' and 'low' insecurity is smaller.

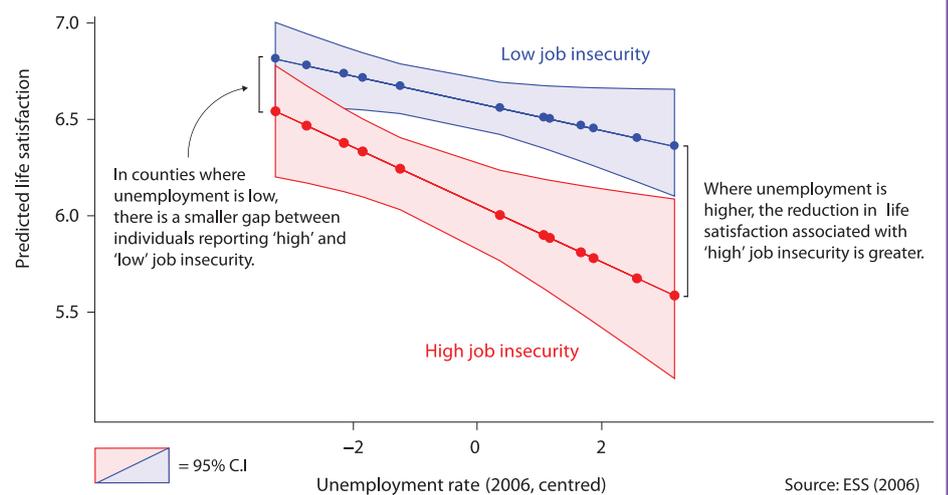
Job insecurity has harmful consequences whether or not people actually lose their job. Not only will more people feel insecure during a recession but, as this research shows, the consequences for well-being are likely to be more severe. Recession, in other words, has a dual impact – increasing the likelihood of experiencing insecurity as well as the severity of the consequences.

To read more about this study see Carr, Elliot and Tranmer (2011) 'A multilevel analysis of the relationship between national economic conditions, an individual's job insecurity and well-being in Western Europe', CCSR Working Paper 2011-05.

**Figure 1:** Variation in the strength of the association between job insecurity and life satisfaction across Europe



**Figure 2:** The intersection between job insecurity and national unemployment



# It's not too late to get a qualification

Tarani Chandola

**People who leave school without any qualifications have poorer health and shorter life expectancies than those with some qualifications. However, a new study suggests that if they return to education later on in life, they may be able to reduce the health gap with their more educated peers.**

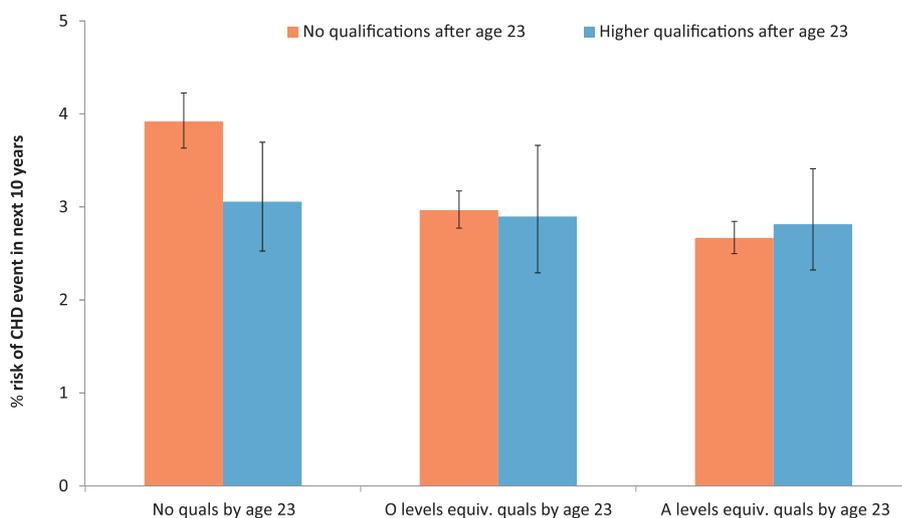
A study of 4,311 British adults born in 1958 (a subset of the National Child Development Study) and aged 42 at the time the data were collected for this analysis, found that men and women who leave school without any qualifications may be able to 'catch up' to some extent with more qualified people in terms of a lower risk of Coronary Heart Disease (CHD). Around 14% of all adults in this cohort went on to obtain some qualifications between the ages of 23 and 42. Figure 1, which reports findings for men only, shows that those who left school without any qualifications had a 4% risk of CHD. Those who left school without any qualifications but who returned to education and obtained some qualifications later on (usually an 'O' level equivalent qualification) had a 25% lower risk of CHD (around 3%). Figure 1 also shows that among men the effects of obtaining higher qualifications in later life were smaller for those who already had some qualifications at age 23. There were similar, although smaller, effects among women.

Health inequalities are a major concern in the UK and elsewhere. While there has been a lot of attention paid to the importance of having a good start in life, there is less evidence on interventions for those who have had a poor start to life. Although the study does not prove that returning to education as an adult automatically improves your health, this study provides some hope to many who leave school without any qualifications. Apart from personal, social and economic benefits to returning to education as an adult, there may be health benefits as well.

To read more about this study see Chandola T, Plewis I, Morris J, Mishra G and Blane D (2011) Is adult education associated with reduced coronary heart disease risk? *International Journal of Epidemiology* (40) 1499-1509.



**Figure 1:** Predicted percentage risk of Coronary Heart Disease (CHD) by qualifications obtained at age 23 and higher qualifications obtained after age 23: Men from the National Child Development Study



# The most favourite and least favourite subjects of English secondary school pupils

Maria Pampaka

**This research forms part of an ongoing ESRC funded study of teaching and learning secondary mathematics in the UK ([www.teleprism.com](http://www.teleprism.com)). Our previous work suggested that students in classrooms where teaching was more interactive were more inclined to continue their studies in maths and other mathematically demanding subjects.**

Building on these findings and a belief that the secret to improving classroom teaching, student engagement and learning outcomes in maths is hidden in the school system itself, this new large scale project has been set up to explore associations between teaching practices for maths and learning outcomes in secondary schools. We aim to break new ground by mapping secondary students' learning outcomes and choices, including dispositions and attitudes, together with the teaching they are exposed to.

The design of the project involves data collection with longitudinal surveys of students (and their teachers) at the beginning and towards the end of the academic year, and at the beginning of the next academic year. This applies for all five secondary year groups (Years 7-11) meaning five years of progression is captured over one year. The combination of a cross-sectional (5 cohorts) and a longitudinal design (each cohort surveyed three times), into what is sometimes called accelerated longitudinal design, is a methodological innovation.

Preliminary findings reported here are based on a sample of more than 10,000 students in Years 7 to 11. The 'word clouds' of Figures 1 and 2 were created using Tagxedo ([www.tagxedo.com](http://www.tagxedo.com)) and show the most favourite and least favourite subjects of the students. The font size indicates the order of preference and their relative frequencies. Maths is at the top of the "least favourite subject" list with 17% of the students selecting it. Nonetheless, it also reaches the fourth position of the "most favourite subject" (with 6% of the students choosing it) suggesting a divergence in attitudes towards maths. These preliminary findings will be extended to show how attitudes are changing over time, and how they are associated with other variables, including teaching practices.

For more a detailed account of our previous work see Pampaka, M., Williams, J., Hutcheson, G. D., Wake, G., Black, L., Davis, P., & Hernandez-Martinez, P. (2011). The association between mathematics pedagogy and learners' dispositions for university study. *British Educational Research Journal*.

**To find out more about the current project, visit [www.teleprism.com](http://www.teleprism.com).** The project is funded under ESRC grant: RES-061-25-0538.

Figure 1: Least favourite subjects

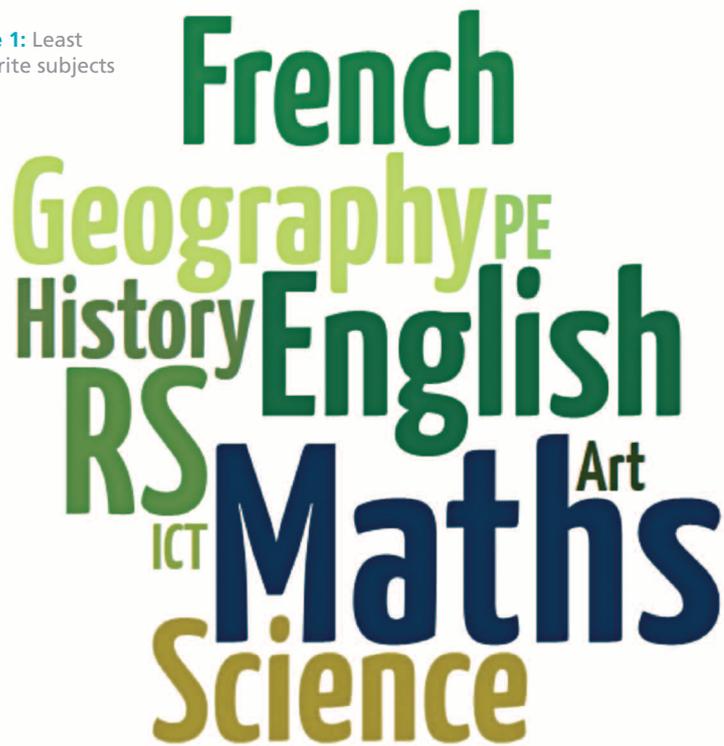
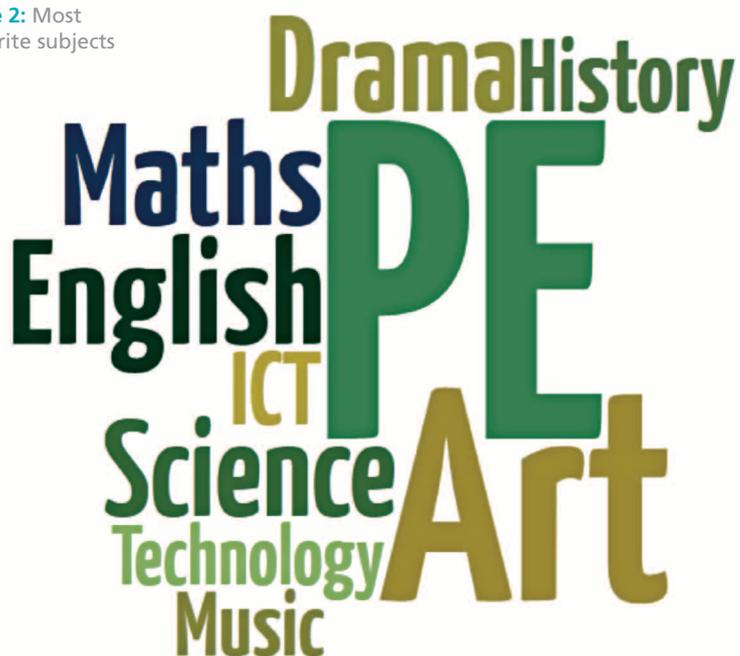


Figure 2: Most favourite subjects



# Embedding quantitative methods into the social science undergraduate curriculum

Mark Brown



**Against the backdrop of concerns over a dearth of quantitative research skills in the UK Social Science community there is growing consensus on the need to revamp the way quantitative methods (QM) are taught at the undergraduate level. In particular there is a need to better integrate the use of quantitative data and methods across the full curriculum, rather than something only encountered in 'methods' courses. The rationale here is clear – students are much more likely to see the relevance of, and be enthusiastic about learning, quantitative methods if they see them demonstrated as integral to research and understanding of the subject areas that inspire them.**

As part of their latest initiative in this area, ESRC are funding a number of projects through two linked schemes: the **Curriculum Innovation Scheme (CI)**, and a Quantitative Methods specific round of the **Researcher Development Initiative (RDI)** aimed at capacity building. In Manchester, an interdisciplinary team led by CCSR and involving colleagues in Sociology, Politics and MIMAS, has been awarded 3 years funding for two linked projects.

For the CI project we have formed partnerships with the lecturers of eight courses teaching on undergraduate programmes in Sociology and

Politics. The courses range from a first year course 'The Sociology of Personal Life' to a final year course on 'The Politics of Protest'. In each we will work with the lecturer to develop, pilot and evaluate new teaching materials that incorporate quantitative evidence and methods. These will range from relatively simple exemplars that can be incorporated into lecture slides to more interactive exercises.

Supporting these CI innovations our project under the RDI scheme will develop a range of 'train the trainer' type activities aimed to promote a culture in which staff are encouraged and supported in the greater use of quantitative approaches in their own teaching. Our starting point is to promote and facilitate the integration of secondary data analysis into undergraduate course units within the School of Social Sciences at Manchester. The overarching aim is to widen access to such materials, and support their use nationally through a series of initiatives including interactive training workshops, webinars, and web dissemination of the University of Manchester teaching materials.

The overarching aim of both projects is to achieve enduring change in the undergraduate curriculum at Manchester, and through the training and networking activities of the RDI project, contribute to capacity building in QM teaching across the UK Social Science community. The two projects

represent an exciting broadening of our QM training role, which from September will also include a major role as provider of methods training on Manchester's new BA (Social Sciences) degree programme.

#### **For further details:**

*Teaching quantitative methods in disciplinary context: integrating quantitative method and evidence into the Social Science undergraduate curriculum.*

[www.ccsr.ac.uk/research/QMCIPROject.htm](http://www.ccsr.ac.uk/research/QMCIPROject.htm)

Principle Investigator Mark Brown

contact: [mark.brown@manchester.ac.uk](mailto:mark.brown@manchester.ac.uk)

*Patterns in Politics & Society: Promoting the Enrichment of Undergraduate Teaching with Quantitative Methods.*

[www.ccsr.ac.uk/research/PIPSProject.htm](http://www.ccsr.ac.uk/research/PIPSProject.htm)

Principle Investigator Wendy Olsen

contact: [wendy.olsen@manchester.ac.uk](mailto:wendy.olsen@manchester.ac.uk)

# The dynamics of religious change: A comparative study of five western nations: Recently awarded PhD

Sarah King-Hele

Recent decades have seen declines in the numbers of people in western countries claiming a religious identity and attending religious services. While these declines have been noted in most western European countries, the United States has enjoyed comparative stability in levels of personal piety. This thesis used census and survey data from Britain, Canada, Australia, New Zealand and the United States from the 1970s and 1980s onwards to examine the dynamics of religious change in those countries.

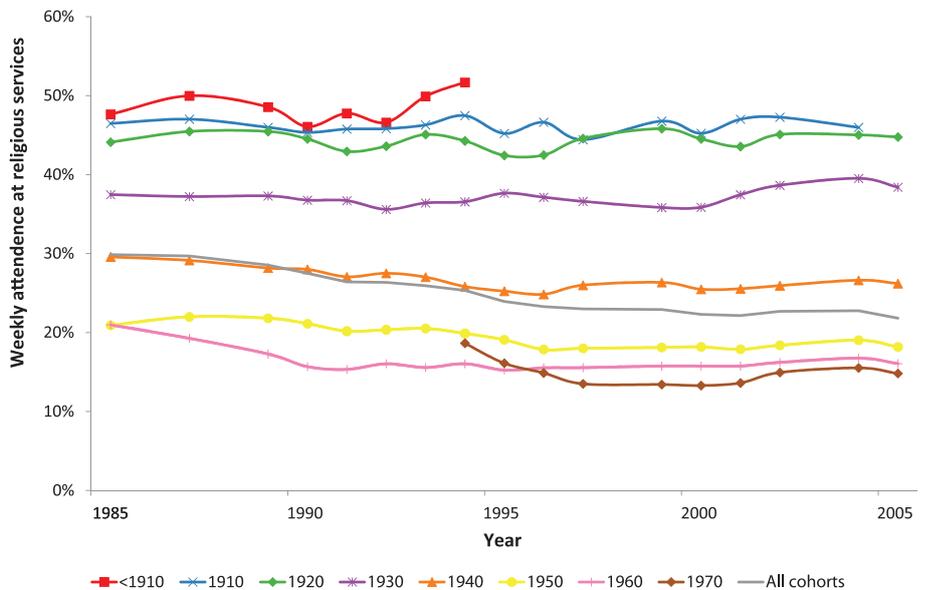
Different dynamics of religious change indicate different sources of religious change at the individual level. The effects of migration and fertility aside, all population change must be related to some combination of age, period or cohort effects; age effects are often interpreted as life-course effects that come about as people marry, have children or retire, period effects are those that impact on the whole population at a particular time regardless of age, and cohort effects impact on one age group and are often attributed to circumstances or events during their youth.

Most religious change in Britain, Australia, New Zealand and Canada is largely due to differences between cohorts. For example, weekly or more frequent attendance at religious services among religiously-affiliated adults in Canada 1985-2006 declined from 30% to 20% (see Figure 1) but within each birth cohort, levels either remained at the same level or declined marginally over time. There is a clear downward cohort progression: the younger the cohort, the lower the level of weekly attendance, so that while over 40% of those born before 1930 attended weekly, on average fewer than 20% of the cohorts born after 1960 made the same claim. If this pattern continues, weekly attendance at religious services in Canada will decline further as younger generations replace older generations. Similar results were seen in Britain, Australia and New Zealand.

The relative stability in personal piety in the United States is due in part to increases within cohorts over time. For example, levels of weekly or more frequent prayer in the United States remained at around 77% from the mid-1980s onwards (see Figure 2). Younger cohorts tended to have lower levels of prayer but upward effects over time are also evident.

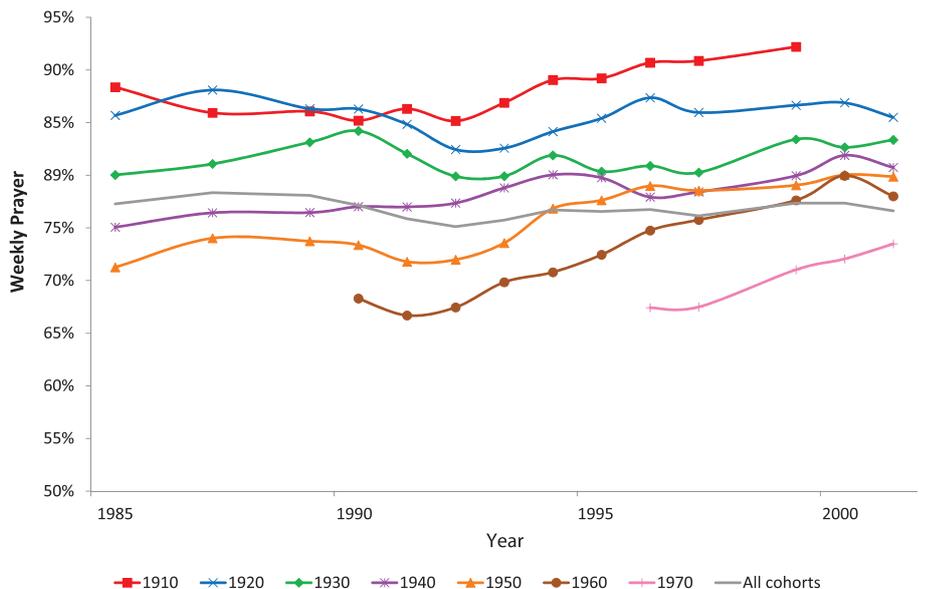
For a fuller discussion see King-Hele S (2010) *The Dynamics of Religious Change: A comparative study of five western countries*, PhD Thesis, University of Manchester.

**Figure 1:** Weekly attendance at religious services by birth cohort among native-born religiously-affiliated adults in Canada, 1985-2006



Notes: Data sources: Canadian General Social Surveys 1985-2006. Uses Canadian-born respondents only. Smoothing: 3-survey moving averages. Data are weighted to make results representative of the Canadian national population.

**Figure 2:** Weekly prayer by birth cohort among adults in the United States, 1983-2008



Notes: Data sources: United States General Social Surveys 1983-2008. Uses only respondents who were living in the United States at age 16 years. Smoothing: 3-survey moving averages. Data are weighted to make results representative of the United States national population.

# Accounting for regional differences in the employment transitions of mothers of young children: Recently awarded PhD

Pierre Walthery

**There remain significant areas in which women do not enjoy the same economic opportunities as men. Time spent caring for young children, which usually involves career breaks or spells of part-time work, has a 'scarring' effect on women's future career opportunities and earnings prospects. Policies meant to increase the employment of mothers with young children tend to be informed by analyses at the country level focusing on national regimes of taxation, childcare provision, and leave policies.**

As a result, most research tends to overlook the existence of variation within countries. For instance, in the UK, the aggregate rates of employment among mothers of children under 6 range from 37% in London to 60% in Scotland and full-time employment rates vary between 27% in West Yorkshire and 52% in Inner London.

This research assessed three possible explanations for these regional contrasts: regional differences in family formation patterns and educational and occupational characteristics of mothers; availability of jobs, especially 'female' jobs; and the impact of regional industrial history, possibly shaping women's orientations to work.

Results pointed to a combined effect. Composition and labour demand effects accounted for some of the regional variations observed. It was also found that in regions with higher proportions of female jobs mothers tended to return to work earlier, but were less likely to take on full-time work at a later stage.

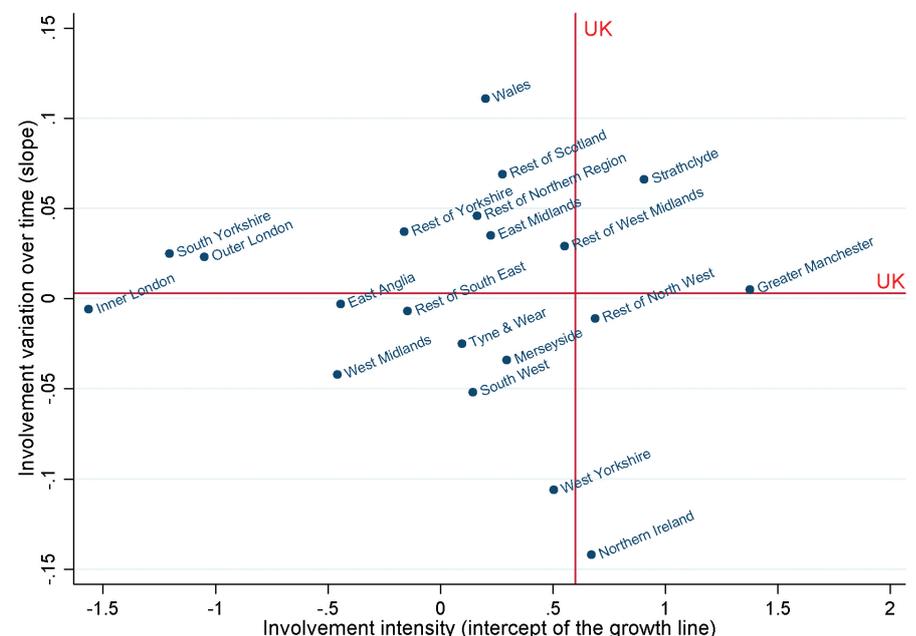
Figure 1 shows the regional differences in the intensity of involvement (the numbers of hours worked) and its variation over 15 months once composition effects have been taken into account. Underlying these differences are complex patterns of engagement in paid work, characterised by differentials in the duration of periods of continuous employment, full-time care, and whether mothers subsequently return to part-time or full time work.

Some correspondence was found between regional variations in mothers' involvement and attitudes of women towards participation. In several cases, regions characterised by higher than average levels of involvement are also regions where the pattern of economic development has encouraged women's employment outside the home (e.g. Lancashire where textile industries employed large numbers of women).

For a fuller discussion see Walthery P (2011) Geographies of Motherhood. Sub-national differences in the involvement in paid work of mothers of young children: the cases of Germany and the UK, PhD Thesis, University of Manchester.



**Figure 1:** Regional differences in the employment transitions of mothers of young children



Residual values of a latent growth curve model of involvement in paid work.. Each dot represents the regional deviation from the model-computed parameters of the growth line for the UK as a whole (the red lines): intercept (involvement intensity) and slope (its variation over time) and show relative differences between regions. Data: Longitudinal Labour Force Survey 2002-2007.

# An international symposium of the Statistical Analysis of Multilevel Social Networks: New approaches and future challenges

The Multilevel Network Modelling Group in association with the Mitchell Centre is hosting an international symposium on the Statistical Analysis of Multilevel Social Networks. The Symposium takes place on the 19th and 20th of June 2012 at the Digital Centre, The Lowry, Salford. Funded by The Leverhulme trust.

The symposium will explore new approaches in multilevel network analysis and the challenges that lie ahead.

The keynote speaker is Tom Snijders. Other speakers include: Stanley Wasserman, Nosh Contractor, Garry Robbins, Philippa Pattison, Emmanuel Lazega, Alessandro Lomi, Rafael Wittek, Mark Tranmer, Johan Koskinen, and Mark Elliot.

For further information:  
[www.ccsr.ac.uk/MNMGConference.htm](http://www.ccsr.ac.uk/MNMGConference.htm)

## Upcoming short courses April - Sept 2012

Our expanded Short Courses programme provides a range of courses in research design and analysis, all with a practical emphasis and applied focus. The programme is structured so that participants may either select an individual course which meets their needs, or build up their expertise through a portfolio of courses. As well as academics, those working in local and central government, health and other public services and also the private sector use CCSR courses to update their research skills. Each course is supported by full documentation.

To book a place visit: [www.ccsr.ac.uk/courses](http://www.ccsr.ac.uk/courses)

| Course name                                   | Date                |
|---|---------------------|
| Event History Analysis                        | 3rd April           |
| Planning and Managing Social Research         | 18th April          |
| Using Panels for Online Research              | 19th April          |
| Using Mixed Data Collection Modes for Surveys | 20th April          |
| Multilevel Modelling                          | 11th May            |
| Demographic Concepts and Methods              | 14-15th May         |
| Population Estimating and Forecasting         | 16th May            |
| Longitudinal Data Analysis                    | 30th May - 1st June |
| Causal Modelling in STATA                     | 6th June            |

## Interested in further study; full-time or part-time? – MSc in Social Research Methods and Statistics (SRMS)



The SRMS MSc course at the University of Manchester provides a thorough grounding in advanced quantitative methods, taught within an applied social science framework. The course is available full-time over one year or part-time over two-years. See [www.ccsr.ac.uk/masters](http://www.ccsr.ac.uk/masters)

Course modules include: Statistical Foundations, Introduction to Statistical Modelling, Survey Research and Longitudinal Data Analysis. The MSc includes training in statistical analysis software such as SPSS and Stata. The MSc is designed to be accessible to people from a broad range of disciplinary backgrounds and with varying levels of prior statistical knowledge. The course attracts students from across the world. Often people take the course whilst working part time.

There is an increasing need for well-trained quantitative social scientists who are able to apply advanced methods of analysis to complex data. Graduates of our programme in Social Research Methods and Statistics are in a good position to obtain jobs in central government, the academic sector, local government and within the commercial research sector. See [www.ccsr.ac.uk/masters/grad\\_dest.htm](http://www.ccsr.ac.uk/masters/grad_dest.htm)

For further details about the SRMS MSc course, contact:  
**Dr K. Purdam**, Postgraduate Teaching Director, CCSR  
Email: [kingsley.purdam@manchester.ac.uk](mailto:kingsley.purdam@manchester.ac.uk)

## General Enquiries

**Philippa Walker**  
tel 0161 275 4721  
email [p.walker@manchester.ac.uk](mailto:p.walker@manchester.ac.uk)

## CCSR

Humanities Bridgeford Street  
The University of Manchester  
Oxford Road, Manchester M13 9PL

## Consultancy

**Kingsley Purdam**  
tel 0161 275 4719  
email [kingsley.purdam@manchester.ac.uk](mailto:kingsley.purdam@manchester.ac.uk)