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UNIVERSITY OF
Southampton

Society Counts

Newsletter of the Department of Social Statistics & Demography

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CPC Exhibit—"How to get to 100 – and enjoy it" What are your chances of living to 100? How do your early years, your family life, where you live, your lifestyle and your work affect these chances? With one in three children born in 2014 expected to live to 100, these key questions have never been more relevant. This unique, interactive exhibition was touring through 6 UK cities using the latest iPad-technology to display up-to-the-minute population research findings via interactive games, quizzes, pictures, interviews and easy-to-understand graphs and texts. The exhibition has been very successful around the UK, and on 16 January Professor Jane Falkingham, Director of the Centre for Population Change and Dean of the Faculty of Social & Human Sciences, appeared on BBC Breakfast as part of a live TV broadcast focusing on life expectancy and our ageing population. The online interview is available on <http://www.bbc.co.uk/programmes/p02h1vfy>, and more information can be found at www.liveto100.cpc.ac.uk. Due



ESRC Centre for Population Change — images from the 'How to get to 100—and enjoy it' exhibit in 2014

to the success of this exhibition, it was held at the University of Southampton again for those who did not have the opportunity to visit it before, from 2 - 13 February.

Half day conference at Turner Sims on 16th October: Towards a Global Health Research Institute at the University of Southampton

– Is your research linked to global health issues? Then you may want to stay in touch with developments arising from a recent half day conference at Turner Sims, introduced by Professor Judith Petts, Pro-Vice Chancellor (Research and Enterprise) and organised by Professor Marie-Louise Newell. The event attracted 150 delegates and achieved its aim of informing researchers about discussions in motion exploring the possibility of developing an interdisciplinary Global Health Research Institute at the University of Southampton. The conference presentations provided vignettes of some of the global health research at the University. Those who attended learned about the extensive range of leading global health research currently conducted at the university. There was an enthusiastic sharing of ideas during the networking portion of the program and the Vice Chancellor, who attended for the final session, expressed his support for the initiative in his closing remarks.

Appointments

We would like to welcome the following staff who joined the Division in 2014: Ngaire Anne Coombs as Teaching Fellow, Jennifer Holland as Lecturer and Paul Smith and Michael Wild as Associate Professors. Ngaire Anne Coombs has a BSc in Population Sciences, an MSc in Social Statistics (Research Methods), and a PhD in Social Statistics & Demography from the University of Southampton. Jennifer Holland is an affiliate of the ESRC Research Centre for Population Change (CPC), an International Collaborator with the Linnaeus Center on Social Policy and Family Dynamics in Europe (Stockholm University, Sweden) and an Affiliated Researcher at the Netherlands Interdisciplinary Demographic Institute (The Hague). Paul Smith worked for 25 years in the Office for National Statistics; he is Associate Editor for the Journal of the Royal Statistical Society (Series A and for Survey Methodology), a member of Statistics Netherlands' Advisory Council on Methodology, a Fellow of the Royal Statistical Society, an elected member of the International Statistical Institute, and a member of the International Association of Survey Statisticians.

Congratulations to Jakub Bijak and Amos Channon on their promotions to Associate Professors. We are also pleased to announce that Solange Correa Onel has been appointed to Lecturer in Official Statistics and Jane Falkingham has been appointed as the new Dean of the Faculty of Social and Human Sciences and will continue her role as the Director of the Economic and Social Research Council (ESRC) Research Centre for Population Change (CPC). New roles have been announced for Nikos Tzavidis (Head of Department), David Holmes (Head of Teaching programmes), Jennifer Holland (Director of MSc programmes), Zoe Matthews (Director of PhD programme until January 2015) and Vicky Hosegood (Director of PhD programme from February 2015).

We would also like to wish a warm welcome to new PhD students who have joined the Division in September 2014: Stephanie Bispo, Bernice Kuang, Andrew Alfred Jamali, Ian David Forbes, Tawia Abbam, Zahoor Ahmad, Ben Damian Pedley, Natalia Vadimovna Permyakova, Hiu Tung Vivian So and Maria Herica La Valle. We are also pleased to announce that Sarah Carter and Patricia Ndugga started their PhDs in Social Statistics & Demography in January 2015.

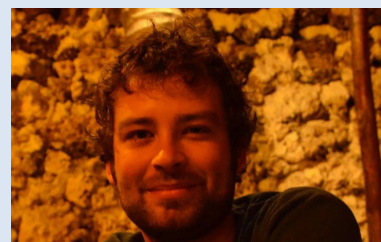
Meet a visiting PGR student – Rob Gruijters

Rob Gruijters, a visiting student from Humboldt University Berlin

Rob is in the second year of his PhD studies at the Berlin Graduate School of Social Sciences. He is also a member of the European PhD in Socio-Economic and Statistical Studies, and as part of this programme he is spending a semester at the division for social statistics and demography.

After completing his masters in development finance in Frankfurt, Rob worked in Ghana for three years in a development project related to the promotion of microinsurance. During his time in Ghana, Rob developed educational materials on microinsurance and conducted research assessing the demand for insurance among low income residents, in collaboration with local academic researchers.

For his PhD thesis, he is currently investigating the impact of internal migration and socio-economic change on family support to older people in China. He is also interested in social pensions and their potential to improve old age security in developing countries. Rob opted to come to Southampton to take part in specialized courses social statistics and learn from faculty members and other postgraduate researchers. He has since benefitted from the networking and mentoring opportunities available.



Rob Gruijters, visiting student

Meet an alumnus – Dr. Priscilla Atwani Idele

Dr. Priscilla Atwani Idele graduated from the Division of Social Statistics & Demography in 2002. Soon after successfully submitting her PhD thesis in Social Statistics, she worked as a Monitoring and Evaluation Specialist with the USAID-funded MEASURE Evaluation Project at Macro International, based in Silver Spring Maryland, USA, where she became fully involved in international health and development work. She supported many USAID-funded programmes in sub-Saharan Africa, developing monitoring and evaluation frameworks, research, data analysis and publishing. While with the MEASURE Evaluation Project, Priscilla Atwani Idele was seconded to Tanzania as the Resident Country Strategic Information Advisor for the United States Government (USG) Emergency Plan for HIV/AIDS Relief (PEPFAR).

Currently, Dr. Priscilla Atwani Idele is a Senior Adviser for Statistics & Monitoring in Statistics at UNICEF, New York. She conducts strategic planning and coordination, providing advisory and technical support services for the implementation, monitoring and evaluation (M&E) of HIV and AIDS related programmes within UNICEF and at the global, regional, and country levels. This includes the oversight of the UNICEF HIV/AIDS-related global databases, flagship and sector specific publications. She also continually makes significant contributions to reporting on health and HIV/AIDS related global goals and targets, such as UNGASS, MDGs, Universal Access, and UNICEF State of the World Children and sector specific reports on Children and AIDS.

Overall, Priscilla Atwani Idele's social statistics background has enabled her to gain fulfilling and rich work experiences in global health statistics: she has been able to co-chair, play active roles in interagency collaborative activities and participate in forums that have led to decisions influencing the overall global agenda on the HIV/AIDS response. Priscilla Atwani Idele has noted that the PhD course in Social Statistics had helped her to learn and apply multinomial logistic regression in her research, which she has reflected on as a very rewarding experience.

While at UNICEF, Priscilla Atwani Idele had been able to further use her statistical skills in research which culminated in an award of Excellence in Research Related to the Needs of Children Affected by AIDS at the International AIDS Conference, Vienna, Austria, 2010.

Dr Priscilla Atwani Idele —
Receiving the International Aids
Society Prize for Excellence in
Research related to the needs of
children affected by AIDs



European Population Conference, 25-28 June, 2014

The European Population Conference (EPC), a bi-annual conference organized by the European Association for Population Studies, was hosted in Budapest, Hungary last year. The special theme of this year was “Transitions: Opportunities and Threads”. The conference received more than 1,000 submissions and accommodated about 550 presentations in 116 sessions and 250 posters. More than 800 participants attended the conference and the UoS was among the institutions with the highest number of participants, with 19 of us, among members of staff, post-doctoral researchers and PhD students from the Department or CPC contributing a paper or a poster.

Agnese Vitali, lecturer in Social Statistics and Demography, presented a paper titled “The emergence of women as main earners in Europe”, co-authored with Daria Mendola from the University of Palermo, Italy. This paper is an initial step in a broader program of work initiated by Agnese that involves a comparative empirical research on an emerging family model characterized by women who earn the largest share of the household income and assesses the causes and consequences of this new earning model for women and men across countries in Europe. The paper was particularly well received by participants in the session at EPC. In particular, Agnese was invited to record a video interview for Population Europe, the network of Europe’s leading demographic research centres. The interview, which will become available soon at <http://www.youtube.com/user/PopulationEurope/>, focused on the new insights on gender and relative earnings brought about by Agnese’s research. Conference paper available at: <http://epc2014.princeton.edu/papers/140935>.



Agnese Vitali at the CPC stand during the EPC conference

By Agnese Vitali

International Conference on Small Area Estimation, 3-5 September, 2014

The Department of Social Statistics and Demography (SSD), University of Southampton was represented by five of its members at the International Conference on Small Area Estimation (SAE) that took place in Poznan, Poland last September. The following presentations were given on methodological developments and practical applications of small area estimation methods.

- ◆ **Model Selection and Checking for Small Area Estimation**, by Danny Pfeffermann.
- ◆ **Benchmarked Synthetic Small Area Estimation**, by Li-Chun Zhang *et al.*
- ◆ **Domain Prediction for Counts using Microsimulation via Quantiles**, by Beate Weidenhammer, Nikos Tzavidis *et al.*
- ◆ **Census and Small Area Estimation: Population Size Estimation**, by Li-Chun Zhang.
- ◆ **A Simple Score Test for Random Effects with Application to Small Area Estimation**, by Yahia El-Horbaty.
- ◆ **Robust Fay Herriot Estimators in Small Area Estimation** by Sebastian Warnholz, Timo Schmid and Nikos Tzavidis.
- ◆ **Multivariate Generalized Structure Preserving Estimation**, by Angela Luna-Hernandez and Li-Chun Zhang.

Danny was a member of the steering board of the conference. Danny and Li-Chun were also among the members of the programme committee of the conference. Moreover, Li-Chun organized and delivered a workshop entitled *Small Area Estimation in R* that was held one day before the official opening of the conference.

The next international conference on SAE will be held in Santiago, Chile in early August 2015. This will be an International Statistical Institute Satellite meeting and the first SAE conference in South America. SSD is again expected to have an impressive representation. As part of the conference, members of SSD are organising a Journal of the Royal Statistical Society Series A special issue on SAE. The guest Editors of the special issue are: Nikos Tzavidis (University of Southampton, Associate Editor of the Journal of the Royal Statistical Society Series A), Danny Pfeffermann (University of Southampton, National Statistician of Israel), Li-Chun Zhang (University of Southampton and Statistics Norway) and Partha Lahiri (University of Maryland).

By Nikos Tzavidis and Yahia El-Horbaty

ESRC DTC Trip to South Africa — Last summer, the Doctoral Training Centre from the University of Southampton offered their PhD students a chance to apply for a residential visit at the University of Witwatersrand (Johannesburg). The overall aim of this residential visit was to collaborate with students from Wits on research projects that would lead to a publication. Being experts in different fields, a variety of projects were developed:

- ◆ Fishing communities' health needs and their mainstreaming into national health and fisheries policies: comparative study of Malawi, Uganda and Zambia
- ◆ The relationship between higher education attainment and transition to employment in South Africa
- ◆ The influence of grandmothers' care on children's educational outcomes in South Africa
- ◆ Understanding data scarcity in sub-Saharan Africa and innovative methodological responses in the social sciences: Key informant perspectives

This residential visit provided the opportunity to develop new academic and social skills. We learned to manage how to work in a team efficiently and we hope that in the long run we will be able to present our group work at conferences as a good example of how interdisciplinary projects can and should work.

In addition, the trip to South Africa also gave us the chance to present our own PhD research to a non-academic environment. We had the opportunity to showcase our PhD projects to the consulting firm Mott MacDonald. It was very helpful to receive comments from Mott MacDonald as provided a more practical and impact orientated point of view on our academic work. These presentations and the visit to an HIV/AIDS awareness project run by Health & Development Africa inspired us to not only focus on publications during our PhD but to connect our research to "real world results" and to achieve an impact with our work.

All in, the entire journey to South Africa can be seen as a very successful trip which greatly influenced our research.

By **Nele Van Der Wielen**



Members of the ESRC DTC during their trip to South Africa

Future Dates for the Diary

30th April–2nd May 2015	Population Association of America (PAA), San Diego, U.S.	Deadline for submissions now closed.
15th–8th June 2015	IUSSP 2 nd Annual International Conference on Demography and Population Studies, Athens, Greece.	Deadline for submissions now closed.
24th–26th June 2015	Ninth Annual Research Conference on Population, Reproductive Health and Economic Development, Addis Ababa, Ethiopia.	Deadline for submissions now closed.
30th June–3rd July 2015	International Conference on Population Geographies, Brisbane, Australia.	Deadline for submissions 15th February 2015.
6th–10th July 2015	European Meeting of Statisticians, Amsterdam.	Deadline for submissions now closed.
6th–8th July 2015	PopFest 2015: The 23rd Annual Population Postgraduate Conference, Plymouth University, UK.	Deadline for submissions 12nd March 2015.
26th–31st July 2015	60 th World Statistics Congress – ISI20015 Satellite Meeting on Small Area Estimation. Rio de Janeiro, Brazil.	Deadline for submissions 13rd February 2015.
3rd–6th August 2015	Research Students Conference (RSC) in Statistics and Probability. University of Leeds, UK.	Details to follow.
3rd–5th August 2015	First Latin American ISI Satellite Meeting on Small Area Estimation (SAE), Chile.	Deadline for submissions 15th April 2015.
2nd–4th September 2015	Royal Geographical Society with the Institute of British Geographers Annual Conference.	Details to follow.
7th–9th September 2015	British Society for Population Studies (BSPS) Annual Conference, University of Leeds, UK.	Deadline for submissions 8th April 2015.



NCRM begins its new £6.25M grant — Last year the National Centre for Research Methods (NCRM) team at the University of Southampton was awarded a £6.25m grant from the Economic and Social Research Council (ESRC), commencing October 1st 2014 and lasting 5 years. The coordinating unit of the NCRM has been based at the University of Southampton since the Centre was first established in 2004. The new Centre structure is a collaborative partnership between the universities of Southampton, Edinburgh and Manchester.

Dean of the Faculty of Social & Human Sciences at the University of Southampton, Professor Jane Falkingham said: "I am delighted by the excellent news that NCRM has been refunded for its 3rd five years. It is a reflection of the significant contribution NCRM has made to the understanding and development of methods within the social sciences since its inception in 2004 and to the innovative leadership of Professor Chris Skinner, NCRM's inaugural Director, and Professor Patrick Sturgis. I am confident that over the next five years Patrick and his team will continue to push the boundaries, ensuring UK social science is at the forefront of research and training." NCRM Director, Professor Patrick Sturgis commented: "I am delighted that ESRC has decided to support the crucial work of the Centre for a further five years. We are very excited by the opportunities that will be created through our partnership with Manchester and Edinburgh. Over the past ten years NCRM has become the key plank in ESRC's strategy for increasing the quality and range of research methods used by the UK social science research community, both in academia and beyond. Our objective in the next period of funding is to enhance and expand our research and training programmes so that they meet the evolving needs of social scientists across all sectors and disciplines."

To find out more about NCRM research and training programmes and online resources please visit us at <http://www.ncrm.ac.uk/> or follow us on Twitter @NCRMUK.

"Comparing the odds of postpartum haemorrhage in planned home birth against planned hospital birth: Results of an observational study of over 500,000 maternities in the UK"

A joint study by researchers from CPC, S3RI and the Centre for Global Health, Population, Poverty and Policy

The findings of Zoe Matthews, Ann Berrington and Andrea Nove have been incorporated into new draft guidelines on maternity care from the National Institute for Health and Care Excellence (NICE). Significant research by Zoë Matthews, Professor of Global Health and Social Statistics at the University of Southampton, with colleagues Professor Ann Berrington and Dr Andrea Nove, has contributed to new recommendations that women with low-risk pregnancies should be advised to plan to give birth at home or in a midwife-led maternity unit. The study found that the risk of postpartum haemorrhage was higher in hospitals than at home and recommended more research into the findings. Using a range of studies, most notably concurrent work at the University of Oxford, which involved the investigation of almost 65,000 births in England, NICE has now concluded that hospital labour wards with doctors should be for more complex and difficult births. In addition, previous research by Dr Wim Van Lerberghe (WHO), Professor Matthews, and other international colleagues showed that initial investment in services was crucial in kick-starting the cycle of improving maternal and newborn health, such that more women will want to make use of the vital care that midwives and other health professionals provide for them and their babies. According to this study, demand for better care by women, linked with the expansion of basic services can catalyse the move to more and better services – and, more recently, political pressure has often helped to further improve midwifery services in low to middle-income countries.

The findings of this study are available by open access online at: <http://www.biomedcentral.com/1471-2393/12/130>.

By Zoe Matthews and Andrea Nove

Centre for Population Change : A Review of 2014

At the beginning of 2014 we were awarded funding from the ESRC for a second phase of CPC. As a result we have reorganised our scientific programme around five research themes, to build on existing achievements and reflect elements of both continuity and change.

- ◆ Fertility and family change
- ◆ Increasing longevity and the changing life course
- ◆ New mobilities and migration
- ◆ Understanding intergenerational relations and exchange
- ◆ Integrated demographic estimation and forecasting

In addition to these themes, in 2013-14, CPC researchers have been working on the following Scottish independence projects:

- ◆ How immigration is viewed by employers, and how immigration is viewed differently in Scotland than in England– Allan Findlay’s CPC Scotland team and the CPC Southampton estimating and forecasting team.
- ◆ Fiscal aspects of constitutional change - led by Professor David Bell.

This research was presented in 2014 at several key events in the lead up to the Scottish Independence referendum, including at the “Demographic Implications of Scottish Independence” debate held at the International Longevity Centre in May and the “International Conference on Economics of Constitutional Change” held in September in Edinburgh. The research has been featured by media outlets such as BBC Radio Scotland’s “Newsdrive” programmes, BBC1 Scotland, articles in The Guardian, Daily Record, Daily Express, Daily Echo and the Huffington Post. A series of blog articles have also been published on both the futureukandscotland.ac.uk and Washington Post websites.

In May 2014, CPC ran a new PhD short course in Southampton on the economics of international migration, taught by Michele Beine from the University of Luxemburg. In June 2014, we jointly hosted a workshop with the EPSRC Care Life Cycle featuring speakers from across the globe on the use of probabilistic forecasts at the Royal Statistical Society in London. From October to December 2014, we were touring the UK with our “How to get to 100 - and enjoy it” exhibition. CPC have also participated in three big conferences last year; the European Population Conference, the British Society of Gerontology conference held at the University of Southampton and the British Society for Population Studies conference. Up to 20 CPC members presented at each conference and CPC’s research was highlighted by an exhibition stand at each event.



Throughout 2014, CPC’s social media presence has steadily grown. Our Twitter feed now has almost 1,200 followers and our Facebook page “likes” are in triple figures. If you would like to join our growing network of followers or just take a look, you can find us on www.facebook.com/CPCpopulation and @CPC_population on Twitter. This year we have also joined Scoop.it! - a media curation tool which displays all of our media coverage. Check out our page at <http://www.scoop.it/t/centre-for-population-change>.

Centre for Global Health, Population, Poverty and Policy (GHP3) - GHP3 undertakes international research to further progress towards alleviating poverty, reducing infant, child and maternal mortality, meeting unmet need for family planning and reducing the spread and economic and social impact of HIV/AIDS. GHP3 strives to not only highlight the interrelationship between health, population and poverty at both the societal and individual level, but also to ensure that all research has salient policy implications for improving health and reducing poverty.

A hallmark of the centre's research is the combination of statistical analysis of large quantitative datasets with rigorous evidence based policy analysis. GHP3 carries forward the work of the Department for International Development (DFID) funded "Opportunities and Choices" research programme in reproductive health and the Centre for AIDS Research. Most recently, GHP3 investigated childhood mortality in Kenya by looking at trends in the urban-rural and intra-urban differentials in childhood mortality in order to estimate infant mortality rate (IMR), child mortality rate (CMR) and under-five mortality rate (U5MR). The results found that between 1993 and 2008, there was a downward trend in IMR, CMR and U5MR both in rural and urban areas, however, the decline was more rapid in rural areas compared to urban areas, narrowing the urban-rural mortality differential over time. Additionally, the results found a downward trend in infant and child mortality in urban slums, although mortality rates were consistently higher compared rural and non-slum urban areas. The conclusion of this project saw that extra emphasis is needed on the urban slums in Kenya in order to reduce childhood mortality.

The Care Life Cycle Project: Health and social care needs in an ageing population

The UK population is ageing and as older people are the primary users of health and social care services, this poses a significant challenge for future service provision. To address these challenges and help policy makers plan effectively for the future, researchers within the Care Life Cycle (CLC) project are developing a suite of computer models representing the socio-economic and demographic processes and organisations involved in health and social care provision in the UK. Led by Professor Jane Falkingham, this 5 year research programme, funded by the Engineering and Physical Sciences Research Council, has united researchers from computing science, operational research and social science, including demography, social policy and social statistics, with CLC Research Fellows are located across the university.



Professor Jane Falkingham

CLC is funded under EPSRC's 'Complexity Science in the Real World' initiative, exploring the behaviour of complex systems by focusing on the interconnections of the system, rather than the individual components themselves. In this instance, researchers are exploring the various factors affecting the supply and demand of social and health care. For example, as informal carers make a major contribution to the supply of social care, data from the Census and Office for National Statistics Longitudinal Study has been analysed to understand the characteristics of informal carers and how this has changed over the last 10 years. Using the gathered data, computer models at various levels are being developed and range from modelling the population to modelling an individual, reflecting the varied modelling approaches characteristic of the academic disciplines represented on the project. The models allow researchers and policy makers to forecast demand for services and understand the wider implications of potential changes to operational services, which will help to inform policy decisions.

Researchers have been working in partnership with Hampshire County Council to model the demand for local authority social care services. Another model has been developed in partnership with the eye unit at Southampton University Hospital and using the example of macular degeneration treatment, models the complex interaction between health and social care. Further information on the CLC project, including forthcoming seminars, journal publications and briefing papers, can be found at www.soton.ac.uk/clc. You can also follow us on Twitter at @CareLifeCycle.



Southampton Statistical Sciences Research Institute (S3RI)

S3RI brings together about 50 researchers working in the statistical sciences on core methodology for generic problems (such as how to deal with missing data) and on substantial applications (such as the spatial modelling of air pollution and its health effects). In December 2013, S3RI celebrated its 10th anniversary with a symposium that presented talks from the five key research areas in S3RI: Modelling, Biostatistics, Experimental Design, Survey Methods and Policy and Evaluation. Associated papers are going to appear in *Statistical Methods in Medical Research*. Here we would like to point out some recent research developments that strengthen the key research areas of S3RI.



Steve Gilmour (RHS), Director of S3RI and Chris Skinner, former Director of S3RI at the S3RI anniversary symposium

Researchers from the Southampton Statistical Research Institute (S3RI) are at the forefront of a £15m consortium that will provide access to government data for academic research. The new Administrative Data Research Centre for England (ADRC-E), hosted by S3RI and directed by Peter W. Smith, is part of an initiative to enable information routinely collected by government departments and other agencies, such as tax, education and health data, to be shared with approved researchers in secure facilities. The Centre is part of a major investment by the Economic and Social Research Council (ESRC) in 'Big Data'. The Centre will be run in collaboration with University College London, the London School of Hygiene and Tropical Medicine, the Institute for Fiscal Studies, the Institute of Education and the Office for National Statistics.

Recently, funding was gained from the Medical Research Council (MRC) on a project entitled *Informative censoring in transplantation statistics – new modelling approaches to improve sensitivity analysis* lead by Stefanie Biedermann and Alan Kimber with a partner in UK Blood and Transplant, Dave Collett, and a medical advisor, Paul Roderick in the Medical Faculty. This is a multi-disciplinary project aiming to provide researchers in Medicine with new statistical/computational tools to assess and to get an intuition about the bias introduced in the model by ignoring the presence of informative censoring in survival data sets. A theoretical framework will be developed to find good closed form approximations to novel sensitivity analyses, which we will then apply to survival data from NHS Blood and Transplant and the UK Renal Registry. Extensive simulation work is planned to assess the performance of our methodology.

Furthermore, an *EPSRC Knowledge Transfer Secondment* could be gained which allows Maria Adamou (secondee) and Dave Woods (Principal Investigator) working with GlaxoSmithKline (GSK) to develop methodology for computer experiments in pharmaceutical development. The use of computational models and "in-silico" experiments has transformed modern science but the computational time and expense required to perform many of these virtual experiments means careful design of experiments is as important as ever. Work from Maria's EPSRC funded PhD project on optimal design for Gaussian process models (a nonparametric regression technique) will be extended and applied to a number of case studies from GSK.

Also, Sujit Sahu (as PI) informed about the exciting news that *two new* colleagues have joined S3RI. They will work with him and colleagues from Ocean and Earth Sciences (SOES) and Geography and Environment (GE). The details are as follows. *Monica Pirani* will work on the Macronutrient project (<http://www.christchurch-macronutrients.org.uk/>) in collaboration with Prof Duncan Purdie in SOES. The duration of this appointment is one year starting now. Monica finished her PhD dissertation, Statistical modelling for Environmental Sciences, from Kings College London under the supervision of Garry Fuller and her supervisory team included Dr Marta Blangiardo and Prof Nicky Best (Imperial College). *Edson Utazi* will work on the Bill and Melinda Gates Foundation project awarded to GE and S3RI. Ed will be supervised by Sujit Sahu and Dr Andrew Tatem and Prof Pete Atkinson in GE. This post is for two years and the project is on spatial modelling and design for setting up a disease surveillance network in Africa to reduce under 5 mortality - a pet project of the man himself - Bill Gates. Ed finished his dissertation in spatial and spatio-temporal modelling from Lancaster University under the supervision of Dr Peter Neal.

For more information on S3RI please visit : <http://www.southampton.ac.uk/s3ri/>.

Administrative Data Research Centre England : The Joys of Open Data



Dr David Clifford, Lecturer

For many reasons I think it's a very exciting time to be a quantitative social scientist! One important reason relates to the new opportunities for empirical research provided by emerging and interesting sources of data. In particular, as part of the wider 'open data' movement, administrative data collected by organisations and government departments are increasingly available for research use. The new [Administrative Data Research Centre England](#), based here in Southampton and directed by Prof Peter Smith of this Department, will be facilitating research based on administrative data that will provide important new insights into social and economic life.

Civil society – often described as the arena between the state, the market and the family - is one important focus of research that will benefit from these new sources of data. Indeed civil society has been recognised as 'unchartered territory' in quantitative social science.

This has stemmed from a lack of data, which has hindered empirical work and therefore the development of theory. For example, even basic information about voluntary organisations – their scope, structure, geographical distribution and funding – has not been available in the past. This context is changing because newly available data provide new opportunities for empirical research on these themes.

I am currently working on an [ESRC funded](#) project which examines the 'international connections of philanthropy' between the UK and overseas. It makes use of newly available administrative data collected by the Charity Commission, which has recently started to collect information on the country of operation of each charity registered in England and Wales that works overseas. The project is based on the understanding that the added value for empirical research is not only provided by exploiting newly available open data, but by *linking* these new datasets to other (existing and emerging) data sources. For example, country-level data on patterns of UK charities' operation are linked to newly available international estimates of [multidimensional poverty](#) developed by OPHI, and to country patterns of UK 'official' (government) development assistance using data from the Department for International Development (DFID).

Given the absence of previous empirical work, much of the project is descriptive. Did you know, for example, that there are now around 11,000 charities in England and Wales that work internationally? This includes many of the well-known larger charities, including Oxfam and Save the Children, but also a large number of smaller grassroots international 'citizen initiatives'. It is instructive to consider the geographical variation in UK charities operation between countries with similar poverty headcounts. Did you know that there are around 9 to 10 times more UK charities operating in Kenya and in Uganda than in, for example, Angola, Madagascar or Vietnam? It is very clear that countries with historic Commonwealth/colonial ties to the UK tend to have higher numbers of UK charities, but it is also clear that there is significant variation in charitable operation even between those countries with historic ties.

These findings are interesting sociologically but they also have practical uses. They are of interest to grant making bodies looking to fund organisations with experience of working in a particular country. They are also of interest to BOND, an umbrella body of UK development NGOs who are interested in the global reach of UK charities. I've recently been liaising with BOND, who are involved with information-sharing and coordination activities for UK NGOs working in ebola-affected countries, to provide them with a database on the organisations with experience of working in these countries. Thinking ahead, as a demographer I'm very much looking forward to developing research themes which examine the implications of demographic processes for civil society. I'd be delighted to talk to you about this if you'd like to find out more.

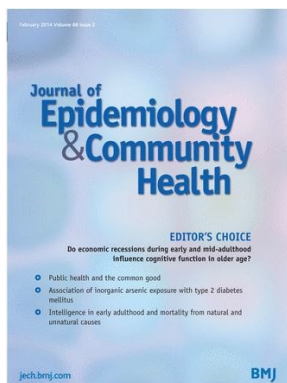
By David Clifford - david.clifford@soton.ac.uk

**S3RI****How important are community characteristics in influencing children's nutritional status? Evidence from Malawi population-based household and community surveys.**

L.C Chikhungu, N.J. Madise, S.S Padmadas,

This study used the 2004 data from the Malawi Integrated Household Survey and the Malawi Community Survey to investigate the influence of community characteristics on stunting among children under five years of age in a rural context. Multilevel logistic regression modelling on 4284 children with stunting as the dependent variable shows that availability of daily markets and lineage defined in terms of patrilineal or matrilineal communities were significant community determinants of childhood stunting in Malawi. There were significant differences in socio-economic status between household heads from matrilineal and patrilineal communities.

doi:10.1016/j.healthplace.2014.09.006

**CPC****Mortality at older ages and moves in residential and sheltered housing: evidence from the UK**

J. Robards, M. Evandrou, J. Falkingham, A. Vlachantoni

The study examines the relationship between transitions to residential and sheltered housing and mortality utilising Longitudinal data from the British Household Panel Survey (waves 1993–2008) where the survey member was 65 years or over and living in private housing at baseline and observed at three consecutive time points. Transition to residential housing within the previous 12 months was associated with the highest mortality risk. There was an interaction between marital status and mortality, whereby unmarried persons were more likely to die. Also, higher male mortality was observed across all housing transitions.

doi:10.1136/jech-2013-203097

**CGHP****Country experience with strengthening of health systems and deployment of midwives in countries with high maternal mortality**

W. Van Lerberghe, Z. Matthews, E. Achadi, C. Ancona, J. Campbel, A. Channon, et al.

This paper complements the *Lancet* Series on midwifery by documenting the experience of low-income and middle-income countries that deployed midwives as one of the core constituents of their strategy to improve maternal and newborn health. It examines the constellation of various diverse health-system strengthening interventions deployed by Burkina Faso, Cambodia, Indonesia, and Morocco, among which the scaling up of the pre-service education of midwives was only one element. Efforts in health system strengthening in these countries have been characterised by: expansion of the network of health facilities with increased uptake of facility birthing, scaling up of the production of midwives, reduction of financial barriers, and late attention for improving the quality of care. Overmedicalisation and respectful woman-centred care have received little or no attention.

doi:10.1016/S0140-6736(14)60919-3

An exact confidence set for a maximum point of a univariate polynomial function in a given interval

Wan, Fang, Liu, Wei, Bretz, Frank and Han, Yang

Construction of a confidence set for a maximum point of a function is an important statistical problem which has many applications. In this paper, an exact $1 - \alpha$ confidence set is provided for a maximum point of a univariate polynomial function in a given interval. It is shown how the construction method can readily be applied to many parametric and semiparametric regression models involving a univariate polynomial function. Examples are given to illustrate this confidence set and to demonstrate that it can be substantially narrower and so better than the only other confidence set available in the statistical literature that guarantees $1 - \alpha$ confidence level.

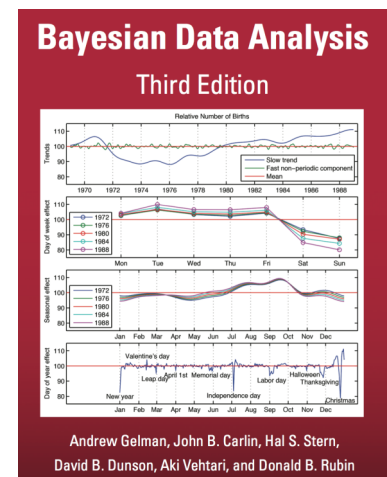
doi:10.1080/00401706.2014.962708

Book synopsis: Categorical Data Analysis & Bayesian Data Analysis

In 2013, the long-running Social Statistics Reading Group dissected Alan Agresti's Categorical Data Analysis. We already know it's an essential read for students, researchers and practitioners facing categorical data, but we also discovered what's new in the latest edition– each chapter now features a snippet of the Bayesian approach to its contents. The book is not exactly the *crème de la crème* of Bayesian data analysis, but we appreciate that there is plenty of literature out there covering that ground. With a little familiarity of the Bayesian approach from elsewhere, one can certainly take advantage of these otherwise, incomprehensive-looking, parts of the book. Having mentioned that, it is still THE book for both model and non-model based approaches to analysing categorical data. One can look up contingency table analysis, logistic regression, clustering and multinomial models for a thorough explanation of how, why and when to use chosen statistical tools. And all of that is well illustrated using plenty of examples (we must admit that we have certainly learnt much about horseshoe crab mating while scouring the book). The book's website is also updated to include software information.

If you fancy joining the award-winning reading group this year, you may be excited (or not) to find out that last year we started to traverse the Bayesian data analysis literature, with the book Bayesian Data Analysis (3rd Ed.). We are hoping that Gelman et. al. will certainly surprise us with what this must-have book couldn't cover, despite its decade long reign, in the previous edition. Even if it doesn't knock our socks off, we certainly are looking forward to seeing Prof. Peter every Tuesday, the commander we would never want to replace!

By Sana Rashid and Dilek Yildiz



About Us

Social Sciences: Social Statistics & Demography

Since the Department of Social Statistics was founded in 1975, we have been at the forefront of international research on methodology for the design and analysis of sample surveys. Today, we are a leading international centre for research in social statistics.

Our research covers a broad range of topics including demographic estimation and statistical modelling; the family, life course and ageing; historical demography; HIV/AIDS; reproductive and child health in the developing world; poverty and living standards in both rich and poor countries. We have been recognised by the ESRC as an outlet for the receipt of its research training studentships. We are therefore able to offer financial support to well-qualified UK, EU and overseas candidates.

For more information please visit our website at: <http://www.southampton.ac.uk/demography/index.page?>

You can also find us on Facebook: <https://www.facebook.com/UoSPopulationResearch>.

Society Counts is published twice a year by postgraduate students from the Department of Social Statistics & Demography at the University of Southampton.

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