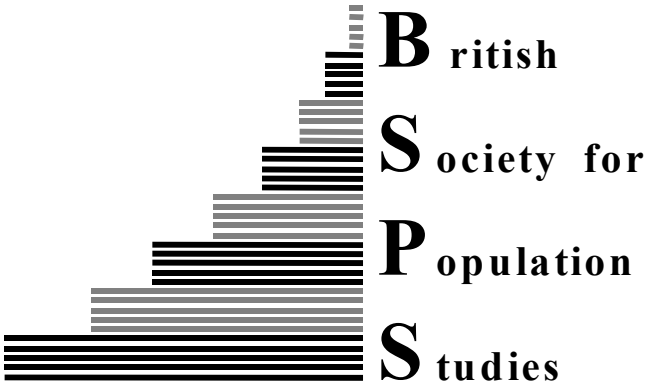

The 2013 Conference

The University of Swansea

9-11 September 2013

The Society acknowledges the generous support of The Galton Institute.

Contents

Welcome

Timetable, including session room details

Abstracts:

Plenaries 1

Ageing 2

Census 7

Ethnicity 14

Families & households 23

Fertility & reproductive health 31

Health & mortality 40

Historical demography 48

Intergenerational transmissions 53

Life course linkages 55

Local government & planning 57

Methods & models 60

Migration 67

Population change, environment, resources & conflict 76

Posters 80

Workshops & training sessions 104

Index to contributors 107

WELCOME

On behalf of the British Society for Population Studies, welcome to the Society's 2013 Annual Conference, and to Swansea in Wales. It is becoming old news that we have again broken our records for the number of participants, including many from outside the UK. May your confidence in BSPS be well rewarded!

Adding to over 45 sessions of contributed papers and a poster session, we have two plenary sessions that promise to provoke discussion throughout the conference. On Monday at 3.30 Mary Daly (University of Oxford) will talk on *Family policy in the UK and Europe – does it respond to fertility and ageing?*

For the second plenary, on Tuesday at 3.30pm Monica Das Gupta (The World Bank) will talk on *Demography, gender and kinship systems: perspectives from Asia*

A written quiz is planned for Tuesday evening – for you to do if you wish, individually or in teams, with a bar voucher as prize. You are welcome to relax in the bar in Fulton House between 6.30pm and midnight and make use of its facilities. All the conference activities are in nearby buildings – meals in the first-floor dining room in Fulton House, plenaries and all Conference sessions in the Faraday Building, and refreshment breaks, poster session and reception, and communal area in the Taliesin Arts Centre (all marked in the programme).

This year's conference widens its training offerings with four sessions open to all those who have pre-booked – with thanks to all those who have contributed their experience.

Such a big programme with many parallel strands poses organisational challenges for you as participants. This programme should allow you to find the location of each presentation. We have asked all speakers and chairs to do their best to keep each presentation and session to time to help you move between the sessions that most interest you.

Please take the time to complete this year's evaluation and leave it with Anne Shepherd at the Registration Desk in the Taliesin Arts Building, either before you leave, or return it by post. As well as asking you to identify any particularly good or disappointing aspects of the conference, which really does help us to plan the next one, the feedback form allows you to suggest policy issues or debates that you would like to see BSPS engage with through the organisation of its conference, plenaries, day meetings or public lectures.

I want to thank all those who have helped organise the Conference, including the strand organizers and, most particularly, Anne Shepherd from the Population Investigation Committee. The strands and special sessions, and their organisers, are:

Strands:
Ageing: Emily Freeman
Census issues: Julie Jefferies, Kirsty MacLachlan, Tony Champion
Ethnicity: Gemma Catney, Nissa Finney, Stephen Jivraj
Families & households: Wendy Sigle-Rushton
Fertility & reproductive health: Stuart Basten, Monica Magadi
Health & mortality: Amos Channon, Paula Griffiths
Historical demography: Alice Reid
Local government: Eileen Howes
Methods & models: Paul Norman
Migration: Tony Champion

Posters: Rachel Bennett

Special sessions:
Career mentoring breakfast: Julia Mikolai
Conflict, environment & resources: Jakub Bijak, Alan Marshall
Demographic projections for local government: David George
Economic change & family processes: Berkay Ozcan
Life course linkages: Elizabeth Cooksey, Dieter Demey
Intergenerational transmissions: Valeria Bordone
Multi-level modelling: Valeria Cetorelli, Ben Wilson
Training session on subnational data: Piers Elias
Training session on modern causal inference methods: Emily Grundy & colleagues
Training session on the UK Census Longitudinal Studies: Nicola Shelton & colleagues
Workshop on Scotland Beyond 2011: Jules Goodlet-Rowley & colleagues

Many of the strand organisers are members of BSPS Council, who can be identified by red lanyards and red badge-holders.

The poster session and welcome Reception is at 6.30pm on Monday evening in the Taliesin Arts Building. All Conference participants, whether staying on campus or not are encouraged and very welcome to attend. This year also sees more contributed posters than ever with over 50 posters on display. Their authors will be there to discuss the posters with you. There will be prizes for the best research-based posters, at least one of which will be for the best student poster.

Those attending the BSPS conference always comment favourably on the opportunities to meet and talk to a wide range of people including those they normally have little contact with. There are always some participants both from the UK and from overseas who do not know anyone else when the conference starts. I hope that all will extend their conversations to include new friends and colleagues.

The AGM of BSPS will be held on Tuesday evening at 7pm (before dinner). Please do come to this if you are a BSPS member. It is my final conference as president and I am happy to be handing over to the new team but they and I would like to hear members' ideas for what they think BSPS can be doing in the next year.

On behalf of BSPS I would like to warmly thank the Galton Institute which has again provided generous financial support to the Conference. This contributes to covering the costs of bursaries for student members and plenary speakers' expenses. The Society is also very grateful to the Population Investigation Committee for its continuing support for the Society. The income of the Population Investigation Committee comes largely from the journal *Population Studies* so those of you who subscribe to this journal are helping BSPS too.

Welcome to Swansea and I hope you all have an enjoyable and rewarding Conference.

Ludi Simpson
BSPS President 2011-2013

British Society for Population Studies 2013 Conference: Timetable

Session rooms listed under each session heading. All adjacent to one another in Faraday Building (ground floor)

Monday 9 September						
From 10.30am	Registration in Taliesin Arts Centre. Registration desk staffed throughout the Conference					
12.15 – 1.30pm	**Lunch in Fulton House Dining Room (first floor)**					
1.30 – 3.00pm	**Ageing: Receipt of care at older ages** ***Chair: Dr. Rebecca Sear*** Session room 1 1. Older people's receipt of social support in England – *Vlachantoni, Shaw, Evandrou, Falkingham* 2. On the compensating role of extended family and non-family ties among the childless elderly in Germany – *Schnettler & Woehler* 3. Shifting & static attitudes towards intergenerational transfers of care in rural Malawi – *Freeman*	**Census: Beyond 2011** ***Chair: Kirsty MacLachlan*** Faraday Lecture Theatre 1. Variability & accuracy of Scottish population estimates from administrative data sources – *Greig* 2. Estimating Scottish local population sizes from administrative data sets using Bayesian Monte Carlo methods – *Sharp & Congdon* 3. Population statistics in an administrative data-based world – *Wroth-Smith & Large*	**Health: Predictors of overweight & obesity in children & adolescents** ***Chair: Dr. Amos Channon*** Session room 2 1. Understanding ethnic differences in BMI in the US & UK – *Zilanawala, Kelly, Sacker* 2. Family structure, maternal nativity, & childhood obesity – *Sigle-Rushton & Goisis* 3. Community & household socio-economic status influences on dietary intake in South African adolescents living in an urban area – *Pradeilles, Griffiths,*	**Migration: Lifecourse** ***Chair: Professor Tony Fielding*** Session room 3 1. Spatial aspects of internal migration in Italy: a longitudinal approach – *Fornasin* 2. The geographic mobility over the life course in some European countries. Using ShareLife data to compare changes of residence over the last decade – *Heins & Bonifazi* 3. Migration motivations & migrants' satisfaction in the life course. A sequence analysis of geographical mobility trajectories in the UK –	**Fertility: cross-national & global perspectives** ***Chair: Dr. Agnese Vitali*** Session room 4 1. The future of fertility: Results from a global survey of experts – *Basten & Sobotka* 2. Culture, structure & fertility: Education, post-materialism in a cross-national perspective – *Macmillan* 3. Lengthening birth Intervals & their impact on the fertility transition in rural & urban East Africa – *Towriss & Timaeus*	**Application of multilevel modelling** ***Chair: Valeria Cetorelli*** ***Discussant: Dr. Berkay Ozcan*** Session room 5 1. Household structure & child health in Botswana - *Ntshebe* 2. Socio-cultural determinants of modern contraceptive use in West Africa – *Ledger* 3. The effect of family allowances on first births in Europe: cross-national longitudinal comparisons and critical junctures – *Wood* 4. The association between individual &

			Rousham, Norris, Feeley	*Nowok & Findlay*		national-level characteristics in fertility & partnership – *Lyons-Amos*
3.00 – 3.30pm	Break. Refreshments in Taliesin Arts Centre					
3.30 – 4.30pm	**PLENARY: PROFESSOR MARY DALY (University of Oxford)** ***Family policy in the UK and Europe – does it respond to fertility and ageing?*** Chair: Professor Ludi Simpson <u>Faraday Lecture Theatre</u>					
4.30 – 4.45pm	Short break					
4.45 – 6.15pm	**Ageing: Segregation & inequality at older ages** ***Chair: Dr. Emily Freeman*** <u>Session room 1</u> 1. Does the level of health inequality within an area influence the health of older people? – *Marshall, Jivraj, Nazroo, Tampubolon, Vanhoutte* 2. What are the dominant patters of expenditure among	**Ethnicity: Residential segregation & mixing** ***Chair: Dr. Stephen Jivraj*** <u>Session Room 2</u> 1. White flight, mixed neighbourhoods or both? Applying spatial measures of ethnic segregation to the 2001 & 2011 Censuses – *Harris & Johnston* 2. 'White flight', local diversity & white opposition to immigration in Britain, 1991-2012 –	**Economic change & family processes** ***Chair: Dr. Berkay Ozcan*** <u>Session room 4</u> 1. Economic precariousness & living arrangements among young adults in the UK – *Tammes, Roberts, Berrington* 2. Economic conditions and variation in first birth hazards in 22 European countries between 1970 and	**Methods: Migration in models** ***Chair: Professor Phil Rees*** <u>Session room 5</u> 1. Estimating annual migration flows by age & sex for subnational geographies in the UK, 2001-2011 – *Norman, Lomax, Stillwell, Rees* 2. Combining internal migration data sources in England – *Newell* 3. Redevelopment of the migration-assumptions setting	**Migration: Inter-regional patterns** ***Chair: Professor Tony Champion*** <u>Session room 3</u> 1. Migration in China: interprovincial migration trends in a transition economy – *Fielding* 2. Differentiation of Russian regions and cities by mean age of population as a consequence of internal migration – *Kashnitsky*	**Training session: Studying pathways between social & biological factors using modern causal inference methods: an example using data from the ONS Longitudinal Study** <u>Faraday Lecture Theatre</u> *Professor Bianca DeStavola & Dr. Rhian Daniel (LSHTM) & Professor Emily Grundy (University of*

	the older population & what explains these? – *Hayes & Finney* 3. Trends in age segregation in England & Wales – *Sabater & Simpson*	*Kaufmann & Harris* 3. Neighbourhood ethnic diversity & mixing in England & Wales, 1991-2011 – *Catney* 4. Ethno-religious residential segregation & social networks: A British Muslim case study - *Gale*	2005 – *Wood & Neels* 3. Economic context & first union formation: exploring the effects of economic downturn at the macro level (1970-2004) in five western-European countries – *Vergauwen & Neels*	methodology for the UK's national population projections – *Leather* 4. Examining the role of international migration in global population projections – *Abel, Sander, Samir*	3. Migration in regional groups: effects, tendencies & correlation with integration - *Vadim*	*Cambridge)*
6.15 – 6.30pm	Short break					
6.30 – 8.00pm	**Poster session & reception (drinks & nibbles) in Taliesin Arts Centre. All Conference participants welcome.** **Over 55 posters on display. See abstracts for full list and presenters.**					
8.00pm	**DINNER. Fulton House Dining Room (first-floor)** **Bar in Fulton House open until midnight**					
Tuesday 10 September						
7.30 – 9.00am	**Breakfast. Fulton House Dining Room.** **Career mentoring breakfast for those who have had their booking confirmed.** Please collect your breakfast from the Fulton House Dining Room & take to the nearby allocated room – location advised to those registered. FULLY BOOKED.					
9.00 – 10.30am	**Census: the 2011 Census in Scotland** ***Chair: Emma Wright*** Session room 5 1. Scotland's 2011 Census: Quality assurance of small area population & household estimates	**Reproductive health: Reproductive & negative birth outcomes** ***Chair: Ben Wilson*** Session room 4 1. Social inequalities of adolescent fertility outcomes: teenage	**Migration: Censuses & estimates** ***Chair: Professor Tony Champion*** Session room 3 1. How well is the impact of international migration measured between censuses –	**Historical demography: Historical mortality** ***Chair: Dr. Eilidh Garrett*** Session room 1 1. From ague to pyrexia & from smallpox to heart	**Life course linkages** ***Chair: Dieter Demey*** Session room 2 1. Coping with complex individual histories: A comparison of life course methods with an application to	**Methods: Variations in outputs** ***Chair: Dr. Paul Norman*** Faraday Lecture Theatre 1. The future quality of population estimates: how will we measure

	with implications for future methods – *Hunter & Macintyre* 2. The Census/Census Coverage Survey Matching Project for Scotland's Census 2011 – *Bowie & Stannard* 3. Scotland's Census 2011: Quality assurance - *Macintyre*	childbearing & abortion trends of three birth cohorts in Finland – *Vaisanen* 2. Local sex ratios & reproduction skew: the Finnish case - *Lainiala & Rotkirch* 3. Co-operation and conflict within families: do kin help or hinder reproductive outcomes? – *Sear, Moya, Schaffnit, Snopkowski* 4. Associations between small-area crime rate & negative birth outcomes in Scotland – *Clemens & Dibben*	*Owen* 2. Measuring population change in Scotland: How the Census sheds light on our success in capturing migration over the last ten years – *Hill* 3. Internal migration as a driver of inter-censal drift – *Park, Smallwood, Auckland*	disease: a general overview of causes of death in Scotland 1855-1955 – *Reid, Garrett, Dibben, Williamson* 2. Was there a causal relationship between early-life living conditions & adult survivorship in the past? Insights on socioeconomic determinants from a height-mortality linkage in Spanish rural settlements (1780-1900) – *Camara & Pujadas* 3. The direct influence from early life disease exposure on young adult height, southern Sweden 1814-1950 - *Oberg*	partnership transitions in Norway – *Mikolai & Lyons-Amos* 2. The role of parental social class in the transition to adulthood: a Sequence Analysis Approach in Italy and the United States – *Sironi, Barban, Impicciatore* 3. Parental background, intergenerational educational mobility & timing of first birth – *Duta* 4. Impacts of NEET experiences on social & health outcomes: an analysis using the Scottish Longitudinal Study – *Ralston, Raab, Dibben, Feng*	& should we adjust? – *Smallwood* 2. On the decomposition of life expectancy & limits to life – *Mayhew & Smith* 3. How confident can we be in the projections of the older population in the UK? - *Rees*
10.30 – 11.00am	Break. Refreshments in Taliesin Arts Centre					
11.00 – 12.30pm	**Ethnicity: Social & economic inequalities** ***Chair: Dr. Stephen Jivraj*** Session room 2 1. Ethnic minorities and inequalities:	**Demographic projections for local government** ***Chair: John Hollis*** Session room 5 1. The production of small area population	**Fertility: Fertility preferences & intentions** ***Chair: Professor Ross Macmillan*** Session room 4 1. Correspondence	**Families: Diverse family forms: Measurement & policy issues** ***Chair: Dr. Almuneda Sevilla Sanz*** Session room 1	**Demography of armed conflict** ***Chair: Dr. Jakub Bijak*** Faraday Lecture Theatre 1.Demography in the courtroom – ***Helge***	**CeLSIUS: joint hands-on training session for the 3 UK Census Longitudinal Studies** Library Computer Room *Nicola Shelton &*

	Exploring ethno-religious contributions to labour market participation - *Khan* 2. Measuring the integration of the young foreign population in a new setting region of southern Italy through the command & use of the language – *Pellicani, Galizia & Moro* 3. Spatial integration at the expense of occupational disadvantage: The case of Latin Americans in Spain – *Sabater, Domingo, Galeano* 4. Self-determination through self-employment? Livelihood strategies of immigrants & their partners in rural Sweden – *Macpherson, Karlsson, Stromgren*	estimates & forecasts for customised geographies – *Kenyon* 2. Population forecasting & demographic change in Luton – *Holmes* 3. Demographic projections for areas at risk of coastal flooding - *George*	between intended & realised fertility: the role of education – *Testa & Iacovou* 2. Fertility intentions and health status among women in slum and non-slum areas in eight Indian cities – *Khopkar, Kulathinal, Saavala* 3. Who wants to remain childless? Exploring gender differences in intended childlessness in Britain & Italy – *Fiori, Rinesi, Graham*	1. Complex families & material hardship - *Pilkauskas & Zilanawala* 2. Cohabiting families and their legal protection against moves into poverty: A comparison of 12 European countries - *Gassen & Perelli-Harris* 3. Economic and demographic change in India: challenging assumptions of family breakdown – *Penny Vera-Sanso, Birkbeck, University of London*	***Brunborg,*** *Statistics Norway* **(SPECIAL INVITED SPEAKER)** 2. The impact of the Iraq war on neonatal polio immunisation coverage – *Cetorelli* 3. Socio-demographic differences in surviving the Holocaust - *Tammes*	*Rachel Stuchbury (CeLSIUS), Michael Rosato (NILS-RSU), Lee Williamson (SLS-DSU)* FULLY BOOKED
12.30 – 1.30pm	**Lunch.** **Fulton House Dining Room**					

1.30 – 3.00pm	**Census: Beyond 2011 (2)** ***Chair: Dr. Ian Shuttleworth*** <u>Faraday Lecture Theatre</u> 1. Integrating surveys & administrative data to estimate population characteristics – *Morris, Taylor, Merad, Ralphs* 2. Public acceptability: the challenges for Beyond 2011 – *Groom* 3. Making a case for small area Census statistics: exploring the spatial scale of population variables in England & Wales – *Lloyd* 4. Assessing the value of small area census data: an input to 'Beyond 2001' discussions – *Norman & Martin*	**Families: Gendered division of labour within families** ***Chair: Dr. Nora Sanchez Gassen*** <u>Session room 1</u> 1. Flexible working & Couples' co-ordination of time schedules – *Sevilla & Bryan* 2. Time availability, bargaining or doing gender? The domestic division of labour in China – *Kan & He* 3. Work-life conflict in Britain: examining the role of family circumstances – *Henz* 4. Family-work practices & attitudes among religious groups in the United Kingdom – *Peri-Rotem*	**Historical demography: Causes of death & disease in the past** ***Chair: Dr. Alice Reid*** <u>Session room 2</u> 1. The experience of trachoma, a poverty-related disease, in Italy & Spain between the 19th & 20th centuries – *Pozzi, Mestre, Galiana* 2. Control of tuberculosis in the Gold Coast, 1900-1960 – *Amo-Adjei et al* 3. Towards a long-term historical cause of death coding scheme – *Reid, Garrett, Dibben, Williamson*	**Intergenerational transmissions** ***Chair: Professor Jane Falkingham*** <u>Session room 3</u> 1. Social mobility over three generations in the UK – *Chan* 2. Intergenerational wealth inequality & dependency across seven OECD countries – *Vitali, Aassve, Furstenberg* 3. Intergenerational transmission of attitudes toward the family: the role of family size – *Bordone, Murphy, Skirbekk* 4. Household structures in Europe & their relationship with poverty & deprivation – *Iacovou*	**Population change, environment, resources & conflict** ***Chair: Dr. Stephen Jivraj*** <u>Session room 4</u> 1. Determining the range of excess population loss estimates: A case study of the Democratic Republic of Congo (DRC) 1984-2004 armed conflict – *Kapend & Hinde* 2. A demographic reconstruction of the components that contributed the most to population change during the Sierra Leonean civil war, 1991-2002 – *Kamanda* 3. Do biased sex-ratios affect violent crime? An individual-level longitudinal analysis using Swedish register data – *Schnettler, Barclay, Beckley, Filser* 4. Population & consumption effects under the Urban Transition – *Terama,*	**Reproductive health: HIV/AIDS & sexual behaviour** ***Chair: Dr. Rebecca Sear*** <u>Session room 5</u> 1. Attitudes towards sexual health among older adults with HIV in rural southern Malawi – *Freeman* 2. Gender disparity in HIV seroprevalence & associated gender variables: A national-level analysis of the association between gender inequality & the feminisation of HIV/AIDS – *Harris* 3. HIV status & contraceptive behaviour among women in Kenya – *Magadi & Magadi,*

					Mace, Coulson	
3.00 – 3.30pm	Break. Refreshments in Taliesin Arts Centre					
3.30 – 4.30pm	**Plenary: Professor Monica Das Gupta (The World Bank)** ***Demography, Gender & Kinship Systems: perspectives from Asia*** Chair: Professor Tony Champion <u>Faraday Lecture Theatre</u>					
4.30 – 4.45pm	Short break					
4.45 – 6.45pm	**Migration: Impacts** ***Chair: Rachel Bennett*** <u>Session room 3</u> 1. The Hazara & Afghan diaspora in the United Kingdom, continental Europe and Australia – *Ware* 2. Location, location? A critical examination of patterns & determinants of internal mobility among post-accession Polish immigrants in the UK – *Trevena, McGhee, Heath* 3. Cleaning & care work in France: the	**Families: Family dynamics in Europe: cross-national comparisons** ***Chair: Dr. Tak Wing Chan*** <u>Session room 1</u> 1. How does human capital affect partnership transitions? Evidence of complex contingencies in a multi-country sample – *Macmillan* 2. The planning status of non-marital fertility – *Vergauwen & Neels* 3. Variation in the intersection between	**Ethnicity: Population change, mixed ethnicities & racism** ***Chair: Dr. Gemma Catney*** <u>Session room 2</u> 1. 'The pebble in the pond': race equality & racism in Wales – *Crawley* 2.– Ethnic differences in housing: evidence from the 2011 census *Finney, presented by Ludi Simpson* 3. Mixed-Britain & ethnicity: findings from the Census – *Smith* 4. How well did we do	**Historical demography: Fertility & households in the past** ***Chair: Professor Lucia Pozzi*** <u>Session room 4</u> 1. Son preference in a sharecropping society: Gender composition of children & reproduction in the pre-transitional Italian community of Casalguidi – *Manfredini, Breschi, Formasin* 2. Innovation-diffusion, geography & clustering of fertility	**Health & Mortality: Socio-demographic predictors of health & mortality** ***Chair: Professor Monica Das Gupta*** <u>Session room 5</u> 1. Do short birth intervals have long-term implications for parental health? An investigation using Norwegian complete cohort register data – *Kravdal & Grundy* 2. Intra-migration & Health in England & Wales: Does where you move to impact upon your health? –	**Local government training session** <u>Library Computer Room</u> ***Led by Piers Elias, with Sally Kenyon & Mark Green*** FULLY BOOKED

	contributions & trajectories of migrant workers – *Condon & Lada* 4. Self-employment of immigrants: Understanding the country-of-origin effects – *Ozcan & Ozcan* 5. The migration-development nexus reconsidered: Trans-local perspectives on migration & local place making processes in eastern Nepal – *Agergaard & Broegger*	partnership & fertility: A comparison across 3 cohorts in 16 countries – *Lyons-Amos & Perelli-Harris* 4. Between tradition & egalitarianism: Non-linear divorce dynamics in Germany, Great Britain & the UK – *Bellani, Boertien, Esping-Andersen*	in projecting ethnic group populations for local authorities in England? An investigation of errors in the ETHPOP projections – *Rees, Wohland, Norman*	behaviour during the fertility transition: A multi-level analysis of micro census data for Sweden, 1880, 1890 & 1900 – *Dribe, Juarez, Scalone* 3. Urban & rural illegitimacy in Coimbra, Portugal (1885-1910) – *Pereira* 4. Investigating the immobile - *Boothman*	*Green* 3. The relationship between age, period & cohort trends in mortality & self-assessed health in Britain from 1974 to 2006 – *Murphy* 4. Identifying housing transitions in relation to subsequent mortality at older ages – *Evandrou, Falkingham, Robards, Vlachantoni*	
6.45 – 7.00pm	Short break					
7.00pm	**BSPS AGM.** (Members only please). Faraday Lecture Theatre					
8.00pm	**DINNER. Fulton House Dining Room** **Quiz in the Fulton House Bar after dinner for all who care to participate**					
Wednesday 11 September						
7.30 – 9.00am	**Breakfast. Fulton House Dining Room**					

9.00 – 10.30am	**Local government** ***Chair: Eileen Howes*** <u>Session room 1</u> 1. Estimating population yield from new housing development – *Tonkiss, Corr, Cameron* 2. Developing & running a local authority pupil projection model – *Elias* 3. Migration and the city regions of England and Wales *Tony Champion, Mike Coombes; Centre for Urban & Regional Development Studies (CURDS), Newcastle University*	**Methods: Digging deeper** ***Chair: Dr. Paul Norman*** <u>Session room 2</u> 1. Identifying age, period & cohort effects: Sarah Connor versus the Terminator – *Voas* 2. Synthetic data estimation for the UK Longitudinal Studies: an introduction to the SYLLS project – *Dennett, Wu, Raab* 3. Agent-based models and statistical emulators in demography: An example of modelling social care for the ageing UK – *Silverman, Bijak, Hilton, Noble* 4. Embedding economic models of migration and household formation in a housing market model for localities and regions in New Zealand – *Bramley, Leishman & Watkins*	**Health & mortality in low income countries** ***Chair: Philippa Waterhouse*** <u>Session room 3</u> 1. Intrapartum care among the urban poor in India: analysis of temporal dynamics in decision-making – *Jones* 2. Regional & socioeconomic differentials of mortality risk at young ages in Brazil – *Monteiro and Zaluar* 3. An investigation of seasonal variation of child under-nutrition in Malawi: is seasonal food availability an important factor? – *Chikhungu* 4. Geographic & socioeconomic inequalities in women and children's nutritional status in Pakistan – *Di Cesare, Bhatti, Fortunato, Bhutta*	**Fertility: Migration, residential context & spatial differences** ***Chair: Professor Anna Rotkirch*** <u>Session room 4</u> 1. Residential context, migration & fertility in Britain – *Kulu* 2. Disentangling the Quantum & tempo of immigrant fertility – *Wilson* 3. Fertility & values: a look at regional differences within the European context – *Tavares & Arpino* 4. A spatial analysis of childbearing in cohabitation – *Vitali, Aassve, Lappegard*	**Ethnicity: Changing families & fertility** ***Chair: Dr. Stephen Jivraj*** <u>Session room 5</u> 1. The changing dynamics of migrant families: Findings from a qualitative longitudinal study – *Ahmed* 2. After Swedish intermarriage – *Obucina* 3. Intergenerational fertility changes, minority status & social mobility of ethnic minorities in the UK - *Dubuc* 4. Pathways out of the parental home among young second-generation migrants in the UK – *Berrington & Tammes*	**Scottish Beyond 2011 Workshop** <u>Faraday Lecture Theatre</u>

10.30 – 11.00am	Break. Refreshments in Taliesin Arts Centre					
11.00 – 12.30pm	**Ageing: Rethinking & re-measuring old-age (in)dependency & its implications for conceptualising population ageing** ***Chair: Professor Philip Rees*** <u>Session room 1</u> 1. Population ageing in Scotland: time for a rethink? – *MacInnes & Spijker* 2. Trajectories of functional disability in the elderly – *French & Steele* 3. Retirement & cognitive skills: the mediating role of social activities & grandparenting – *Arpino, Bordone, Skirbekk*	**Families: Kinship** ***Chair: Ben Wilson*** <u>Session room 2</u> 1. Family geography & demography in the UK – *Chan & Ermisch* 2. Post-separation mobility: Moving closer to the family – *Das, de Valk, Merz* 3. Fostering relations: the differences in sexual & reproductive outcomes between children raised by kin & non-kin carers – *Schaffnit, Sheppard, Garcia, Sear*	**Census: Census analysis & dissemination** ***Chair: Esta Clark*** <u>Faraday Lecture Theatre</u> 1. Census analysis work programme – *Browne & Taylor* 2. Origin destination products from the 2011 Census – *Waruszynski & Hutchinson* 3. 2011 Census microdata products – *Lewin & Hutchinson* 4. Innovations in census dissemination at the UK Data Service - *Hayes*	**Health: Inequalities in health in England & Wales** ***Chair: Valeria Cetorelli*** <u>Session room 3</u> 1. Gender convergence in human survival & the postponement of death – Mayhew & Smith 2. Social inequalities in mortality in English regions & Wales by NS-SEC, 2001 to 2010 – *Owen* 3. The changing structure of English society, implications for health: evidence from the Health Survey for England 1996-2010 – *Darlington, Norman, Ballas* 4. The influence of area disadvantage on LLTI reporting in England, 2001. Contributing evidence to the Joint Action European Health & Life Expectancy	**Migration: Younger adults & children** ***Chair: Dr. Beata Nowok*** <u>Session room 4</u> 1. Migration transitions to higher educational institutions: Statistical modelling of the Student Record Data in the UK – *Bailey & Bijak* 2. Spatial mobility trends in Sweden: An order-specific analysis of migration – *Kulu & Lundholm* 3. Migration intentions in post-Socialist countries – *Obucina* 4. Contexts of migration across childhood: evidence from rural South Africa - *Bennett*	**Ethnicity: National identity & belonging** ***Chair: Dr. Gemma Catney*** <u>Session room 5</u> 1. Researching residential segregation in Northern Ireland: Interpreting the question on 'national identity' in the 2011 censuses of population – *Shuttleworth & Lloyd* 2. Belonging and not belonging: The experience of return migration for the second generation Irish from Britain – *Hannafin* 3. Who feels British? The relationship between ethnicity, religion, and national identity – *Jivraj, Byrne, Nazroo* 4. Ethnicity, nationality & identity in the UK: the development of a comparative acculturation

				Information System Programme (Work Package 6: The National Experiences in SES Differentials in Health Expectancies) - *Evans*		framework – *Nandi & Platt*
CLOSE. **Thank you for coming: BSPS hopes to see you again at the annual Conference.** **BSPS 2014 Conference: the University of Winchester 8-10 September 2014.** Session suggestions welcome by early January 2014. Submissions via online system by mid-January 2014						

PLENARY ABSTRACTS:

Monday 9 September 3.30pm

Family Policy in the UK and Europe: Does it Respond to Fertility and Ageing?

Professor Mary Daly
Department of Social Policy and Intervention,
University of Oxford

This presentation offers an analysis of social policy development and change from the perspective of fertility and ageing. With the main focus on recent family policies in the UK, it first undertakes an overview analysis of the thrust and direction of policy change. Family policy will be conceived in a relatively broad way - among the policy areas that will be considered are child-related policies, parenting, elder care and general reforms like Universal Credit. The intent is to interrogate the driving motivations, philosophies and modalities as well as the incentives involved for particular kinds of behaviours on the part of mothers, fathers and other family members. The second part of the presentation enquires into the kind of demographic and family order that is implied by the policy changes and prevailing philosophies or discourses of relevant reform (principally: social investment and work-family balance). The conceptual framework used leans towards the sociological and institutional, investigating the implications of policy and discourse in terms of family relations, the generational contract, gender and other forms of inequality, and care. Throughout, the presentation problematises the linkages between social policy and demographic/family structures and behaviours.

Tuesday 10 September 3.30pm

Demography, Gender & Kinship Systems: perspectives from Asia

Professor Monica Das Gupta
The World Bank

Kinship systems differ in patterns of residence and inheritance that have many ramifications for gender and demographic outcomes, some of which are illustrated here with data from Asia. Within patrilineal kinship systems alone, there is a great deal of variation that shape the rights of different categories of household members, and patterns of cooperation between them. In the most rigidly patrilineal systems, adult women are largely excluded from their parental home, and start with low autonomy in their husband's home. This affects women's and children's health, and encourages a strong preference for sons. At the same time, these rigid systems offer some social protection. The evidence shows that kinship systems are persistent but not immutable: they can be altered by state intervention, and by the exigencies of urban industrial life.

AGEING

STRAND ORGANISER: DR. EMILY FREEMAN, UNIVERSITY OF SOUTHAMPTON

Receipt of care in older age: Monday 9 September 1.30pm

Older people's receipt of social support in England

Athina Vlacantoni, EPSRC Care Life Cycle Programme, Centre for Research on Ageing and ESRC Centre for Population Change, University of Southampton; Richard Shaw, University of Glasgow; Maria Evandrou, EPSRC Care Life Cycle Programme, Centre for Research on Ageing and ESRC Centre for Population Change, University of Southampton; Jane Falkingham EPSRC Care Life Cycle Programme, ESRC Centre for Population Change and Centre for Research on Ageing, University of Southampton

Demographic and policy change can have an adverse effect on the social care support received by older people, whether through informal, formal state or private sources. This paper analyses the English Longitudinal Study of Ageing data (wave 4) in order to examine the demographic and socio-economic characteristics associated with the receipt of support by older people from different sources. The research findings outline three key results which have significant implications for the organisation of social care for older persons in the future. Firstly, the number of Instrumental Activities of Daily Living (IADLs), followed by the number of Activities of Daily Living (ADLs) are the strongest determinants of receiving support from any source in later life. Secondly, there are significant gender differences in the factors which are associated with the receipt of support from different sources; for example, physical health is a strong determinant of informal support receipt by men, while mental health status is a strong determinant of informal support receipt by women. Finally, different kinds of needs are associated with the receipt of support from different sources, and this 'link' raises questions about the manner in which future social care provision should be organised.

a.vlachantoni@soton.ac.uk

On the compensating role of extended family and non-family ties among the childless elderly in Germany

Sebastian Schnettler, Thomas Wöhler, Department of Sociology, University of Konstanz

Previous research shows that children, along with partners, are the most important support persons in old age. But the combined trends of increasing childlessness and increasing life expectancy leave ever more people without these potential supporters. This raises important questions: Do the childless elderly perceive and experience less support potential than parents? Or do other people in the networks of the childless elderly take over social support functions usually taken up by partners and children – and if so which persons? Previous research on the individual consequences of childlessness in old age has not been able to answer these questions, often due to problems associated with small case numbers. Using a pooled data set of three waves of the German Aging Survey (DEAS), including 1,866 childless individuals and 12,774 parents, we provide a detailed description of the social networks of the elderly childless, compared against those of parents, in a nationally representative sample. We will further present regression results on the possible determinants that mediate the existence of support ties in old age. Results indicate that the childless are not a homogenous, socially isolated group – instead we can identify important risk and resilience factors that moderate the influence between childlessness and perceived social support. Although we find childlessness to have a negative impact on support potential overall,

compensation by other network members than children takes place, e.g. by siblings and friends. We further identify a cohort effect such that compensation is more likely for younger cohorts.

sebastian.schnettler@uni-konstanz.de

Shifting and static attitudes towards intergenerational transfers of care in rural Malawi
Emily Freeman, Centre for Research on Ageing, University of Southampton

This presentation will consider two interwoven, but not necessarily allied, discourses on the practice and expectations of intergenerational transfer of care for older adults in rural Malawi. It will be based on analyses of data produced between 2008 and 2010 using repeat dependent interviews (N=135) with older men and women (N=43) and key informant interviews (N=19) with policy and programme makers. These will be supplemented by fieldwork observations over 11 months, as well as data from a three-month multi-site pilot study, interviews with HIV support groups (N=3) and policy documents. The presentation starts in the villages of southern Malawi. It will explore the centrality of reciprocal exchanges of physical strength ("blood") and the importance of self-care in older adults' understandings of old age care without shame. Against this, it will consider the receipt of care in practice and how 'real life' – food scarcity, priorities, illness and arguments – distorted the reciprocal exchange. The presentation will then move to Lilongwe, the capital, where in an emerging ageing-focused policy and programme arena, government and civil society stakeholders were engaged in finding a solution to a contested 'problem': what should an "African" response be if children could no longer be relied upon to support their parents in old age? In both urban and rural spaces, old age care provided a forum in which national and social identities were constructed and reconstructed.

e.k.freeman@soton.ac.uk

Ageing: Segregation and inequality at older ages: Monday 9 September 4.45pm

Does the level of health inequality within an area influence the health of older people?
Alan Marshall, Stephen Jivraj, James Nazroo, Gindo Tampubolon, Bram Vanhoutte, University of Manchester

The main focus of this paper is to consider whether the level of wealth inequality within an area is associated with several dimensions of health (self-reported limiting long term illness, depression and a timed walk) in the older population (aged 50+) using the English Longitudinal Study of Ageing. Additionally, we also examine whether area wealth and deprivation, are associated with the health of older individuals. Our results vary according to health outcome and geographical scale and where we find area health effects these often vary across the distribution of individual wealth. Whilst area inequality is not important predictor of health, we do find some evidence of higher levels of limiting long term illness (LLTI) in more unequal regions (9 regions in England) although this finding is sensitive to the measure of area inequality. There are lower risks of LLTI for individuals living outside the poorest districts after controlling for relevant individual and area characteristics. Increasing neighbourhood deprivation is associated with poorer outcomes in terms of depression and self-reported limiting long term illness. We do not find any significant area effects on the speed at which individuals completed the timed walk but, as for depression and LLTI, we observe a striking gradient of declining health with declines in individual wealth. We conclude that inequalities in health outcomes amongst older people in England are best understood in terms of an individual's socio-economic position and in the case of certain health outcomes, the extent of deprivation within their neighbourhood of residence.

alan.marshall@manchester.ac.uk

What are the dominant patterns of expenditure among the older population and what explains these?

David Hayes, Personal Finance Research Centre, University of Bristol; Dylan Kneale, International Longevity Centre, & Andrea Finney, Personal Finance Research Centre, University of Bristol

Recognising the heterogeneity that exists among the older population, and classifying and segmenting the population accordingly, is of key interest to policy-makers and practitioners. Furthermore, a good understanding of older people's expenditure and consumption is necessary in order to inform the design of policies and services that affect their lives. This understanding also informs the wider academic debate surrounding aspects of wellbeing among older people. Although poverty and material deprivation among this population have been the subject of considerable research, the implications of an ageing population and their levels and patterns of expenditure and consumption have not been explored adequately.
Using equivalised and absolute expenditure, this paper presents results from a household-level analysis of the Living Costs and Food Survey by:
1. Describing expenditure by age and other key variables using descriptive statistics (among households where the Household Representative Person (HRP) is aged 50 or over);
2. Segmenting and constructing a typology of the older population based on their expenditure patterns (using cluster analysis)
3. Determining the drivers of these expenditure patterns (using logistic regression analysis), and the reasons for differences among segments of the older population.

This analysis uses an innovative methodology to generate in-depth knowledge about differences that exist within the older population in relation to their expenditure and consumption. Drawing out the implications for policy and research, our aim is to stimulate much-needed further conversation and research in this area.

david.hayes@bristol.ac.uk

Trends in age segregation in England and Wales

Albert Sabater, Centre for Housing Research, University of St Andrews Ludi Simpson, Cathie Marsh Centre for Census and Survey Research, University of Manchester

Age structures vary considerably between cities, towns and countryside. While a positive population momentum is usually concentrated in urban areas as a result of the young age structure of their residents, the reverse occurs in rural settings where a negative momentum is found due to the growing elderly population. Within this context, although age segregation might be less pronounced than other forms of segregation (e.g. social class, ethnicity and family cycle), little is known about the trends in age segregation over time and space in England and Wales. To address our main research question –how residentially segregated are the old versus the young?, we examine general patterns of urban-rural residence of those aged 65 and above compared to all other ages. Using an urban-rural classification, we analyse two dimensions of segregation (evenness and exposure) across districts in England and Wales. While we assume that in large and fast-growing cities the intense competition for residential locations leads to higher levels of segregation of the aged via displacement, increasing age segregation is also likely to occur in rural settings due to the relatively few young adults who can afford to move away to less suburban and more rural environments. The analysis uses full population estimates (1991-2001) and data from the 2011 Census in England and Wales. The results are expected to contribute to existing segregation debates

that have almost entirely ignored age as a key factor in explaining the distribution of population across space.

albert.sabater@st-andrews.ac.uk

Ageing: Rethinking & re-measuring old-age (in)dependency & its implications for conceptualising population ageing. Wednesday 11 September 11.00am

Population ageing in Scotland: time for a rethink?

John MacInnes, Jeroen Spijker, University of Edinburgh

In 2011 it was the first time that there were more people aged 65+ in Scotland than children younger than 15. A century ago the elderly represented about 1:20 of the population. Today their share is 1:6. Not surprisingly, yet without well-substantiated empirical basis, commentators and social scientists alike express concern about population ageing — the process whereby falls in fertility and concomitant rises in life expectancy give rise to changes in the population's age structure within which older people form an ever-increasing proportion of the total. Objective: To use alternative approaches to conventional ageing indicators to describe population ageing in Scotland. Data and method: With data from the Human Mortality Database and using alternative definitions of the elderly based on remaining life expectancy more objective ageing indicators are constructed. Results: Between 1950 and 2009, life expectancy rises kept pace with rises in the median age, such that both the median age and the median remaining life expectancy in the population rose, i.e. the Scottish population in 2009 was as young as it was in 1950. While the population is ‘older’ in the traditional sense (higher average age), thanks to gains in life expectancy, it did not ‘age’ at all. Conclusion: People are living longer partly because they are healthier. As expenditure on health and social care is still concentrated in the final years of life and increases in life expectancy postpones this expenditure to higher ages, old age should not be a static but a dynamic concept and be measured as such.

jspijker@staffmail.ed.ac.uk

Trajectories of functional disability in the elderly

Robert French & Fiona Steele, Centre for Multilevel Modelling, University of Bristol

Research question: This study characterises trajectories of functional disability over the final stages of the life course. We examine between individual heterogeneity in growth curves, and how trajectories differ by gender and SES.
Methods: We estimate growth curves in a standard way, the innovation is to incorporate a measurement model for the outcome variable ‘functional disability’. To model trajectories of such a latent variable we must demonstrate measurement invariance over time.
Data: Data come from the British Household Panel Survey (BHPS), an annual household survey of all adults in a representative sample of British households from 1991-2008. Analysis focuses on the sub-sample of elderly household members (aged 65-84).
Preliminary results & potential applications: There is no definitive test for measurement invariance, the most commonly applied is chi-squared, we also consider two additional tests to add robustness. Growth curves are currently provisional, we have fitted models and results will be interpreted in the final paper

r.french@bristol.ac.uk

Retirement and cognitive skills: the mediating role of social activities and grand-parenting

Bruno Arpino, Universitat Pompeu Fabra, Barcelona & Centre for Research on Social Dynamics, Bocconi University, Valeria Bordone, Wittgenstein Centre (IIASA, VID, WU), Vegard Skirbekk, Wittgenstein Centre (IIASA, VID, WU),

Little and contrasting evidence exists on the effects of grandparental childcare on grandparents. However, there exists clear evidence of a negative effect of retirement on cognitive functioning and of positive effects of engaging in social activities. These events all tend to happen at mid-life. In this paper, first, we analyse to what extent grand-parenting and working compete with social activities. If any effect of grand-parenting and retirement on the probability to be involved in social activities will be found, it will then be of interest to assess how this can have an impact on grandparents' cognitive functioning and health-related aspects. We use time-varying instrumental variable regression on longitudinal data from the first (2004), second (2006/2007) and fourth (2010/2011) waves of the Survey of Health, Ageing and Retirement in Europe. Retired older persons have more time to invest both in childcare and social activities. However, if grand-parenting subtracts time to social activities, the positive effect of grand-parenting on cognitive functioning (and health) due to an increase in the sense of responsibility and to a more active life could be reduced by the (indirect) negative effects of less involvement in other stimulating activities. The aim of our paper is therefore to assess whether grand-parenting and social activities can mitigate the negative effect of retirement.

bruno.arpino@upf.edu

CENSUS

STRAND ORGANISERS: JULIE JEFFERIES, OFFICE FOR NATIONAL STATISTICS; KIRSTY MACLACHLAN, NATIONAL RECORDS OF SCOTLAND; PROFESSOR TONY CHAMPION, UNIVERSITY OF NEWCASTLE

Census issues: Beyond 2011: Monday 9 September 1.30pm

Variability and Accuracy of Scottish population estimates from administrative data sources

Alastair Greig, National Records of Scotland

For Scotland, a credible alternative to census-based population estimates hinges upon the feasibility of applying a competent coverage and adjustment methodology that can produce population estimates comparable to that which would be achieved from a full census. Using responses to the 2011 census to infer coverage of administrative datasets, analysis is presented on the likely precision of an alternative population estimate under various sampling regimes and data quality assumptions. Altogether, the paper provides an overview of current thinking from Scotland's Beyond 2011 project before speculating on the likely avenues of further development in the months and years ahead.

alastair.greig@gro-scotland.gsi.gov.uk

Estimating Scottish local population sizes from administrative data sets using Bayesian Monte Carlo methods

Stephen Sharp, Demography Division, National Records of Scotland; Peter Congdon, Department of Geography, Queen Mary University of London

This presentation reports research using Bayesian inferential methods to produce small area population estimates in Scotland using administrative data sources available for these areas. The main sources currently available are from the NHS Central Register, the Department of Work and Pensions (DWP) Customer Information Service, HMRC child benefit data, and the annual "Pupils in Scotland" census. The first two of these sources provide age-gender breakdowns across all ages and are thus of major relevance for any scheme to produce annual small area population estimates for adult ages if the Census were to be discontinued. Because there are a number of alternative sources of information available and none can be regarded as more definitive or accurate than others, the Bayesian approach using the WINBUGs software was a suitable methodology for combining information over the datasets to produce a single estimate. Random effects models were used to provide estimates for 2010 and 2011 for 6,505 Datazones (DZs) and 1,235 Intermediate Zones (IZs). Comparison with midyear population estimates for Scotland and for its constituent local authorities (LAs) show differences in age structure between the administrative datasets, such as undercounting of children under five by the DWP data. These age structure differences persist in DZ and IZ population estimates based on administrative data. Comparison at LA level shows that DZ and IZ estimates based on administrative data are also underestimates (relative to midyear estimates) of the populations of the two major Scottish cities. Constraining DZ and IZ estimates within LA midyear estimates would avoid systematic discrepancies for particular age bands or LAs. This would require that LA (and national) midyear estimates continue, with input from recurrent sample censuses that can provide revised benchmark population information for larger areas such as LAs. After constraining the DZ and IZ estimates (based on administrative data) to LA midyear estimates for 2010 and 2011, these small area estimates were then compared with the existing SAPE estimates for DZs made by National Records of Scotland which are necessarily constrained within

midyear estimates. Comparison at this finer disaggregated scale shows that DZ estimates based on administrative data tend to produce lower population estimates for the inner city areas of Glasgow and Edinburgh, and higher estimates for outer city areas.

stephen.sharp@gro-scotland.gsi.gov.uk

Population statistics in an administrative data based world
Charlie Wroth-Smith, Amy Large, Office for National Statistics

The Office for National Statistics is currently taking a fresh look at options for the production of population and small area socio-demographic statistics for England and Wales. The Beyond 2011 Programme has been established to carry out research on the options and to recommend the best way forward to meet future user needs. Beyond 2011 is considering a range of options including census, survey and administrative data solutions. Since 'census-type' solutions are relatively understood most of the research is focussing on how surveys can be supplemented by better re-use of 'administrative' data already collected from the public. This presentation will focus on research that has been undertaken to investigate administrative data-based models as possible providers of local authority estimates of the population by age and sex. These use anonymously linked administrative data in combination with a population coverage survey. The presentation describes the framework for producing population estimates under this approach, and will cover the design of statistical population datasets, sample design issues and the estimation framework. We will present results of both a simulation exercise, and early trial estimates to assess the likely quality of estimates arising from the different options. We will discuss these potential methods in the context of the wider set of population statistics and the opportunities this may provide. The plans for further work will also be described.

charlie.wroth-smith@ons.gsi.gov.uk

2011 Census in Scotland: Tuesday 10 September 9.00am

Scotland's 2011 Census: Quality Assurance of small area population and household estimates and implications for future methods
Michael Hunter, Cecilia MacIntyre, National Records of Scotland

This study looks at the relationship between results from Scotland's 2011 Census and the National Records of Scotland's (NRS) annual Small Area Population and Household Estimates at data zone level: from quality assurance of the census and lessons learned, through to how we can improve our estimates in the future. This study concentrates on the population and household figures published at data zone level. Data zones cover the whole of Scotland and nest within local authority boundaries. Data zones are groups of 2001 Census output areas which originally had populations of between 500 and 1,000 household residents, and some effort was made to respect physical boundaries. In addition, they have compact shape and contain households with similar social characteristics. The publication of the population and household count at datazone level allows a greater insight into where the differences seen at council level have occurred.

michael.hunter@gro-scotland.gsi.gov.uk

The Census/Census Coverage Survey Matching Project for Scotland's Census 2011
Neil Bowie, presented by Alex Stannard, National Records of Scotland

The importance of an accurate and reliable linkage between the Census enumeration results and the Census Coverage Survey (CCS) results cannot be understated. The CCS is a sample survey of about 1.5% of the Scottish population, taken 5 or 6 weeks after Census day (27th March 2011). The objective was to use these linkage results to derive an estimate of the entire Scottish population. For several years prior to the Census, National Records of Scotland (NRS) has been working on developing strategies and techniques in data linkage, and was therefore well positioned to design and conduct the Census/CCS matching project. The project was unusual in that household level information was available to be incorporated into the more usual individual linkage methodologies. A staged process using a combination of automatic matching, clerical matching and data interrogation was designed to ensure that maximum use could be made of the available data. Specialised software was developed to manage these stages as well as formalising the presentation of data to encourage accurate, reliable and consistent decision making. Furthermore, the software was designed to fully integrate the linkage process into the wider Census data processing systems. This paper describes the methodology employed for this project as well as some of the outcomes from the linkage. It also briefly describes ways in which the methodologies and tools are being further developed in Scotland so that they can be applied to other linkage projects in the future.

neil.bowie@gro-scotland.gsi.gov.uk

Scotland's Census 2011 - Quality assurance
Cecilia MacIntyre, National Records of Scotland

This talk will present the process used to quality assure the population and household estimates outputs from Scotland's Census. The quality assurance of the published summary tables on population and households included looking at the following aspects: • Comparisons with published sources: • age by sex profile by council area • household numbers • household size • student numbers • Fertility rates • The inferred sex ratio distribution by age • The pattern of response by age and gender. An External Data Quality Advisory Group examined census estimates for Scotland and council areas at stages throughout the process. The advisory group provided comments on the quality assurance process, the initial figures and also commentary on the emerging trends. The census estimates were examined by the QA team in NRS using an agreed list of checks. The results of these checks, along with the comments from the External Data Quality Advisory Group, were discussed with an Internal Quality Assurance Panel, drawn from topic experts from National Records of Scotland. This group examined the issues highlighted in the quality assurance, and provided an assessment of the quality of the census estimates for each age-sex group. It suggested supplementary work to be carried out by the QA and coverage and adjustment teams in NRS, and identified where there were differences with comparator sources. Quality assurance packs on the census population and household estimates for each council area in Scotland are published as part of the release.

cecilia.macintyre@gro-scotland.gsi.gov.uk

Beyond 2011: Tuesday 10 September 1.30pm

Integrating surveys and administrative data to estimate population characteristics
Louise Morris, Alan Taylor, Salah Merad, Martin Ralphs, Office for National Statistics

The Office for National Statistics is currently taking a fresh look at options for the production of population and small area socio-demographic statistics for England and Wales through its Beyond 2011 Programme. A range of options including census, survey and administrative data solutions are being considered. A key focus of ongoing research by Beyond 2011 is the approach to production of socio-demographic outputs (statistics about population and household characteristics) under an administrative data based approach. This paper sets out proposals for the design of an integrated system to deliver socio-demographic outputs, bringing together administrative information with data collected directly via a survey. Research has shown that in the short-term it is likely that surveys will form the basis of a system design but research is also being undertaken into the application of small area estimation models to supplement surveys for the production of outputs for small geographic areas or population groups. Over time as topic and population coverage by administrative sources improves there may be increased opportunities for more direct production of estimates from administrative sources or for use of modelling. Administrative data may also be used to monitor change in geographic areas or population groups longitudinally allowing for a more targeted survey design. Results from work to look at initial survey design options will be discussed along with findings from initial research to explore the scope to further improve the system design in the longer-term by making use of small area estimation and administrative data with targeted surveys.

louise.morris@ons.gsi.gov.uk

Public acceptability: the challenges for Beyond 2011
Genevieve Groom, Office for National Statistics

The Office for National Statistics is currently taking a fresh look at options for the production of population and small area socio-demographic statistics for England and Wales. The Beyond 2011 Programme has been established to carry out research on the options and to recommend the best way forward to meet future user needs. Improvements in technology and administrative data sources offer opportunities to either modernise the existing census process, or to develop an alternative by re-using existing data already held within government. The final recommendation, which will be made in 2014, will not only balance user needs, cost, benefit and statistical quality, but will also consider the public acceptability of all of the options. This paper draws upon the research that has been undertaken to investigate public attitudes and opinions relating to the use of personal data for statistical purposes. It will discuss the main areas of public concern identified by the research and the challenges faced by the Programme in ameliorating those concerns.

genevieve.groom@ons.gsi.gov.uk

Making a case for small area Census statistics: exploring the spatial scale of population variables in England and Wales in 2011
Christopher D. Lloyd, University of Liverpool

Debates about the future of the Census in the UK have considered how far alternative forms of data collection could replace the functions of Census surveys. Defenders of the Census have argued that no other form of survey will be able to replicate closely the richness of the data available as outputs from the Census, both in terms of the array of variables and the level of geographical detail. This paper explores the scale of spatial variation in Output Area level data from the 2011 Census for

England and Wales. The analysis considers the spatial structure of a set of demographic and socioeconomic variables (including age, housing tenure, NSSEC, LLTI, and ethnicity) and demonstrates how these population characteristics vary at multiple scales. If one population sub group tends to be clustered over small areas, (e.g., manual or professional NSSEC groups in urban areas), while another is quite homogeneous over large areas (e.g., owner occupiers), then we must have data at a fine enough scale to capture the clustering in the first group. Otherwise, it is impossible to properly explore the first variable, or the relationship between the first variable and the second. This paper considers questions such as 'does the loss of geographically-detailed cross-tabulations prevent analysis of local differences in relationships between, for example, LLTI and ethnicity?'. Making use of measures of spatial autocorrelation including Moran's I and the variogram, it is shown that meaningful analysis of many variables is only likely to be possible using the kinds of small area data available from the Census. The results provide compelling evidence that the termination of the UK Census would mean an end to much academic research, as well as a profound reduction in the ability of (local) government and policy makers to answer fundamental questions about the population of the UK, and the needs and characteristics of individual groups. The paper concludes by arguing that the Census is an irreplaceable tool for understanding the population of the UK, and not merely the luxury that some commentators believe.

c.d.lloyd@liverpool.ac.uk

Assessing the value of small area census data: an input to 'Beyond 2011' discussions
Paul Norman, University of Leeds; David Martin, University of Southampton

Placing a 'value' on academic research is far from easy. To date we might have been writing in a conclusion, 'this research has implications for policy applications', counting citations to our publications in other papers (straightforward now with tools like Google Scholar) and revelling in feedback from people who found our work interesting. Over the last few years we have been learning what 'impact' might be and that this and 'knowledge exchange' should be demonstrated clearly to funding councils (like ESRC). The HE 'Research Excellence Framework' 2014 will include submissions from academic departments of 'Impact Case Studies' for the first time. However, 'value' is also financial. Our National Statistics Agencies make a business case for the census and the options which Beyond 2011 will recommend regarding whether or not we have a 2012 Census and any alternatives will include a business case. As an input to this David Martin and Paul Norman carried out a trawl of academic research and have attempted to estimate the financial value of small area research carried out using 2001 Census data. This evidence has been presented to ONS (end of February 2013) and will be updated on 1st May 2013 in conjunction with a Beyond 2011 conference. This presentation to BSPS will provide information on the above and will update on anything related which transpires by September 2013.

p.d.norman@leeds.ac.uk

Census analysis and dissemination: Wednesday 11 September, 11.00am

Census Analysis Work Programme

Tristan Browne, Craig Taylor, Office for National Statistics

ONS are conducting a Census Analysis work programme with one of the main aims being to provide a coordinated and timely set of analytical products aiming to meet the needs of a wide ranging set of users. The work programme has now started to deliver a varying set of products and this presentation aims to provide a high level overview of the analysis that has been produced to date by ONS together with information on planned upcoming analysis. Details of the analysis undertaken so far together with some of the key findings on topics such as ethnicity, religion and the labour market will be highlighted and presented using some of the of the various dissemination options utilised. These include various data visualisations, interactive content & podcasts, which enables the analysis to reach out to a wide ranging set of users from policy makers to the general public. The Census Analysis work programme is not just about the analysis produced by the ONS but to have a joined up approach to analysis across the UK. The aim has been to have a central portal through which the majority of Census based analysis can be accessed helping to showcase this whilst also making users aware of the wide ranging analytical work produced across the UK. The presentation will focus on the approach that has been taken detailing the various functions and processes in place to coordinate the work and how analysts/academics can be part of this.

tristan.browne@ons.gsi.gov.uk

Origin Destination Products from the 2011 Census

Johannes Hechler, Johanna Hutchinson, Office for National Statistics

Origin-Destination (or flow data) are a unique, highly sought after resource for research and planning. With an interactive look-up facility this product maps the 'flows' of people between any two areas. Origin-destination may be tracking the path of commuters from home to work, those moving residence between different areas, travelling from their main to second residence or mapping people formerly at a student term-time addresses. With the inclusion of geography as detailed as individual output areas, and coupled with an array of other socio-demographic variables 2011 Census Origin-Destination allows a specific detailed look at people movement across the UK. This presentation will detail the creation of flow products, demonstrating their use and accessibility.

johanna.hutchinson@ons.gsi.gov.uk

2011 Census Microdata Products

Marcus Lewin, Johanna Hutchinson, Office for National Statistics

2011 Census Microdata provide samples of anonymised records. These unique datasets will enable further detailed and bespoke analyses of UK census data. Census Microdata products boast a large sample size, high response rate, wide range of socio-demographic topics and coverage of sub populations traditionally under-sampled in other surveys e.g. communal establishments. Microdata will be disseminated via a number of routes tailored to a wide variety of users, from secure access files containing large samples and a high level of detail for 'approved researchers' to a publicly available file with a smaller sample and lower level of detail in accordance with statistical disclosure procedures. This presentation gives an in-depth look at the production of census Microdata from the inclusion of data to security measures and determining sample size. Incorporating user feedback on the 2001 Census Microdata product, we demonstrate how incorporating new technology and methods helps to increase value to users creating an accessible, specialised product.

johanna.hutchinson@ons.gsi.gov.uk

Innovations in census dissemination at the UK Data Service

Justin Hayes, University of Manchester

UK Data Service Census Support provides easy and comprehensive access to a range of outputs from the five UK censuses from 1971 to 2011, as well as supporting their use. It aims to make the outputs easier to find, understand and use appropriately to facilitate high quality social and economic research and education. It is part of the ESRC's UK Data Service, combining the units of the former ESRC Census Programme, and is delivered by data experts at some of the UK's leading universities.

UK Data Service Census Support builds upon a long history of research and innovation in data dissemination that has created interfaces such as Casweb (aggregate outputs), WICID (flow outputs), and Boundary Data Selector. More recently, the InFuse interface uses a fundamentally restructured version of the census aggregate outputs to permit simplified access to based directly on the selection of combinations of variables without the need to search through published tables.

This presentation will provide an update on the UK Data Service Census Support and its interfaces and other services, with a particular focus on dissemination of outputs from the UK 2011 Census. It will also cover recent moves to lift academic-only restrictions on the interfaces to make them publically available in line with relaxed licensing conditions and ESRC policy.

justin.hayes@manchester.ac.uk

ETHNICITY

STRAND ORGANISERS: DR. GEMMA CATNEY, UNIVERSITY OF LIVERPOOL; DR. NISSA FINNEY, UNIVERSITY OF MANCHESTER; DR. STEPHEN JIVRAJ, UNIVERSITY OF MANCHESTER

Residential segregation and mixing: Monday 9 September 4.45pm

White Flight, Mixed Neighbourhoods or both? Applying Spatial Measures of Ethnic Segregation to the 2001 and 2011 Censuses.

Richard Harris and Ron Johnston, School of Geographical Sciences, University of Bristol

The 2011 UK Census showed that London is no longer a majority 'White British' city. Media reports followed of 'white flight' from London, with tales of ethnic cliffs between neighbouring authorities (The Sunday Times and Daily Mail online). Others argue that what we are seeing is a process of aspiration as those able to do so relocate to more rural settlements: "It is a story of success" (Mark Easton, the BBC's Home editor). Support for the positive view is given by Catney (2013) and by Johnston et al. (2013), showing that neighbourhood residential integration is increasing, with a greater percentage of the White British population now living in more mixed neighbourhoods, including in London. However, measures of segregation are relative, meaning neighbourhoods can appear more mixed due to the departure of one portion of their population. In fact, of the 17,167 Census Output Areas that were at least 80% White British in the 2001 but not the 2011 Census, almost two fifths had fewer White British people living in them at the end of that ten year period. Meanwhile, the growth of the White British population in places 80% White British in both censuses was 1.91%. In short, the Census presents a mixed picture with work to be done to understand it. In this paper, our contribution is to use methods of spatial analysis to consider ethnic differences at the boundaries of adjacent census areas, reviewing whether these give evidence of increased or decreased ethnic segregation between 2001 and 2011.

rich.harris@bris.ac.uk

White Flight and White Nationalism in the UK: Is there a Connection?

Eric Kaufmann and Gareth Harris, Department of Politics, Birbeck, University of London

The paper asks whether white attitudes to immigration affect the decision of respondents to leave - or avoid - diverse wards. Is white flight related to white nationalism? This analysis uses the 1991-2008 British Household Panel Survey and 2009-13 Understanding Society datasets, linked to decennial census data, to help answer a puzzle that emerges from 2007-12 Citizenship Survey data: why white UK-born residents appear to be more tolerant towards immigration in more ethnically diverse areas compared to those who live in more homogenous wards. This pattern has been found in the vast majority of studies of attitudes to immigrants, minorities and immigration in the US and Europe. Rarely does a dataset permit the analyst to track the demographic, geographic and attitudinal properties of respondents. The BSPS/Understanding Society is an important exception due to its longitudinal nature, large size (permitting geocoding) and inclusion of political and attitudinal items.

e.kaufmann@bbk.ac.uk

Neighbourhood ethnic diversity and mixing in England and Wales, 1991-2011
Gemma Catney, University of Liverpool

The population of England and Wales is becoming more diverse, and more mixed. The 2011 Census showed that the minority (groups other than White) population of England and Wales now constitutes 14 per cent of the total, at around 7.9 million people – an increase of roughly eight percentage points from 1991. There has been considerable growth in the proportion of multiple ethnicity households, and a more than doubling of the number of individuals who identified with a mixed ethnic group category; thus, England and Wales has seen an increase in mixing at the individual and the household level over time. How has ethnic group mixing changed geographically, in particular within neighbourhoods? This paper will begin with an account of the changing landscape of diversity and mixing within England and Wales, before considering the decrease in minority group 'segregation' witnessed over the last two decades; London, and major urban centres like Leicester, Bradford, Manchester and Birmingham, have seen decreases in ethnic minority segregation. In this paper, local measures of segregation are applied, which enable the spatial variation in ethnic group population distributions to be properly accounted for. Not constrained by pre-imposed area boundaries, these local measures provide much greater insight into how areas have changed over time, and in what ways the different dimensions of segregation (for example, unevenness and isolation) are related over local space and between ethnic groups. This is not only methodologically innovative for British segregation studies, but provides the first systematic account of the nature of local level segregation.

g.catney@liverpool.ac.uk

Ethno-Religious Residential Segregation and Social Networks: A British Muslim Case Study
Richard Gale, Cardiff School of Planning & Geography, Cardiff University

Concerns over British Muslim integration have been to the fore of public debate over much of the last decade, with Muslim segregation constituting a key issue. Recent analyses have usefully shown that current concerns over segregation levels in the UK are exaggerated. However, these analyses continue to rely on census ethnicity data, which are used as proxy for religion to draw inferences about Muslim residential phenomena. Through a case study of Birmingham, this presentation will attempt to redress this tendency by exploring religious segregation directly. The presentation will comprise two parts. In the first part, standard measures of segregation and Special Migration Statistics (SMS) by religion for the year 2000-2001 will be used to show how Muslims exhibit a significant if spatially constrained movement away from concentrated inner urban areas. In the second part, qualitative data on Muslim friendship networks will be used to explore how religious values are drawn upon to manage and give coherence to the 'micro-social worlds' (Spencer and Pahl, 2006) and spatial mobility of a Birmingham-based group of Muslim women of Mirpuri heritage. Overall, the paper contributes to three existing and emergent geographical discourses: 1) the geography of ethno-religious segregation and internal migration; 2) the geography of religion, faith and spirituality relating to Muslims and Islam; and 3) the geography of friendship.

galeRT@cardiff.ac.uk

Social & economic inequalities: Tuesday 10 September 11.00am

Ethnic minority and inequalities: Exploring ethno-religious contributions to the labour market participation.

Sabrina Khan, University of Manchester

This presentation aims to identify whether association to a certain religious group affects the overall labour market participation across ethnic minority groups in terms of economic activity (self-employment, paid- employment, unpaid worker in family business) and economic inactivity (unemployment, full-time student, looking after family and home). Recent studies indicates that there exists a labour market penalty for being associated with certain religious group. Using the most current data from the Understanding Society survey, the purpose is to explore whether the same pattern continues or labour market conditions have improved for the ethnic minorities in Britain.

sabrina.khan@postgrad.manchester.ac.uk

Measuring the integration of the young foreign population in a new setting region of southern Italy through the command and use of the language

Michela Pellicani, Valeria Moro and Francesca Galizia, University of Bari

Measuring the integration of the young foreign population in a new settling region of Southern Italy through the command and use of the language
In the last decades Italy is increasingly taking a multi-ethnic face as a crossroads of peoples and cultures thanks to the gradual and widespread stabilization with a rising contribution of the foreign population in defining the socio-economic, ethnic, cultural and political set-up of the country. In this context, our aim is to analyze the integration process of foreign students also because of a substantial increase, in the recent years, of them: in the last six years, their number doubled reaching an incidence of foreign students on the total school population equal to 7.9%. With particular reference to the Southern regions, we can point out the case of Apulia that represents rather faithfully the national panorama with regard to the main characteristics of the foreign minors. Other than the official data collected at a national level that give just a quantitative description of the foreign students, we organized a field survey ad hoc, conducted in collaboration with the Regional School Division and financed by the European Fund for the Integration. Thanks to the richness of the questionnaire, it has been possible to find out, beyond quantitative aspects, qualitative features very useful for a more complete phenomenon interpretation. Among the different aspects we have put the emphasis on the linguistic integration, basing on the consideration that language is the vehicle par excellence for a full socio-economic integration. We considered the command of the Italian language as a dependent variable adopting a model of binary logistic regression.

michelapellicani@uniba.it

Spatial Integration at the Expense of Occupational Disadvantage: The Case of Latin Americans in Spain

Albert Sabater, Centre for Housing Research, University of St. Andrews; Andreu Domingo, Centre for Demographic Studies, Autonomous University of Barcelona; and Juan Galeano, , Centre for Demographic Studies, Autonomous University of Barcelona

Throughout the last decade, a third of the new inflows towards Europe were directed to Spain, thus making the most important destination of international migration in Europe. Immigration from Latin American countries was pivotal both in terms of its magnitude (representing 38.4 per cent of the total inflows until 2010) and gendered nature. The growing demand for care work is considered the main responsible of the feminization of migration flows from Latin America to Spain. Although this has prompted various examinations of occupational disadvantage, little is known about the connection between occupational and residential segregation. To address our main objective, we examine the relationship between occupational and residential segregation, thus giving further insight into the socio-spatial behaviour of Latin Americans over time and space in Spain. For this purpose, we employ the index of dissimilarity (D) as the standard measure to analyze the uneven distribution of members of two groups (native and Latin American) across a set of categories on both occupational and residential segregation. We use data from the Labor Force Survey and Local Census data for the period 2000-2010. Contrarily to the parsimony hypothesis (i.e. positive correlation), our findings suggest that occupational and residential segregation are generally negatively correlated (i.e. spatial integration at the expense of occupational disadvantage). Hence, while the level of residential segregation for Latin American is generally moderate, high levels of occupational segregation are found due to their over-representation in care work (mostly women) and construction (mostly men).

albert.sabater@st-andrews.ac.uk

Self-determination through self-employment? Livelihood strategies of immigrants and their partners in rural Sweden

Robert Macpherson, Department of Geography & Sustainable Development, University of St. Andrews; Svante Karlsson and Magnus Stromgren, Department of Geography & Economic History, Umea University

In many immigrant receiving countries, self-employment is considered a potentially beneficial pathway to the economic integration of new arrivals. But while the majority of studies have focused on metropolitan labour market regions, and particularly ethnic enclaves, other immigration literature has stressed the importance of understanding immigrant settlement away from traditional metropolitan gateways, such as smaller urban and rural areas. Furthermore, while broader literature on self-employment has stressed the importance of individual, family background, and intra-partner and household characteristics, significantly less is known about the role of inter-ethnic partnership. This study bridges these areas of research through an empirical case-study of Sweden using register data for individuals to address questions of: what extent, and where, do immigrants utilise self-employment as a livelihood strategy? Also, what degree do immigrant partner characteristics influence this pattern? Our findings suggest that immigrants in rural areas seek self-employment to a higher degree and that this is reinforced through having a native partner and the self-employment of their partners. This not only raises important issues concerning rural areas often associated with economic and population decline, but also the role of inter-ethnic contact and self-employment**.**

rm204@st-andrews.ac.uk

Population change, mixed ethnicities & racism: Tuesday 10 September 4.45pm

'The pebble in the pond': Race equality and racism in Wales
Heaven Crawley, Centre for Migration Policy Research, Swansea University

According to the 2011 Census, the population of Wales now stands at 3.06 million and has increased by 5% in the last ten years. Migration (mostly from England) accounts for over 90% of this growth. The Black, Asian and Minority Ethnic (BAME) population of Wales remains small but has nearly doubled over recent years, rising from 2.1% to 4.0% between 2001 and 2011, largely as a result of international migration. Although international migration to Wales is nothing new, there have been significant changes since 2001 associated with asylum dispersal, EU accession and the internationalisation of higher education. This paper, based on recent research undertaken for Race Council Cymru (2012), explores the experiences of BAME communities living in different areas of Wales. The research found evidence that people from BAME backgrounds do not feel that they are treated equally in education, housing and health services. Only 25% consider that there is race equality in employment with even lower proportions for those from Black African (20%), Chinese (20%), Indian (12%) and Bangladeshi (5%) backgrounds. Around half (47%) of those who participated in the research have experienced racism with much higher proportions among Pakistani (73%), Bangladeshi (70%) and Black African (60%) respondents. Much of this takes the form of 'everyday racism', that is to say, racism that occurs in daily life and is subtly reinforced by the response (or otherwise) of others. There is evidence that this racism is largely under-reported and has a significant impact on those form BAME backgrounds.

h.crawley@swansea.ac.uk

Ethnic differences in housing: Evidence from the 2011 Census
Nissa Finney, University of Manchester, presented by Ludi Simpson, University of Manchester

This presentation will review evidence from the 2011 Census about the housing circumstances of ethnic groups in England and Wales. The presentation will examine ethnic differences in household composition, tenure and overcrowding and will relate these to indicators of socio-economic circumstances (car ownership and central heating). The patterns will be examined nationally and for sub-national areas and changes since 2001 will be outlined. In conclusion, the results will be discussed in relation to debates about ethnic inequalities and housing provision.

nissa.finney@manchester.ac.uk

Mixed-Britain and Ethnicity: findings from the census
Darren P. Smith, Loughborough University

This paper will analyse GB census data to explore the emerging and changing geographies of mixed-ethnicity couples and families. The paper will frame the discussion within wider political rhetoric about the virtues of social mixing and so-called balanced communities. The paper will consider the salience of findings from other national contexts such as the possible links between social diversity, specific neighbourhood characteristics, and where and why concentrations of mixed-ehtnicity families prevail. The discussion will pose some important questions about the reasons for the presence and absence of mixed-ethnicity families from particular types of neighbourhood and location, using Area-level classifications.

d.p.smith@lboro.ac.uk

How well did we do in projecting ethnic group populations for local authorities in England? An investigation of errors in the ETHPOP projections

Philip Rees, University of Leeds; Pia Wohland, University of Newcastle; and Paul Norman, University of Leeds

In 2012 and 2013 the main outputs from the 2011 Census are being published. Publication of tables reporting the ethnicity of local authority populations by ethnicity provides a rare opportunity to evaluate a set of ethnic group projections for England local authorities completed in 2010-2011, one decade into a 50 year forecast horizon. We convert ethnic group, local authority and time definitions for the projections to match those of the 2011 Census. Our projection of England's population is quite close but we over-project the White British group by 3%, the White Irish group by 25% and the Black African group by 27%. For all other ethnic groups we under-project their populations. For the Black population as a whole the under-projection is 12%, for the Asian population it is 8%, for the Mixed population 17% and for the Other (residual) groups it is 45%. Our projections thus under-estimate the speed at which the England population is diversifying. We also assess how well our projections did in comparison with inter-census change in terms of directions of change (growth, no change, decline) and in terms of changes in levels of segregation and diversity. In the paper we explore the local variation in census-projection errors and attempt to identify the estimation and assumption errors by component, in order to learn how to produce better projections using the 2011 Census for starting populations.

p.h.rees@leeds.ac.uk

Changing families & fertility: Wednesday 11 September 9.00am

The changing dynamics of migrant families: Findings from a qualitative longitudinal study

Nilufar Ahmed, Swansea University

This paper reports on findings from a qualitative longitudinal study. In 2001 one hundred first generation Bangladeshi women were randomly selected for interview from GP lists across Tower Hamlets. Ten years later, twenty respondents were again randomly selected from within this sample for follow up. Respondents arrived in the UK as part of the family reunification process, and have mostly been viewed simply as dependents of their spouses. There has been little exploration of the complexity of relationships they have within and outside the home and their role in renegotiating the family structure. This paper discusses the ways in which the family has undergone change since migration in terms of structure, roles and practices, reciprocal obligations and material circumstances. It analyses the changing structure of the family from the nuclearisation of the family in the early years after migration to the renewed extended structure that has developed as children grow older and marry and the way family roles have been reinterpreted to fit the UK context. It also analyses the greater affluence and upward mobility of the community as a result of family obligations and responsibilities. The findings caution against ethnographic studies which offer a snapshot of a community that can lead to them being reified in positions of disadvantage by providing an insight into a period of accelerated change over ten years which challenges the notion of a static and homogenous community resistant to change and integration.

nilufar@hotmail.com

After Swedish Intermarriage
Ognjen Obucina, Demography Unit, Department of Sociology, Stockholm University

The researchers largely agree that interethnic marriages are an important indicator of social integration of immigrants into host societies. However, it has been frequently found in the previous literature (e.g. Kalmijn et al, 2005) that interethnic marriages are more likely to break up than mono-ethnic marriages. Sweden is no exception to this pattern (Dribe and Lundh, 2012), while the UK might be (Feng et al., 2012). The main question in this paper is how the experience of having been in a mixed-nativity union affects the subsequent marital and cohabitational trajectories in Sweden. The data used in the paper are derived from the Swedish population registers and cover the period from the 1990 until 2007. In this paper, the cohabitants with at least one common child are treated the same as the married couples, whereas the second-generation immigrants are not included into the analysis. The multivariate analysis is based on event history models of competing risks or, more precisely, discrete-time multinomial logistic regression. Even though the descriptive statistics suggests that many of those who experience a divorce of intermarriage do make a different choice the second time around (this is most obvious among native women and immigrant men), the multivariate analysis shows that, for both natives and immigrants, there is a strong and positive association between having been in an intermarriage and forming another intermarriage following the divorce, when a comparison is made with persons who were previously in a same nativity marriage

ognjen.obucina@sociology.su.se

Intergenerational fertility changes, minority status and social mobility of ethnic minorities in the UK
Sylvie Dubuc, University of Oxford

This paper gives an overview of fertility for immigrant and second generation women in the UK, by ethnic groupings using the LFS-OCM method (with cross-sectional and pseudo-cohort comparisons). Results reveal intergenerational fertility transitions that strongly contribute to the fertility convergence between ethnic groups and indicating degrees of intergenerational adaptation to the UK mainstream childbearing behaviour, although ethnic differences remain. The analysis of fertility by educational attainment of women reveals consistent educational association with fertility patterns across immigrant and ethnic groups. Results provide evidence for educational/structural factors to largely contribute to ethnic fertility differentials and intergenerational changes. Departure from the classical assimilation theory for some well-established minority groups is discussed in the second part of the paper.

sylvie.dubuc@spi.ox.ac.uk

Pathways out of the parental home among young second generation migrants in the UK
Ann Berrington and Peter Tammes, ESRC Centre for Population Change, University of Southampton

This paper fills a gap in our knowledge and understanding by focusing on pathways out of the parental home for second generation migrants in the UK. Migrants from the Caribbean, India, Pakistan and Bangladesh who arrived in the UK during the 1960s, 70s and 80s produced a second generation now in their twenties and thirties. Given the greater levels of education and labour market participation of the South Asian second generation, we expect to see a delay in family formation to later ages and more diverse routes out of the parental home, more consistent with the white population. The first generation of Caribbean migrants tended to have more “modern” family situations with a large proportion living without a partner, many as lone parents. We examine

whether this continues to be relevant for the contemporary second generation. We argue that adherence to traditional family formation patterns will be greater amongst those second generation young adults who identify more strongly with their parents' ethnicity. We test this explicitly within our analytical framework which includes two indicators identifying the extent to which young adults' identify themselves with their parental ethnic group and the importance they put on "being British".

a.berrington@soton.ac.uk

National identity & belonging: Wednesday 11 September 11.00am

Researching residential segregation in Northern Ireland: Interpreting the question on 'national identity' in the 2011 Census of Population

Ian Shuttleworth, Queen's University Belfast; and Christopher D. Lloyd, University of Liverpool

Social and political research on Northern Ireland has commonly used religion or religion brought up in as a proxy for national or cultural identity. The conflict has historically been understood in terms of two communities – Protestant and Catholic – which equate respectively to British/Unionist and Irish Nationalist identities. This interpretation is shared by academics, policymakers and politicians and is deeply rooted. Studies of residential segregation have also followed in this tradition with a focus on the spatial distributions of Catholics and Protestants. However, the newly-available national identity question in the 2011 Census is an alternative and possibly more direct measure of political and cultural identity. Initial findings have drawn attention to the 'Northern Irish' who form a large minority of the population. The presentation mainly, though not exclusively, focusses on this group by trying to answer questions about who the Northern Irish are, understanding how the relationship between religious affiliation and national identity varies spatially, and working through the implications of recasting the analysis of residential segregation in Northern Ireland from a two-group to a three-group problem. One major conclusion is that the social and political interpretation of residential segregation is, as ever, more complicated than would initially appear.

c.d.lloyd@liverpool.ac.uk

Belonging and not belonging: The experience of return migration for the second generation Irish from Britain

Sara Hannafin, National University of Ireland, Galway

The enduring connections between the children of migrants and their parental homelands are growing areas of research interest (see Levitt and Waters, 2006; Christou, 2006; Wessendorf, 2007) suggesting that the parental home place frequently remains meaningful and significant to next generations. This paper is based on research into the migration to Ireland of the adult children of the Irish in Britain and the extent to which this return to a perceived homeland generates conflicting feelings of belonging and not belonging. A qualitative methodology was employed to investigate this relatively invisible migration flow which was more likely to have been motivated by emotional than economic factors. Through in-depth interviews combined with written commentary, participants were asked to focus on their experience of growing up in Britain with a sense of connection to Ireland, their decision to move and their experiences since the move. Individuals have described how a physical engagement with specific places in Ireland during regular childhood holidays, along with cultural activities in Britain, frequently promoted an emotional attachment to place. Many have described a 'reverence' for the physical place of Ireland and exhibit a great deal of insider knowledge however this is complicated, for some, by a sense of disconnect from the people and an acceptance that their claims to an Irish identity are frequently misunderstood. My aim

is to explore this complex relationship with place in order to contribute to an understanding of the significance of place to identity in terms of how these migrants negotiate feelings of belonging/not belonging.

sarahannafin@yahoo.com

Who feels British? The relationship between ethnicity, religion and national identity.
Stephen Jivraj, Bridget Byrne, James Nazroo, Centre on Dynamics of Ethnicity, University of Manchester

The Coalition government has set out an approach to create an integrated society in England, in part, through strengthening national identity. What national identity the government seeks its citizens to feel is unclear, however, it is clear that those with minority affiliation are the main target of the policy. According to early results from the Understanding Society survey, Britishness has shown to be felt more strongly by ethnic minorities than the White British majority. This is true of UK and non-UK born minorities. Therefore, forcing minority groups to accept British identity is inconsistent, not least because many of the problematised groups (e.g. Muslims) are willing to accept the idea of shared values that politicians ask of them whereas the least problematised groups (e.g. White British, American, Australian and Western Europeans) are not. This paper seeks to compare the sense of national identity by ethnic group using data available for the first time in the census in 2011. We show how certain ethnic groups are more likely to feel a form of British national identity. However, English (Welsh in Wales) only national identity is felt by more people than any other form of British national identity, especially among the majority White British. We also find differences in national identity by religious affiliation and age. This demonstrates the confusion that surrounds national identity in the UK and suggests that policy makers should be careful when advocating identities that the majority of the population do not appear to experience.

stephen.jivraj@manchester.ac.uk

Ethnicity, nationality and identity in the UK: the development of a comparative acculturation framework
Alita Nandi, University of Essex; Lucinda Platt, Institute of Education, University of London

There has been extensive public debate on the potential exclusiveness of ethnic identities. However, the psychological and sociological research literature has demonstrated that dual identities can be successfully maintained. Moreover, particularly in the context of devolution within the UK, there are claims that we are seeing a shift within the 'majority' population towards country-specific national identities, raising questions about what a 'majority' identity actually means. In this paper we present new analysis of Understanding Society: the UK Household Longitudinal Study, which addresses the following questions: what are the patterns of identification with British and minority identities across minority ethnic groups? Do stronger identities in one domain lead to weaker or strong identities in another domain? Which group or groups are least likely to maintain strong ethno-national identities? To address these questions we employ an adaptation of Berry's acculturation framework to estimate the factors associated with dual, single and weak identities across both majority (exploring British, UK country identity, both or neither) and minorities (exploring British, minority identity, both or neither). Results from multinomial logistic regression models indicate that there are variations in identity acculturation across minority groups and by generation. We also find that identities are interconnected, but in varying ways. For example, stronger political adherence is linked to higher chances of a dual identity compared to a minority identity for minorities, but to a reduced chance of a dual identity compared to a single country identity for the majority. We conclude with some broader implications of our results.

l.platt@ioe.ac.uk

FAMILIES AND HOUSEHOLDS

STRAND ORGANISER: DR. WENDY SIGLE-RUSHTON, LONDON SCHOOL OF ECONOMICS

(Economic change & family processes session: Dr. Berkay Ozcan, London School of Economics)

Economic change and family processes: Monday 9 September, 4.45pm

Economic precariousness and living arrangements among young adults in the UK
Peter Tammes, ESRC Centre for Population Change, School of Social Sciences, University of Southampton; Steven Roberts, School of Social Policy, Sociology and Social Research, University of Kent; Ann Berrington, ESRC Centre for Population Change, School of Social Sciences, University of Southampton

The housing and family transitions of young adults in the UK have been affected by increasing housing costs, economic uncertainty, labour market insecurity and reductions in welfare support in recent years. Although these changes affect all young adults' residential and family pathways in the UK, those who are lower educated or have a low socio-economic status may be more vulnerable to this situation. We argue that more attention needs to be paid to young adults who do not attend (higher) education and who are in relatively low skilled and low wage jobs for some years. In the youth studies literature these young adults are sometimes considered as the 'missing middle' or 'forgotten working poor' since they do not fit in the usual profile of potential risk groups such as the unemployed, disabled, homeless, or the NEETS. This 'missing middle', however, might face a precarious situation with few prospects for job promotion or change, wage increase, and developing their skills and knowledge. Secondary analyses of the 2009/10 UK Household Longitudinal Survey is used to examine the extent to which the living arrangements and housing situation of the 'missing middle' differs from both more and less precarious groups of young adults. Our preliminary findings show that working men aged 22-34 with low earnings are less often married, and more likely to live with their parent(s) than those with higher earnings. In fact their situation is more similar to those with the lowest earnings.

p.j.tammes@soton.ac.uk

Economic conditions and variations in first birth hazards in 22 European countries between 1970 and 2005
Jonas Wood, Karel Neels, University of Antwerp

Throughout the 20th century economic recessions raised interest on the effect of economic context on fertility. The recent economic recession starting in 2008 adds to the long-standing interest in the interaction between economic conditions and fertility trends. Most research supports a pro-cyclical effect, meaning that economic downturns entail postponement of motherhood, and effects of aggregate economic context on childbearing have found to differ by age- and educational group. However, existing contributions assessing the impact of macro-level economic conditions on childbearing often focus on OECD countries, hereby neglecting the Central and Eastern European countries. this paper aims to develop a broad European assessment of the relation between economic conditions and motherhood timing for 22 countries drawing on micro-level ESS (2006) data and Consumer price index as a macro-level economic indicator. Using multi-level discrete-

time event history models and including error terms at the aggregate and individual level for unobservable characteristics we investigate the impact of individual and aggregate-level economic conditions on the transition to motherhood. We conclude that postponement of motherhood among women aged 15-29 is related to deteriorating economic conditions, and entry into the labour market is an important precursor of motherhood among the higher educated and in Western European countries whereas lower educated show to be less affected by unfavourable economic conditions at both the individual and the aggregate level. Turning to childbearing later in the life course, entry into the labour force does not seem relevant while unfavourable aggregate economic conditions continue to depress motherhood, especially in Southern Europe.

jonas.wood@ua.ac.be

Economic context and first union formation: exploring the effect of economic downturn at the macro level (1970-2004) in five western-European countries
Jorik Vergauwen, Karel Neels, University of Antwerp

Authors have principally found a negative impact of economic recession and rising unemployment on family formation. Few papers have although directly addressed the effect macro-level economic conditions on union formation. With career maturity being hampered by adverse economic conditions, union formation hazards are nevertheless expected to decrease given the lack of financial and social long-term prospects. Hence, in this paper we consider the effect of aggregate-level economic context on entry into a first union and the type of this union (either unmarried cohabitation or marriage). Since marriage is mostly characterized by high commitment and extensive investments, a deferring impact of economic recession on first marriage is hypothesized. Adversely, non-marital cohabitation is often considered as a strategy to deal with economic uncertainty. The effect of economic downturn is therefore assumed to be smaller or positive for entry into unmarried cohabitation. We additionally investigate how these effects are differentiated in terms of educational attainment. The analyses use union histories for five western-European countries drawn from the Harmonized Histories. Multilevel discrete-time event-history and logistic regression models are used to assess the impact of economic context on timing and type of entry into first unions between 1970 and 2004 respectively. Harmonized unemployment rates provided by the OECD are included as macro-level indicators. Our results suggest that first union formation is hampered by economic downturn, particularly among the youngest ages. Some evidence additionally indicates that this effect is stronger for marriage compared to cohabitation We find the latter effect to be weaker for the highest educated.

jorik.vergauwen@ua.ac.be

Diverse family forms: Measurement and policy issues: Tuesday 10 September, 11.00am

Complex families and material hardship
Natasha V. Pilkauskas, Columbia University; Afshin Zilanawala, University College London

Demographic shifts in the US over the last half century, including increased non-marital childbearing, cohabitation, divorce and remarriage, as well as delayed marriage, have resulted in increasingly complex family formations. In particular, the prevalence of adults having biological children with more than one partner, multi-partnered fertility (MPF), has risen. Estimates from an urban birth cohort found as many as 21% of married and 59% of unmarried parents had MPF. As a result of MPF, the complexity of the household (e.g. navigating visitation, financial support, parenting and childcare) has increased, and may make these households more economically

vulnerable. Fathers may experience increased demands on financial resources from multiple families; mothers may have difficulty obtaining resources from fathers or may receive less support from extended families (cash or in-kind) leading to increased material hardship. Although prior literature has linked MPF with father's reduced ability to provide economic support and mother's reduced perceived support, no studies have investigated whether MPF is associated with material hardship, a consumption based indicator of economic wellbeing that measures ability to meet basic needs. We fill this gap in the literature by examining whether MPF is associated with material hardship (difficulty paying bills, housing insecurity, having utilities cut off, unmet medical needs, or food insecurity). Understanding this association is important, as hardship has been linked with poorer child outcomes. We study this question using longitudinal data from the Fragile Families and Child Wellbeing Study, a birth cohort study of nearly 5,000 children born in large U.S. cities.

afshin.zilanawala@ucl.ac.uk

Cohabiting families and their legal protection against moves into poverty: A comparison of 12 European countries

Nora Sánchez Gassen, Stockholm University; Brienna Perelli-Harris, University of Southampton

Cohabitation and childbearing within cohabitation have increased remarkably in Europe during the past decades. Some governments have reacted by changing previously marriage-centric laws in order to protect cohabitants against moves into poverty, for instance in case of death or union dissolution. Nonetheless, previous research has revealed that cohabitation is not consistently regulated in all European countries (Perelli-Harris and Sánchez Gassen 2010). This has prompted some family researchers to argue that further reforms are necessary in order to reduce the legal vulnerability of cohabiting couples and their children (Barlow et al. 2005).
The main goal of this paper is to contribute to a better understanding of the needs for future legislation by comparing cohabitation law and cohabitation behavior in East and West European countries. Using a database of 12 policy areas for 12 countries, we first analyse whether and under which conditions cohabiting couples are covered by inheritance laws, property laws, tax and benefit laws etc. We then use European Social Survey data of 2010 to estimate how many couples live in cohabitation and which proportion of these cohabiting unions are covered or fall outside the laws in their country. The central question this paper intends to answer is whether cohabitants continue to be less well protected against moves into poverty than married spouses or, by contrast, whether laws have been changed to such a degree that most cohabiting couples are now covered by them.

nora.sanchez@sociology.su.se

Economic and demographic change in India: challenging assumptions of family breakdown

Penny Vera-Sanso, Birkbeck, University of London

This paper questions the widespread assumption that the values underlying the 'traditional' family in India are breaking down as well as assumptions about their economic and social consequences. Examining family form and composition and networks in low income settlements in South India, and taking into account longitudinal research, the paper demonstrates that economic changes over the past 20 years as well as demographic shifts have had an impact on family relations and flows of labour and resources across multiple generations. While at the bottom of the social hierarchy demographic transition is leading to narrow and less resilient family networks as well as narrow and less resilient domestic economies, this is not because of the breakdown of either 'traditional families', or 'traditional family values'.

pverasanso@yahoo.com

Gendered division of labour within families: Tuesday 10 September, 1.30pm

Flexible working and couples' co-ordination of time schedules

Almudena Sevilla, Queen Mary University of London; Mark L Bryan, University of Essex

This paper uses previously unexploited data on time scheduling in the household and employment contexts to investigate the effect of flexible working on couples' coordination of their time schedules in the UK for the first time. This question is of paramount importance to policymakers considering the effects of extensions to flexible working, yet the economics literature provides relatively little theoretical and empirical evidence on it. The aim of the present work is to close this gap. We find that when the woman in the couple has the freedom to choose daily work times subject to a weekly total number of hours there is greater spouse synchronization in working times. All the action is being driven by couples with dependent children, who arguably value synchronization most. In contrast, when the man in the couple has flexitime at work it does not change the amount of spouse synchronization. Other measures of flexibility at work, such as annualized hours and having a sense of control over working hours do not seem to help spouses in synchronizing the time together.

a.sevilla@qmul.ac.uk

Time availability, bargaining or doing gender? The domestic division of labour in China

Man-Yee Kan, University of Oxford; Gloria Guangye He, The Hong Kong University of Science and Technology; Xiaogang Wu, The Hong Kong University of Science and Technology

This paper analyses data of the Chinese Women's Status Survey 2000, a national survey in China, to examine the determinants of housework participation of dual-earner couples. Findings show that the gendered pattern of associations between housework hours and relative family income in China is different from those in UK, US and other developed countries. Men's and women's total housework and cooking time follow the predictions of the time availability approach rather than those of the resource bargaining theory: the longer their work hours, the shorter the time they spent on cooking and total housework. However, their relative contribution to family income is not significantly associated with their time on cooking and total housework when work hours are taken into account. Relative income has significant associations only with some types of housework (e.g. cleaning time of urban men) and with rural women's level of participation in domestic work relative to their partner's. There is evidence to show that the 'doing gender' effect in housework is more prominent in rural area than in urban area, indicating that the gender ideology plays a more significant role in rural China. It is clear that husbands and wives are less likely to 'do gender' in routine daily housework (e.g., cooking) than in other forms of housework. Men have a tendency to 'do gender' in feminine types of household work (e.g., cleaning). However, time availability appears to be a dominant factor in determining the housework hours of men and women.

man-yee.kan@sociology.ox.ac.uk

Work-life conflict in Britain: examining the role of family circumstances
Ursula Henz, London School of Economics

Changes in the structure and organization of paid work and women's rising labour-market participation have put the inherent tensions between paid work and family life into the focus of social research. Various theoretical models have been formulated to describe how the conflicting demands of paid work and family life can lead to individual stress. This study draws on 'border theory' (Clark, 2000) to conceptualize the relationship between the two life domains. The paper will present analyses of family-to-work and work-to-family conflict (WFC) using the Working in Britain 2000 survey. Initial analyses of work-to-family conflict suggest complex relationships between family circumstances and WFC. It turns out useful to further distinguish two dimensions of WFC, namely time-based and strain-based conflict. Having a partner tends to be associated with higher levels of WFC, rejecting suggestions (Bianchi & Milkie 2010) that the presence of a partner may help an individual to more successfully negotiate the tensions generated by time based demands. The analyses further show that men whose wives worked few or no hours for pay experienced high levels of time-based WFC. Border theory can explain this pattern in terms of wives with few or no hours of paid work being strong defenders of the family border and refusing to accommodate their husbands' needs of expanding their working hours. A strong relationship exists also between men's increased level of strain-based WFC and their partner working full time, supporting the more common idea of a particularly strong time-squeeze experienced by these couples.

U.Henz@lse.ac.uk

Family-Work Practices and Attitudes among Religious Groups in the United Kingdom
Nitzan Peri-Rotem, Nuffield College, University of Oxford

Recent studies have documented the persistent relevance of religious adherence in explaining variation in family norms and behaviour. Individuals with higher religious involvement demonstrate relatively traditional family patterns, such as preference of marriage over cohabitation, lower divorce rates, and higher ideal and actual family size compared to their non-religious peers. These differential family patterns may also be linked to the way religious women allocate their time to the home and the labour market. Moreover, religious teachings and norms of the appropriate division of gender roles may have a direct effect on women's economic activity. The current study examines religious differences in family and work attitudes as well as female labour force participation in the United Kingdom. In addition, it explores whether religious differences in employment are related to variations in family structure. Using data from the British Household Panel Survey, a Generalized Ordered Logistic regression is employed to examine religious differences in attitudes towards the male-breadwinner model of the family and working mothers. A Multinomial regression analysis is also used to examine the likelihood of women from different religious groups to work full-time, part-time or being out of the labour force. The results show that religious individuals tend to hold more conservative views of gender role division. However, it was also found that religious women are less likely to work full-time, compared to non-religious women, only when young children are present in the household.

nitzan.peri@nuffield.ox.ac.uk

Family dynamics in Europe: Cross-national comparisons: Tuesday 10 September, 4.45pm

How does human capital affect partnership transitions? Evidence of complex contingencies in a multi-country sample

Ross Macmillan, University of Bocconi

Second Demographic Transition highlighted three broad social currents: intimate relationships are increasingly unstable, educational attainment has rapidly expanded, and adult roles overlap and compete in complex ways. Time to entry into first partnership is significantly affected by a prolonged permanence in education while, on the contrary, human capital accumulation becomes an asset for subsequent unions. Our empirical analysis on 9 European countries stresses the importance of human capital accumulation in accelerating relationship transitions. However, we show evidence of how the burden of prior relationships' costs slow down paths of union re-entering.

ross.macmillan@unibocconi.it

The planning status of non-marital fertility

Jorik Vergauwen & Karel Neels, University of Antwerp

Proponents of the SDT argue that the alteration of life style choices constitutes the core process underlying the recent rise in non-marital fertility. Other authors, however, have provided evidence for a negative educational gradient of non-marital childbearing. According to the latter, the relationship between education on the one hand and union formation and fertility on the other, has changed over the last decades with SDT-like behaviours increasingly becoming a sign of disadvantage. Evidence on whether individuals actually intend to have children in unmarried cohabitation is currently lacking. Hence, in this paper we examine i) the educational gradient in intentions to marry and have children, ii) the correspondence between intentions and outcomes and iii) the educational gradient in (un)intended non-marital fertility. Using longitudinal micro data from the Generations & Gender Survey, we consider short term intentions of marrying and/or having a child in the next three years. Based on the combination of intentions, we distinguish four groups: a) women planning a child without getting married, b) women intending to have a child and get married, c) women only intending a marriage and d) women not intending any transition. Subsequently, we compare intentions measured in the first wave of the GGS with the occurrence and sequence of events occurring between both waves. The first part of the paper uses cross-sectional logistic regression to look into fertility and marriage intentions in the first wave of the GGS. Subsequently, discrete-time event history models are used to analyse non-marital birth hazards.

jorik.vergauwen@ua.ac.be

Variation in the intersection between partnership and fertility: A comparison across 3 cohorts in 16 countries

Mark Lyons-Amos, Brienna Perelli-Harris, University of Southampton

The intersection between partnership forms and fertility is increasingly complicated in the United States and European countries. This is due to increasing variety in partnership forms, diversity in fertility, and changes in the way that these two processes interact. For example, in countries such as Norway, cohabitation, birth postponement and births to stable but non-marital partnerships are important, while in Italy, birth is largely restricted to marital relationships, which are universal albeit postponed. Moreover, even within dominant regimes there is a considerable amount of sub national variation in the prevalence of different behaviours- for example the continued prevalence

of marriage behaviour in Norway (Perelli-Harris and Lyons-Amos 2012). This paper uses Latent Class Growth models to evaluate the relationship between partnership and fertility and how this varies across the United States and 15 European countries. The main aims of the paper are to establish how the intersection between partnership patterns and the timing of first birth varies between countries, and how this association has changed across cohorts.

mja303@soton.ac.uk

Between tradition and egalitarianism: Non-linear divorce dynamics in Germany, Great Britain and the USA
Daniela Bellani, Diederik Boertien and Gøsta Esping-Andersen, Universitat Pompeu Fabra

For many years now, divorce research has focused on the influence of women's new economic role. A number of studies show that divorce risks are associated with women's income. And, yet, there is also mounting evidence that the social gradient of divorce is being reversed. How does one reconcile such findings? In this paper we offer an alternative framework, based on multiple equilibrium models, that predicts that couple instability should be greatest where strong normative consensus is absent – i.e. in unstable equilibria. We should expect significantly lower divorce risks in either the traditional family equilibrium or in a (possibly) emerging gender-egalitarian one. One important upshot is that research on family dynamics should be more sensitive to non-linearities. Using the GSOEP, the BHP and PSID waves 1986-2009; we apply discrete time event history analysis to couples and relate partnership durations to couple specialization. We focus particularly on inequity effects related to the division of domestic and market work.

daniela.bellani@upf.edu

Kinship: Wednesday 11 September, 11.00am

Family geography and demography in the UK
Tak Wing Chan, John Ermisch, University of Oxford

We study geographic proximity between adult children and their parents using data from a very large and nationally representative household survey collected in the United Kingdom during 2009-2010: Understanding Society. Variation in geographic mobility over the life course is very important for intergenerational proximity. In particular, those who move more during their life are more likely to live farther away from their child or parent. There are also large differences in intergenerational proximity between the foreign born and UK born, and among ethnic groups. We test a number of hypotheses on how proximity varies with people's 'stable' demographic attributes (i.e. those which usually do not change much after one's early 30s). Our evidence is consistent with three long-term trends operating to reduce the proximity between parents and their adult children: declining fertility, more divorce and rising educational attainments. Contrary to earlier studies, our evidence is not consistent with proximity varying with the existence or number of siblings of the adult child.

tw.chan@sociology.ox.ac.uk

Post-separation mobility: Moving closer to the family

Marjolijn Das, NIDI, Statistics Netherlands; Helga de Valk, NIDI, Vrije Universiteit Brussels; Eva-Maria Merz, NIDI

Starting from a life course perspective this study aims to gain more insight in mobility patterns of recently separated mothers. These mothers may benefit from support of family, in particular grandparents. Also, the grandparents' home can be a (temporary) place to stay shortly after divorce. Our first research question is where recently separated mothers move to. Second, we examine the role of the grandparents by focusing on moves to the location of the maternal grandmother. Both individual and life course characteristics of the mother are studied as determinants for these residential choices. Data come from the Social Statistical Database of Statistics Netherlands. This unique dataset combines longitudinal data from a vast number of administrative registers. The dataset covers the complete Dutch population making it exceptionally well suited for life course research, including spatial patterns. We study mobility of all mothers with minor children for two years, starting from 2008 up until 2010. Our study includes 600 thousand mothers of which about 9 thousand (1.5%) experienced a separation in 2008. In the two years after separation, mothers moved to the grandmother's municipality more often than non-separated mothers. Eight per cent of them moved in with the grandmother, mostly temporary. After such a period of coresidence, mothers frequently stayed in the grandmother's municipality. Thus, coresidence appears to influence residential location choice later on. Results suggested that mothers who move near the grandmother or coreside are in need of practical support, and are in some cases more economically vulnerable than other separated mothers.

mdas@cbs.nl das@nidi.nl

Fostering relations: the differences in sexual and reproductive outcomes between children raised by kin and non-kin carers

Susan Schaffnit, London School of Hygiene & tropical Medicine; Paula Sheppard, London School of Hygiene & Tropical Medecine; Justin R. Garcia, Indiana University; Rebecca Sear, London School of Hygiene & Tropical Medicine

Kinship fostering is often assumed to be superior to non-kin fostering despite inconsistent evidence of the advantages of either foster method. Using the unusual and rich Original Kinsey Survey data, collected in the US from 1938 to 1963, we ran event history analyses to compare the effects of living with kin and non-kin fosterers in childhood on the timing of sexual and reproductive behaviours – age at first sex and marriage. We control for parental divorce and death to try to tease apart the effects of living with kin and non-kin from early life disruptions, which have been suggested to be the source of later life outcomes related to fostering. We expect kin carers to act more similarly to biological parents than non-kin fosterers due to shared genetic interests between carer and child. Kin carers should shield children from premature sexual and reproductive behaviour and encourage slower reproductive strategies in order to invest in embodied capital, as parents do in low fertility societies. Our time-to-event analyses show that while kin fostered children do have somewhat accelerated life histories compared to children from intact families, kin fosterers buffer children from premature sexual and reproductive behaviours compared to children in the care of non-kin fosterers.

susie.schaffnit@lshtm.ac.uk

FERTILITY & REPRODUCTIVE HEALTH

STRAND ORGANISERS: DR. STUART BASTEN, UNIVERSITY OF OXFORD; DR. MONICA MAGADI, UNIVERSITY OF HULL

Fertility: cross-national and global perspectives: Monday 9 September 1.30pm

The future of fertility: Results from a global survey of experts

Stuart Basten University of Oxford; Tomas Sobotka, Vienna Institute of Demograph,) Krystof Zeman, Vienna Institute of Demography

In Summer 2011 an Internet survey on the likely future trends in fertility, mortality, and migration and the main factors behind them has been conducted among the members of major population associations. The survey, organised as a collaboration of IIASA and Oxford University, will become a basis for new global probabilistic population forecasts by age, sex, and level of education. By allowing a large number of experts to participate and by providing an argument-based underpinning of numerical estimates about future fertility trends, the survey addresses two common weaknesses of population projection-making: 1) very limited or no theoretical foundation and 2) a participation of a small and often closed group of experts in formulating the parameters of projection scenarios. Our study presents first results of the survey module on low fertility, which focuses on countries that are relatively rich and have at present low fertility. The experts were offered 46 arguments potentially relevant for the future trends in fertility, and clustered into six groups of factors. They have selected a country or a group of countries, to which their assessment pertains, and also provided numerical estimates of the likely range of the period total fertility rates in 2030 and 2050. Altogether, 184 experts have assessed the low-fertility module of the survey. These experts represented 41 low-fertility countries on 6 continents. We cluster these countries into regions and analyse the responses along several key dimensions: numerical estimates of future period TFR, the relevance and impact of individual arguments, and the relative importance of the clusters of arguments. We pay special attention to the arguments where experts gave contrasting views about their likely importance and impact on fertility. These diverging views either indicate existence of region-specific factors, or they signal considerable disagreement about the likely impact of some factors on future fertility trends.

stuart.basten@spi.ox.ac.uk

Culture, structure and fertility: Education, post-materialism in a cross-national perspective

Ross Macmillan, University of Bocconi

Demographers have long-standing interests in issues of culture and fertility and such issues are central to theoretical discussions around the Second Demographic Transition (SDT). At the same time, there have been relatively few attempts to model culture directly and empirically examine its impact. At the same time, considerations of culture must be situated within the context of other large-scale social change, particularly changing patterns of educational attainment. Using data from women aged 15-49 from 77 countries in the World Values Surveys, this research takes on the culture and fertility question by examining the micro- and macro-level of effects of 'post-materialism' on individual fertility behavior. Post-materialism signals cultural shifts from a security-based to a actualization-orientation that echoes arguments about changing ideas about the 'value' of children. Results suggest a complex and unanticipated relationship between post-materialism and fertility. First, post-materialism is most important for fertility as a macro-level, cultural phenomenon rather than a micro-level, individual orientation. Second, post-materialist

culture has a strong relationship with individual fertility, but the effect is curvilinear with fertility rates highest in culturally ambiguous contexts. Finally, post-materialism shapes the effect of education on fertility where educational effects are muted at both high and low post-material contexts. Implications for theory and research are discussed.

ross.macmillan@unibocconi.it

Lengthening birth intervals and their impact on the fertility transition in rural and urban East Africa

Catriona Towriss, Ian Timaeus, London School of Hygiene and Tropical Medicine

There has been concern about the progress of fertility transition in Sub-Saharan Africa: in many parts of the continent family sizes continue to be large. However, examining fertility rates by rural and urban area reveals that the decline is well underway in some populations. This research will investigate whether there is a relationship between low fertility and birth interval length in urban areas of East Africa. Birth spacing practices which served to delay births were an important element of fertility dynamics in many traditional communities. Current research shows that birth spacing continues be an important feature of fertility, and in a number of countries intervals have lengthened to five years or more. Regression models were used to analyse birth interval length by rural and urban area in four East African countries. Early analysis shows that, overall, intervals are longest and lengthening most rapidly in urban areas. Further analysis of these changes will give an understanding of the potential influence that lengthening birth intervals will have upon the fertility transition. Timaeus and Moultrie have argued that many African women who delay a birth do so for prolonged periods and some eventually become permanent postponers. Thus, if intervals continue to increase it will be impossible for populations to return to high fertility levels.

catriona.towriss@lshtm.ac.uk

Reproductive and negative birth outcomes: Monday 9 September 4.45pm

Social inequalities of adolescent fertility outcomes: Teenage childbearing and abortion trends of three birth cohorts in Finland

Heini Väisänen, London School of Economics

Objective: To investigate why pregnancies occur more often among lower socio-economic group adolescents and study the determinants of choosing an induced abortion over childbirth.
Methods: Nationally representative register data from Finland on three female birth cohorts (1955-59, 1965-69 and 1975-79) are analysed (N=259,242). Cox regression models for socio-economic differentials in each cohort and pregnancy outcome (childbirth or abortion) and binary logistic regression models estimating socio-economic differentials in the odds of choosing an abortion for those who experienced their first pregnancy before age 20, are presented. The socio-economic differentials are measured based on the occupation the household member who has the highest socio-economic status and it is divided into seven groups: self-employed, upper-level white collar employees, lower-level white collar employees, manual workers, farmers, students, and others. Place of residence, ethnicity, relationship status, pregnancy history, and age at pregnancy are controlled for.
Results: Teens from lower SES background have higher risk of both outcomes even after controlling for other factors affecting fertility behaviour, but the differences are more distinctive in the childbearing model. Pregnant teens from upper-level employee backgrounds have from two to three times the odds of choosing an abortion compared to manual workers' children. Conclusions: Despite the low levels of teen pregnancies in Finland, lower SES background continues to be

associated with a higher risk of conceiving and giving birth. This finding indicates that new policy interventions are needed to reduce these inequalities.

h.e.vaisanen@lse.ac.uk

Local sex ratios and reproductive skew: the Finnish case

Lassi Lainiala, Anna Rotkirch, Population Research Institute, Väestöliitto – Finnish Family Federation

Sex ratios are known to influence several aspects of marital and childbearing behaviour. Demographers have lately paid attention to the "marriage squeeze" in many Asian countries. The effect of sex ratios on fertility in contemporary Europe has, however, to our knowledge not been explored. Childlessness is increasing throughout Europe and mostly involuntary. "Not finding a suitable partner" is a frequent explanation, but the extent to which this relates to mating markets unclear. We study the associations between local sex ratios, propensity to marry and to divorce, and fertility in Finland. Like the UK, Finnish fertility is on average comparatively high (TFR 1.83) but polarised. We use both macro-level data of municipality and sub-regional unit level and micro-level register data. Results show that that several municipalities have a very skewed sex ratio, 1.1-1.4 for Finns in their twenties. High regional sex ratio is associated with lower age at marriage of women, lower number of divorces, and higher fertility. Low sex ratios are related to higher age of marriage, more single women, higher share of cohabitation, higher divorce rate, and lower fertility. Thus the regions where women have many children appear to be those with high male childlessness, and the regions where men have many partners have high female childlessness. We suggest that reproductive skew within European societies can partly be explained by local sex ratios and call for comparative research on the topic.

anna.rotkirch@vaestoliitto.fi

Cooperation and conflict within families: do kin help or hinder reproductive outcomes?

Rebecca Sear, Cristina Moya, Susie Schaffnit, Kristin Snopkowski, London School of Hygiene & Tropical Medicine

The view that humans are 'cooperative breeders' is becoming established in the anthropological literature: mothers appear to parcel out the costs of raising multiple dependent children across several other individuals, most commonly fathers of the child or other men, grandmothers or older siblings of the child. But the reproductive interests of different family members will not always be in harmony. These conflicts of interest may show up as reduced reproductive success in the presence of certain kin members. Here we develop a framework for predicting when kin should help and when they should hinder reproductive outcomes. We then present a comparative study of kin influences on fertility, using data from all world regions, to demonstrate some systematic patterns of kin help and hindrance. Datasets we analyse include nationally representative large-scale surveys from both high and low income countries (including Demographic and Health Surveys, Family Life Surveys and the Generations and Gender Survey), as well as small-scale data sets collected by anthropologists from subsistence populations, including hunter-gatherers, horticulturalists and pastoralists. Broadly, we find that the presence of kin sometimes increases and sometimes decreases fertility, but that co-residence with kin tends to be more likely to be anti-natal than living near kin, and that a woman's parents-in-law tend to be more pro-natal than her own parents.

rebecca.sear@lshtm.ac.uk

Associations between small area crime rate and negative birth outcomes in Scotland
Tom Clemens, Chis Dibben, School of Geography and Geosciences, University of St Andrews

Negative birth outcomes, which are important determinants of future child development, have been shown to be associated with both social and environmental characteristics of the mother's area of residence. Air pollution has been identified as a key environmental factor but neighbourhood social stressors such as the prevalence of crime have remained relatively understudied. An important question is the extent to which area based characteristics exert an influence on birth outcomes independently of the individual socio-economic circumstances of the mother. This study examines the effect of small area crime rates in the mother's place of residence for a number of birth outcomes (fetal development and risk of prematurity) with adjustment for a range of individual maternal characteristics including smoking. A sample of women was drawn from the nationally representative Scottish Longitudinal Study and births to these women (between 1994 and 2008) were identified through record linkage to maternity hospital admissions data. Maternal exposure to crime was estimated from the crime domain of the Scottish Index of Multiple Deprivation (SIMD) at small area level (datazones). The association between crime rates and birth outcomes was estimated from multilevel linear and generalised linear models. The preliminary findings, generally, indicate a significant relationship between levels of recorded crime at the mother's place of residence and negative birth outcomes which remain significant after adjustment for a range of important individual confounding effects. These findings add to the growing body of evidence highlighting the independent association between local area characteristics and negative birth outcomes.

tc245@st-andrews.ac.uk

Fertility preferences and intentions: Tuesday 10 September 11.00am

Correspondence between intended and realised fertility: the role of education
Maria Rita Testa, Wittgenstein Centre (IIASA, VID/ÖAW, WU), Vienna Institute of Demography/Austrian Academy of Sciences; Maria Iacovou, University of Essex

The intended number of children is a strong predictor of subsequent fertility. However, the lack of long-span longitudinal surveys has hindered in-depth studies on the correspondence between intended and actual childbearing in Europe, especially the role of fertility postponement in the mismatch between the two variables. This is a relevant line of research, given the increasing share of couples who delay starting a family. Using longitudinal data from the British Household Panel Survey (BHPS) and its successor, Understanding Society (UKHLS), which cover the years between 1991 and 2012, we link planned fertility, as reported by women and men in their 20s and 30s in the first wave, with completed family size, as reported by the same women and men at the end of their reproductive careers, i.e., in their 40s and 50s at the last wave. We aim to reconcile the contradictory findings of highly educated women planning larger families than the medium to low-educated ones but having smaller families than their less educated counterparts by the end of the reproductive years. Our basic idea is that an increase in education from a low level is associated with a decrease in birth intentions, whereas an increase from a higher level is associated with an increase in fertility intentions.

maria.rita.testa@oeaw.ac.at

Fertility intentions and health status among women in slum and non-slum areas in eight Indian cities

Sangita Kulathinal, University of Helsinki, Minna Säävälä, Population Research Institute, The Family Federation of Finland

Harsh and unpredictable environmental conditions make it 'bio-logical' for people to develop faster, mature earlier, and reproduce sooner rather than later. Reproductive intentions and behavior are not solely determined by social learning but may respond also to ecological context. Thus far we have mostly aggregate level analyses on the effect of higher mortality and morbidity on the timing of first birth (e.g. Nettle 2011). We have little knowledge on how individual health and risks to longevity, independently of SES, are reflected in fertility preferences and intentions in developing country conditions.

This paper examines the relationship between reproductive intentions and health condition of women aged 15 to 29 in eight Indian cities. The data consists of the National Family Health survey (NFHS) 2005-6. We will examine whether individual differences in health (measured by weight, height and anemia) and awareness of the risk of death (manifested by the fact of having lost one's parents), relate to the ideal number of children and preferred waiting time before the next desired birth.

We hypothesize that morbidity and perceived mortality risk relate to fertility intentions not only in the ecological level but also when using individual as unit of analysis. We will examine whether, when controlling for education, sex of the existing child(ren) and the urban risk environment, those women who have poorer health status and whose own parents are dead, would prefer more narrowly spaced births and would have a higher ideal number of children.

References:

Nettle D 2011. Flexibility in reproductive timing in human females: Integrating ultimate and proximate explanations. *Philosophical Transanctions of the Royal Society (Biological Sciences)* 366: 357–365.

minna.saavala@vaestoliitto.fi

Who wants to remain childless? Exploring gender differences in intended childlessness in Britain and Italy.

Francesca Fiori, CPC -University of St Andrews; Francesca Rinesi, ISTAT (Italian National Institute of Statistics); Elspeth Graham, CPC- University of St Andrews

Since the 1970s several European countries have experienced an increase in the levels of childlessness. This may partly be a consequence of women progressively delaying procreation to later ages and the corresponding decrease in fecundity, and partly attributable to greater social acceptance of individual preferences for alternative, child-free life choices. This paper aims at explaining recent increases by investigating childlessness in two countries - Britain and Italy - with contrasting fertility and welfare regimes. The study first reviews differences between the two countries with respect to their welfare regimes, levels of secularization, attitudes to gender roles, family models and fertility levels. The main analyses then focus on intended reproductive behaviour by investigating the micro-factors associated with the intention to remain childless among British and Italian women and men. Three main research questions are addressed in an examination of: (1) Macro contexts and the choices facing women; (2) Gender differences in the intention of remaining childless; and (3) Alternative lifestyle choices in large cities. The analyses are based on: (a) the first wave of Understanding Society, years 2009-2010, for Britain; and (b) the ISTAT Multipurpose Survey "Famiglia, Soggetti Sociali e Condizioni dell'infanzia", 2009 edition for Italy. Our selected

sub-samples are of childless respondents in the fertile age groups living with partners. Multivariate models predicting intended childlessness are fitted separately for the two countries, and for men and women. The discussion highlights the similarities and differences between Britain and Italy and between men and women in the micro-factors associated with intended childlessness.

ff20@st-andrews.ac.uk

HIV/AIDS and sexual behaviour: Tuesday 10 September 1.30pm

Attitudes towards sexual health and sex behaviour among older adults with HIV in rural southern Malawi

Emily Freeman, Centre for Research on Ageing, University of Southampton

Adults aged beyond the reproductive years are estimated to contribute 14.3% of adult HIV disease burden in sub-Saharan Africa. Research regarding older adults' sexual health attitudes and behaviours has typically focused on risk of transmission among HIV-seronegative or sero-unknown individuals. However, the sexual health attitudes and behaviours of seropositive individuals have implications for experiences of HIV after age 49, and onward transmission. This paper answers the research question 'what are HIV-infected older adults' attitudes towards sexual health and sexual behaviours?' Data were produced in rural southern Malawi using repeat in-depth interviews (N=136) with men (N=20) and women (N=23) aged 50-90. A third of respondents had HIV. Interview data were supplemented by data from focus groups with older people with HIV (N=3), key informant interviews (N=19) and observations made over 11 months of fieldwork. Attitudes towards sexual health and sexual behaviours were tied to broader understandings of ageing, the body and illness. Both older age and HIV were understood to diminish an individual's finite store of vitality, recognised by diminishing ability for farm, house and 'bed' work (sex). Work was in turn associated with what it meant to be alive: to be an 'adult'. The adult identity represented the core identity respondents associated with and aspired to. By limiting ability to work age and HIV threatened respondents' 'adult' identities. In response, they employed a range of narratives that realigned behaviours with the 'adult' identity. In these narratives, understandings of sex and the body underpinned an emphasis on either continued sexual vitality and activity or the avoidance of sexual risk-taking.

e.k.freeman@soton.ac.uk

Gender Disparity in HIV Sero-prevalence and Associated Gender Variables: A national-level analysis of the association between gender inequality and the feminisation of HIV/AIDS

Katherine Harris, University of Southampton

The quantitative link between HIV prevalence and gender inequality is not well established at the national level, with papers from Greig & Koopman (2003) and Kashkooli (2006) suggesting that sub-Saharan Africa does not fit the pattern of a negative correlation between levels of HIV prevalence and gender equality. Furthermore, the sex ratio of HIV prevalence varies significantly from country to country, yet thus far has only been the subject of one quantitative analysis (Hertog, 2008). This paper therefore aims to extend the quantitative evidence base regarding the country-level variation in HIV prevalence and the sex ratio of HIV prevalence. Firstly, using country-level aggregate data for sub-Saharan African countries, bivariate analysis and partial correlation coefficients are used to assess the direction and magnitude of the relationships between indicators of gender equality (in social, economic and political domains) and the dependent variables (level of HIV prevalence and HIV prevalence sex ratio), whilst controlling for important institutional and socioeconomic differences between countries including wealth, population size, health expenditure,

population growth, size of urban population and maturity of the epidemic. The paper uses data primarily from UNDP Human Development Report (HDR), and national household surveys which include a HIV component. Secondly, an OLS regression is conducted in order to better describe the form of the relationship between HIV prevalence and gender inequality. Preliminary findings suggest that the factors driving high HIV prevalence in a country are unlikely to be the same as those factors related to the discrepancy in HIV prevalence between the genders.

kh8v07@soton.ac.uk

HIV status and contraceptive behaviour among women in Kenya

Monica A. Magadi, Department of Social Sciences, University of Hull; Winnie A. Magadi, Division of Biostatistics, University of Leeds

Although all available reversible methods of contraception can generally be used by women at risk of HIV infection and by HIV infected women, hormonal contraception have been recently linked to increased risk of infection in high risk women. The recent trend of rising and predominant use of hormonal contraceptives such as the injectables in most of sub-Saharan Africa has important implications for contraceptive method choice in settings of high HIV risk. This paper focuses on the association between HIV status and current contraceptive use and method choice among women in Kenya. The analysis is based on Kenya Demographic and Health Surveys data collected in 2003 and 2008 and applies multilevel logistic (i.e. multinomial for method choice) regression models to a sample of 5378 sexually active women of reproductive age. The multilevel models take into account community (i.e cluster) effects on contraceptive behaviour and allow the HIV risk factor to vary across communities. Descriptive results reveal that HIV positive women are significantly less likely to be current users of any contraceptive method (34%) compared to HIV negative women (45%) [Chi-Square p-value<0.01]. Although it is encouraging to note a significantly higher use of condoms among HIV positive than negative women, hormonal contraceptives are by far the most popular contraceptive method among HIV positive women, with 18% of sexually active women using hormonal contraceptives compared to only 7% using condoms. Multivariate results further reveal interesting pathways through which HIV status may be linked to contraceptive behaviour.

m.magadi@hull.ac.uk

Fertility: migration, residential contexts and spatial differences. Wednesday 11 September 9.00am

Residential Context, Migration and Fertility in Britain

Hill Kulu, University of Liverpool

This study examines fertility variation by residential context and its causes. While there is a large literature on fertility determinants in industrialised countries, little research has investigated spatial fertility variation. We study fertility variation across regions with different size and within urban regions by distinguishing between central cities and suburbs of the cities. We use longitudinal data from Britain and apply event history analysis. We investigate to what extent the socio-economic characteristics of couples and selective migrations explain fertility variation between residential contexts and to what extent contextual factors play a role. We also study childbearing behaviour of people who move from one residential context to another. Our analysis shows that the fertility levels decline as the size of an urban area increases; within urban regions suburbs have significantly higher fertility levels than the city centres.

hill.kulu@liverpool.ac.uk

Disentangling the quantum and tempo of immigrant fertility

Ben Wilson, London School of Economics

Migrant fertility has become an increasingly prominent explanation for recent fertility change. Immigrant Total Fertility Rates (TFRs) are consistently higher than native TFRs in the majority of European countries (Sobotka, 2008). However, research has cast doubt on the use of tempo-distorted measures of fertility for evaluating the contribution of immigrants to aggregate fertility (Toulemon, 2004, 2006). Furthermore, previous research has almost exclusively analysed incomplete fertility profiles, an approach which provides little insight into the absolute impact of immigrant fertility. Considering the UK, this research uses survey estimation and count regression techniques to disentangle tempo variation from the quantum of immigrant fertility. This approach is crucial for testing migrant fertility hypotheses because migration is known to influence the timing of childbearing (e.g. Andersson, 2004). The results support several hypotheses, with evidence of disruption followed by elevated fertility, particularly for recent cohorts of women arriving after age 25. However, the results show no evidence of disruption for immigrants from Jamaica or Bangladesh, instead suggesting cultural maintenance for Bangladeshis and adaptation for Jamaicans. After exploring these results in detail, this paper discusses the benefits of this approach for understanding migrant fertility and informing population projections.

b.m.wilson@lse.ac.uk

Fertility and values: a look at regional differences within the European context

Lara Patrício Tavares, Instituto Superior de Ciências Sociais e Políticas (Universidade Técnica de Lisboa) and DONDENA Centre for Research on Social Dynamics (Università Bocconi); Bruno Arpino, Department of Political and Social Sciences and RECSM, Universitat Pompeu Fabra and DONDENA Centre for Research on Social Dynamics (Università Bocconi)

Using data from the Eurostat Database and European Value Surveys we assess if recent fertility trends in Europe are associated with a change in values. A special emphasis is given to Spain and Italy that, together with the other Southern European countries, are often seen as a homogeneous group sharing the same 'traditional' values and demographic behaviours –as opposed to Scandinavian countries which are seen as progressive. We show that Italy and Spain are not that similar in terms of values. We also show that similarities at the country level with respect to TFR

hide considerable variation at the regional level. We argue that an analysis at the regional level, as carried out here, is crucial to better understand changes in fertility levels. Our analyses provide evidence that recent fertility trends are associated with value dynamics, namely that the highest increases in TFR happened in regions where both individualism with respect to relationships and individual autonomy grew at the same time that individualism with respect to children diminished. We also provide empirical evidence in support of McDonald's theory that both gender equity at the institutional level and within the family are necessary for fertility to rise.

ltavares.wiv@gmail.com

A Spatial Analysis of Childbearing in Cohabitation

Agnese Vitali, Carlo F. Dondena Centre for Research on Social Dynamics, Bocconi University; Arnstein Aassve ,Carlo F. Dondena Centre for Research on Social Dynamics, Bocconi University; Trude Lappegård, Statistics Norway

The disconnection between marriage and childbearing represents one of the main recent change in the families, with the Nordic countries acting as the forerunners in this new trend. In this paper we study the diffusion of childbearing in cohabitation as opposed to marriage across Norwegian municipalities. We rely on spatial panel econometrics to investigate how childbearing in cohabitation spreads geographically in relation to three indicators: importance of religion, female educational expansion and economic uncertainty. Our findings indicate that female educational expansion is the most important predictor of childbearing in cohabitation. The innovation of this paper is found in the access to unique data which offer detailed information on all municipalities within a country. Using new advanced modelling techniques this paper provides new and improved knowledge about the diffusion of childbearing in cohabitation.

agnese.vitali@unibocconi.it

HEALTH AND MORTALITY

STRAND ORGANISERS: DR. AMAOS CHANNON, UNIVERSITY OF SOUTHAMPTON; DR. PAULA GRIFFITHS, LOUGHBOROUGH UNIVERSITY

Predictors of overweight and obesity in children and adolescents: Monday 9 September, 1.30pm

Understanding ethnic differences in BMI in the US and UK

Afshin Zilanawala, Yvonne Kelly, Amanda Sacker, University College London

Health disparities are an important indicator of inequality in society. In the UK and US, racial and ethnic health disparities have been documented. Research has focused on adults and less is known about disparities among children. Early childhood health is an important predictor of adult health and wellbeing. Previous work suggests observed disparities are explained by socioeconomic, cultural, and behavioural factors. Little research examines racial and ethnic disparities in childhood health from a comparative perspective. Comparative analyses offer the opportunity to take into account cultural and societal factors in explaining ethnic/racial differences. Our study investigates ethnic inequalities in adiposity, as measured by BMI and obesity/overweight, among 5 year olds. We examine socioeconomic position, markers of cultural tradition, and family routine characteristics to understand ethnic inequalities in adiposity. Analyses use two comparable nationally representative birth cohort studies from the US and UK. We use a detailed ethnic classification and a rich set of explanatory factors. In the UK sample, we find Indian and Pakistani children have lower BMI and Black Caribbean children have higher BMI compared to White children. Bangladeshi and Black African children were more likely to be obese (as compared to normal weight), but these disadvantages were mostly due to cultural and socioeconomic factors. Unexplained ethnic differences were seen among Black Caribbeans. In the US sample, Mexican children's higher BMI is explained by cultural factors, and the American Indian disadvantage for BMI was not explained by explanatory factors.

afshin.zilanawala@ucl.ac.uk

Family structure, maternal nativity, and childhood obesity: Evidence for the United Kingdom

Wendy Sigle-Rushton, Alice Goisis, London School of Economics

Using data from the British Millennium Cohort Study (MCS), we examine the risk of overweight at age 5, exploring whether and how it varies by family structure and maternal nativity. Because the resources available to different family types, and the form and function of the family, are likely to vary across different nativity groups, a closer examination of heterogeneous effects may shed light on the underlying processes that drive gaps in well-being by family structure and parental marital status. Although within all maternal nativity groups children of married mothers have better health outcomes, our findings suggest that predominant theoretical explanations which link marriage to greater access to resources and better health behaviours may be less relevant for the children of foreign-born and to some extent second-generation mothers.

W.Sigle-Rushton@lse.ac.uk

Community socio-economic status influences on dietary intake in South African adolescents living in an urban area

R. Pradeilles[1] ; P. Griffiths[1,2] ; E. Rousham[1] ; Norris S 2 ; A. Feeley[2]; [1]Centre for Global Health and Human Development, SSEHS, Loughborough University; [2]MRC/Wits Developmental Pathways for Health Research Unit, Department of Paediatrics, School of Clinical Medicine, The University of the Witwatersrand

Background and objectives
The influence of the community environment on adolescent dietary intakes has not yet been investigated in low- and middle-income countries. This work investigates associations between community and household socio-economic status (SES), gender, ethnicity and diet.
Methods
Analyses of data at 17-19 years from the 1990 born Johannesburg-Soweto Birth to Twenty cohort (n=631) were conducted. Associations between gender, ethnicity, caregiver's education, community SES indices, and dietary intake were examined using linear regression whilst controlling for potentially confounding factors. Community SES indices were created using principal components analysis applied to proxy indicators of the community environment. Dietary intake was assessed using a locally developed Food Frequency Questionnaire.
Results
Adjusted linear regression results showed there was a significant relationship between gender and fat intake (+2.3% of total energy for girls vs. boys; p<0.0001). The difference in mean energy intake by ethnicity was significant in girls (-0.5 z-scores for mixed ancestry vs. blacks; p<0.0001).
Mean energy intake was higher in girls living with a caregiver who had lower education (+0.39 z-scores for the non-educated or primary school category vs. higher education; p=0.023 and +0.41 z-scores for the secondary school category vs. higher education; p=0.002).
Mean carbohydrates intake in girls was higher among those reporting a high need for neighbourhood services (+2.17%; p=0.012).
Mean energy intake in girls was higher among those reporting higher problems in their neighbourhood (+0.3 z-scores; p=0.002).
Conclusions
Findings of this analysis show that gender, ethnicity, caregiver's education and community SES factors have an influence on diet in this cohort of adolescents in Johannesburg.

R.Pradeilles@lboro.ac.uk

Socio-demographic predictors of health and mortality: Tuesday 10 September, 4.45pm

Do short birth intervals have long-term implications for parental health? An investigation using Norwegian complete cohort register data

Oystein Kravdal, University of Oslo Emily Grundy, University of Cambridge

Short inter pregnancy intervals are known to have adverse effects on perinatal incomes and child health, especially in poorer countries. Inter-pregnancy or birth intervals have also been associated with maternal outcomes in both poorer and richer societies, although results have been disputed. Apart from possible maternal depletion, having two closely spaced children may lead to stresses on both parents which are manifested in later poorer health. We investigate associations between birth intervals and later use of prescribed medication and mortality risks using discrete time hazard modelling of complete cohort Norwegian register data. Results show significant adverse effects on both outcomes of birth intervals of less than 18 months, although effects are relatively small.

emily.grundy@geog.cam.ac.uk

Intra-migration and health in England and Wales: Does where you move to impact upon your health?

Mark A Green, University of Sheffield

A small subset of Geographers have been interested in the role that migration plays in influencing health other than for international movements. Despite the success of the 'Moving to Opportunity' scheme in the USA, very few studies have focused on how neighbourhood effects and conditions independently affect this relationship. Of the research conducted in Britain, most focuses on an aspatial approach. However this is problematic, since they assume that this experienced effect (i.e. migration) is consistent. Furthermore, given that movers and non-movers vary in their characteristics, selection bias is usually unaccounted for when testing such effects. As a result, analyses violate their model assumptions meaning findings may be false and be a product of model conditions. This presentation seeks to evaluate whether there is an additional observed impact on an individual's health associated with migration within England and Wales. A new and innovative methodology is applied to this theme to allow us to gain a more accurate analysis of patterns. This surrounds a recently developed matching method (Coarsened Exact Matching), which manipulates a dataset to allow for more accurate parametric testing. Matching methods are an under-utilised research method, despite their ability to transform analytical design towards a pseudo-experimental approach. Results from a larger study showing the importance of accounting for origin and location in movements are presented to further advocate the implementation of this research methodology/design as a means of improving spatial and analytical research in Geography.

mark.green@sheffield.ac.uk

The relationship between age, period and cohort trends in mortality and self-assessed health in Britain from 1974 to 2006

Michael Murphy, London School of Economics

Over the past 30 years, mortality has improved substantially in Britain. However, a range of health indicators, especially self-reported measures, suggested that health improvements did not match those of mortality or even deteriorated over this period. Trends in mortality and morbidity might be expected to be causally related to both current (period) and earlier (cohort) experiences, but effects such as selection and scarring might be expected to work in opposite directions. Thus the relationship between age, period, and cohort morbidity and mortality at the population level remains an empirical question and this paper assesses these relationships in Britain over the past 30 years, using a range of different self-reported morbidity indicators in order to elucidate possible joint future patterns of mortality and morbidity. The morbidity data used are from the General Household Survey (GHS) time series file, interviewing about 20 thousand adults aged 16 and over per annum, The total sample size is 671,773 including information on: 1. long-standing (chronic) illness 2. limiting long-standing illness 3. general health 4. current illness 5. acute illness 6. smoking The mortality data covering the same period are taken from the Human Mortality Database (HMD). I fit a series of age, period and cohort (APC) epidemiologically-informed models using Poisson & log-binomial models to compare period & cohort trends. I discuss the results and methodological issues including robustness of models and the implications of these findings for future patterns of morbidity.

M.Murphy@lse.ac.uk

Identifying housing transitions in relation to subsequent mortality at older ages

Maria Evandrou, Jane Falkingham, James Robards, Athina Vlachantoni, EPSRC Care Life Cycle, University of Southampton

While transitions into residential care and informal caring arrangements within the household have been researched in numerous cases, there has been less consideration of such transitions in the context of subsequent mortality. Analyses have generally either considered longer-term mortality transitions over ten years or more using longitudinal data or short-term transitions in relation to palliative care. Neither approach allows for the estimation of the relationship between housing pathways and risk of mortality depending on the housing pathway. Therefore, the present study uses waves 1-18 of the British Household Panel Survey (BHPS) to identify housing transitions over a period of three years and their association with subsequent mortality. BHPS members aged 65 years and over and resident at two consecutive waves were selected and followed through their housing pathways. Mortality after the three waves of observation was estimated according to the housing pathways observed and also controlling for a range of covariates which include age, sex, marital status, health status and socioeconomic measures. Results show that transitions to residential housing within 1 year of the final wave of observation before dying are the strongest predictor of subsequent mortality. Excess male mortality across all housing transitions was evident, as was higher mortality among the never married group and among those reporting poor health at the baseline. A finer-grained set of mortality transition estimates are presented than possible using other longitudinal data which has considered longer time intervals between transitions.

james.robards@soton.ac.uk

Health and mortality in low and middle-income countries: Wednesday 11 September, 9.00am

Intra-partum care among the urban poor in India: analysis of temporal dynamics in decision-making

Eleri Jones, London School of Economics

Aim: To understand and explain the temporal process and dynamics of decision-making on intra-partum care for first births among the urban poor in India.
Methods: The study uses a qualitative longitudinal research design. Two stages of semi-structured in-depth interviews were conducted in January-July 2012 with primiparous women, as well as their husbands, mothers-in-law and/or mothers (depending on household composition around the time of the birth). The first interview was conducted in the third trimester of pregnancy and the second within the first 8 weeks postpartum. 16 households were sampled purposively from 12 slums in the city of Indore, Madhya Pradesh. 75 interviews, background information and field notes were coded and analysed thematically and longitudinally.
Results: Households identify the location and register at a facility as a priority, but make financial and transport arrangements in the final stages of the pregnancy. Where intentions for home delivery are influenced by strong norms and/or lack of experience with the health system in general, planning and preparation is limited. Even where planning for intrapartum care is explicit and begins early in pregnancy, uncertainty is a feature. Anxiety; discontent following antenatal visits; and mixed messages from members of the social network and health providers all contribute to this uncertainty regarding health care provider. Intentions may change during pregnancy and outcomes do not always match intentions, regardless of preparedness, due to multiple influences at the individual, household and health system levels. Conclusion: There is a need to reconceptualise decision-making and birth preparedness as temporal processes with non-linear courses of action.

E.W.Jones@lse.ac.uk

Regional and socioeconomic differentials of mortality risk at young ages in Brazil.
Mario F. G. Monteiro, Alba Zaluar, NUPEVI, Instituto de Medicina Social, UERJ, Rio de Janeiro

The probability of premature death between the ages of 15 and 30 (15q15) is particularly important in studies on violence because external causes account for 72% of deaths in this age group. The objective of this paper is to study the ethnic and regional risk differences of mortality among young people, estimating the probability of an 15 year old adolescent dying before reaching 30 years (15q15). This information can be useful for implementing public policies that aim a reduction of mortality risk at young ages. The estimates have been done for five selected States of Brazil: Rio de Janeiro, São Paulo and Minas Gerais, in the Southeast Region, and Pernambuco and Bahia in the poorer Northeast Region. Using the MortPak, program, developed by the UN Population Bureau, with information from the Demographic Censuses of 2000 and 2010 on children born alive and children surviving according to mother's age (Brass Method), the probability of death between the ages of 15 and 30 years old (15q15) was estimated. The results showed higher risks for the Black population than for the White, mainly in Pernambuco in 2000 (15q15 = 48/1000, meaning that 4.8% of Black adolescents aged 15 years old will die before completing 30 years) and Bahia (15q15 = 34/1000, in 2000). Nevertheless, significant reductions of 15q15 from 2000 to 2010 were observed for both Black and White ethnicities in five States. In Pernambuco in 2010 the estimate of 15q15 was reduced to 26/1000 for the Black population.

mario_f_monteiro@hotmail.com

An investigation of seasonal variation of child under-nutrition in Malawi: is seasonal food availability an important factor?
Lana Chikhungu, University of Southampton

Recent estimates indicate that the levels of child stunting and underweight in Malawi are 47% and 13% respectively (NSO-Malawi and MEASURE DHS, 2011). These levels are extremely high considering it is expected that in a well-nourished population only 2% of the population should be stunted or underweight (ORC-Macro, 2006). This study uses the 2004 Malawi Integrated Household Survey which was collected to study the variation of child stunting and child underweight across the year. The multivariate analysis findings show that stunting levels are significantly higher in the months of March to August (the harvest period) compared to September to February (the cropping season) similar to the findings by Ferro-Luzzi et al. (2001). The observed seasonal pattern of stunting is consistent with the pattern of childhood illnesses such as pneumonia and fever, again in line with previous studies (Panter-Brick, 1997, Simondon et al., 2001, Rowland et al., 1977). On the other hand, anecdotal evidence suggests reduced child care with mothers spending more time tending to the harvests during the months of March to August may also play a part in the increased stunting rates during this period. Reduced child care during busy agricultural activities has been reported in other settings (Chen et al., 1979, Huffman et al., 1980). It is therefore important that nutrition interventions should take into consideration this seasonal variation of child stunting and reduced child care children might receive during the busy harvesting time when implementing their programmes.

lcc2g12@soton.ac.uk

Geographic and socio-economic inequalities in women and children's nutritional status in Pakistan

Mariachiara Di Cesare, Imperial College London; Zaid Bhatti, The Aga Khan University, Pakistan; Lea Fortunato, Imperial College London; Zulfiqar Bhutta, The Aga Khan University, Pakistan

Background: Under-nutrition represents an important health risk factor among children and women in low-income countries. Despite the general global improvement in nutritional status observed in the last decade still in 2011 more than 300 million children in the world were undernourished. In particular, inequalities in the nutritional status of children and women suggest that the burden of under-nutrition is not equally shared within a country and across the population. Pakistan is one of the countries in the world with the highest burden of child under-nutrition and the lowest women's BMI.
Methods: Using data from the National Nutritional Survey of Pakistan 2011 we analyse geographical inequalities in nutrition among children and women as well as individual and household determinants. We use a Bayesian spatial model for the geographical analysis and multilevel regression models for the individual level analysis.
Results: In the best-off 10% of the sample the prevalence of stunting was 24% while it was 56% in the poorest. Similarly women's BMI ranged from 20.6 kg/m2 to 26.5 kg/m2 across deciles of wealth. The geographical analysis showed a high level of inequalities with areas characterized by a stunting prevalence from 22% to 75%. In multivariate analysis, after adjustment, household assets and mother's anthropometric status were associated with higher height, while food insecurity was associated with lower weight-for-age z-score and women's BMI.
Conclusions: Having identified the main determinants of under-nutrition alongside the vulnerable areas in Pakistan this is an opportunity for discussing specific local actions for reducing nutritional inequalities.

m.di-cesare@imperial.ac.uk

Inequalities in health in England and Wales: Wednesday 11 September, 11.00am

Gender convergence in human survival and the postponement of death

Les Mayhew & David Smith, Cass Business School, City University

It has been a long accepted demographic maxim that females outlive males. Using data for England and Wales, we show that life expectancy at age 30 is converging and continuation of this long-term trend suggests it could reach parity in 2030. Key among the reasons identified for the narrowing of the gap are differences in smoking prevalence between males and females which have narrowed considerably. Using data from 37 comparator countries gender differences in smoking prevalence are found to explain over 75% of the variance in the life expectancy gap, but other factors such as female emancipation and better health care are also considered. The paper presents a model which considers differences in male and female longevity in greater detail using novel methods for analysing life tables. It considers the ages from which death is being postponed to the ages at which people now die; the relative speed at which these changes are taking place between genders; how the changes observed are affecting survival prospects at different ages up to 2030. It finds that as life expectancy continues to rise there is evidence for convergence in the oldest ages to which either gender will live.

lesmayhew@googlemail.com

Social inequalities in mortality in English regions and Wales by NS-SEC, 2001 to 2010
Llio Owen, Office for National Statistics

In England and Wales, it is well-established that mortality varies according to socio-economic position. It is usually only possible to publish accurate and precise mortality rates for these social strata around the time of the decennial census, when populations are enumerated by occupation and employment status. However, to improve the timeliness of updates to such statistics, ONS in 2010 conducted a study to investigate the feasibility of using the Labour Force Survey (LFS) to provide inter-censal population denominators for the estimation of mortality rates by the National Statistics Socio-economic Classification (NS-SEC) during the inter-censal period. Further to this, ONS published national results from 2001 to 2010 which showed that there has been a steady decrease in mortality rates for both men and women in most classes over the period. Estimates have now been extended to regional level for three-year rolling periods from 2001-03 to 2008-10, which highlight geographical differences in the social inequality. In this analysis, the LFS was used to provide population denominators by age and NS-SEC for men and women of working age. Numbers of deaths by NS-SEC were obtained from death registrations (numerators) and the populations were derived from the weighted LFS datasets (denominators). Both relative and absolute indicators, Slope Index of Inequality (SII) ad Relative Index of Inequality (RII), are used to examine the trend in the size of the social gradient in mortality over time.

llio.owen@ons.gsi.gov.uk

The changing structure of English society, implications for health: evidence from the Health Survey for England 1996-2010
Fran Darlington, Paul Norman, Dimitris Ballas, University of Leeds

Recent releases from the 2011 UK Census have confirmed that Britain is changing; minority ethnic groups are not the minority they once were, particularly within England. This has implications for those monitoring the health of the English population: inequalities in health are widely documented including variations by ethnic group which cannot be explained away by genetic or cultural differences. Indeed it has been argued that such inequalities are rooted within socio-economic differences. Consequently, exploring how the distribution of key socio-economic variables and health status has changed over time by ethnic group is important to efforts made to understand changing health gradients. Drawing on evidence from the Health Survey for England between 1996 and 2010, this work will show how changes to the social and economic mix of England have differentially influenced the probability of reporting poor health or limiting long-term illness (LLTI) by ethnic group. Time trends illustrating patterns in the distribution of minority ethnic groups by social, class, education, housing tenure, employment status or health status will reveal changes in society's structure. To assess changing implications for ethnic variations in health over time, binary logistic regression will be used to model the probability of reporting poor health or LLTI each year. These results will be supplemented by calculating SIRs for each ethnic group by, for example, social class, housing tenure and education at each survey year.

gyfd@leeds.ac.uk

The Influence of area disadvantage on LLTI Reporting in England, 2001. Contributing Evidence to the Joint Action European Health and Life Expectancy Information System Programme (Work Package 6: The National Experiences in SES differentials in Health Expectancies)

Eleanor Evans, Office for National Statistics.

The influence of an ecological measure of area deprivation (Index of Multiple Deprivation (IMD), 2004) and a number of household and individual characteristics were used to assess the reporting of limiting long-term illness (LLTI) in England using the Office for National Statistics Longitudinal Study (ONS LS). This research formed part of a larger project to investigate the viability of using the LS as a basis for calculating life and health expectancies by National Statistics Socio-Economic Classification (NS-SEC), with the idea of testing the comparative discriminatory power of individual socioeconomic position and area cluster on a health outcome collected at Census 2001. Binary logistic regression analysis found, amongst others, increasing age, low educational attainment and high area based deprivation to be significant in increasing the odds of reporting limiting long-term illness. A significant interaction between IMD and housing tenure was also present: in the most deprived areas, a protective modifying effect was found for residents of council and other social housing forms of tenure and raised for residents of private rented and other accommodation types of tenure when compared to owner occupiers. This study adds further to the body of evidence linking socio-economic factors with subsequent LLTI reporting and also represents an important step in the study of life and health expectancies using the LS. In addition, the finding of a significant interaction between IMD and housing tenure in LLTI reporting warrants further investigation and may signify differences in housing quality, maintenance and access. ONS LS Clearance Number: 20139.

eleanor.evans@ons.gsi.gov.uk

HISTORICAL DEMOGRAPHY

STRAND ORGANISER: DR. ALICE REID, UNIVERSITY OF CAMBRIDGE

Historical mortality: Tuesday 10 September, 9.00am

From ague to pyrexia and from smallpox to heart disease: a general overview of causes of death in Scotland 1855-1955

Alice Reid, Cambridge Group for the History of Population and Social Structure, University of Cambridge; Eilidh Garrett, University of Cambridge & University of St Andrews; Chris Dibben, University of St Andrews; Lee Williamson, University of St Andrews

This paper provides a broad overview of mortality in Scotland for the century following the inception of civil registration in 1855. A newly created dataset comprising the detailed returns of deaths by cause of death, age and year as given in the Annual Reports of the Registrar General for Scotland will be used. The role of variations in nosologies, developments in medical knowledge and fashions, differences in age structure and the evolution of the disease environment in the changes in causes of death reported at the national level between 1855 and 1955 will be examined. Numbers of deaths were published annually by the Registrar General for Scotland by age, sex and cause. In 1855 deaths were classified into 109 causes; by 1949 255 separate causes were enumerated. The way individual causes were recorded varied over time, resulting in nearly 1000 distinct descriptors. These have been re-coded and regrouped so as to maintain (as far as possible) consistent causal groupings across time. The resulting time series enables numbers of deaths, as well as crude, age-specific and standardised death rates, to be considered by sex and cause over time. Broad trends will be presented, and comparisons of the various measures allow the roles of changing age structure and the decline in infectious disease in the overall decline of mortality to be assessed. The data will also be used to comment on Flinn's version of the McKeown thesis regarding the reasons for mortality decline in Scotland.

amr1001@cam.ac.uk

Was there a causal relationship between early-life living conditions and adult survivorship in the past? Insights on socioeconomic determinants from a height-mortality linkage in Spanish rural settlements (1780-1900)

Antonio D. Cámara , Joana Maria Pujadas, Centre d'Estudis Demografics

The mediation of socioeconomic factors on the health outcomes of past populations has revealed to be complex in that socioeconomic inequalities do not always result in a health gradient or at least this gradient does not hold for all types of health outputs. Hence, it seems convenient to reassess the existence or absence of a solid relationship between certain inputs like income and/or occupation and health outputs on the basis of the potential mediation of uncontrolled factors related to the cumulative impact of living conditions over the life course. The aim of this work is twofold: 1) To test the relationship between health status in early stages of life (as approached by adult height) and survivorship (as approached by age at death). 2) To test whether that potential relationship was somehow mediated by the socioeconomic status of individuals and/or whether a potential attenuation of SES-related effects holds for all causes of death. Height (from recruitment acts) and mortality data (from death registers) were collected, tabulated and linked for male cohorts born between 1780 and 1900 in the municipality of Montefrio (Spain). Based on the valid matches, survival analysis techniques are being used in order to calculate relative hazards in function of age

(at enlistment and death), birth cohort, adult height and several combinations from the set of socio-demographic variables available in the sources.

adcamara@ced.uab.es

The direct influence from early life disease exposure on young adult height, southern Sweden 1814-1950

Stefan Öberg, Department of Economy and Society, Unit for Economic History, University of Gothenburg

We use a sibling comparison design to investigate if there is a direct influence from disease exposure early in life, as measured by mortality rates, on young adult height. The data comes from the Scanian Economic Demographic Database, covering five parishes in southern Sweden, with heights linked from universal conscript inspection lists to men born 1814-1950. The longitudinal data structure and detailed information make it possible not only to calculate the community level infant mortality rate for the year of birth but also for each individual's first year of life and time in utero. Since family relations are known we can use a sibling comparison design to remove all confounding factors constant between the brothers. No statistically significant and consistent negative influence is found. There are reasons to believe that the results represent lower bound estimates of any such influence. We for example find some indications of mortality selection counteracting any negative influence, or scarring effect, from disease on height. We can therefore not conclude that there is no negative influence. We can conclude that both the selection and the scarring effect on height from early life disease exposure, as measured by mortality rates, are likely to be very weak.

stefan.oberg@econhist.gu.se

Causes of death and diseases in the past: Tuesday 10 September, 1.30pm

The experience of trachoma, a poverty-related disease, in Italy and Spain between the 19th and the 20th Centuries

Lucia Pozzi, University of Sassari; Josep Bernabeu Mestre, University of Alicante; Maria Eugenia Galiana, University of Alicante

Trachoma, an eye disease caused by the Chlamydia trachomatis bacterium, is still today one of the three main causes of avoidable blindness, widespread in most countries in the developing world. The areas most affected by trachoma are characterised by conditions of extreme poverty and strong deficiencies in sanitation and housing. In the early 20th century it was still endemic in many European countries, in particular in the Mediterranean: Italy and Spain were two of the countries most affected by the disease; in the southern regions of the Italian peninsula and along the Mediterranean coasts of Spain only in the 60s it definitively disappeared. A first goal of our work is to analyse the incidence of the disease in these two European countries from the late 19th century until the 1960s, using all available documentation, highlighting its determinants and the causes of its prolonged persistence in the territories longer suffering from trachoma. The comparison between the strategies used to fight the disease in the two countries will allow us to highlight the importance of the health education, inspection activities carried out by dispensaries and rural hygiene centres, intervention and environmental sanitation. The historical experience will help us to reaffirm the validity of those strategies to improve the hygienic conditions and the environmental factors that cause the prevalence of trachoma, through a transversal community. Also, the limitations of an exclusively pharmacological treatment thereby providing valuable reflection also on today's health interventions made in the poorest countries. The analysis will also allow to contextualise the

experiences of the fight against trachoma in two European countries, highlighting the crucial role played by international health activities in the fight against trachoma.

lpozzi@uniss.it

Control of tuberculosis in the Gold Coast, 1900-1960

Joshua Amo-Adjei Department of Population and Health, Faculty of Social Sciences, University of Cape Coast; Frank Bonsu, National TB Control Programme, Accra Ghana; Kofi Awusabo-Asare, Department of Population and Health, Faculty of Social Sciences, University of Cape Coast

The paper explores the control of tuberculosis (TB) in the Gold Coast from 1900 to 1950. Using archival data, it deals with the epidemiology of the disease, spatial dimension and the responses from the government. First recorded cases were in 1904 when the government expressed concern over the health of Africans, especially at mining centres and major towns. Mining areas were the epic-centres of TB. For instance, in 1935, Tarkwa, a mining town with a population of 2,671 recorded 56 cases compared to 92 for Accra with population of 60,000. Reported deaths were highest among migrants from the north working in the mines. The high reported cases could be attributed to poor socio-economic conditions. Although, TB was common, emerging as the second highest reported cause of mortality, responses to address tuberculosis were weak. Among the challenges with control were poor record keeping and local opposition to data collection on illnesses, weak government commitment towards TB, issues which still plague the control of TB in Ghana.

kjamoadjei@yahoo.com

Towards a long-term historical cause of death coding scheme

Alice Reid, Cambridge Group for the History of Population and Social Structure, University of Cambridge; Eilidh Garrett, University of Cambridge & University of St Andrews; Chris Dibben, University of St Andrews; Lee Williamson, University of St Andrews

The comparison of causes of death over time is extremely difficult. Changes in medical knowledge and fashion mean diagnoses of the same condition may change over time: in most cases they become more precise, or two conditions, initially confused, are later recognised to be different. Cause-of-death classifications have changed over time to reflect medical knowledge and the cause of death structure and, even if causes are regrouped, it often proves impossible to follow causes reliably over time. The use of individual level cause of death data would allow the problem of changing nosologies to be addressed, as individual cause of death strings can be reclassified, but a classification system sensitive and flexible enough to reflect changes in the way the causes of death are recorded over time has not been developed. This paper reports on an attempt to develop such a classification, starting with the basic building blocks of the 4 character ICD10 codes but then adding additional historic codes for historical descriptors (HICOD). Of course mis-diagnoses, 'unknown' causes and overly vague descriptions of symptoms mean that it will never be possible to know the exact distribution of historical causes of death, and this may hamper analyses of change over time. However some groups of causes can be followed with more consistency than others, and this paper will give examples of successful and more problematic groupings using a variety of nineteenth century data-sets containing individual level causes of death.

amr1001@cam.ac.uk

Fertility and households in the past: Tuesday 10 September, 4.45pm

Son preference in a sharecropping society: Gender composition of children and reproduction in the pre-transitional Italian community of Casalguidi

M. Manfredini, Department of Life Science, University of Parma; M. Breschi, A. Fornasin

According to the evolutionary theory of Trivers and Willard (1973), biased gender compositions of children should be more male-oriented in high-status families, and more female-oriented in low-status ones. It has been then acknowledged that cultural and socioeconomic factors might offset and even reverse such a theoretical assumption. Gender-related reproductive behaviours could be the result of pure discrimination, usually towards females, but could also arise from different economic costs and benefits of sons and daughters. The present study aims at investigating the existence of son-oriented reproductive behaviours in a pre-transitional population of mid-nineteenth century Italy. The community was characterized by a large presence of sharecroppers, whose economic and occupational status was based on the availability of male working force within the household. By analyzing the reproductive life-histories of the villagers, we found evidence that such urgency translated, for sharecroppers, into an element able to affect fertility and reproductive behaviours.

matteo.manfredini@unipr.it

Innovation-diffusion, geography and clustering of fertility behaviour during the fertility transition: A multi-level analysis of micro census data for Sweden 1880, 1990 and 1900

Martin Dribe Department of Economic History and Centre for Economic Demography, Lund University; Sol Pía Juarez Centre for Economic Demography, Lund University; Francesco Scalone Department of Statistics, University of Bologna

Trying to describe and explain the fertility transition has been one of the main tasks of demographers and economic historians. Large scale projects such as the European Fertility Project have made great contributions to our understanding, although controversy remains about the causes and mechanisms of the fertility decline. There is an ongoing debate about whether the transition was mainly a response to changing socioeconomic structural conditions (adjustment) or a result of new attitudes, norms and behaviour spreading at about the same time in many regions of Europe (innovation diffusion). Although empirical evidence has supported both views, it has proven especially difficult to empirically corroborate the innovation diffusion theory (IDT). By studying fertility behaviour during the early phase of the fertility transition in Sweden, we aim at empirically testing the IDT. Since at least implicitly, IDT is often connected to geographic differences and ideas about clustering of fertility behaviour across space, we apply a multilevel approach on micro-level census data covering the entire population. The idea is to look at measures of clustering of fertility behaviour by geographical units to find empirical evidence that the community where people lived had an independent effect on their fertility. Despite average differences in fertility at geographical level, our findings demonstrate that fertility decisions are explained almost exclusively by family-level characteristics regardless of where the mother lives. Our results suggest that the IDT is based purely on an ecological interpretation of geographical differences (averages) rather than actual individual variability (variance).

sol.juarez@ekh.lu.se

Urban and Rural Illegitimacy in Coimbra, Portugal (1885-1910)
Mafalda Moura Pereira, University of Cambridge

Demographic treatments of births in Portugal around the turn of the twentieth century suggest (though partially and inconsistently) that illegitimacy was higher in cities than in the country. My paper tests this assumption through a study of some 16,000 baptisms in Coimbra's urban parishes between 1885 and 1910. It attempts a relatively rigorous analysis of what may be conceived an intractable problem in seeking to break down Coimbra's supposedly higher incidence of illegitimacy into a genuinely urban and an extra-urban component. Throughout the study period, Coimbra offered not only free medical care for single women but also private clinics and a selection of university-trained, fee-taking midwifes. It is thus plausible that it served as a magnet for pregnant women from the city's rural hinterland, who for health and other reasons chose to come to Coimbra to lie in. The paper lays claim to at least some methodological originality in its use of parish records to recategorize illegitimate births. Its procedure is to strip out from a record of the 'city's' baptisms 1) adults, latterly recognised as legitimate by fathers or meeting a precondition of their own marriage, and 2) relevant children, who may have been abandoned in the county and sent to Coimbra's orphanage, born outside but baptised within Coimbra, or born in Coimbra to non-resident mothers. Coimbra's baptismal records enable household reconstitution in stating parents' occupations, civil status, home town and residence, and grandparents' and godparents' names. By subtracting extra-urban births, we arrive at a single figure for cases of 'resident' illegitimacy and so derive the city's illegitimacy rate. Early findings for the relative incidence of rural and urban illegitimacy tend to bear out the assumption that rural women, following Catholic practices, were less likely to give birth out of wedlock. Over a 26-year period, the rural parish Sta. Clara numbered 179 illegitimate births in 1,452 (12.3%). The urban S. Bartolomeu had 412 such births in 2,176 (18.9%). Rural parents also tended to take their children to church for baptism earlier than their urban counterparts, after an average of 96 days against 110.

ammp2@cam.ac.uk

Investigating the immobile
Lyn Boothman, University of Cambridge

My research has examined long-term immobility in one small town in the two hundred year period to 1861.What proportion of couples, and single adults, had ancestors in the town, what proportion spent a large proportion of their lives in this one settlement? Did this change over time and how did it relate to social status, to kinship and to receipt of poor relief? This archive-based study used a population reconstruction which included a very wide range of data. Two types of indicator were used to assess immobility: 1. Family: the proportion of adult residents (singularly, or as a partner in a couple) who had ancestors in the parish; most analysis is based on those who were at least third generation 2. Time: the proportion of adult residents (singularly, or as a partner in a couple) who lived in the town for at least 30 years over the age of 16. These indicators were then related to social status and to kinship links within the settlement. Amongst the most noteworthy results: 1. An increase in immobility on both family and time indicators across the period. 2. A higher rate of change amongst married women than their husbands. 3. A considerable change in the social composition of the immobile across the period. 4. A concentration of immobility in the lower social groups, and amongst some families, by the nineteenth century. 5. Kinship links amongst immobile couples increased and kinship density grew considerably by the nineteenth century.

lb231@cam.ac.uk

INTERGENERATIONAL TRANSMISSIONS

SESSION ORGANISER: DR. VALERIA BORDONE, VIENNA UNIVERSITY OF ECONOMICS & BUSINESS

Intergenerational transmissions: Tuesday 10 September, 1.30pm

Social mobility over three generations in the UK
Tak Wing Chan, University of Oxford

In a previous paper, Chan and Boliver (2013) use data from three British birth cohort studies (NSHD, NCDS and BCS) to examine the patterns of social mobility over three generations of family members, and report a significant and strong grandparents' effect on both absolute and relative mobility rates. In this paper, I use data from the BHPS to explore further the grandparents' effect in social mobility. I try to replicate previous results with BHPS data. Further, I exploit the richer data in the BHPS in order to explore the channels through which the grandparents' effect operates. The grandparents' effect in social mobility persists even when parents' education, income and wealth are taken into account.

tw.chan@sociology.ox.ac.uk

Intergenerational wealth inequality and dependency across seven OECD countries
Agnese Vitali, Carlo F. Dondena Centre for Research on Social Dynamics, Bocconi University; Arnstein Aassve, Carlo F. Dondena Centre for Research on Social Dynamics, Bocconi University; Frank F. Furstenberg, Department of Sociology, University of Pennsylvania

The distribution of income and wealth across age groups is changing in many countries. Young people today are more likely to experience financial difficulties as compared to young people in the past. The elderly, on the other hand, live longer and are wealthier than they used to be. This paper studies the distribution of wealth across age groups in seven OECD countries (United States, United Kingdom, Germany, Italy, Sweden, Finland, and Japan) using harmonized micro-level data from the Luxembourg Wealth Study Database. We employ ordered logistic regressions to compute predicted probabilities of being in a given quintile of the distribution of net worth by age of householder, and we estimate the timing of wealth accumulation among young adults using polynomial regressions. Our findings show that in all countries the distribution of wealth is concentrated among the older age groups. This means that the older age groups have command of a disproportionate share the economic resources, compared to young adults. In many countries, the majority of young people aged less than 35 negative (i.e. debts) or no wealth. Italy and Japan represent the only two exceptions in that young people are wealthier than peers in other countries. We discuss the implications of concentration of wealth among the older segments of the population and difficulties of acquiring wealth among the young, an urgent topic for governments trying the balance support of the elderly while providing sufficient investment in the young.

agnese.vitali@unibocconi.it

Intergenerational transmission of attitudes toward the family: the role of family size
Valeria Bordone, Vienna University of Economics & Business; Michael Murphy, London School of Economics; Vegard Skirbekk, IIASA

This study investigates the association between family size (i.e. number of children within the family) and the similarity of parent and child attitudes about two alternative family forms, opposite-sex and same-sex cohabitation. We consider the extent to which family size moderates the relationships between intergenerational attitudinal congruence using multiactor data on native Dutch from the Netherlands Kinship Panel Study (N = 4,075). Multilevel regression and multinomial models show that while for cohabitation among opposite-sex couples there is no statistically significant difference in the parent-child similarity of attitudes in families with one child as compared to their corresponding dyads in families with 2 children, a lower similarity is found when looking at same-sex cohabitation. The higher the number of children, the larger (and positive) is the difference between parent's attitude and child's attitude on opposite-sex cohabitation, showing that parents are more traditional than the children.

valeria.bordone@wu.ac.at

Household structures in Europe, and their relationship with poverty and deprivation
Maria Iacovou, Institute of Social & Economic Research, University of Essex

This paper examines the relationship between household composition and a range of measures of the sufficiency, or otherwise, of people's incomes. The link between household structure and the risk of poverty has been documented in a range of studies (Bane and Ellwood, 1986), with particular attention paid to vulnerable groups, including families with children (Bradbury and Jantti, 1999); young adults (Aassve et al, 2007) and older people (Rendall, 1995). However, these studies tend to be restricted to subgroups in society; no study has attempted to document the relationship between household structure and income sufficiency across a wide range of household types, and across all 27 countries of the post-2005 European Union. That is the aim of this paper. The paper uses data from the EU-SILC, and assesses four measures of disadvantage: two measures of relative income poverty (household income below 50% and 60% of national medians, respectively) and two measures of subjective hardship (income insufficiency and difficulty in making ends meet). We identify those households which are at the greatest risk of poverty and hardship, examining how these risks vary across Europe, and how they vary between the different indicators of disadvantage which we consider. Although there are large variations between regions, and between countries within regions, in the risk of disadvantage, we find that three groups in particular are at an elevated risk of both poverty and hardship: households consisting of a single retired adult; households consisting of a single adult below retirement age; and lone parent households. However, we point out that social policy should not focus exclusively on these groups because when we consider the poor population as a whole, other groups, notably two-parent families with children, constitute a very large proportion of the poor population.

maria@essex.ac.uk

LIFE COURSE LINKAGES

SESSION ORGANISERS: PROFESSOR ELIZABETH COOKSEY, OHIO STATE UNIVERSITY; DIETER DEMEY, UNIVERSITY OF SOUTHAMPTON

Life course linkages: Tuesday 10 September, 9.00am

Coping with complex individual histories: A comparison of life course methods with an application to partnership transitions in Norway

Julia Mikolai, Mark Lyons-Amos, University of Southampton

As variation in the pattern of family life courses has increased over the past 50 years, the techniques available to analyse life course data have also expanded. While event history analysis is commonly applied, this is not always suitable, and more holistic approaches such as sequence analysis have been proposed as alternatives. As research tends to be interested in explaining more complexity in the family life course, it is necessary to extend our methodological toolkit by applying other promising methods, such as multistate event history models and latent class growth models. The aim of this paper is to compare and contrast event history models, sequence analysis, multistate models and latent class growth curve models to studying the family life course. The advantages and weaknesses of each of these methods are highlighted by applying them to the same empirical problem. Using data from the first wave of the Norwegian Generations and Gender Survey from 2007/2008, restricted to a subset of the 1955-1964 birth cohort, we model changes in partnership status across the life course, with education as the primary covariate of interest.

jm1e11@soton.ac.uk

The role of parental social class in the transition to adulthood: a Sequence Analysis Approach in Italy and the United States

Maria Sironi, University of Pennsylvania; Nicola Barban, University of Groningen; Roberto Impicciatore, University of Milan

In comparison to older cohorts, younger men and women in the developed societies delay their transition to adulthood and follow more complex trajectories. However, within cohorts there remain variations in timing and sequencing of events. Two of the major determinants of life course events related to transition to adulthood, and in particular family formation, are gender and social class. These two characteristics can influence the sequence of events characterizing the transition to adulthood in terms of socioeconomic inequalities through a different availability of opportunities for social mobility. The aim of the research is to examine in details the sequences of transitions highlighting, in a comparative perspective, how the life trajectories are influenced by parental social class and gender in the US and Italy.

mari.sironi@gmail.com

Parental background, intergenerational educational mobility and timing of first birth
Adrienne Duta, University of Southampton

This study aims to contribute to a long-standing debate in the literature regarding social mobility and fertility. Previous research focused mostly on the quantum dimension of fertility in relation to intergenerational class mobility. In this study, a less explored dimension of fertility is investigated, namely timing of first birth, and the intergenerational mobility measure is redefined as intergenerational educational mobility in order to accommodate the fertility dimension under study. The data used in this research come from BHPS (British Household Panel Study). The modelling strategy starts with more conventional approaches used to model mobility outcomes and it combines, for the first time, discrete-time hazard models with diagonal mobility models which are widely preferred in current studies analysing the outcomes associated with social mobility. The research questions to be answered are the following: (1) Does parents' education influence timing of first birth over and above respondent's education? (2) Does intergenerational educational mobility influence timing of first birth over and above parents' education and respondent's education? (3) Is the timing of first birth of mobile individuals more similar to non-mobile individuals in the group of destination or to the non-mobile individuals in the group of origin? (4) How do these vary by gender and cohort? Answering these questions will improve our knowledge of how individuals' lives are connected to the lives of their parents, what is the interplay between ascription-related, achievement-related educational characteristics and timing of first birth, and whether intergenerational educational mobility matters for the timing of first birth.

ad3e11@soton.ac.uk

Impacts of NEET experiences on social and health outcomes: an analysis using the Scottish Longitudinal Study
Kevin Ralston, Gillian Raab, Chris Dibben, Zhiqiang Feng, University of St Andrews

The high proportion of young people who are not in employment, education or training (NEET) is considered a serious social problem and has drawn considerable attention from academic researchers and policy makers in Britain. Being left out of employment or education at a young age may have long lasting effects in later life. However, there have been theoretical debates on the consequences of the NEET experiences, and so far empirical studies have yielded mixed results. This paper aims to investigate whether experiences of being NEET have adverse effects on later life chances in the Scottish context, where the prevalence of NEETs is persistently high in comparison with other parts of Britain. We used the Scottish Longitudinal Study (SLS), which is a 5.3% representative sample of the Scottish population We followed young people who were aged 16-19 in 1991 to 2001 when they were aged 26-29. Our outcome variables are economic activities, limiting long term illness and lone parent status. We used descriptive and modelling approaches in our analysis. Our research found that in 1991 NEETs were more likely to be of older (within the 16 to 19 age range), female, with lower qualifications, and to report limiting long illness. The NEET status in 1991 appears to be associated with negative social and health outcomes in 2001 but the strength of association varies with the type of outcome.

kr43@st-andrews.ac.uk

LOCAL GOVERNMENT & PLANNING

STRAND ORGANISERS: EILEEN HOWES, BSPS COUNCIL; DAVID GEORGE, LINCOLNSHIRE COUNTY COUNCIL

Demographic projections for local government: Tuesday 10 September, 11.00am

The production of small area population estimates and forecasts for customised geographies

Sally Kenyon, Hampshire County Council

This presentation will outline the data sources and methods used to produce customised population estimates, forecasts and projections for non-standard geographies. These include emergency planning zones, fire station catchments, flood zones, population within a distance of a point and school catchments. The presentation will also touch on the types of demography products produced by Hampshire County Council, their use in planning and policy and the threats to their existence.

sally.kenyon@hants.gov.uk

Population forecasting and demographic change in Luton

Eddie Holmes, Luton Borough Council

Luton has experienced strong population growth through a high birth rate and high levels of inward migration leading to pressure on housing, schools and services. The Luton local plan requires population and household projections and the education department require school place forecasts. The paper looks at the demographic issues surrounding Luton such as the under-estimation of the population in the mid-year estimates, measuring migration into Luton, population growth, fertility rates of the different ethnic groups and the implications of the population growth for school place provision, housing and demand for services. The paper looks at the results of the four different population forecasting scenarios for Luton which are trend migration, high migration, net-nil migration and a housing constrained scenario. Future issues are also looked at such as the implications of future migration and the housing benefit changes. The housing benefit changes could lead to extra population pressure for Luton with people moving from London to an area with cheaper rents.

edward.holmes@luton.gov.uk

Demographic projections for areas at risk of coastal flooding

David George, Lincolnshire County Council

Demographic projections for areas at risk of coastal flooding David George, Lincolnshire County Council Climate change poses an increasing risk to the population in low-lying areas along the east coast of England. The Lincolnshire Coastal Study, covering its three coastal Districts, was published in 2010 and recommended a strategic aim for housing development in the zones of highest flood risk to be of a level and type designed to keep the population broadly stable. To quantify this level of development and assess it against other trend based and policy scenarios for Local Plans in the area the County Council commissioned Edge Analytics to run a range of scenarios up to 2031 for the flood risk zones in each District using the POPGROUP suite of demographic forecasting models. These were completed in March 2011. This paper will describe:- • the technical challenges of running projections for bespoke areas based on Output Areas and, • how

the results have informed Local Plans since then. Using that data, East Lindsey District Council has consulted on their Draft Core Strategy and the Joint Planning Unit covering Boston and South Holland will have published theirs by the time of the conference. It is hoped that by then work will have been undertaken to update the projections to check against the proposed levels of housing, using the results of the 2011 Census. All three Districts have seen major revisions to their 2010 Indicative Mid-Year Estimates based populations following the release of the 2011 Census.

david.george@lincolnshire.gov.uk

Local government: Wednesday 11 September, 9.00am

Estimating population yield from new housing development

William Tonkiss, Ben Corr, Richard Cameron, Greater London Authority

The need to accurately predict the size and characteristics of new populations arising from housing development is well understood by local authority planners and private sector service providers alike. The GLA Intelligence Unit has used recent releases of 2011 Census data to assess past trends in population yield and to develop an evidence base for use by the London Plan team in setting housing targets, and by local authorities in negotiations with housing developers. The presentation focuses on the methodology, challenges and results of this project which seeks to transform the way population yield is understood in London.

william.tonkiss@london.gov.uk

Developing and running a local authority pupil projection models

Piers Elias, Tees Valley Unlimited

This talk looks at the processes and challenges of developing and running a Pupil Projection Model. Tees Valley Unlimited provide projections for all publicly funded Primary and Secondary schools in the Tees Valley – some 200 primary and 40 secondary schools with over 100,000 pupils – and have done so since the late 1970s when Cleveland County existed. The old Fortran model has long since been replaced with a much more transparent excel based model which has been in place since 1997 and has developed over the years with the emergence of
1. Alternative data sources such as ONS Postcode Birth Data, GP Patient Data; new legislation on parental preference; the disappearance of Infant and Junior Schools; the introduction and rapid expansion of Academies and now Free Schools and
2. New technologies, mainly GIS. With the emergence of Local Plans and Infrastructure Projects looking into the longer term, the model and outputs are coming under greater scrutiny, particularly on developer contributions, and its original purpose of providing DfES with projections for 7 years ahead in Primary and 5 years ahead in secondary has been superseded by planning requirements and alternative scenario building.

piers.elias@teesvalleyunlimited.gov.uk

Migration and the city regions of England and Wales

Tony Champion, Mike Coombes. Centre for Urban & Regional Development Studies (CURDS), Newcastle University

The UK's switch from net emigration to net immigration, along with changes in the origins of immigrant flows and alterations in the patterning of internal migration, have substantially altered the context of population change for its cities. The aim of this paper is to document the recent migration dynamics of England and Wales and examine the way in which the population profiles of places reflect their history of migration. The primary geographical framework is the 38 CURDS City Regions (CRs), using a 4-way classification of the 25 largest of these (Gateway, Stronger, Moderate and Weaker) developed for a previous study plus a fifth residual category of Smaller CRs. The empirical part of the paper begins with a decomposition of the migration component of population change 2001-2011 into its international and internal elements for the 5 CR types, using the ONS's official components of change data as revised in the light of the 2011 Census. Then data from the 2001 Census is used to compare the profiles of the CRs' populations in terms of the proportion of overseas-born, the latter's origins and their year of arrival. Further insights into the patterning of recent immigration are obtained from NINO registrations, while the role of internal migration is explored using data on the age of migrants from the NHS Central Register and Patient Register Dataset. Explanations for the patterns revealed include differences between the CR types in the performance of their economies.

tony.champion@ncl.ac.uk

METHODS AND MODELS

STRAND ORGANISER: DR. PAUL NORMAN, UNIVERSITY OF LEEDS

(Application of multi-level modelling session: organisers Valeria Cetorelli & Ben Wilson, London School of Economics)

Applications of multilevel modelling: Monday 9 September, 1.30pm

A session with four short papers using multi-level modelling, followed by discussion and structured debate with a senior academic.

Household structure and child health in Botswana
Oleosi Ntshebe and Amos Channon, University of Southampton.

This study examines the association between household structure and child health in Botswana. Such relationships are little studied in lower income settings, which is the case in Botswana. Also, new household types are emerging in Botswana in the form of extensive lone parenting, non-marital childbearing and parental cooperation with nonresident fathers and other household members. Household structure is defined based on the character and the complexity of the family in which children are brought up. Two measures of child health are assessed: diarrhoea and acute respiratory infection. Data analyzed comes from nationally representative surveys: the 1996, 2007 Botswana Family Health Surveys (BFHS) and the 2000 Multiple Indicator Survey (MICS). Simple and logistic multilevel models serve to control for confounding variables associated with child health. By implication, this study provides important insights into family functioning and child health outcomes not only in Botswana but other countries, particularly in Africa, with similar demographic and social contexts.

on1g11@soton.ac.uk

Socio-cultural determinants of modern contraceptive use in West Africa
Megan Ledger, University of Southampton

Research question: What role do socio-cultural factors play in the geographic differences in modern contraceptive use in West Africa?
Methods: Multilevel modelling techniques will be used to investigate the influence of communication, socio-cultural values and identity and to identify within and cross-country variations in the use of modern contraceptives at the individual, community, national and international level.
Data: Demographic and Health Survey (DHS) data from seven West African countries are used in the analysis of this paper. They were chosen because they were either phase V or VI surveys and GPS data was also available for these countries.
Preliminary results: The analysis is currently being carried out but it is expected that there will be differences in the significant associations between the socio-cultural factors and use of modern contraceptives across and within the diverse countries and regions in the analysis. The hypothesis is that socio-cultural factors that are significantly associated with modern contraceptive use will vary between as well as within the seven countries in the analysis and that community aspects relating to particular socio-cultural environments will influence modern contraceptive use.
Potential applications: This paper aims to see if there are geographical patterns in the determinants of contraceptive use and how these relate to each other. A cross-national comparison of differences

and similarities between population groups could be vital in informing the improvement and development of family planning interventions in this region.

mll105@soton.ac.uk

The effect of family allowances on first births in Europe cross-national longitudinal comparisons and critical junctures

Jonas Wood, Karel Neels, University of Antwerp

Fertility postponement and decline have contributed substantially to the acceleration of population ageing in later twentieth century Europe, which remains an important challenge for contemporary welfare states. As a result questions and debate arise on the impact of family policy on fertility. Using longitudinal microdata this article investigates the impact of family allowances on motherhood transitions in 13 selected European countries between 1970 and 2005. This contribution will present two contrasting approaches to assess the effect of allowances on first births. First a longitudinal cross-national comparative approach is taken in a multilevel framework. Second, focusing on critical junctures in family allowances by country, single-country analyses are performed and family allowances are operationalized with dummy-coded period variables. Controlling for individual level household and labour market position as well as aggregate-level yearly trends and unemployment rates, this contribution relates rises in cash benefits to higher first birth hazards for women aged over 30. However we also conclude that both approaches adopted in this research highlight the difficulties in assessing causal relations between macro-level allowances and micro-level childbearing decisions.

jonas.wood@ua.ac.be

The association between individual and national-level characteristics in fertility and partnership: An application of two-level latent class models

Mark Lyons-Amos, University of Southampton

There is considerable variation in both partnership and fertility across the developed world. As a result, the policy context also varies considerably either reflecting or driving cross-national behavioural differences. However, the range of substantive evaluations of the interaction between policy and behaviour is limited to policy evaluations (e.g. Perelli-Harris and Sanchez Gassen). This analysis therefore aims to address this dearth of research by evaluating the association of demographic behaviour at the individual level with national level policies. While multilevel-models are a common means of examining the interaction individual and contextual level, the loss of information in using countries as cluster level units means that drawing substantive conclusions is often difficult. As such, I propose the use of a two-level latent class analysis, where individuals and countries are assigned to classes at both level 1 and level 2 (so called discrete random effects). This facilitates a more specific interpretation of the interaction between individuals and their national context. Level-1 latent classes are formed from growth curves for the probability of experiencing three key life events by a certain age: entry into first cohabitation, entry into first marriage and first birth. These demographic data are drawn from the Harmonized-Histories dataset, which contained standardised, retrospective demographic histories. Level-2 latent classes are formed from indicators from the GGP contextual database, incorporating policy indicators and social indicators relevant to family formation (e.g. alimony structures, child benefit). Level-1 and Level-2 classes are correlated to formally reflect the interaction of individual demographic behaviour and national level policy.

mja303@soton.ac.uk

Methods: migration in models: Monday 9 September, 4.45pm

Estimating annual migration flows by age and sex for subnational geographies in the UK, 2001-2011

Paul Norman, Nik Lomax, John Stillwell & Phil Rees; School of Geography, University of Leeds

Data on migration between local government areas is an important component of annual estimates of population. Changes in migration levels at this subnational geography are indicators of social change and provide challenges for resource allocation. Outside of census year, in the absence of a population register in the UK, there is a need to estimate migration between areas using proxy data sources. One such source is derived from patient registers when people move house and inform their doctor of their change of address. Unfortunately, whilst data are available annually, the geographical and age-sex information is not sufficient to provide direct counts of migrants in the required detail. This methodological paper will demonstrate how Iterative Proportional Fitting (IPF) can be used to update base year local level origin-destination flows to subsequent years where only in/out totals are available and how nonlinear regression can be used to estimate age-sex schedules from grouped and / or sparse age-specific migration rates. An interim step making the estimation process more efficient is to group together local areas which have similar migration rates by age using k-means classification. A problem overcome here is that the data availability and specification is different in England & Wales from that in Scotland and also in Northern Ireland so producing a UK-wide migration matrix is especially challenging. The result of this work is an annual time-series of counts of migrants by age and sex between origins and destinations for local areas across the UK for 2001 to 2011.

p.d.norman@leeds.ac.uk

Combining Internal Migration data sources in England

Rebecca Newell, ONS/ESRC/University of Southampton

A new methodology for combining internal migration flow data from the 2001 Census and NHSCR data sources is presented in this paper. Central to the research is the development of an integrated Bayesian modelling framework, capable of combining the strengths from each of the two data sources to produce harmonised estimates of internal migration flows at the regional level in England. The methodology also provides a mechanism for describing and presenting the uncertainty in the estimates. As internal migration is the primary mechanism behind population redistribution in England, this work has the potential to better understand the quality and limitations of the available data.

bex.newell@ons.gsi.gov.uk

Redevelopment of the migration assumptions setting methodology for the UK's national population projections

Fern Leather, Office for National Statistics

A review was conducted by Southampton University in 2012 with the objective of evaluating the migration assumptions setting methodology for the Office for National Statistics' (ONS) national population projections and suggesting improvements. Following this, ONS have redeveloped the assumption setting methods for the 2012-based national population projections to incorporate gross flows rather than net migration, use of a Rogers-Castro curve with a student peak to smooth age distributions, and the use of formal time series models for extrapolation. These changes also prepare the assumption setting methods for the inclusion of rates-based flows in the future and could ultimately facilitate a move to probabilistic forecasting. The paper will detail the new methods and

set out the improvements compared with the old methodology, which have brought the UK's migration assumption setting closer in line with academic discourse and current best practice in official population projections.

fern.leather@ons.gsi.gov.uk

Examining the Role of International Migration in Global Population Projections
Guy J. Abel, Wittgenstein Centre for Demography and Global Human Capital, Vienna Institute of Demography of the Austrian Academy of Sciences; Nikola Sander, Wittgenstein Centre for Demography and Global Human Capital, Vienna Institute of Demography of the Austrian Academy of Sciences; Samir K.C. Wittgenstein Centre for Demography and Global Human Capital, International Institute for Applied Systems Analysis (IIASA)

Advances in projecting international migration have been hindered by a lack of adequate data. Consequently, international projection-making agencies commonly use simplistic assumptions of net-migration measures derived as residuals from demographic accounting. However, past net migration can be often volatile and are known to introduce inaccuracies when projecting populations (Rogers, 1990). This paper presents a set of global population projections to 2060, focusing on two alternative assumptions of international migration. Assumptions on rates of other demographic factors, namely fertility and mortality, are held constant. In the first projection, we set up the future migration in each country to mirror that of the United Nations Population Division (UNPD) , where "Projected levels of net migration are generally kept constant over the next decades. After 2050, it is assumed that net migration will gradually decline." (UNPD 2011, p. 12, paragraph C.1). In the second projection, we use a first-of-a-kind set of estimated 5-year bilateral migration flows by sex developed from Abel (2013). The net migration of the estimates within these flow tables matches those of the UNPD. The bilateral flow table estimates are further disaggregated by age using a standard Rogers-Castro migration schedule, and then summed over rows and columns to obtain immigration and emigration rates by age and sex. These estimates are used as base data in the projection model, where immigration and emigration rates are assumed to remain constant up to 2060. Our results highlight differences in the future level of populations around the globe and numbers of migrant flows between the net migration projection model and the immigration and emigration projection model.

guy.abel@oeaw.ac.at

Methods: Variations in outputs – Tuesday 10 September, 9.00am

The future equality of population estimates: how will we measure and should we adjust?
Steve Smallwood, Office for National Statistics

As with every Census the 2011 Census has increased our understanding of how population estimates drift over intercensal periods. It has also given us insights into how population as measured by the Census compares with population figures generated from other data sources. Alongside this knowledge lessons were learnt from improved quality assurance of both 2011 Census and mid-year estimates. Other work has been carried out attempting to consider uncertainty around population estimates and also to consider the application of plausibility ranges around population. This is all in the shadow of the potential for major changes in population systems if the Beyond 2011 programme results in major changes to the demographic system. This presentation will show some of the work that will be carried out to help communicate the quality of mid-year estimates. It will also discuss issues around whether, if information from that work suggests strongly that a mid-year estimate is drifting, some form of adjustment should be made.

steve.smallwood@ons.gsi.gov.uk

On the decomposition of life expectancy and limits to life
Les Mayhew & David Smith, Cass Business School

Life expectancy is a measure of how long people are expected to live and a widely used measure of human development. Variations in life expectancy reflect not only the process of ageing but also the impacts of epidemics, wars, economic recession. Since 1950 their influence in the most developed countries has waned and life expectancy is growing at an unprecedented pace. As a result it has become more difficult to forecast long run trends or possible upper limits to life expectancy. However, accurate population projections are needed for consideration of the social and economic consequences in fields such as health and social care and pension provision. In this paper we compare life expectancy in developed countries and the prospects for further advancement at both a macro and micro level. New methods are presented for comparing past advancements in life expectancy and also future prospects using data from five developed economies. Specifically, we consider life expectancy in ten year age intervals rather than over remaining life and show how natural ceilings in life expectancy can be used for extrapolating future trends.

lesmayhew@googlemail.com

How confident can we be in the projections of the older population in the UK?
Philip Rees, University of Leeds

This paper responds to a request by Lord Filkin, the Chair of the House of Lords Selective Committee on Public Service and Demography, to supply an assessment of confidence in the projected numbers of older persons for the UK. The paper reviews current methods of establishing confidence through probabilistic projection carried out by academics, national statistical offices and international statistical agencies. However, no UK probabilistic projections could deliver reasonable confidence intervals, required by the Committee by the end of 2012. Therefore, an alternative method was proposed that used a set of recent plausible projections of the UK population to form a distribution of outcomes that could deliver population ranges with known probability. Nineteen projections were pooled and used to compute confidence bands around a median projected population for each age group. The UK population aged 65+, 10.2 millions in 2010, is projected to 18.3 million in 2050, with a 95 confidence that it will lie between 21.3 and 15.7 million. We can be more confident about the numbers for the younger elderly (aged 65-84) than for the older old (aged 85+). We cannot be very confident about the future numbers of centenarians. The population of centenarians is projected to be 242 thousand in 2050 compared with 12 thousand in 2010 but the 95% confidence band stretches from 426 thousand to 59 thousand. Discussion in the final part of the paper addresses the issue of how much confidence we can have in the confidence band estimates.

p.h.rees@leeds.ac.uk

Methods: Digging deeper - Wednesday 10 September, 9.00am

Identifying age, period and cohort effects: Sarah Connor versus the Terminator

David Voas, University of Essex and Siobhan McAndrew, University of Manchester

How and why do people and societies change? Demographers and other social scientists often wrestle with the question of whether shifts in attitudes and behaviour are associated with age or the life course, historical period, or birth cohort / generation. The problem of disentangling age, period and cohort effects has become a staple issue in longitudinal analysis. New statistical approaches to age-period-cohort analysis (e.g. cross-classified multilevel models, intrinsic estimator, maximum entropy and Deaton-Paxson) have appeared in the past decade. Despite (or perhaps because of) their technical impenetrability, many scholars use them relatively uncritically. They have come to be seen as state-of-the-art tools that should be used in preference to less sophisticated methods. The avoidance of substantive assumptions in favour of a kind of robotic neutrality is regarded as a virtue. Using religious change in Great Britain and the United States as empirical illustrations, we argue that these methods are no more likely to produce correct solutions than approaches that explicitly call on human fallibility. We propose an alternative strategy based on visualisation and an iterative inductive-deductive approach.

voas@essex.ac.uk

Synthetic data estimation for the UK Longitudinal Studies: an introduction to the SYLLS project

Adam Dennett, University College London; Belinda Wu, University College London; Gillian Raab, University of St. Andrews

The England and Wales Longitudinal Study (LS), Scottish Longitudinal Study (SLS) and Northern Ireland Longitudinal Study (NILS) are incredibly rich micro-datasets linking census and other health and administrative data (births, deaths, marriages, cancer registrations) for individuals and their immediate families across several decades. Whilst unique and valuable resources, the sensitive nature of the information they contain means that access to the microdata is restricted, limiting the user base. The SYLLS project will develop synthetic data which mimics the real longitudinal data but crucially will not be subject to the same access restrictions as the national LSs. In this paper we will introduce two different but complementary methods that we will be adopting to generate the synthetic data – microsimulation and multiple imputation. Microsimulation will be used to generate a synthetic LS 'spine', mimicking the full population of individuals in the LSs but for a limited set of core variables, transitioning between 1991 and 2001. Multiple Imputation will be used to generate bespoke synthetic data extracts which match precisely the requirements of individual research projects. This paper will report on the methodological progress to date, issues and prospects for the new synthetic datasets.

a.dennett@ucl.ac.uk

Agent-based models and statistical emulators in demography: An example of modelling social care for the ageing UK

Eric Silverman, Jakub Bijak, Jason Hilton, Jason Noble, University of Southampton

Statistical demography is concerned with populations of statistical individuals, whose life courses can be inferred from empirical information. In contrast, agent-based models study simulated individuals, for whom certain behavioural rules are assumed. We wish to bring these two approaches closer together by proposing a method to analyse rule-based outcomes statistically. For that purpose, we utilise Gaussian process emulators – statistical models of the base model – to analyse the impact of selected parameters on model outputs. Emulators permit a statistical analysis of model properties and help select plausible parameter values, despite non-linearities and feedbacks in agent-based models which preclude a direct statistical analysis. We also undertake a sensitivity analysis to assess the relative importance of different parameters. The discussion is illustrated by a multi-state agent-based model of the ageing UK population, which aims to examine the interaction between population change and the cost of social care. The model captures the basic processes which affect the demand for and supply of social care, including fertility, mortality, health status, and partnership formation and dissolution. The mortality and fertility rates in this population are drawn from UK population data for 1951–2011 and Lee-Carter forecasts until 2050. Results show that the cost of social care in the UK is expected to rise significantly as the population continues to age. An in-depth sensitivity analysis performed using statistical emulators confirms that the level of care need within the population and the age of retirement have the most profound impact on the projected cost of social care.

j.bijak@soton.ac.uk

Embedding economic models of migration and household formation in a housing market model for localities and regions in New Zealand

Glen Bramley, Chris Leishman and David Watkins, Heriot Watt University

Traditional extrapolative projections of population and migration remain popular as a basis for planning housing provision in many countries. However, it can be argued that these processes of demographic change are significantly influenced by, as well as influencing, economic and housing market conditions at the level of local and sub-regional jurisdictions. This suggests that these processes should be treated as endogenous within models that seek to forecast housing needs and outcomes and test the impact of varying policies and economic conditions. Such a perspective, informed by UK experience and research, is brought to bear in a study commissioned by the national state housing agency to develop a demand and supply forecasting model for New Zealand. This paper would describe the method and findings for the specific models developed to forecast local migration flows and household formation rates by age, using 5-yearly Census data for territorial local authorities. It will go on to outline how these are incorporated in the wider economically-oriented forecasting system. System simulations are examined particularly in terms of deviations between the resulting population and household forecasts and the conventional projections provided by the national statistics agency. These highlight the importance of housing supply constraints and he potential spillovers between areas.

g.bramley@hw.ac.uk

MIGRATION

STRAND ORGANISER: PROFESSOR TONY CHAMPION, UNIVERSITY OF NEWCASTLE

Migration: Life course – Monday 9 September, 1.30pm

Spatial aspects of internal migration in Italy: a longitudinal approach
Alessio Fornasin, University of Udine; Corrado Lagazio, University of Genova

Whereas most research on internal migration in Italy to date uses cross-sectional data, this paper examines the phenomenon using a longitudinal approach. We study both the risk of migration over the last 80 years of individuals between ages 20-49 and the distance of migrants' first and second migrations. Data were collected using an ad hoc Telephone survey, involving around 2,000 respondents born and resident in Italy. A Poisson model is used for measuring risk and OLS regression models for distance. The variables that emerge as most influencing the risk of migration are the subject's place of residence and previous life-history. Migratory distance greatly depends on the migrants' socio-economic background and reason for migrating. The main determinants of internal migration at an individual level are level of education and having previously migrated at a younger age.

fornasin@uniud.it

Geographic mobility over the life course in some European countries: Using ShareLife data to compare changes of residence over the last decade
Frank Heins, Corrado Bonifazi, Institute for Research on Population and Social Policies – National Research Council

Within the framework of the SHARE project (Survey of Health, Ageing and Retirement in Europe - 50 + in Europe) biographical data of persons 50 years and older living in 16 European countries were collected in 2008-09. SHARELIFE, as the English Longitudinal Study of Ageing (ELSA), includes retrospective information on childhood, health, economic situation and employment, family events - such family formation and birth of a child - and on housing. The contribution focuses on the changes of residence over the life course and presents results of a detailed analysis of the available information. The changes of residence refer to all accommodations, where the participants in the study have lived permanently regardless of the various criteria of official statistics. The international comparison of the processes of geographic mobility takes into account the cohorts, the calendar years and the demographic information regarding the individuals. The analysis of the factors associated with geographic mobility is extended to the socio-demographic situation (especially the years of education) of the individuals and the major events over the life course (the formation and dissolution of the couple, the birth of a child, the job history). The events of 'start living together' and 'marriage' are the ones associated most closely with a change of residence, followed by the birth of a child. The factors shaping the geographic mobility of individuals will be presented for all persons and for persons who are living on their own. The potential of this analysis to shed light on the international differences in the intensity of geographic mobility will be discussed.

f.heins@irpps.cnr.it

Migration motivations and migrants' satisfaction in the life course: A sequence analysis of geographical mobility trajectories in the UK
Beata Nowok, Allan M Findlay, ESRC Centre for Population Change, University of St Andrews

An individual's residence history interrelates closely with other lifetime trajectories such as family, educational and employment careers. These dynamic and interacting processes produce migration patterns that differ between individuals. In this paper we apply sequence analysis methods to investigate existence of distinctive lifetime patterns of migration drivers among individuals changing place of residence within the United Kingdom. Based upon migrants' reasons for moving we link geographical mobility to various life domains, like job, housing or personal life. We use 18 waves of the British Household Panel Survey (BHPS) and treat sequences of all annual observations for an individual as a conceptual unit. We cluster those trajectories using pairwise dissimilarities derived by applying optimal matching technique. We indentify four distinctive groups of migrants and compare their satisfaction with life overall and with selected life domains. Since young adults are most mobile and can have very fluid residence histories we perform a separate analysis of them.

bn7@st-andrews.ac.uk

Migration: inter-regional patterns – Monday 9 September, 4.45pm

Migration in China: interprovincial migration trends in a transition economy
Tony Fielding, University of Sussex

This paper builds upon research published two years ago that tested four hypotheses about the effects of economic transition on migration flows in China: (i) that distance decay functions will decrease, meaning that the Chinese space-economy will become more integrated as capitalist development proceeds; (ii) that migration patterns will reflect the spatial clustering of peripheral Fordist accumulation in the Shanghai-Guangzhou coastal axis; (iii) that the flows will reflect the emergence of a 'new spatial division of labour' as the economic growth process matures; and (iv) that the flows will reflect the weakening control over migration exercised by the central state. It uses recently released 2010 census data to analyse the trends in inter-provincial migration flows from the late 1990s to the late 2000s. These analyses show that while the evidence favouring the four hypotheses remains strong, major shifts in the migration patterns have occurred. These shifts require us to revise dominant views as to the nature of the main migration patterns in China and of the processes from which they result.

a.j.fielding@sussex.ac.uk

Differentiation of Russian regions and cities by mean age of population as a consequence of internal migration
Ilya Kashnitsky, Higher School of Economics, National Research University, Moscow

Migration (especially internal) changes sex-age structures substantially both in donor and host areas. As long as migration involves mainly young people, their relocation to the big cities (mainly regional centres) accelerates population ageing in peripheral areas and thus depopulation. Ageing is particularly fast in the Russian hinterland. Here you can find areas with the mean age of population exceeding 50 years. These processes are illustrated with the map of mean age by Russian cities and districts (more than 2000 areas) built on Census 2010 data. It shows the significant difference between large cities and peripheral areas. In general, Russian population is younger in the eastern national regions and South due to the relatively high birth rates and immigration. In contrast, the oldest population – in the regions surrounding Moscow and St. Petersburg, which have been losing

its youth for decades – the "summoning force" of metropolitan agglomerations. It is estimated that rural areas and small provincial towns have been losing up to 40% of school graduates in the years 1989-2002 due to migration to the regional centers and major cities. The aim of this research is to estimate the scale of youth resettlement for the period 2003-2010 using the method of "shifting ages". It shows that the situation hasn't changed yet. The work is accompanied by illustrative materials (diagrams and already mentioned map), which give an idea of age-sex composition differences of the population in large cities and rural periphery. Migration plays the key role in these changes.
ikashnitsky@hse.ru

Migration in regional groups: effects, tendencies and correlation with integration
Bezverbny Vadim, Socio-Political Research Institute of Russian Academy of Sciences, Department of Economics and Sociology of Knowledge

At present, regional integration is an integral part of contemporary social processes of globalization and internationalization. Today it's difficult to imagine a stably developing country not being a member of an integration pool and not having stable political and economic relations with neighbouring countries. The paper examines the dynamics and trends of the migration links between countries of the main regional groups over time. For example, migration between the EU countries is viewed in close connection with the processes of deepening European integration following the creation of the European Economic Community. The main hypothesis is that the historical development and the emergence of the European Union, European Economic Area, Eurasian Union, MERKOSUR, Andean Community and other integration groups have changed the scale, trends and the impact of the migration exchange between the major regional group countries. The methodology is based on the methods of the statistical and graphical analyses. I also use correlation analysis to identify the relationship between the migration and historical integration processes. The indicators of migration exchange, migration turnover and net migration rate will be utilized. The data come from the official statistics of the Eurostat, the UN and the OECD.

vadim_ispr@mail.ru

Migration: censuses and estimates – Tuesday 10 September, 9.00am

How well is the impact of international migration measured between censuses?
David Owen, Institute for Employment Research, University of Warwick

This is an era of sustained high net international migration to the UK. The social and economic impact of such large population flows is likely to be substantial but the measurement of migration flows is problematical. The 2011 Census revealed that international migration had been the major influence upon population change over the preceding ten years, but the effect of sudden increases in migration upon the resident population is even greater at the sub-national scale. Population growth was slower in Wales and Northern Ireland than in England, but their minority ethnic populations grew rapidly largely as a result of international migration between 2001 and 2011. It was important for national and local governments to know about their numbers, location and needs. Unfortunately, the statistical information base on the growth of new populations and their characteristics was inadequate. This paper assesses how successful regular statistical surveys and administrative data sources were in identifying migration to each country, the changing ethnic composition of their populations and the socio-economic circumstances of new population groups. It presents the evidence on population change from a range of sources and compares it with Census data. The paper demonstrates the need for surveys to be boosted in order to accurately identify new population groups.

d.w.owen@warwick.ac.uk

Measuring population change in Scotland: how the Census sheds light on our success in capturing migration over the last ten years
Kylie Hill, National Records of Scotland

The ten-year interval between population censuses in Scotland leaves a large gap in our knowledge of population change over the decade. While births and deaths are registered centrally there is no such system to record migration – whether local, national or international. This presentation looks at the difficulties of tracking population change in a highly mobile era and how this can lead to the differences seen between population estimates produced throughout the decade and the results published from Scotland's 2011 Census. The first release of Scotland's Census results in December 2012 showed a Scottish population 49,000 higher than that expected by rolling forward the data from 2001, suggesting that we may have undercounted the total net migration throughout the decade. The presentation will break down how aspects of our methodology and assumptions could have led to these discrepancies and how much of the difference can be attributed to migration from different sources, including international migration from the International Passenger Survey; the adjustments applied to these flows in different parts of the decade; and internal and cross-border migration from NHS Central Register and Community Health Index records. Of particular concern is the need to estimate migration flows for detailed subgroups and at sub-national level. Assessing the success of our methods in following changes since 2001 will allow us to rebase the time series, apportioning additional residents to the correct years and geographic areas, and improve our processes to produce better population estimates on an on-going basis.

kylie.hill@gro-scotland.gsi.gov.uk

Internal migration as a driver of inter-censal drift
Neil Park, Steve Smallwood, Mark Auckland, Office for National Statistics

The mis-measurement of internal migration in the mid-year estimates whilst often marginal for a single year provides a significant driver of drift in the longer term. Although issues may not appear large in one year they are compounded by identical issues in subsequent years. This presentation explains how deficiencies in the measurement of internal migration can lead to substantial inter-censal errors in local authority mid-year estimates and are the main driver of error in many local authority areas. The difference between the population base derived from the Census and the patient registers used to estimate internal migration is examined and the impact this has on the construction of the mid-year estimates is discussed. In particular features of the mid-year estimates related to the interaction of rebasing the mid-year estimates and long lags between real moves and the capture of those moves via internal migration are explained. It is considered whether differences between migration flows from the Census and those derived by patient register can be used to predict the likely scope of errors in the mid-year estimates. Finally a framework for understanding how all measurement issues related to the mid-year estimates interact together is proposed.

neil.park@ons.gsi.gov.uk

Migration: Impacts – Tuesday 10 September, 4.45pm

The Hazara and Afghan diaspora in the United Kingdom, continental Europe and Australia

Helen Ware, University of New England

On March 1st 2012, the United Kingdom Parliament debated the persecution of the Hazara community in Quetta, Pakistan - a concern shared by at least twenty MPs who support the cause of their Hazara constituents. Proportionately there would be more Hazaras in Australia than in the UK but anything like such a level of political influence in the Antipodes would be unthinkable. There are many advantages in studying an ethnic diaspora group in a number of different locations. For example, as in this paper, it is possible to examine the links between the size of an immigrant ethnic group and its political influence. Demographically, the Hazara diaspora are of particular interest because the statistics (drawn from censuses and national immigration data) reflect a clear strategy of protecting young men whilst establishing familial bridge-heads in the new location. Thus in Australia 62% of Hazaras are male and the median age is a remarkably low 22.4. However, recent data indicate that there is now also a new wave of secondary or tertiary movement of Hazaras who have experience of refugee life in Iran and Pakistan. This paper explores what the statistics show about the Hazara and Afghani diaspora in Australia, the UK and Continental Europe, demonstrating that both the claims of the diaspora themselves and of their host populations are often belied by the actual figures, especially once the distinction is made between Hazaras and the Afhani community as a whole. In the European context, differences are explored between the nature of these diasporas where their host countries have been engaged in the fighting in Afghanistn and those who have not been so engaged.

hware@une.edu.au

Location, location? A critical examination of patterns and determinants of internal mobility among post-accession Polish migrants in the UK

Paulina Trevena, Centre for Population Change, University of Southampton; Derek McGhee, Centre for Population Change, University of Southampton; Sue Heath, Morgan Centre for the Study of Relationships and Personal Life, University of Manchester

This paper adds to the debate on the divide between internal and international migration by investigating patterns of internal mobility following the international move of post-accession Polish migrants to the UK. Our analysis is based on a large-scale qualitative study carried out among 83 Polish migrants living in urban and rural locations in England and Scotland. We analyse the reasons behind their initial choice of location in the destination country, and the propensity for subsequent internal mobility after arriving in the UK. We consider the role of family characteristics, migration channels, and time in the spatial moves the migrants undertake. In our analysis we differentiate between residential mobility (which was generally very high among our study participants) and internal mobility (undertaken by one-third of our sample). Our research findings indicate that migrants who arrive through recruitment agencies and do not have children (with them in Britain) are the most internally mobile, while those who arrive through personal networks (of family, friends or acquaintances) and with (especially school-age) children are the least likely to relocate after arriving in the UK. Moreover, it appears that migrants with families are more willing to make urban to rural moves, while young and childless migrants favour rural to urban relocations. Notably, the internal migration of some of our (childless) study participants was sometimes interspersed with short-term return migration. Finally, the general propensity to move internally seems to decrease with time: once the migrants secure permanent employment and stable accommodation, they are less willing to uproot again.

p.m.trevena@soton.ac.uk

Cleaning and care work in France: the contributions and trajectories of migrant workers.
Stephanie Condon, INED; Emmanuelle Lada, INED

The care sector has become a highly profiled object of migration studies. At the same time, gerontologists have raised awareness of the needs of the dependant elderly in their homes, but other branches of the care sector (housecleaning, childcare) have been paid less attention by policy or population researchers. Recent migration research has focused on the people carrying out various caring tasks in the domestic sphere. Yet this has generated less interest for policy-makers than estimations of needs of care services or how costs can be covered. Informality has long been a characteristic of care work throughout the world; the informal legal status of many migrants carrying out these jobs is just another layer of the complexity of understanding the dynamics of the sector. A European research project coordinated by the ILO has been instrumental in foregrounding issues relating to the role and working conditions of migrants as caregivers. This paper will present results from the French case. Multiple methods have been used to gain an appreciation of the position of migrant workers in the care sector and data sources include Labour Force Survey data (2010), policy reports produced by various administrations or agencies, interviews with stakeholders (union representatives, government departments, NGOs) and practitioners, and a series of semi-structured interviews with migrants working in the sector. Migration and ethnicity, as well as gender, are keys to understanding many aspects of migrant workers' trajectories within this section of the labour market, from recruitment and working conditions to training and mobility.

condon@ined.fr

Self-Employment of Immigrants: Understanding the country of origin effects
Berkay Ozcan, Department of Social Policy, London School of Economics; Serden Ozcan, Copenhagen Business School and Center for Entrepreneurship at CBS

A growing literature seeks answers to the question why immigrants from certain countries of origin are more entrepreneurial and whether entrepreneurship is culturally determined. Yet, focusing on the first-generation immigrants, this literature failed the thorny task of isolating the effect of institutional settings and macroeconomic conditions in origin countries from the "entrepreneurial culture", and furthermore has found inconclusive results. We propose that comparing second-generation immigrants that are born in the USA and lived under the same macroeconomic climate and institutional setting provides a way around this problem and alleviates the concerns about the immigrant selection. Using data from the Current Population Survey (1994-2011), we analyse the mechanisms through which the entrepreneurial culture in the country where parents had originated from affects their children's propensity to choose self-employment. Our preliminary result shows a significant negative correlation, which is robust to various specifications and fixed effects. Overall, our study offers insights about cultural transmission of self-employment across immigrant generations.

b.ozcan@lse.ac.uk

The migration-development nexus reconsidered: Trans-local perspectives on migration and local place making processes in Eastern Nepal

Jytte Agergaard and Ditte Rasmussen Broegger, Department of Geosciences and Natural Resource Management, University of Copenhagen

Geographical studies of migration, not least studies focusing on the Global South, have benefitted greatly from the theorization on transnational migration, diasporic practices and mobilities, and empirical studies of trans-local everyday practices and migrants' positioning as "being in-between". These insights have also stimulated governments, donors, NGOs and academics' interest in how migrants' transnational connections, in particular their individual and collective (economic) remittance practices, contribute to growth and well-being at home – referred to as the migration-development nexus. However, what seems to be less articulated in these theorizations and empirical analyses is how migration within national borders and trans-local everyday practices intersect with place-making. Thus, the main objective of this paper is to explore how migrants' trans-local habitus may explain if and how migrants participate and are included in local place-making in their 'home' place. In this respect we draw on geographical theories of place and mobility and by using a trans-local lens we move beyond conventional approaches to the migration-development nexus. Our empirical analysis is based on a qualitative and multi-sited case study organized around a particular village community in Eastern Nepal and scrutinizes the relationship between different forms of multi-local lives of movers and stayers and how different actors articulate the role and importance of 'home'.

ja@geo.ku.dk

Migration: younger children and adults – Wednesday 11 September, 11.00am

Migration transitions to higher educational institutions: Statistical modelling of the Student Record Data in the UK

Neil Bailey and Jakub Bijak, University of Southampton

Around two and half million people were attending an institute of higher education in the United Kingdom in the 2010/11 academic year, which equates to around 4.1% of the total population. Surprisingly, given the importance of higher education very little work has been conducted on the migratory patterns of students attending institutes of higher education in the UK. This presentation develops on my previous paper, which put forward a typology that categorised the different migration transitions that a person can undertake in order to attend a higher educational institution. Using the Student Record Dataset of the Higher Education Statistics Agency, which contains detailed information on every student recorded as attending an institute of higher education in the UK, we apply a series of statistical models to gain an in-depth understanding of student migration in the UK. The first technique used in this paper is a spatial interaction model of the student transitions between local authorities (LA) where distance and origin /destination characteristic variables are used to add informative information to our model of the transitions undertaken by students in the UK. The second technique uses multiple regression to model the distance migrated by students in the UK against their individual characteristics (age, ethnicity, socio-economic status, parental education), the institute they attended and the course they studied.

neil.bailey@soton.ac.uk

Spatial mobility trends in Sweden: An order-specific analysis of migration
Hill Kulu, University of Liverpool; Gunnar Malmberg, University of Umea; Emma Lundholm, University of Umea

The aim of this study is to investigate spatial mobility in Sweden over time and changes in mobility patterns by population subgroups. Most studies on internal migration focus on spatial redistribution of population and determinants of inter-regional migration flows; surprisingly little research has investigated the dynamics of spatial mobility in industrialised societies over time. The study of the dynamics of spatial mobility will deepen our understanding of how lives of individuals change over time and how changes in various domains of individuals' lives interact with their spatial mobility. We expect our research to trigger a series of studies on other countries using the same methodology. We propose the methodology as follows: We will first calculate age controlled migration measures to investigate spatial mobility of Swedish population over the last four decades (from 1968 to 2009). We will then disaggregate mobility rates by calculating order-specific mobility rates (e.g. the age-specific mobility rate for ages 18-29 is the sum of the first, second and subsequent mobility rates). We will next standardise order-specific mobility rates for place of residence and for changes in other life domains of individuals (education, work, family) to find out how much changes in various life domains of individuals or couples explain the change in mobility levels over time. We will examine mobility rates over time by using different definitions of spatial mobility and migration. We will use register data to study spatial mobility of individuals aged 18 to 29; the data include information on the main life events of the research population including residential changes.

hill.kulu@liverpool.ac.uk

Migration intentions in post-Socialist countries
Ognjen Obucina, Demography Unit, Department of Sociology, Stockholm University

The aim of the paper is to explore the factors related to emigration from Central and Eastern European and the former Soviet Union countries (commonly referred to as "post-socialist countries") and shed light on how economic circumstances following the crisis particularly influence respondents' plans to leave the country. No information on actual migrations abroad are available, but the previous literature suggests that migration intentions are a good predictor of actual migrations and that the forces that trigger migration intentions are also the same forces that make people actually move. Data are drawn from The Life in Transition survey II, which was conducted jointly by the European Bank for Reconstruction and Development and the World Bank in late 2010. The survey comprises 39,000 households in 34 countries to assess public attitudes, well-being and the impacts of economic and political change. The dependent variable in the paper is intention to move abroad within 12 months following the survey. The multivariate analysis is modelled as mixed effects logistic regressions with a random intercept. This approach makes it possible to allow for and to explore between-country variance in migration intentions. The results indicate that the impact of crisis is positively associated with intention to leave the country within 12 months. The impact of the self-perceived social mobility is arguably very interesting: both upwardly mobile and downwardly mobile are more likely to express the intention to migrate as compared to those who stayed in the same status relative to the period four years before the survey. The respondents aged 20-35 are 33% more likely to migrate than the respondents aged 36-50 and are also more than twice as likely to migrate as those aged above 50

ognjen.obucina@sociology.su.se

Contexts of migration across childhood: evidence from rural South Africa

Rachel Bennett, University of Southampton

Exposure to migration is an important yet unstudied indicator of children's social and physical environments in many low and middle countries. In South Africa, migration to access caregivers and educational opportunities, support family households and accompany family members are commonplace childhood experiences. Existing studies have found evidence of positive and/or negative relationships between measures of migration and child wellbeing. However analyses and understanding of the patterns, triggers and experiences of children's migration are limited. The aims of this paper are (i) to propose an approach to measuring children's migration focused on relationship to co-movers, origin household structure and childhood stage and (ii) to present empirical results on the contexts of children's migration in South Africa using longitudinal data from a demographic surveillance system in rural KwaZulu-Natal. The empirical work uses event history techniques to describe migration behaviour during infancy, preschool, middle childhood and adolescence, and to examine the relationships between propensity to migrate and individual and parental characteristics and life events, wider support networks, housing quality and household composition in relation to the migration typology. Key results include (i) strong relationships between measures of support networks and moves which do not involve the whole household, (ii) increasing relevance of paternal characteristics for propensity to migrate during later childhood stages, and (iii) the importance of individual characteristics and life events such as gender, childbirth and educational status for moves during the final childhood stage, adolescence. The paper contributes to efforts to conceptualise and measure children's migration and documents the circumstances in which children migrate in rural South Africa.

rachel.bennett@soton.ac.uk

POPULATION CHANGE, ENVIRONMENT, RESOURCES AND CONFLICT

STRAND ORGANISERS: DR. JAKUB BIJAK, UNIVERSITY OF SOUTHAMPTON; DR. ALAN MARSHALL, UNIVERSITY OF MANCHESTER

Demography of armed conflict: Tuesday 10 September, 11.00am

INVITED KEYNOTE SPEAKER:
Demography in the courtroom –
Helga Brunborg, Statistics Norway

The use of demographic evidence in international criminal court proceedings is relatively new and has presented several challenges. The talk will be based on the population project at the International Tribunal for the former Yugoslavia (ICTY) in The Hague. The goal of the project was to estimate the number of dead and missing persons during the armed conflicts in Bosnia and Herzegovina, 1992-1995. The presentation will focus on the study of dead and missing connected with the fall of Srebrenica in July 1995, which is known as the worst massacre in Europe since World War II. Results from this study have been presented to the court in a number of trials in written reports and oral testimonies, leading to convictions for war crimes and genocide. The use of micro data in court proceedings has presented special challenges with regard to data quality and methods. The role as expert witness will be discussed

Helge.Brunborg@ssb.no

The impact of the Iraq war on neonatal polio immunisation coverage
Valeria Cetorelli, London School of Economics

The public health consequences of the Iraq war (2003-11) have remained difficult to quantify, mainly due to a scarcity of adequate data. This paper is the first to assess whether, and to what extent, the war affected neonatal polio immunisation coverage. The study relies on retrospective neonatal polio vaccination histories from the 2000, 2006 and 2011 Iraq Multiple Indicator Cluster Surveys (N=64,141). Pooling these surveys makes it possible to reconstruct yearly trends in immunisation coverage from 1996 to 2010. The impact of the war is identified with a difference-in-difference approach contrasting immunisation trends in the autonomous Kurdish provinces, which remained relatively safe during the war, with trends in the central and southern provinces, where violence and disruption were pervasive. After controlling for individual and household characteristics, year of birth and province of residence, children exposed to the war are found to be 21.5 percentage points less likely to have received neonatal polio immunisation compared to non-exposed children. The decline in neonatal polio immunisation coverage is part of a broader war-induced deterioration of routine maternal and newborn health services. Post-war strategies to promote institutional deliveries and ensure adequate vaccine availability in primary health facilities could increase dramatically the percentage of newborns immunised.

V.Cetorelli@lse.ac.uk

Socio-demographic differences in surviving the Holocaust
Peter Tammes, ESRC Centre for Population Change, University of Southampton

During the Nazi occupation 73% of all Jews living in The Netherlands were killed in concentration and destruction camps - the lowest national survival rate in North-West Europe. Soon after the liberation The Netherlands Red Cross estimated that few Jewish children and aged had survived the Holocaust. Furthermore, it is assumed that among the Jewish proletarians the survival rate was lowest. These statements, however, lack a numerical basis. Recovered resources on Jewish inhabitants allow us to determine survival rates. In January 1941, the Nazi occupier ordered Jews living in The Netherlands to register with the local authorities. The original list of Jewish residents in Amsterdam has been recovered. This list provides information on names, date and place of birth, marital status, family size, address, religion, nationality and occupation. To determine who fell victim to the Holocaust, these Jews were compared to Jews mentioned in In memoriam-Lezecher; the book that contains the place and date of death of all Jews who lived in The Netherlands and died in Nazi camps: about 75% of all Amsterdam Jews were killed. Using these sources, we can analyze differences in survival chance and survival time related to socio-demographic characteristics. The preliminary findings show that Jews younger than 15 did not had lower chances of survival than older Jews, while Jews who lived in a family whose head had a higher status job had a higher chance of survival than Jews who lived in a family whose head had no job or a lower status job.

p.j.tammes@soton.ac.uk

Population change, environment, resources and conflict: Tuesday 10 September, 1.30pm

Determining the range of excess population loss estimates: A case study of the Democratic Republic of Congo (DRC) 1998-2004 armed conflict
Richard Kapend and Andrew Hinde, University of Southampton

The range of excess population loss estimates associated with the 1998-2004 armed conflict in the Democratic Republic of Congo (DRC) varies according to the methods, baseline or counterfactual scenarios set by given studies. By excess population loss is meant population shortfalls linked to all three components of population change: fertility, mortality and migration. Such shortfalls include the total number of deaths in excess of what would have been the case under normal circumstances; a fall in the number of births as well as an increase in the number of emigrants which can be associated with the conflict. Existing studies by Lambert and Lohlé-Tart and the International Rescue Committee (IRC), found that DRC's 1998-2004 war related estimates of excess population loss range, respectively, from 200,000 to over 5 million, between 1998 and 2007. This study presents new estimates, which range between 1.4 million and 2.8 million. These estimates were constructed by applying a range of demographic methods, both direct and indirect, to multiple sources of data, including the DRC 1984 census, Multiple Indicator Cluster Surveys in 1995 and 2001 and the 2007 Demographic and Health Survey, to estimate the components of demographic change. These estimates formed the input into cohort-component population projections under factual (i.e. what actually happened) and various counterfactual scenarios. Estimates of excess population loss were then derived from the difference between the two scenarios. Despite some limitations, combining various and timely data opportunities allows this study to narrow the uncertainty range around specific benchmark points. This study's findings suggest that presenting a range of plausible estimates of excess population loss is more comprehensive than considering single estimates as it has been the case with previous studies both by Lambert and Lohlé-Tart and the IRC.

R.Kapend@soton.ac.uk

A demographic reconstruction of the components that contributed the most to population change during the Sierra Leone civil war, 1991-2002
Amie Kamanda, University of Southampton

This paper aims to reconstruct the population of Sierra Leone to explore the demographic components that contributed the most to structural changes in the population during the civil war of 1991-2002. This conflict reduced life expectancy at birth, prompted mass population displacements and led to a rapid decline in the total fertility rate. The cumulative effect of these processes was negative population growth rate and dramatic deviations to the historical interplay of the patterns in the country's fertility, mortality and migration rates. Understanding the impact of such drastic reversals on the country's population is important for historical documentation and using demographic evidence to promote peaceful conflict resolutions. The cohort component method of population projection is applied to age, sex, fertility and mortality data from the 1985 and 2004 censuses of Sierra Leone to reconstruct the civil war population which is benchmarked to the 2004 population. Data on net migrants is extracted from the United Nations refugee agency. Additional fertility data stems from survey data and United Nations World Population Prospects (2010). The reconstructed population of 4.9 million in 2005 is compared to the observed population in 2004. Next, the counterfactual population is obtained through variant projections using age and sex data, fertility and survivorship ratios from 1985 census. The individual effect of each demographic component is assessed followed by an evaluation of the effect of interactions of the components. The result suggests that the drivers of population change during the armed conflict in Sierra Leone were fertility and forced migration.

ak904@soton.ac.uk

Do biased sex-ratios affect violent crime? An individual-level longitudinal analysis using Swedish register data
Sebastian Schnettler, Dept. of Sociology, University of Konstanz; Kieron Barclay, Dept. of Sociology, Stockholm University; Amber Beckley, Dept. of Criminology, Stockholm University; Andreas Filser, Dept. of Sociology, University of Konstanz

Highly male-skewed sex ratios have led researchers consider the potential consequences of male surplus on the marriage market for violent crimes and national security. Male surplus emerges due to imbalances of sex ratios at birth, shifting cohort sizes in case of age heterogamy, sex-specific mortality and regional migration. Therefore consequences of local imbalances on the marriage market may also appear in countries with a balanced sex ratio on the national level. Theory and evidence remain equivocal about the direction of a potential link between sex ratios and violence: Whereas taming effects of marriage on men and consequences of male-male competition point towards a positive association, larger female bargaining power and selectivity in partner choice due to female scarcity point towards the opposite: here males are expected to channel their efforts into socioeconomic achievement rather than violence. Evidence for contemporary societies relies almost exclusively on the correlation of crime rates and sex ratios on the national or province level. Results remain mixed which is likely due to data limitations in previous research: lack of individual-level and longitudinal data, an overly broad definition of marriage markets, and lacking specification of victim and perpetrator gender. We address these limitations and study the hypothesized link using Swedish registers, linking individual- and municipality-level data for Stockholm County (1990-2003). Using discrete-time proportional hazard models, we find that a higher proportion of males is associated with an increased probability of males aged 16 to 30 to commit crimes against both male and female victims.

sebastian.schnettler@uni-konstanz.de

Population and consumption effects under the Urban Transition

Emma Terama, University College London; Georgina Mace, University College London; Tim Coulson, Oxford University

Our project 'Population Change and Energy Consumption in the Urban Transition' investigates the net effect of urbanisation globally. We do this by 1) investigating population change in cities, i.e. using a demographic model to depict the predominant age groups and their progression through an observation period, 2) apply consumption indicators to the population structure, 3) break down the overall consumption levels to transport-based and non-transport energy consumption, and 4) draw a trajectory of the 'population x consumption' effects over time in an urban vs rural setting. Through this trajectory we can show the net effect of population and consumption on dwindling natural resources, as well as highlighting the consequences of consumption on emissions. We also investigate the differences between consumption patterns in an urban vs. rural setting. Scenarios curbing consumption may be used to inform future policy against the perils of major, uncontrolled consumption, especially in the less developed world. Through this research we aim to contribute to the understanding of rural vs urban consumption, the effects of population structure in creating observed consumption patterns, and to promote the sustainable use of energy in the future.

e.terama@ucl.ac.uk

POSTERS

STRAND ORGANISER: RACHEL BENNETT, UNIVERSITY OF SOUTHAMPTON

Poster session 6.30pm Monday 9 September (posters will remain on display throughout the Conference):

Why at the age of 15 years? An interrogation into why most adolescents have their sexual debut at the age of 15 years

Samuel Kojo Antobam, Gertrude Voetabge, Marian Smith, Ipas, Ghana

A good amount of work has gone into studying factors and consequences of early sexual debut of teenagers. Economic, social and some psychological reasons have been put forward to explain why adolescents engage in sex at early ages. The reasons range from family factors such as orphanhood (Palermo and Peterman, 2009), peer coercion and parental absence from home (USAID, 2008), dropping out of school (Morhe et al, 2012) to economic ones (Gómez et al, 2008). In all of these studies the approach has been to lump individual age points together, say early sexual debut before age 14, 15 or 16 years. But age of sexual debut increases more prominently at the age of 15 years than any other age in many sub-Saharan African countries. Specifically the percentage increase of adolescents joining the "sexual debut train" between the age of 14 and 15 years is significantly higher than at any other age. We are therefore asking what is peculiar about age 15 that explains this phenomenon. To answer this we need longitudinal data to determine the factors that influence many adolescents to start their sexual life at the age of 15 years, controlling for effect of time. But this type of analysis is hard to come by in sub-Saharan Africa due to lack of appropriate data. What we propose to do in attempting to answer the question above is to use latest rounds of Demographic and Health Survey (DHS) data from nine sub-Saharan African countries and compare sociocultural and demographic factors that may influence this phenomenon. Where possible (For example: education, date of first menstrual period, marital status, etc) we would lag the factors to reflect individual characteristics before they attained the age of 15 years. Admittedly this approach would not effectively deal with time factor, but it will help us to know some indicators as to why the age of 15 years seems to be unique in sexual history of many adolescents. We expect that sociocultural factors will uniquely explain why the age of 15 years seems to be a common choice among those who are not under any coercion at their sexual debut.

kojobbm@yahoo.co.uk

Understanding imperfections with the Mid-year estimates

Mark Auckland, Neil Park, Rebecca Wright, Steve Smallwood

This poster proposes a holistic way for understanding and visualising how errors from each component of change in the Office for National Statistics mid-year estimates series interact together. The benefits of this approach are that the interaction of compensating errors allows a better understanding of how mid-year estimates may 'drift' from accurately measuring the population.

mark.auckland@ons.gsi.gov.uk

Naturalization and earnings: A Sweden-Denmark comparison
Pieter Bevelander, Malmö University, Jonas Helgerz, Lund University, Anna Tegunimataka, Lund University

In the last decade several countries have changed its citizenship legislation in order to ease naturalization and increase economic integration among immigrants. In this regard Sweden and Denmark have taken different paths, where Danish legislation has been tightened the last decades and Swedish legislation, on the other hand, rather has been stable with no major changes. In Sweden an immigrant must have been resident in the country for a minimum of five years in order to apply for citizenship. In Denmark the corresponding number is nine. This study investigates the effect of citizenship on income in Sweden and Denmark and we ask whether becoming a citizen has a causal effect on an individual's income, and when this effect occur. Using comparable register data from both countries covering 300.000 immigrants in Denmark and100.000 in Sweden between the years 1986 and 2007 we perform fixed effects regression aiming for a causal relationship between citizenship and income. When comparing the outcomes in Sweden and Denmark we expect to see differences due to the major differences in citizenship legislation in the two countries.

anna.tegunimataka@ekh.lu.se

The People Trap: The unforeseen Impact of Birth Control: Contraception and Abortion
P S Carroll, R Kandhari and K Amirthamoorthy

Since the 1960s birth rates have declined worldwide. Together with the decline below replacement level there is a lack of means to bring about a recovery in the birth rate in developed countries where there is government support for birth control. The decline in the birth rate is linked both to the promotion of birth control, liberalisation of abortion laws and to the decline of marriage and these same factors are a hindrance to achieving a recovery in the birth rate. In certain Asian countries there are significant numbers of sex selective abortions. These raise the replacement level, which is a function of the gender ratio at birth and female mortality pre-childbearing. Asian countries such as China and India, where there are significant numbers of sex selective abortions, are discussed with the implications for how population trends might develop in the future. Health issues include depressive illnesses, low weight and premature births, breast cancer, ectopic pregnancies. Cerebral palsy is more often prevalent among children born with a low birth weight. Breast cancer risks increase with use of hormonal contraceptives and after induced abortions. Ectopic pregnancies are linked to use of IUCDs. Trends over time and international comparisons of the incidence or prevalence of these conditions are considered in relation to abortion rates and use of oral contraceptives, contraceptive implants and devices and other risk factors.

papriresearch@btconnect.com

Child tax, welfare benefits, and their effect on population growth
Alan Castle, Population Matters

Family Allowance was started in 1946 by Beveridge primarily to combat child poverty. With other benefits it is now an important part of many family incomes. England and Holland are now Europe's most densely populated countries and the UK fertility rate is well above the European average. Our continuing population growth is contributing to environmental damage and global warming. Is there a link between welfare benefits and fertility rates? There is a long history of using the tax and welfare system to modify social behaviour (e.g. fuel, tobacco, alcohol). The issues surrounding family benefits are explored, including the impact of the Child Tax Credit of 2003, the new Universal Tax Credit of 2013/14, and the new cap on benefits linked to average net earned income. While there is little direct UK evidence that our tax and welfare benefit system provides an

incentive towards larger families, ONS and European comparative studies support a link. Should government pay any incentive to families to have children? Any change would need to gradually remove incentives, but at the same time protect the poor. The recent Government review missed an important opportunity to create a radically new child benefit system to address today's problems, instead of those of 1945. Successive governments have failed to recognise the need for a National Population Strategy. The paper finally gives examples of alternative approaches to the benefit system.

colin@colingallagher.plus.com

An assessment of the input approach to estimate household childcare: the case of Plymouth, UK.

Hoayda Darkal, University of Plymouth

Household childcare is one of the most important unpaid production activities performed within home. The main aim of this study is to estimate the monetary value of childcare activities carried out by parents and to present an assessment of the input approach in estimating household childcare in the UK. Time use diaries were filled in by parents in Plymouth and used alongside available data on the amount of time spent on childcare in the south west. Using these data, the time input into childcare by parents was valued. Interviews with carers were conducted. Results focus on the difference between approaches, gender division of care performance and major trends.

hoayda.darkal@plymouth.ac.uk

Living alone, partnership history and psychological well-being in mid-life

Dieter Demey, Ann Berrington, Maria Evandrou, Jane Falkingham; ESRC Centre for Population Change, University of Southampton

There is strong empirical evidence that psychological well-being deteriorates in a relatively short period surrounding a union dissolution, but also that experiencing multiple union transitions can have longer lasting consequences for psychological well-being. However, previous studies have rarely jointly considered the duration since the most recent union dissolution and the number of union transitions. This study uses data from the United Kingdom Household Longitudinal Survey (UKHLS) to investigate how the time since the most recent union dissolution and the number of union dissolutions are related to two indicators of psychological well-being, namely dissatisfaction with life and GHQ-12 caseness. The sample is restricted to 50-64 year old British men and women who are living alone and have ever been in a co-residential union. We focus on adults living alone in late mid-life as this is an increasingly common living arrangement in this age group and because their partnership histories are very diverse, with a considerable proportion having re-partnered at least once. Preliminary findings show lower psychological well-being in the two years following a union dissolution. Furthermore, psychological well-being is also lower for those who have experienced multiple union dissolutions. These findings are reported for both men and women, and remain unaltered when controlling for age, parenthood status and socio-economic status. However, the findings differ for the two measures of psychological well-being. These findings indicate that several aspects of partnership history are related to psychological well-being. Our approach also demonstrates that partnership dissolution is associated with lower well-being in the longer term.

d.demey@soton.ac.uk

Synthetic data estimation for the UK Longitudinal Studies – an introduction to the SYLLS project

Adam Dennett, University College London, Belinda Wu, University College London, and Beata Nowok, University of St. Andrews

The England and Wales Longitudinal Study (LS), Scottish Longitudinal Study (SLS) and Northern Ireland Longitudinal Study (NILS) are incredibly rich micro-datasets linking census and other health and administrative data (births, deaths, marriages, cancer registrations) for individuals and their immediate families across several decades. Whilst unique and valuable resources, the sensitive nature of the information they contain means that access to the microdata is restricted, limiting the user base.
The SYLLS project will develop synthetic data which mimics the real longitudinal data but crucially will not be subject to the same access restrictions as the national LSs. In this paper we will introduce two different but complementary methods that we will be adopting to generate the synthetic data – microsimulation and multiple imputation. Microsimulation will be used to generate a synthetic LS 'spine', mimicking the full population of individuals in the LSs but for a limited set of core variables, transitioning between 1991 and 2001. Multiple Imputation will be used to generate bespoke synthetic data extracts which match precisely the requirements of individual research projects.
This paper will report on the methodological progress to date, issues and prospects for the new synthetic datasets.

a.dennett@ucl.ac.uk

The Census & Administrative Data LongitudinaL Studies Hub (CALLS Hub)

Chris Dibben, University of St. Andrews

The Census & Administrative data LongitudinaL Studies Hub (CALLS Hub) has been commissioned by the ESRC to co-ordinate, harmonise and promote the work of the three LS Research Support Units (CeLSIUS, NILS-RSU, SLS-DSU), with the aim of providing a more streamlined experience for users. The three UK census Longitudinal Studies provide a unique and powerful research resource for a range of academic disciplines. They also form a powerful source of research evidence for policy-makers, practitioners and third sector bodies.
CALLS Hub exists to help researchers find the information and resources they need in a straightforward way, and to promote the work and impact of the RSU's to a wider audience. By bringing together the three studies, we can also highlight the potential benefits and possibilities of using more than one LS, either to allow regional comparisons or to build a national population.

The aims of CALLS Hub are:

- To enhance the research potential of the LSs by co-ordinating the development of new resources and methodologies.
- To enhance and streamline the user experience of obtaining information about the LSs and applying to use them for research.
- To increase academic impact by developing communication strategies to raise awareness of the LSs, promoting their outputs and facilitating their impact strategies.
- To increase the economic and societal impact of the LSs by working together with key external stakeholders to develop research projects meeting their evidence needs.

- To facilitate and encourage the use of multiple LSs for UK-wide research.

cjld@st-andrews.ac.uk

Gender preference and prenatal sex selection against females in the UK
Sylvie Dubuc, University of Oxford

Sex-selection against females is well documented in Asia. Since the 1980s the diffusion of prenatal sex-selection against females (PNSSaF) has been evidenced in China, India, South Korea until the late 1990s and more recently Vietnam. In India census data from 2010 suggests that this practice has further increased and spread. A male biased sex ratio at birth among India-born women in the UK over 1990-2005 reflects the trend observed in India. This poster presents 1) updated results up to 2011 for the main immigrant groups in the UK using annual birth registration data, 2) a new method using LFS/APS survey data to estimate the SRB of the UK-born generation of Asian background and findings 3) an analysis/interpretation of the findings (including extend, trends, how the findings contribute to analyse potential factors of change and their implications).

sylvie.dubuc@spi.ox.ac.uk

Estimating the geography of morbidity beyond 2011: An assessment of small area estimation techniques
Pierre Dutey-Magni, Graham Moon, Nikos Tzavidis, University of Southampton

Since 1991 the UK census has been asking citizens about their health, which has led to the production of small area health estimates that are crucial to a large range of fields, including NHS funding allocation, local strategic planning, and academic research. In 2010 the Office for National Statistics was instructed to review the design of the national census and to envisage alternative modes of collection. The current format for small area health statistics may therefore be subject to change in the near future. ONS research has highlighted the importance of recent developments in model-based estimation, as a route to producing future local population data. However, there is currently a lack of unanimity when considering which procedures may perform best given known constraints upon data collection and availability. Evidence has yet to be presented that model-based predictions can be used down to the micro-level to produce morbidity estimates.

This poster presents the PhD research design executed as part of the Southampton ESRC doctoral training centre. The project commences with a review of the potential of small area estimation methods for the continuous production of morbidity statistics for England and Wales. This is followed by an empirical performance assessment of model-assisted, model-based and microsimulation methods against existing census estimates for long-term limiting illness and general health. A simulation study will be conducted to assess exact bias, mean squared error and sensitivity to model assumption violations. Finally, an exploratory analysis will be conducted to assess how transferable the findings are to other morbidity indicators beyond those currently measured in the census.

p.dutey-magni@soton.ac.uk

An investigation into wellbeing factors influencing development perception in rural Kenya: a structural equation modelling approach

Hildah Essendi, University of Southampton

While the involvement of local communities in their development is widely recognised as a key step in sustainable and equitable development, very few rural development projects in sub-Saharan Africa and in Kenya use this approach. Recognised as a potentially beneficial approach to meeting the needs of beneficiary communities, participatory development has either been partially used or not used at all. Where this approach has been used, the area of perceptions of development and the relationship with wellbeing has not been of major focus area. Instead, this approach has extensively been used in health-related and environmental studies with the aim of designing interventions to address the various health and environmental issues. None of the studies however has focused on the resultant aspects of the people's perceptions on environmental conservation and their well-being. This is important because environmental conservation has a link of people's wellbeing, including health, especially in semi-arid areas where rainfall variability has been widely recorded. This study sought to answer this question: Is there a significant covariance between the personal and economic characteristics and perception of development? Data from 275 households, collected at the individual level were analysed using structural equation modelling techniques to examine relationships between the Development Perception, a latent variable and observed wellbeing variables including SES, fertility, nutrition, education gender and health perceptions.

h.essendi@soton.ac.uk

Improving the methodology for estimating emigration at local authority level

Brian Foley, Michelle Bowen, Alison Whitworth, Office for National Statistics

Reliable estimates of annual emigration are fundamental to the production of accurate national and sub-national population estimates - these data are essential for planning, resource allocation and a broad range of public policy purposes. The International Passenger Survey (IPS) is the main component of the Long term International Migration estimates produced by ONS, which are considered to be statistically robust at national and regional level.

Given the small sample size of emigrants captured by the IPS (circa 1,700 in the year to mid-2011), it is difficult to produce reliable estimates of emigration from local authorities (LAs) in England and Wales each year. Therefore, ONS developed a Poisson regression model to generate emigration estimates at this lower level of geography. The model takes the response variable as the number of emigrants leaving an LA (3-year average based on the IPS), establishes the average relationship across all LAs between the response variable and a number of LA-level covariates (data from Census, survey and administrative sources) and uses this relationship to produce emigration estimates for each LA based on their respective covariate data for a particular year. The model has been applied to produce revised LA emigration estimates for the years ending mid-2002 to mid-2008 and official estimates for the years ending mid-2009 to mid-2012.

Certain limitations of the current model have been identified, such as the use of IPS emigration data for a redundant intermediate geography to constrain the produced estimate. These necessitate a redevelopment and improvement of the model by the Population Statistics Research Unit (PSRU) at ONS. In addition to incorporating 2011 Census data, PSRU are also evaluating the use of a range of administrative data in the model that either provide information on emigration flows or are indicative of areas from which emigrants are likely to leave from. The re-development work will ultimately improve the quality of the annual LA emigration estimates produced by the model in future years.

brian.foley@ons.gsi.gov.uk

Analysis of the probability of getting pregnant in Guadalajara, Spain, and influence factors
Beatriz López-Garrido, Azuqueca de Henares Speciality Health Center. SESCAM Health Service Spain; Roberto Gil-Pita, Azuqueca de Henares Speciality Health Center. SESCAM Health Service, Signal Theory and Communications Department, University of Alcalá, Madrid

Nowadays, in the developed countries, most of the pregnancies are planned. Fertility depends on many influential factors. Time to pregnancy is a fertility marker and its estimation can be useful to plan gestation and to determine influence factors. The aim of this paper is to study the average time in reaching a desired pregnancy in fertile couples, determining the dependency with some influence factors like parental age, number of gestation, frequency of sexual relations, pre-conceptional and post-conceptional folic acid use, menstrual formula and menarche age. For this purpose, a retrospective descriptive study over 491 pregnancies who reached a desired spontaneous pregnancy in the health basic area of Guadalajara (Spain) is carried out. The study consists in an anonymous and voluntary survey which is offered and executed by the midwife during the first pregnancy consult. After its accomplishment, the survey is deposited in a closed envelope guaranteeing the anonymity and the confidentiality of the data. From the results, average time to desired pregnancy is 7,3 cycles. This estimation is significantly influenced by maternal and paternal ages, the number of gestation, the menstrual formula and the menarche age. Nevertheless, we could not find significant relationships between the use of the folic acid before pregnancy or frequency of sexual coital relations, and the average to the time to get a desired pregnancy.

lopesbea@hotmail.com

Census 2011 analysis and dissemination methods: Unpaid care in England and Wales 2011 and comparison to 2001
Timothy Gibbs, Chris White, Michael Smith, Eleanor Evans, Office for National Statistics

Research question: How has the provision of unpaid care changed in England and Wales since 2001 to 2011? What new methods have ONS used to disseminate the data in 2011?
Methods: Analysis of the number and proportions of unpaid carers in England and Wales, by English region, by Local Authority and by IMD/WIMD deciles. Our dissemination methods, tailored towards the citizen user, include; short stories, interactive and static maps, podcasts published using Youtube and info graphics designed to widen the access, appeal and thereby impact of the census statistics.
Results: • In 2011 just over 10% of the population (5.8 million) were providing some level of unpaid care in England and Wales • The absolute number of unpaid carers has increased by almost 600,000 since 2001 • Unpaid care has grown as a proportion of the population providing it between 2001 and 2011 • The amount of unpaid care provided is markedly higher in some LAs than in others • The amount of unpaid care amounts to approximately 17 million working days in per week in 2011 in England and Wales.
Potential applications: The analysis and dissemination methods are primarily designed to engage the citizen user both in terms of the census and of official statistics in general, and as such could be used to inform the pubic debate, increase public engagement and thereby hold the government to account on this policy area by increasing public awareness. Furthermore the analysis results could be used by care charities and government alike in providing adequate support to unpaid carers.

tim.gibbs@ons.gsi.gov.uk

Travel to Work: A Summary of the 2011 Census Results
Tom Leveson Gower, Office for National Statistics

Using 2011 Census information, this poster will, through the use of charts, tables and graphs, present how people commuted to work in 2011 (including home working). Where appropriate, comparisons with the 2001 Census will also be made. Workers were requested to provide address details of their workplace. Using this information in conjunction with the enumeration address, presentations will be made of how far people were commuting to work in 2011. For local authorities, English regions and Wales, and England and Wales as a whole, an average distance commuted to work has been calculated. The key findings from this will also be presented. Distance and method of travel to work have also been analysed in combination with a number of other census variables: age, sex, hours worked, occupation, health, National Statistics Socio-economic Classification and number of cars and vans in the household. The most interesting findings from this research will be presented in the poster.

tom.leveson.gower@ons.gsi.gov.uk

Death in England and Wales, 2006-2009: Using a classificatory approach for researching mortality
Mark A. Green, University of Sheffield

Everyone dies. Nonetheless what we die of varies both by people and place. This last act provides a wealth of information, an indicator of both your life and the area you live in. Most past research has focused on individual causes only, however this ignores how various causes interact together. Rather than remaining in a uni-dimensional research design, we need to begin to move towards a multi-dimensional approach. Otherwise information is lost, which could help explain mortality patterns and processes. Yet this also brings added complexity to any analysis, making it difficult to 'see the wood for the trees'. Area classifications can get around this issue through summarising the main clusters/patterns which dominate the geography of mortality. Unknown underlying structures to patterns become visible. This is in relation to recent governmental calls for the incorporation of such techniques in health and mortality research, which have otherwise been largely ignored. This paper details the building of the first, low-level area classification of mortality patterns. A k-means cluster analysis was employed on standardised mortality rates for the main causes of mortality (63 variables), finding eight main clusters throughout England and Wales. These clusters did not solely differentiate based upon just prevalence, but variations existed based upon types of death as well. Demographic, socio-economic and geographical variations helped explain parts of the cluster formations, but not all. Indeed the clusters helped add new information about the clustering and geography of mortality patterns, as well as socio-economic correlates.

mark.green@sheffield.ac.uk

Correlation of demographic transition stages with family structure dynamics and the world economy
Yulya Gubareva, Belorusian State University

Demographic changes may be less obvious than economic or political ones but lead to changes in matrimonial, sexual, family, migratory, moral and physiological human behaviour. A basic part of the demographic transition concept is periodisation of demographic development, which matches great historical periods (agrarian, industrial, post-industrial societies). In family structure, the transition from the family with many children to the nuclear family with two children and to the one child family and further to the decline of the family institution. Demographic transition is caused by social and economic changes including changes in material conditions of human life. Changes in

living conditions are caused by changes in the world economy. The facts that world economic cycles cause changes in demographic processes can be assumed. Therefore, it is possible to draw an analogy of the demographic transition stages with Kondratiev cycles. Due to uneven demographic world development and territorial differences, the examination of family structure dynamics of Western European states and attendant economic changes is appropriate. Comparison of family structure dynamics, demographic transition stages and world economic cycles proves a relationship between demographic and economic processes. In future such an approach could be used in forecasting of the demographic and socio-economic situation in the world.

ygubareva@gmail.com

Household Position and Self-perceived Health: a comparative study of Spain, Germany and the United Kingdom

Jordi Gumà, Autonomous University of Barcelona; Gabriele Doblhammer, University of Rostock and Rostock Centre for the Study of Demographic Change; Rocío Treviño, Centre for Demographic Studies of Barcelona; Antonio D. Camara, Centre for Demographic Studies of Barcelona

In recent decades the interest of social sciences in health inequalities is becoming higher. Different social factors have been analyzed to assess its relationship with health. Among these factors, marital status and household arrangements are becoming more important in the current literature. We propose a new approach in order to study the association between health status and household arrangements: the analysis of the effect of the individual's position within the household instead of using the household as the context. The position within the household is defined according to: the partnership situation, living with children and the relationship with the family nucleus. Therefore, the aim of this study is to assess whether the change of an individual's position within the household affects self-perceived health in Spain, Germany and the United Kingdom. We compare these three countries due to their evolution in the household diversification and their own model of the European welfare state. We apply panel logistic regression models to the longitudinal microdata of EU-SILC from 2004 to 2009 in order to get our aim. The preliminary results show that though this factor is statistically significant in the three cases, the direction of the relationship is different in each country. The United Kingdom and Germany show similar profiles whereas Spain follows a different pattern. Higher social acceptance of new household profiles as well as a lower range of gender differences in Germany and United Kingdom are proposed as possible reason to explain the dissimilarities found between these two countries and Spain.

jguma@ced.uab.es

Census 2011 analysis on migration

Lorraine Ireland, Office for National Statistics

The Census 2011 data released to date allows us to produce analysis of international migration in England and Wales. Key variables used to define international migrants include: country of birth and passports held (to determine nationality); although country of birth has featured in previous censuses in England and Wales, the 2011 Census was the first to ask about passports (used to determine nationality) and to enumerate short-term residents. The Census Analysis Unit (CAU) at ONS have published a number of stories on migration arising from the 2011 Census data. These include analysis of non-UK born and non-UK nationals in the usually resident population and of short term residents in England and Wales. The presentation will highlight some of the key findings from these short stories, highlighting also future planned analyses of migrant populations using more complex multivariate data tables from the 2011 Census.

lorraine.ireland@ons.gsi.gov.uk

Implications of Polish migrants' reproductive behaviour for settlement decisions in the United Kingdom

Barbara Janta, University of Warwick

The recent migration of Polish people to the United Kingdom has had a major impact on the British and Polish populations and on these countries' labour markets. However, there is considerable uncertainty about whether recent Polish settlement is permanent or will be reversed. Decisions to stay in the UK or to return to Poland are always subject to a complex set of factors, such as, for instance, motivations for migration, employment and education opportunities, and the welfare system. Many of these socio-economic factors have been explored by researchers focusing on Polish migrants in the UK. In this article we focus on the fertility behaviour of migrants, which we feel has not been paid sufficient attention to date, and we argue that childbearing decisions are a crucial factor in determining settlement decisions. The child-bearing decisions of migrants is an important topic to study because it is related to the individual/family motivation for migration, the career and life plans of migrants and the response of migrants to national differences in social policy. Despite the broad literature on Polish migrants in the UK, analysis of the reproductive behaviour of Polish migrants is still scarce. In this paper, we provide analysis of the trend in births to Polish mothers in the UK between 2004 and 2010 based on the birth registration data. Based on this analysis, we discuss potential socio-economic implications of Polish migrants' reproductive behaviour for settlement decisions, demographic trends, the labour market and public services both in the UK and Poland.

ierlac@warwick.ac.uk

The intergenerational transmission of the Welsh language: an analysis of change between the 2001 and 2011 Censuses

Hywel M. Jones, Welsh Language Commissioner

The intergenerational transmission of language within the family is a crucial feature which must be assured if language shift is to be reversed (Fishman, 1991). This poster will report on results from the 2011 Census, looking particularly at geographical variation. The actual scope of the poster/paper will depend on the 2011 results which are expected to be published in May. My paper to the BSPS Conference in 2009 (http://www.webarchive.org.uk/wayback/archive/20120330020405/http://www.byig-wlb.org.uk/Cymraeg/cyhoeddiadau/Cyhoeddiadau/BSPS%202009%20Conference%20The%20intergenerational%20transmission%20of%20Welsh%2020090910.pdf) will be a starting point for my analyses.

hywel.jones@welshlanguagecommissioner.org

Mapping the dispersal and deprivation of asylum seekers in Britain since 1999

Sarah Lubman, University of Southampton

Since the implementation of the 1999 Immigration and Asylum Act, asylum seekers who require housing support have been 'dispersed' across the UK, with the intention of moving the focus of settlement away from London and the South East. It has been suggested in local level qualitative research that asylum seekers are being housed in deprived urban areas and as a result are experiencing social exclusion. This paper presents the current state of knowledge in this policy area before assessing the nature of the relationship between dispersal and deprivation at a national level, utilising Home Office asylum statistics alongside the Index of Multiple Deprivation to map Local Authorities by their characteristics. Cluster analysis highlights a group of Local Authorities with relatively high density of dispersed asylum seekers and high deprivation levels, which can be

identified as large cities in the Midlands, North West and North East. The Survey of New Refugees is a longitudinal dataset which records background characteristics of refugees as well as outcomes in their first 21 months after receiving leave to remain. This data is presented with cross sectional and descriptive analysis tracking indicators of wellbeing and integration over time.

sll1v07@soton.ac.uk

Household Estimates and Projections for Scotland
Hugh Mackenzie and Kim Reimann, National Records of Scotland

This poster looks at the key trends from the household estimates for Scotland, such as the increasing probability for people to live alone, as well as looking at household projections to see how the continuation of these trends could affect households in the future. In addition, the release of household figures from the 2011 Census provides an alternative estimate of the number of households in Scotland, allowing a comparison to be made between the 2011 household estimates and the 2011 Census figures. The household estimates are produced by the National Records of Scotland (NRS) every year and are used for a range of purposes including informing local authority decisions about housing need and providing service. The household estimates are based on Council Tax data; using this data it is possible to estimate the number of dwellings which are occupied or vacant as dwellings which are vacant or second homes are entitled to a council tax discount/exemption. An occupied dwelling is then considered to be approximately equal to a household. The household projections are produced by NRS every second year, with the latest set of projections being the 2010-based projections which were published in June 2012. The number of households is projected forward by 25 years based on population projections for Scotland as well as projected headship rates which are based on observed headship rates from the 1991 and 2001 Censuses.

hugh.mackenzie@gro-scotland.gsi.gov.uk

Scottish Mid-Year Population Estimates and Estimating Migration
Luke Main, National Records of Scotland

The National Records of Scotland (NRS) produces detailed annual estimates of the resident population as at 30 June each year. Population estimates from the census are updated each year, using the cohort component method, with elements of population change from the previous 12 months to produce the annual mid-year estimates. NRS are constantly looking to develop the methodology and since the release of the results from the 2011 Census the approach to estimating international migration has been improved. Estimates of the births and deaths in Scotland are well documented and both within Scotland migration and migration to the rest of the UK can be estimated by using the Community Health Index and the National Health Service Central Register (NHSCR) to estimate moves from the transfer of patients records. The process for estimating international migration is more difficult due to there being no comprehensive system for recording migration into and out of the UK. Currently NRS use the Long Term International Migration estimates produced by the Office for National Statistics together with estimates of age/sex distributions from the NHSCR to estimate international migration.
This poster describes the methodology behind the Scottish mid-year estimates, focusing on the approach used to estimate migration.

Union formations and job satisfaction in the UK
Elena Mariani, London School of Economics

Existing empirical evidence shows the existence of marital status and gender differentials in the labor market, especially in terms of earnings. This study investigates whether these differentials persist also when considering a measure of non-monetary reward, as job satisfaction. To do so I investigate the association between cohabitation formation, transition into marriage, arrival of a new child and job satisfaction in the United Kingdom using 18 waves of the British Household Panel Survey (1991- 2009). Preliminary descriptive analysis shows that for a sample of working age individuals both men and women are more satisfied at work if married with respect to single and that married women are significantly more satisfied than married men. On the other hand, cohabitants are significantly less satisfied at work than single, and women are significantly less satisfied than men. Lastly, women with at least one child are significantly more satisfied than childless ones, but there seem to be no effect of having a child on men's job satisfaction. These results only show differences in levels of job satisfaction among different groups and not necessarily the effect of marrying, forming a cohabitation and having a child. The analysis aims at deriving a measure of these effects by using fixed effects regressions to control for selection into family state and by discussing the role of selection into employment in driving the results.

E.Mariani@lse.ac.uk

The effect of domestic violence on child mortality in India
Seetha Menon, ISER, University of Essex

The number of children dying, worldwide, under the age of 5 is estimated at 6.9 million (2011). India accounts for 1.7million of these deaths - almost a quarter. This paper investigates domestic violence as a potential contributor to this situation. Specifically, is there a significant causal relationship between domestic violence and child mortality in India? In India, where the subjugation of women is the social norm, domestic violence has been estimated at approximately 40%. In addition, violence against women during pregnancy has been estimated at almost 13%. The current literature has succeeded in establishing an association between domestic violence and child mortality, but has to yet present evidence of a causal relationship. Data from the Demographic Health Survey (DHS 5, India) is used for this study. This dataset contains information on child mortality, maternal health, socioeconomic status and anthropometric data. In addition a domestic violence module was also executed. Violence encompasses the presence of any of the three forms; physical, sexual and emotional violence. In order to overcome the inherent endogeneity issue of domestic violence in such analysis, an Instrumental Variable estimation strategy is used. The instruments used are the height of the mother, relative to the father and the price of gold at the time of marriage (dowry effects). Three models are estimated for neonatal, infant and child mortality respectively. Initial results show a positive and significant relationship between domestic violence and child and infant mortality and a positive but insignificant relationship between domestic violence and neonatal mortality.

srmeno@essex.ac.uk

Unemployment and entry into parenthood in Finland
Anneli Miettinen, Population Research Institute, Väestöliitto, Helsinki

Recent severe economic downturns and increasing unemployment among the young has raised concerns about the impact of economic recession on fertility. It is widely believed that economic hardship and unemployment lead to lower fertility, with the male unemployment having a stronger effect on fertility than female unemployment. However, with increasing precariousness of male

employment, women's economic potential may have become more salient to couples' childbearing. This study investigates the impact of economic insecurity and unemployment on the transition to parenthood among Finnish men and women. Although there is ample evidence of the relationship between aggregate level unemployment and fertility, mechanisms linking uncertain or precarious employment to individual fertility decisions are not clear. For instance, the effects of unemployment can vary by education and occupational strata, as well as by age and sex. Furthermore, unemployment may be linked to partnership behaviour, and financial insecurity may interfere with family formation at various stages. The analyses are based on longitudinal Finnish register data which includes information on economic activity, income and educational attainment, and vital events (births, formation and dissolution of unions etc.) of all persons resident in Finland in 1970-2003. Data allows us to investigate different aspects of individual and couple-level economic uncertainty on the transition to parenthood, and distinguish between joblessness and registered unemployment as well as the duration of unemployment.

anneli.miettinen@vaestoliitto.fi

Assortative matching within co-ethnic and inter-ethnic unions: Evidence from the UK

Greta Morando, Alita Nandi , ISER, University of Essex

In an increasingly multi-ethnic society like the UK inter-ethnic unions will play a key role in determining what the future British society will look like. Such unions play an important part in assimilation and integration of migrants into the host society which may have significant impacts on their labour market outcomes. To understand these impacts we need to know the characteristics of the partners or more specifically the assortative matching patterns. Are assortative matching patterns among inter-ethnic and co-ethnic couples different? Does ethnic group feature in the choice of partners? Or is it that partnership choice is driven by socio-demographic characteristics such as age, education, attitudes and values, personality and the ethnic group of partner is just the result of availability. Individuals in inter-ethnic partnerships represent about 8% of the UK population. However, this is still a minority population and until now most datasets in the UK were not large enough or did not include relevant information to study these questions. Understanding Society with its large sample size of approximately 30,000 households and an ethnic minority boost sample makes such analysis possible. Using data from the first two waves of Understanding Society we compare assortative matching patterns across a number of characteristics (education, wages, age, religion and so on) for co-ethnic and inter-ethnic couples. Following Jepsen and Jepsen (2002) we identify potential and rejected partners to estimate the partnership choice using conditional logit method.

gmoran@essex.ac.uk

Review of the methods and software used in the Sub-National Population Projections for Scotland

Ronan O'Kelly, Esta Clark, National Records of Scotland

This study reviews the system used by National Records of Scotland (NRS) to produce the Sub-National Population Projections (SNPPs) for Scotland with the aim of improving the methods to deal with a new migration projection methodology which is being implemented on a phased basis on a National level . Following the publication of the National Population Projections by the Office for National Statistics (ONS) which occur on a bi-annual basis, the Sub-National Populations Projections are produced for each constituent country of the UK. In 2012, a review was untaken by ONS regarding the migration assumptions methodology used to produce the National Population Projections (NPPs). One of the key findings of the review recommended changing from the current system where migration is measured by net migration (immigration less emigration) to a new

system in which migration is modelled as flows and more specifically to a system where international emigration and cross-broader flows are modelled as rates. While the change to rates is not been implemented for the 2012 NPPs, there is an expectation that a new system incorporating rates will be implemented in due course. Currently the methods and system used in Scotland for producing the SNPPs is only designed to deal with migration expressed as immigration less emigration. This study's purpose is to examine if the current method can be adapted to use migration modelled as flows and rates or if a new system is warranted. The study will explore options such as developing existing in house software or considering other available products e.g POPGROUP.

Ronan.O'Kelly@gro-scotland.gsi.gov.uk

Municipal-level census data in Russia: Questions, assumptions, analysis, prospects, with the Moscow region as an example

Anastasiya Pyankova, Higher School of Economics, National Research University

The results of the Russian Census of 2010 lay on the table several topics requiring further discussion. Prerequisites for this discussion are the change of the administrative-territorial structure of Russia after the reform of municipal government in 2006 and the amendments to the Census Law made prior to Census 2010. Our poster is devoted to the discussion of the following issues: • Are the changes in population size and structure that took place in 2002-2010 realistic and plausible? • What might have caused these changes? • How comparable is municipal-level data for 2002 and 2010 censuses? ; We have been carrying out research on the example of Moscow region, which according to the census data faced population growth of 7% or nearly +480 thousand people over the period 2002-2010. The structure of this population increase and its spatial distribution will be shown in the poster. During this period the increase in the rural population was almost twice as high as that in urban areas: +11% and +6.3% correspondingly. Rural population increased up to 30-50% in some municipalities, while changes in the same areas of the urban population were fairly minor or even negative over the intercensal period. This significant rise in the rural population could be related with changes concerning data capture of the population living in collective households. This 'non-demographic' factor distorts denominator for demographic rates for municipalities, affects on an allocation budget funds depending on the population in the municipality. In addition poster will show a disparity in population of small units (municipalities) between 2010 census data and the estimates for 2010 based on 2002 census data, vital and migration statistics. This approach allows us to identify the municipalities where the census data is questionable and the population changes cannot be explained by demographic events (vital and migration), even taking into account the incompleteness of migration statistics.

amahotkina@gmail.com

Family stability and child development

Abigail Rimmer, University of York

The poster is an examination of how family change might affect the socio-emotional and cognitive development of young children. Recent work in the field of families and children's outcomes has established that it is change in parental partnerships to which children are exposed that is important for children's well-being. Building on this approach has led me to the formulation of a bipartite definition of family change focusing on the changes in resident parent(s) partnerships and additionally the composition of the child's sibling group, with the introduction of half siblings to a child's sibling group being of particular interest. I argue that family change does not directly impact on children's outcomes, but instead the instability of the parenting environment represented by family change is an important determinant by making the establishment and maintenance of

positive parenting routines more difficult. An investigation of the role of family change in outcomes for young children has been carried out using the Millennium Cohort Study, because this study includes children's family structure data at the age of 9 months, 3, 5 and 7 years together with a range of socio-emotional and cognitive indicators at 3, 5 and 7 years old. A series of regression models have been fitted to test the hypothesis outlined above and the results of these models will be presented.

acr517@york.ac.uk

Children from broken families and stepfamilies leave home early
Annette Roest, Carel Harmsen, Statistics Netherlands

Children in lone parent families and stepfamilies tend to leave home earlier then children in intact families. In this research push and pull factors are determined which influence children to decide to leave home. The research question focuses on the age at leaving home and the household position after leaving home. Factor being researched are; - Composition of the parental family - Parental income - Parental education/own education - Regional location of the parental home. For this purpose integral data from the social statistical database at Statistics Netherlands were drawn. To answer the research question longitudinal data for one cohort, children born in 1985, were compiled. In order to analyze the effect of a set of variables on the timing of leaving home survival analysis has been used. The most import results from the analysis thus far is that children raised in broken homes tend to leave home early. Apart from this children acquiring higher education tend leave home earlier and live as a single. Children acquiring secondary education stay at the parental home longer and, when leaving home, more than average start living with a partner right away.

chmn@cbs.no

Can maternal education hinder, sustain or enhance the benefits of early life interventions?
Ricardo Sabates, University of Sussex: Mariachiara Di Cesare, Imperial College

It is well established that education produces benefits that are beyond income and employment and that it is a key determinant of health, with more educated people having better health outcome than less educated people. This paper focuses on the benefits of maternal education on child nutrition in Ethiopia, India, Peru, and Vietnam. We examine the benefits of maternal education on child nutrition during the first year of the child life and at age 5. In particular we look at the combined effect of maternal education and early life interventions, such as access to antenatal services, on child nutritional status following the call of the early life intervention of the Commission on the Social Determinants of Health. We use data from the Young Lives Longitudinal Study a 15-year study of childhood poverty in 4 developing countries in Ethiopia, India, Peru and Vietnam. We model child nutrition, as a function of access to antenatal care services, maternal education, and a set of key predictors of child nutrition found to be relevant (using a multilevel model). Our first key finding suggests that there are benefits of maternal education on reducing child malnutrition both at age 1 and at age 5. We also find that these benefits are substantial, with mothers who have the highest levels of education tend to have children who have the lowest risk of malnutrition. Our second finding is that maternal education can interact with other early life interventions to support a health development for children.

m.di-cesare@imperial.ac.uk

Fashioning Age: A phenomenological exploration of ageing, fashion, gender and identity
Anna Mari Sadkowska, Nottingham Trent University

This poster will present ongoing work proposing a phenomenological approach in research and design practice to explore the experience of ageing, fashion, gender and identity. The project aims to develop a deep understanding of human actions, where fashion and clothes, as the communicators and mediators between self and society become the key to understand ageing identities. Decisions about data collection are supported by Heidegger's philosophy and the concept of "Dasein", emphasising the experience as the result of interactions between animate and inanimate entities. The methodological framework of my research involves psychological, participatory and qualitative methods; triangulation of 'traditional' for interpretative phenomenological analysis (IPA) methods such as semi-structured interviewing and 'innovative': personal inventories, design workshops and practice-based investigations. The interpretation and response to gathered information, from the perspective of fashion practitioner, will result in the creation of a series of 3D models and prototypes addressing older population and influencing their personal well-being.

anna.sadkowska2012@my.ntu

Single, sexless and infertile: Sexuality aspects of very low fertility in Japan
Ryuzaburo Sato, Miho Iwasawa, National Institute of Population and Social Security Research, Japan

Since the late 1970s, Japan's total fertility rate has been below the replacement level at about 2.1 children per woman, and has remained below 1.5 since 1995. After Japan's fertility rate reached what was termed as the '1.57 shock' in 1990, the Japanese government introduced a string of policy measures, which included upgrading child-support allowances and childcare services, instituting and promoting childcare leave, promoting gender equality, and supporting employment of young people. However, there have been no signs of a recovery in fertility thus far. This paper examines aspects of Japanese sexuality and familial relationships to identify possible causes of very low fertility in Japan. By examining government statistics and publicized survey data, we observed several major recent changes in the aspects of Japanese sexuality. Both men and women marry later and less frequently year after year, and couple formation in advance of marriage among young men and women is infrequent. A few surveys indicate that the proportion of couples who are sexually inactive is very high, while that of young men and women engaging in premarital sex has been increasing. Postponement of marriage and delayed entry into reproductive life for women, without increased cohabitation and extramarital birth, necessarily increases couples' concerns about infertility. We should increasingly focus on the aspects of sexuality when studying the differences in fertility levels among industrialized countries. In particular this paper stresses the deficiency of a 'couple culture' in Japan as one of the major determinants of very low fertility.

sato.ryuzaburo@gmail.com

Introducing the Northern Ireland Longitudinal Study (NILS): Structure and 2011 Link
Ian Shuttleworth for Northern Ireland Longitudinal Research Support Unit (NILS-RSU), QUB

The Northern Ireland Longitudinal Study (NILS) is a powerful resource for social, demographic and health research. It is a 28% sample of the Northern Ireland population (selected from 104 out of 365 birthdates) drawn from health cards and it links together Census and administrative data on births, deaths, marriages and migration events as well as information on housing (from the Land and Property Services). It has some 500,000 members. Special one-off links to other administrative

data sources (with ethical approval and agreement of data custodians) can be made through the Distinct Linkage Project (DLP) process.

The value of the NILS will shortly be increased by the linkage of data from the 2011 Census. This will be completed and ready for researchers by the end of 2013 and will allow economic, social and demographic transitions between 2001 and 2011 to be described and analysed. By the end of 2014 a similar link will have been made to the 1991 Census. This will allow transitions over the twenty-year period from 1991 to be analysed and will provide a valuable insight into the changing society of Northern Ireland through the paramilitary ceasefires and the establishment of devolved government.

i.shuttleworth@qub.ac.uk

Reproductive and socio-economic profile of urban and rural Roma women living in Croatia
Tatjana Škarić-Jurić, Nina Smolej Narančić, Branka Janićijević, Jasna Miličić, Marijana Peričić Salihović, Matea Zajc Petranović, Željka Tomas, Ana Barešić Institute for Anthropological Research, Zagreb, Croatia

The Roma (Gypsy) are the largest European transnational minority population and are characterized by poverty, social exclusion, poor education and traditional attitudes towards female reproductive health that all contribute to a high fertility reproductive pattern. In order to assess the influence of urbanization on the socio-economic status and reproductive characteristics of Roma women, we included in the study a total of 207 adult Roma women aged 18-72 yrs (40.6±13.7) living in urban (87) and rural (110) settlements in Croatia. The study showed that the Roma women marry young (17.5 years) for a husband two years their senior (19.6 yrs) and give birth to 3.8±2.6 children. Financially, the Roma women primarily relay on social welfare support allowance (63.5%) and child allowance (41%), while merely 5% are permanently and 17% occasionally employed. The proportion of the Roma women who had never attended school amounts as high as 39.1%. The urban-rural difference was not found in any reproductive characteristics (number of children, contraception, menarcheal and menopausal age, etc.). On the other hand, two important differences in socio-economic variables were found: urban Roma women compared to their rural counterparts more frequently have a permanent job (9% vs. 1%; $p = 0.012$) and less frequently receive social welfare support allowance (42% vs. 87%; $p < 0.001$). These differences in social and financial position of urban Roma women warrant a follow-up of this population to detect whether a) this trend will continue to spread and b) it will have an impact on reproductive behaviour and health.

This research was supported by the Nutricia Research Foundation (grant: 2012-36/2013-E7) and by Ministry of Science, Education and Sports of the Republic of Croatia (grants: 196-1962766-2747 and 196-1962766-2763).

tanja@inantro.hr

Quality of life and longevity: the oldest-olds' views
N. Smolej Narančić , T. Škarić-Jurić , J. Miličić, M. Zajc-Petranović , Ž. Tomas , Institute for Anthropological Research, Zagreb, Croatia ; S. Tomek-Roksandić , Andrija Štampar Institute of Public Health, Center of Gerontology, Zagreb, Croatia

Our study examines the perspectives on longevity and psychophysical well-being and relates them to functional ability of the oldest-olds from the Croatian population. The data from 300 subjects aged 85-101 years who possess preserved psychological and cognitive abilities (MMS>17) and live in old peoples' homes are extracted from the extensive anthropological and genetic-epidemiological study of aging started in 2007. In addition to numerous biomedical measures, the comprehensive

structured interview was applied including the questions regarding socio-demographic and health status, medical history, nutritional habits, physical activity and quality of life. Two age groups were compared: 85-89 vs. 90-101 years. The elderly identified continuous physical and mental activity, genetics, optimism, family contacts and healthy nutrition as main reasons for their long lives. The older-olds did not complain more often about their health, mobility or independence, declared equally frequent unfavourable health behaviours (apart from physical activity) but had greater functional disability compared to younger group. They declared equally often engagement in different mental activities and their cognitive function was reasonably well preserved. They reported equally intensive social and regular family contacts but loneliness and the feeling of uselessness are among the main current problems of both age groups. As much as 40% are satisfied with their present life, and 15% report the age of 85+ as the most satisfying period of their life, both age groups equally. The interviewed oldest-olds appear to be well adapted to their lives. Their explanations, attitudes and preferences may help enhancing quality of institutional care delivered to this vulnerable population group.

tanja@inantro.hr

A 'final destination'? Challenging the idea of settlement in sub-Saharan African 'transit' migration to Europe

Eleanor Staniforth, Centre for Migration Policy Research, Swansea University

The current body of research on African migration to Europe has focused primarily on the process of migration towards the European Union, but has neglected to explore migrants' onward movements once they reach Europe. The concept of 'transit migration' has been widely used in the literature to describe the complex nature of many migrants' journeys towards Europe, but is problematic in that it assumes that these journeys come to an end once migrants have reached their intended 'destination'. This study aims to challenge the idea that African migration to Europe has a clear end-point and seeks to explore migrants' attitudes towards settlement in general, as well as their decision-making process with regard to onward movement or settlement and their choice of subsequent 'destination'. The study employs in-depth interviews, informal discussion and observation with African migrants currently living in Madrid (Spain) and Paris (France), and comprises a longitudinal engagement with a number of participants in order to 'follow' their decision-making process over time. The research seeks to question dominant conceptualisations of African migration as inherently threatening by taking a normalising perspective, critiquing the separation between 'mobility' and 'migration' which features in both policy discourse and in research, and drawing on the concept of a 'global hierarchy of mobility' in order to analyse approaches to African migration taken in Europe. Finally, the research will consider the impact of European migration policy on the lived experiences of migrants themselves, assessing the role which this policy has to play in provoking onward movement.

eleanorstaniforth@gmail.com

New set of population projections by age, sex, and educational attainment for 171 countries of the world: methods and challenges

Erich Striessnig, Samir KC, Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID/ÖAW, WU), International Institute for Applied Systems Analysis

The aim of this contribution is to present for the first time a new set of basic assumptions regarding the future of fertility, mortality, and migration that is currently under development at the newly established Wittgenstein Centre for Global Human Capital and Demography (WiC) for a total of 195 countries of the World. In contrary to previous assumption-gathering exercises, the new set of assumptions was derived from argument-based expert opinions. These WiC assumptions are the

basic demographic inputs for the new population projections by age, sex, and education also presented in this paper. Compared to the earlier projections, the number of education categories increased from four to six to allow for more detailed disaggregation. The number of countries for which education data was available increased from 120 to 171, covering more than 97% of the World's population. Initial distributions of population by age, sex, and education were prepared using most recent censuses (IPUMS) or surveys and the education variables were recoded to match the ISCED definition. Education differentials in fertility, mortality, and migration are mostly based on own estimations relying on census (IPUMS) and survey data, as well as on the available literature. Various methods of dealing with the differentials have been fine-tuned and some additional complexities were introduced (e.g. allowing child mortality to depend on the education of the mother). Finally, the education projections were improved by allowing country as well as regional trends in addition to the global trend to influence future attainment.

Population Growth and Housing Expansion in the UK: Some preliminary considerations
R. Swann, E. Baird, J. Davies, J. Dixon, R. Douthwaite, I. Mairs, P. Vaughan; Population Matters

The 2008-2033 ONS projections for England indicate that an increase of 9 million in the population by 2033 might be accompanied by demand for an additional 6 million households, including a large increase in single households. A review of the literature was carried out, and an analysis made of current data and assumptions on UK population growth. The paper first looks at the relationship between UK population growth and housing expansion, in the context of both the ONS population projections and the new National Planning Framework, which in particular supports housing growth in London and the South East. It then reviews the impacts that increased housing may have on food self-sufficiency, biodiversity, pressure on water and other resources, increased domestic carbon emissions, and community attitudes to housing development. Recommendations are given for further work, which include: To assess how well the UK governments housing policy is effectively reconciled with its responsibility for engaging with the ongoing social and environmental challenges of climate change and sustainability. To investigate the advantages, disadvantages and problems surrounding a policy of net zero migration. It is intended that the paper will stimulate further research and debate on population growth and housing.

colin@colingallagher.plus.com

Psychological distress of union dissolution: what does the average effect hide?
Lara Tavares, Universidade Tecnica de Lisboa and Bocconi University

It is well-established that on average divorce brings about psychological distress. But, as Amato (2010) points out, average effects may mask substantial heterogeneity in individual's reaction to union dissolution. The fact that on average divorce brings about psychological distress does not mean that all individuals experience union dissolution in the same way (Carr and Springer 2010). Actually, it might be beneficial to those who initiated it (Kitson 2006; Wheaton 1990; Amato 2000). The outcome studied relies on an indicator of mental health, psychological distress. The dependent variable is the change in psychological distress around first union dissolution i.e., the change between the level of psychological distress measured at the first interview after union dissolution (t+1) and the one observed in the interview before the last with respect to union dissolution (t-2), as (t-1) is likely to capture an anticipation effect. Our descriptive results clearly show that individuals are almost evenly split between those who gain from the union dissolution and those who loose. In this paper we are particularly interested in the moderation effects of gender, parenthood and union type (marriage vs. cohabitation). On the other hand, it is likely that the consequences of union dissolution differ according to which union breakdown one is looking at. Due to sample size limitations, in the analysis we will not stratify by union order but we do control for it which allows us also to see if psychological distress of union dissolution decreases with the union order.

Preliminary results show significant gender differences. Higher union dissolutions tend to be less distressful but only for men. Working at (t-2) has a protective effect, but only for women. Having children however, significantly increases psychological distress for both women and men.

ltavares.wiv@gmail.com

When and how many? An account of women's reproductive intentions in the informal settlements of Nairobi

Catriona Towriss, Ian Timaeus, London School of Hygiene & Tropical Medicine

Evidence is increasingly showing that the traditional binary classification of fertility intentions into either 'spacing' or 'limiting' cannot adequately explain the lengthening of birth intervals in some Sub-Saharan African populations. This phenomenon is thought to be a result of reproductive uncertainty within a population. Survey data suggests that birth interval lengthening is widely occurring in urban areas, where a myriad of reproductive expectations exist and women face increased economic and social instability. Using data from six focus group discussions conducted in the informal settlements of Nairobi, Kenya, this research examines women's perspectives on childbearing and explores their fertility intentions in order to determine whether there is evidence of reproductive ambivalence in this population. The results show that women desire long spaces between their births, which is a result of factors both related to, and independent of, the age of their youngest child. And, whilst they demonstrate certainty about the number of children they desire in their lifetime, it is also common to find women who have been unable to commit to these goals. Women's intentions regarding the timing of their births and their desired number of children reveal reproductive ambivalence that is a result of the contradictory pressures on their households and relationships. This research aims to contribute to the literature on the impact of social uncertainty on fertility decision-making and to the development of birth postponement theory.

catriona.towriss@lshtm.ac.uk

A life course perspective to abortions in Finland

Heini Vaisanen, London School of Economics

Induced abortion is a major personal decision and an important part of fertility behaviour but it remains understudied. This study uses Finnish register data to examine how the socio-economic and fertility life course pathways of women having abortions differ from other women and how these differences depend on having several abortions versus only having one. Also, the socio-demographic determinants and cohort differences in abortions are examined. Fertility histories are related to other life events, so use of life course perspective is crucial. Previous studies suggest that high costs of childbearing, young age, being single, having relationship problems, low socio-economic status or education and previous births and abortions increase the probability of abortion. Consequences of abortions are not as widely studied due to problems in claiming causality and lack of longitudinal data. Nationally representative register data on three female birth cohorts (1955-59, 1965-69 and 1975-79, N=274,908) during their reproductive life span (age 15-50) are analysed using event-history modelling. Women having abortions are compared to women who had a live birth during the same age-period and to women who did not experience a pregnancy. The study solves problems previous studies face: lack of long follow-up time and reliable information on abortions. Moreover, it contributes to the debate about whether abortions are associated with adverse life outcomes. It also helps policy-makers to reduce abortions and if adverse life outcomes are found, it helps tackling the problem. Lastly, focusing on repeat abortions helps tackling the recent increase in the number of repeat abortions.

h.e.vaisanen@lse.ac.uk

Families in the 2011 Census
Folkert Van Galen, Office for National Statistics

Household information collected by the 2011 Census for England and Wales allows us to extract information on families. This includes living arrangements for adults, parents, and both dependent and non-dependent children. Comparisons are drawn with data from the 2001 Census. Changes in families may be due to changing attitudes towards children, marriage, cohabitation, divorce and separation. Distributional changes in family types, family size and the geographical distribution of types of families are also discussed.

folkert.van.galen@ons.gsi.gov.uk

Do health inequalities predict population-level abortion behaviours?
Sandra Virgo, Rebecca Sear, London School of Hygiene & Tropical Medicine

UK quantitative and qualitative research shows that aggregate- and individual-level socioeconomic deprivation predicts a lower likelihood of termination of pregnancy and less acceptance of abortion, suggesting local 'cultures' regarding abortion related to one or more aspects of deprivation. Both demographic transition theory and evolutionary life history theory propose that fertility responds to changes in mortality, with established population-level links. The relationship may be causally mediated by psychological mechanisms causing individuals to lower their fertility as mortality rates fall, and controlled psychological experiments have shown that people faced with cues of mortality express increased/accelerated fertility preferences and reduced support for birth control policies. Health disparities may mean that perceptions of increased mortality and morbidity for poorer people might decrease motivation to terminate pregnancy when young, as proposed by the 'weathering hypothesis'. Do area-level morbidity and/or mortality then predict patterns of abortion, particularly for those under 25, for whom termination may be seen chiefly as a means of fertility postponement? Multi-level models test for ward-level associations between mortality (LE; SMR), morbidity (limiting long-term illness; receipt of disability benefits) and 'abortion proportion' (proportion of conceptions ending in abortion) in English and Welsh wards aggregated 1999-2003 in age bands: under 25; 25-29; 30-34; and 35 and over. Controls are used for ward-level income, education, housing, religion, ethnicity, and access to services and local-authority level area classification and abortion service provision with adjustments made for multicollinearity. Interpretation is made in the light of ecological fallacy. Further research will test for individual-level causal mechanisms.

sandra.virgo@lshtm.ac.uk

Migration and health in England and Scotland: A study of migrant selectivity and 'Salmon Bias'
Matthew Wallace, Hill Kulu, University of Liverpool

This study examines the health of migrants between England and Scotland comparing their health patterns to those of origin and host populations. While there is a growing literature on the health and mortality of international migrants, few studies have investigated the health of people moving within a country. We use individual-level data from the UK 1991 population census and apply the technique of logistic regression to analyse health differences between migrants and non-migrants. The analysis of the prevalence of a limiting long-term illness shows that on average migrants have better health than non-migrants supporting the notion of a 'healthy migrant effect'. Further, Scottish migrants are origin-selective but not host-selective while English migrants are host-selective but not origin-selective. Only English men in older working ages show significant health advantages over both origin and host populations. No evidence was found to support a 'salmon bias'.

gg0u7237@liv.ac.uk

ONS Longitudinal Study
James Warren & Kevin Lynch, Office for National Statistics

The project to link 2011 Census data for England and Wales to the LS database is nearing completion. After the inclusion of this data the LS will hold information on 1.1 million members and five decades of census data. The inclusion of 2011 Census data also means the LS will hold information on intention to stay, passports held, visitors, second addresses, main language and civil partnerships for the first time. It also means that for the second consecutive decade the LS will have information on general health, caring and religion. Researchers are currently testing a beta test version of the database as part of the final evaluation of quality before the database is launched in November 2013. Details of the research projects selected to test the database are shown in the poster along with the full range of census information available in the LS.

james.warren@ons.gsi.gov.uk

Resilient families in the context of rapid urbanisation: Wellbeing of working mothers in Accra, Ghana
Philippa Waterhouse, University of Southampton

Increasingly research is being directed at urban areas in sub-Saharan Africa due to the opportunities and challenges that the rapid growth of cities present. The new urban setting has particular implications for the lives of women. Economic, socio-cultural and environmental transformations have resulted in the greater intensification of women's burdens compared to men's. In the sphere of economic activity profound changes in the social organisation of female work have taken place. Simultaneously, traditional patterns of familial reciprocity have weakened due to the dislocation of kin through migration and as a result of changing values associated with modernisation. In such shifting environments it is argued that women are experiencing a tighter 'reproductive/productive squeeze' raising the question of whether there are consequences for the wellbeing of mothers and children. In Accra, one of the fastest growing cities in the African region, previous research has found maternal employment to not be associated with child nutritional status. Nonetheless, whilst mothers may be successful in fulfilment their work and family roles for the benefit of their offspring this may be at cost of their own wellbeing. Using longitudinal data from the Women's Health Study for Accra, this research examines the implications of maternal employment on maternal physical and mental wellbeing in the context of a dynamic sub-Saharan African centre. Results from preliminary analysis suggest that maternal employment has no adverse consequences for maternal wellbeing. Despite concerns expressed in the literature, urban families appear to be resilient, achieving competent functioning and wellbeing in the context of risk and adversity.

pjw2v07@soton.ac.uk

An UK comparison of families with up to two children and those with three or more
Susanne Whiting, Population Matters

The UK population is projected to increase from 62 to 70 million by 2027. The paper compares families with no children, with two or less, and with three or more, to explore the factors surrounding family size, in particular looking at historical, age-specific, socio-economic, ethnic and regional issues. The analysis was based on data compiled by the Office of National Statistics and on ONS website data. The two child family continues to be the most common, and childlessness second. The total fertility rate increased over the last decade for all age groups apart from teenagers. In 2010 nearly half of all babies were born to mothers aged over 30. Fertility rates rose for UK born women, while remaining stable for non-UK born women. Due to the increase in foreign-born

women living in the UK, their births increased from 13% in 1980 to 25% in 2010, (Poland the most common origin). Within religious groups, families with >3 children varied from 25% of Muslim, 14% Sikh, 7% Hindu and 5% Christian. Ethnicity impacts on family size, but not Socio-economic class. Regionally, large families are most prevalent in Northern Ireland and London. These findings only inform us about recent changes which have occurred within the UK population. While the ONS population projected increase to 70 million in 2027 is a likely scenario, the detailed changes described here cannot be projected forward with equal robustness.

colin@colingallagher.plus.com

Introducing the Scottish Longitudinal Study (SLS)

Lee Williamson, Longitudinal Studies Centre – Scotland (LSCS), University of St Andrews

The poster will introduce the SLS and the datasets, the application process for researchers interested in using the SLS and outline research examples. The Longitudinal Studies Centre – The size and scope of the SLS make it an unparalleled resource in Scotland for analysing a range of socio-economic, demographic and health questions. Additionally, the longitudinal nature of the SLS is particularly valuable, allowing an exploration of causality in a way that cross-sectional data collected at a single point in time does not. In this way, the SLS can provide insights into the health and social status of the Scottish population and, crucially, how it changes over time. Scotland (LSCS) was established in 2001 and hosts the Scottish Longitudinal Study (SLS). This study links together routinely collected administrative data for a 5.3% representative sample of the Scottish population (about 270,000 people). It currently includes a wealth of information from the censuses starting in 1991, vital events registrations (births, deaths and marriages), Scottish education data, and with appropriate permissions can be linked to NHS health data including cancer registry and hospital admission data.

lee.williamson@st-andrews.ac.uk

Inequality in Health Expectancies in England and Wales: The role of Individual Level Social, Health and Lifestyle Factors

Pia Wohland, Carol Jagger, Institute for Ageing and Health, Newcastle University

The InHALE project is concerned with inequalities in healthy active life expectancy in England and Wales with a focus on the role of time, place and individuals. The first part of the project, now completed, concentrated on inequalities in health expectancies between geographic areas both over time and across different ages using cross-sectional data. The second part of the InHALE project, presented here, focuses on individual level information at older ages. We analyse two major longitudinal studies CFAS, Cognitive Function and Ageing Studies, with individuals aged 65 and over and ELSA, English Longitudinal Study of Ageing, comprising individuals aged 50 and over. This analysis will provide further evidence on regional differences as established in the cross-sectional data analysis and in addition will address whether these variations are manifested through differences in onset of ill-health, recovery or mortality. The research question we aim to answer in this presentation: What is the relative contribution of individual-level social, health and lifestyle factors to inequalities in healthy life expectancy and disability free life expectancy?

pia.wohland@ncl.ac.uk

Marriage and reproduction in northern rural Greece during the 20th century: Evidence from seven settlements of Pieria and twenty-six of Rhodopi

Konstantinos N. Zafeiris, University of Thrace

Based on the civil register archives of the municipality of Dion, the life lines of the members of the population were reconstructed. An analysis was carried out in order to examine the reproductive history of women during the 20th century. The analysis was based on the life lines of different cohorts of women for each settlement and population group of the municipality in order to identify temporal trends, convergences and divergences of the demographic characteristics among them. Age at marriage and age difference of the spouses, age of the mothers at first child, birth spacing, age of the mothers at the last child, reproductive span and children ever born were the main demographic measures used in the analysis. The findings were screened out against those of previous work concerning the population of 26 villages of the Department of Rhodopi (Greek Thrace). However, because the original analysis for these villages was based on marriage cohorts, all the measures were recalculated for birth cohorts in order to be comparable with those of the Municipality of Dion. Findings indicate significant temporal and spatial differences of the demographic characteristics and an on-going fertility transition in the 20th century, which mainly represent the effects of the action of the political, historical, cultural, religious and socio-economic characteristics and transformations of the populations examined.

kzafiris@he.duth.gr

Divergence of policy responses to lowest-low fertility in East Asian societies: A comparative qualitative study on Taiwan and South Korea

Yuxi Zhang, Stuart Basten, Department of Social Policy and Intervention, University of Oxford

Most East Asian societies have finished the fertility transition and reached the lowest-low fertility threshold (TFRs ≤1.3) in the early 21st Century. The lasting lowest-low fertility rate in East Asia has attracted a lot of academic attention, but neither the Demographic Transition theory nor the Second Demographic Transition theory has been robust enough to explain this issue and its country variants. In practice, the lowest-low fertility levels imply a shortage of labour force in the future. Together, the accelerating population aging trends pose great burden on these country's welfare system. Facing the lowest-low fertility "crisis", each of these countries sets up pronatalist policies to encourage childbearing. Although these societies are similar in many ways, their pronatalist policies are by no means homogeneous. So, a comparative qualitative research on the divergence of policy responses to lowest-low fertility in East Asian societies has strong theoretical and practical significance. The poster will show the results of comparative qualitative research conducted in 2013. In it, we depict the demographic history and reality in South Korea and Taiwan; demonstrate the divergence of pronatalist policies in the two societies with evidence from policy analysis; and elaborate the different dynamics of policy making in the two societies with data from original fieldwork, namely interviews with policy makers, stakeholders and prominent academics in both South Korea and Taiwan.

yuxi.zhang@kellogg.ox.ac.uk

WORKSHOPS & TRAINING SESSIONS

NB: Advance registration was required. As some sessions are fully-booked, please check first with the registration desk before attending if you have not booked.

Monday 9 September, 4.45pm

STUDYING PATHWAYS BETWEEN SOCIAL AND BIOLOGICAL FACTORS AND USING MODERN CAUSAL INFERENCE METHODS: AN EXAMPLE USING DATA FROM THE ONS LONGITUDINAL STUDY

Bianca DeStavola, London School of Hygiene & Tropical Medicine; Rhian Daniel, London School of Hygiene & Tropical Medicine; Emily Grundy, University of Cambridge

In this workshop we aim to introduce participants to the language and methods of 'modern' causal inference and discuss how these can be used to guide the analysis of data from observational studies. In particular, we will compare these more modern perspectives (based, for example, on causal diagrams) with traditional approaches (such as the 'epidemiological triangle') to defining and dealing with confounding.

Tuesday 10 September, 7.30am

CAREER MENTORING BREAKFAST (Fully booked)

Organised by Julia Mikolai, University of Southampton.

Tuesday 10 September, 11.00am

CeLSIUS: JOINT HANDS-ON TRAINING SESSION FOR THE THREE UK CENSUS LONGITUDINAL STUDIES (Fully booked)

Nicola Shelton & Rachel Stuchbury, CeLSIUS; Michael Rosato, NILS-RSU; Lee Williamson, SLS-DSU

The three UK Census Longitudinal Studies (the ONS LS, SLS and NILS) provide a rich and powerful resource for research for a diverse range of academic disciplines, policy-makers, practitioners and third sector bodies. They offer unparalleled detail for analysis at the individual level, with sample sizes that confer considerable power.

In addition to the rich information provided by the Censuses, the LSs variously contain additional linkages to administrative data such as education, prescribing, dental care, pollution levels and extensive health data. In some cases it is also possible for researchers to link an LS sample to their own provided data. The forthcoming addition of Census 2011 data makes this is an exciting time for the LSs as they extend their follow up of individuals to between 10 years (NILS) and 40 years (ONS LS).

The three LSs are maintained by specialist Support Unit teams, who support researchers in accessing and using the data. These teams are:

- CeLSIUS, supporting the ONS LS (England & Wales),
- NILS-RSU, supporting the NILS (Northern Ireland), and
- SLS-DSU, supporting the SLS (Scotland)

These have now also been joined by the CALLS Hub (Census and Administrative data LongitudinaL Studies Hub), which aims to support, promote and harmonise the work of the three Support Units.

This 90 minute session will aim to be of interest to both academic and non-academic audiences, and will provide a general introduction to the LSs and the Support Unit teams, in particular highlighting new data linkages such as Census 2011. This brief talk will be followed by an opportunity for delegates to:

- explore the new websites of CALLS and the Support Units;
- explore which variables are held by each LS;
- have a hands-on session with real data from the ONS LS;
- make use of the presence of team members from all three LS Support Units to get help with actually completing an application to use LS data;
- have the opportunity to talk in person with Support Unit staff about questions they have about the LSs, or to discuss the development of new research projects.

Tuesday 10 September, 4.45pm

LOCAL GOVERNMENT TRAINING SESSION (Fully booked)

Led By Piers Elias, Tees Valley Joint Strategy Unit, with Sally Kenyon, Hampshire County Council, and Mark Green, University of Sheffield

Session 1. Sally Kenyon, Hampshire County Council : How to calculate Small Area Population Projections for customised geographies.

Session 2. Mark Green, University of Sheffield : Measuring the impact of policy interventions using matching methods.

Wednesday 11 September 9.00am

SCOTTISH BEYOND 2011 WORKSHOP

Lamine Lachhab and Tom Wallace , with Gemma Jackson, National Records of Scotland

The census has long been the only way of producing small area population and socio-demographic information for the whole population. However, the traditional 10-year census cycle, coupled with an increasingly mobile population means this information can quickly become out-of-date. The Beyond 2011 programme in Scotland was formally established in September 2011 to research suitable methods for producing population and socio-demographic information. The Office for National Statistics (ONS) and the Northern Ireland Statistics and Research Agency (NISRA) are doing similar research and the National Records of Scotland (NRS) will be working closely with these agencies throughout the programme.

The success of the Programme will depend on NRS having a clear understanding of user requirements and priorities and how these can be met with the possible options. Stakeholder engagement work combined with formal consultations will document these requirements.

This workshop will be held after the publication of a formal consultation report on the user requirements for producing population and socio-demographic statistics/information (http://www.gro-scotland.gov.uk/beyond-2011/consultations-events/consultations/user-requirements.html) and part of this workshop will be to reflect on these findings.

The workshop will be split into three elements.

Element 1: A brief presentation on the work of the Scottish Beyond 2011 programme detailing the results from the user consultation and how this is being fed into the options. This will set the context for the discussions.

Element 2: A discussion around the results of the consultation and how these can be combined with the different options.

Element 3: A discussion around the options themselves and the privacy, ethical, technological and legal issues surrounding these options.

Elements 2 and 3 will use interactive facilitation to progress the discussion, collecting the views of the participants and feeding into the body of evidence around the different issues within Beyond 2011.

Participants will have the option to reflect on how the work of the Scottish Beyond 2011 will combine with the work being carried out by ONS and NISRA.

Index of authors and session organisers

Aassve, 39, 53
Abel, 63
Agergaard, 73
Ahmed, 19
Amirthamoorthy, 81
Amo-Adjei, 50
Antobam, 80
Arpino, 6, 38
Auckland, 70, 80
Awusabo-Asare, 50

Bailey, 73
Baird, 98
Ballas, 46
Barban, 55
Barešić, 96
Basten, 31, 103
Beckley, 78
Bellani, 29
Bennett, 75, 80
Berrington, 20, 23, 82
Bevelander, 81
Bezverbny, 69
Bhatti, 45
Bhutta, 45
Bijak, 66, 73, 76
Boertien, 29
Bonifazi, 67
Bonsu, 50
Boothman, 52
Bordone, 6, 53, 54
Bowen, 85
Bowie, 9
Bramley, 66
Breschi, 51
Browne, 12
Brunborg, 76
Bryan, 26
Byrne, 22

Camara, 88
Cámara, 48
Cameron, 58
Carroll, 81
Castle, 81
Catney, 14, 15
Cetorelli, 60, 76
Champion, 7, 59, 67
Chan, 29, 53
Channon, 40, 60
Chikhungu, 44
Clark, 92
Clemens, 34
Condon, 72
Congdon, 7
Cooksey, 55
Coombes, 59
Corr, 58
Coulson, 79
Crawley, 18

Daly, 1
Daniel, 104
Darkal, 82
Darlington, 46
Das, 30
Das Gupta, 1
Davies, 98
de Valk, 30
Demey, 55, 82
Dennett, 65, 83
DeStavola, 104
Di Cesare, 45, 94
Dibben, 34, 48, 50, 56, 83
Dixon, 98
Doblhammer, 88
Domingo, 17
Douthwaite, 98
Dribe, 51
Dubuc, 20, 84
Duta, 56
Dutey-Magni, 84

Elias, 58, 105
Ermisch, 29
Esping-Andersen, 29
Essendi, 85
Evandrou, 2, 43, 82
Evans, 47, 86

Falkingham, 2, 43, 82
Feeley, 41
Feng, 56
Fielding, 68
Filser, 78
Findlay, 68
Finney, 14, 18
Fiori, 35
Foley, 85
Fornasin, 51, 67
Fortunato, 45
Freeman, 2, 3, 36
French, 5
Furstenberg, 53

Gale, 15
Galeano, 17
Galiana, 49
Galizia, 16
Garcia, 30
Garrett, 48, 50
George, 57
Ghana, 50
Gibbs, 86
Gil-Pita, 86
Goisis, 40
Graham, 35
Green, 42, 87, 105
Greig, 7
Griffiths, 40, 41
Groom, 10
Grundy, 41, 104
Guangye He, 26
Gubareva, 87
Gumà, 88

Hannafin, 21
Harmsen, 94
Harris G, 14
Harris K, 36
Harris R, 14
Hayes, 4, 13
Heath, 71
Hechler, 12
Heins, 67
Helgerz, 81
Henz, 27
Hill, 70
Hilton, 66
Hinde, 77
Holmes, 57
Howes, 57
Hunter, 8
Hutchinson, 12

Iacovou, 34, 54
Ireland, 88
Iwasawa, 95

Jackson, 106
Jagger, 102
Janićijević, 96
Janta, 89
Jefferies, 7
Jivraj, 3, 14, 22
Johnston, 14
Jones E, 43
Jones H, 89
Juarez, 51

Kamanda, 78
Kan, 26
Kandhari, 81
Kapend, 77
Karlsson, 17
Kashnitsky, 68
Kaufmann, 14
Kelly, 40
Kenyon, 57, 105
Khan, 16
Kneale, 4
Kravdal, 41
Kulathinal, 35
Kulu, 38, 74, 100

Lachhab, 106
Lada, 72
Lagazio, 67
Lainiala, 33
Lappegård, 39
Large, 8
Leather, 62
Ledger, 60
Leishman, 66
Leveson Gower, 87
Lewin, 12
Lloyd, 10, 21
Lomax, 62
López-Garrido, 86
Lubman, 89
Lundholm, 74
Lynch, 101
Lyons-Amos, 28, 55, 61

Mace, 79
MacInnes, 5
MacIntyre, 8, 9
Mackenzie, 90
MacLachlan, 7
Macmillan, 28, 31
Macpherson, 17
Magadi M, 31, 37
Magadi W, 37
Main, 90
Mairs, 98
Malmberg, 74
Manfredini, 51
Mariani, 91
Marshall, 3, 76
Martin, 11
Mayhew, 45, 64
McAndrew, 65
McGhee, 71
Menon, 91
Merad, 10
Merz, 30
Mestre, 49
Miettinen, 91
Mikolai, 55, 104
Miličić, 96
Monteiro, 44
Moon, 84
Morando, 92
Moro, 16
Morris, 10
Moya, 33
Murphy, 42, 54

Nandi, 22, 92
Narančić, 96
Nazroo, 3, 22
Neels, 23, 24, 28, 61
Newell, 62
Noble, 66
Norman, 11, 19, 46, 60, 62
Norris, 41
Nowok, 68, 83
Ntshebe, 60

O'Kelly, 92
Öberg, 49
Obucina, 20, 74
Owen, 46, 69
Ozcan B, 72
Ozcan S, 72

Park, 70, 80
Pellicani, 16
Pereira, 52
Perelli-Harris, 25, 28
Peri-Rotem, 27
Petranović, 96
Pilkauskas, 24
Platt, 22
Pozzi, 49
Pradeilles, 41
Pujadas, 48
Pyankova, 93

Raab, 56, 65
Ralphs, 10
Ralston, 56
Rasmussen Broegger, 73
Rees, 19, 62, 64
Reid, 48, 50
Reimann, 90
Rimmer, 93
Rinesi, 35
Robards, 43
Roberts, 23
Roest, 94
Rosato, 104
Rotkirch, 33
Rousham, 41

Säävälä, 35
Sabater, 4, 17
Sabates, 94
Sacker, 40
Sadkowska, 95
Salihović, 96
Samir, 63, 97
Sánchez Gassen, 25
Sander, 63
Sato, 95
Scalone, 51
Schaffnit, 30, 33
Schnettler, 2, 78
Sear, 30, 33, 100
Sevilla, 26
Sharp, 7
Shaw, 2
Shelton, 104
Sheppard, 30
Shuttleworth, 21, 95
Sigle-Rushton, 23, 40
Silverman, 66
Simpson, 4, 18
Sironi, 55
Škarić-Jurić, 96
Skirbekk, 6, 54

Smallwood, 63, 70, 80
Smith, Darren, 18
Smith, David, 45, 64
Smith, Marian, 80
Smith, Michael, 86
Smolej Narančić, 96
Snopkowski, 33
Sobotka, 31
Spijker, 5
Štampar, 96
Staniforth, 97
Stannard, 9
Steele, 5
Stillwell, 62
Striessnig, 97
Stromgren, 17
Stuchbury, 104
Swann, 98

Tammes, 20, 23, 77
Tampubolon, 3
Tavares, 38, 98
Taylor A, 10
Taylor C, 12
Tegunimataka, 81
Terama, 79
Testa, 34
Timaeus, 32, 99
Tomas, 96
Tomek-Roksandić, 96
Tonkiss, 58
Towriss, 32, 99
Trevena, 71
Treviño, 88
Tzavidis, 84

Vaisanen, 99
Väisänen, 32
Van Galen, 100
Vanhoutte, 3
Vaughan, 98
Vera-Sanso, 25
Vergauwen, 24, 28
Virgo, 100
Vitali, 39, 53
Vlacantoni, 2
Vlachantoni, 43
Voas, 65
Voetabge, 80

Wallace M, 100
Wallace T, 106
Ware, 71
Warren, 101
Waterhouse, 101
Watkins, 66
White, 86
Whiting, 101
Whitworth, 85
Williamson, 48, 50, 102, 104
Wilson, 38, 60
Wohland, 19, 102
Wöhler, 2
Wood, 23, 61
Wright, 80
Wroth-Smith, 8
Wu B, 65, 83
Wu X, 26

Zafeiris, 103
Zajc-Petranović, 96
Zaluar, 44
Zeman, 31
Zhang, 103
Zilanawala, 24, 40