Historical demography

Strand organisers: Prof. Eric Schneider (LSE) and Prof. Nicola Shelton (UCL)

4:45 - 6:15 Monday 11 September: A: Transitions and Kinship

The first demographic transition in Britain – one or more?
Alice Reid[1], Hannaliis Jaadla[1], Eilidh Garrett[2], Kevin Schurer[1], Lee Williamson[2] – [1]University of Cambridge, [2]University of Edinburgh

The broad trajectories of the fertility and mortality declines during the first demographic transition are well known for Scotland and for England and Wales, and regional patterns within each country have been explored. However, like-for-like comparisons between the three nations have never been done, nor has investigation of regional patterns across the whole of Britain. It is therefore unclear whether there were local demographic continuities across national borders, and if so whether they followed economic, occupational, cultural or linguistic lines. We will use group-based multi-trajectory modelling to identify dynamic demographic regimes which can be used in further analysis. This will be the first holistic analysis of the interactions between the demographic components of fertility, mortality, nuptiality and migration in Britain, and how these interacted with economic and cultural processes to create one or more demographic systems and changed over the late nineteenth and early twentieth centuries.

Email: amr1001@cam.ac.uk

Leveraging online crowdsourced genealogical data to measure fertility in Europe and North America during the first demographic transition
Riccardo Omenti - University of Bologna

Crowdsourced online genealogies are a promising data source for demographic research that incorporates both individual-level demographic data, e.g., place and date of birth and death, as well as information about transnational kinship ties spanning over multiple centuries. This research project aims to examine the potential use of online genealogical data to study the evolution of fertility in six European Countries and the United States during the historical period 1750-1900. The analysis relies on FamiLinx, a novel historical data set crowdsourced from the public available genealogies on the website geni.com. The evolution of fertility is examined by constructing country-specific time series of Total Fertility Rates (TFR) through the implementation of a Bayesian hierarchical model. The former allows to estimate TFRs using as little information as the number of women at maternal ages (15-49) and the number of children aged 0-4 in the data set FamiLinx while accounting for both the underestimation of infant-mortality and sample under-enumeration. The performance of the Bayesian model is assessed by comparing the genealogy-based TFR estimates against ground-truth rates stemming from databases such as the Human Fertility Collection as well as from relevant studies in the field of Historical Demography. Based upon the preliminary results, the inclusion of prior information on both child survival and sample undercount through Bayesian modelling makes genealogy-based TFR estimates much closer to the true rates. Furthermore, it enables to predict fertility levels in countries and historical periods for which ground-truth demographic data are not available.

Email: riccardo.omenti2@unibo.it

Returning to a new home: The impact of the Greek-Turkish population exchange on kinship structures
Ebru Sanliturk and Athina Anastasiadou, Max Planck Institute for Demographic Research

Based on the Convention Concerning the Exchange of Greek and Turkish Populations under the Lausanne Peace Treaty (1923) an estimated number of 1.2 million Orthodox Greek inhabitants of contemporary Turkey were exchanged against approximately 400 thousand Muslim Turkish inhabitants of contemporary Greece. Mass population displacements have severe implications on the families involved in the process and the consequences on the family structures through loss of family members and geographic relocation remain unknown. In this study, we aim to shed light on how large-scale forced displacement affect family configurations and in particular, how forced resettlement results in kin losses. The analysis in this study will utilize archival data

from Greece and Turkey. Historical records of the economic compensation requests and other evidence collected by the National Bank of Greece allow us to locate the refugee settlements in Greece. Additionally, ecclesiastical records will allow us to draw family trees of the displaced. For Turkey, the detailed titles of the evacuation and settlement records of incoming Muslim families, which include the place of departure, place of settlement, information about the father and accompanying family members will be used. By applying natural language processing to match families on archival data, we hope to contribute to the literature on historical family demography and migration studies. By answering the above stated research objective, we strive to produce a data collection that could be further used for assessing the long-term implications of kinship loss on family structures or inter-generational transmission of migratory behaviour.

Email: sanlituerk@demogr.mpg.de

Forced opening and enhanced kinship network - evidence from pre-modern China
Wenhao Cheng - University College London

Demographic behaviour in traditional societies relies heavily on kinship, but how does such reliance change with economic conditions? I study this by focusing on clans' support for male marriage in 19th-century China and using the opening of Niuzhuang port as a shock to the pre-modern economy. I at first documented evidence showing that the opening improved residents' well-being by lowering mortality, and then find that a central position in kinship networks helps a male to find a wife, and such help was enhanced after the opening of the port. I find evidence suggesting that the channel is that inequality was larger after the opening as there were more resources to be allocated within clans. Contrary to the classic theory arguing that traditional institutions will be weakened during development, this research suggests that under some circumstances the effects of kinship networks will be enhanced when social welfare improves.

Email: wenhao.cheng.17@ucl.ac.uk

1:00 - 2:30 Tuesday 12 September: B: Migration and Mortality

Migration flows from stock census data, Great Britain, 1851-1901
Eilidh Garrett[1], Hanna Jaadla[2], Alice Reid[2], Kevin Schurer[2], Lee Williamson[1,] [1]University of Edinburgh, [2]University of Cambridge

While migration underpins much of the demography of urbanising, industrialising Victorian Britain, the flows of population are still only sketchily understood. This paper will use full-count, individual-level census data for Great Britain, 1851-1901, to measure movement across England, Scotland and Wales (GB) in three different ways. Firstly, birthplace information allows the average distance and predominant direction of 'life-time' migration to be estimated, between both sending and receiving areas within GB at a variety of spatial levels. Secondly, the comparison of sex ratios for successive age groups indicates both the ages at which people migrated, and differences in migration flows between the sexes. Thirdly, census populations, together with sex and age specific mortality data allow estimation of age and sex specific net out-migration at a variety of levels using cohort depletion rates.

Email: eilidh.garrett@btinernet.com

Religious affiliation and child mortality in Ireland
Lucia Pozzi[1], Liam Kennedy[2], Michail Raftakis[1], Francesco Scalone[3] - [1]University of Sassari, [2]Queen's University Belfast, [3]University of Bologna

This paper aims to examine the impact of religious affiliation on child mortality in the entire island of Ireland during the early 20th century, using the 1911 full count IPUMS Irish census. The census dataset provides individual-level information on various demographic factors, such as religion, occupation, literacy, electoral division of residence, and the number of children ever born and surviving for every married woman. The study employs indirect mortality measures and regression analyses to explore the relationship between religious affiliation and child death, while also controlling for factors at the individual and contextual level. The results indicate that there were significant differences in child mortality rates among Ireland's major religious denominations. Specifically, Catholics had the highest infant mortality rates, while families affiliated with the Church of Ireland had slightly better outcomes. The largest Protestant denomination, the Presbyterians, had the

lowest infant mortality rates. However, these differences were associated mainly with the different socioeconomic characteristics of each religious group. The analysis also found that the Jewish families had lower child mortality rates than other religious denominations. The paper will also focus on the urban experience of Northern Ireland, specifically Belfast, Derry, and Lurgan. An additional exploratory analysis will be conducted through an individual nominative linkage approach, combining birth and death records with the 1901 and 1911 censuses to have a closer look at the child mortality in the textile town Lurgan.

Email: lpozzi@uniss.it

Assessing the omission of early deaths in historical vital registration data: A model life table approach

Julio Romero Prieto – LSHTM, Andrea Verhulst – CED Barcelona, Michel Guillot - University of Pennsylvania, Institut National d'Études Démographiques

This paper investigates the magnitude of omissions of early deaths in historical vital registration data of Belgium, Finland, France, England and Wales, Norway, and Sweden. Data were extracted from the Under-5 Mortality Database, a newly compiled source including 1,741 distributions of under-five deaths by detailed age–by days, weeks, months, trimesters, and years–of 25 countries. Although the civil registration and vital statistics of these countries have been systematic for the period covered by the U5MD, old definitions of livebirths and premature deaths underestimated the actual number of infant deaths–sometimes omitted or misclassified as stillbirths. This paper examines 320 country-years affected by omission of early death between 1855 and 1952 in 6 countries; and proposes a correction strategy, following a model life table approach and implementing a hierarchical Bayesian estimation. Results suggest a correction of up to 100 per cent of the observed level of the neonatal mortality rate, representing 20 per cent of the infant mortality rate–which is close to one year of life expectancy at birth.

Email: julio.romero-prieto@lshtm.ac.uk

Urban shitscapes and the late decline of infant diarrhoeal mortality in England and Wales: Evidence from medical officer of health reports, 1890-1911

Romola Davenport - University of Cambridge

Efforts to establish the contribution of water and sanitation to mortality improvements in Britain have focussed disproportionately on improvements in water supplies to towns. Water supplies were extended and improved across the nineteenth century, and by 1911 almost all towns provided clean piped water to all their inhabitants. Sewage disposal on the other hand developed more slowly, and most towns still lacked a comprehensive water-based sewage disposal system in 1911. Northern towns in particular often relied on 'dry' disposal methods, and were characterised by high infant and diarrhoeal mortality rates. Recent work has indicated that investments in water supplies were not related to infant, diarrhoeal or crude mortality rates in the largest urban districts over the period 1875-1911. However sewerage expenditure was associated with improvements in crude mortality rates over the same period. This paper tests whether faecal disposal methods were associated with variations in infant and diarrhoeal mortality in the period 1890-1911, when infant mortality first fell decisively in English towns, and I exploit Medical Officer of Health reports to quantify faecal disposal methods. I use two-way fixed-effects models and weekly counts of infant, typhoid and diarrhoeal deaths to model relationships between annual and summer peaks of mortality on the one hand, and prevalence of flush toilets, privies or middens. I find that summer temperatures account for most of the variation in infant and diarrhoeal mortality over the period, regardless of sanitary provision. Typhoid declined uniformly across towns, again regardless of levels or trends in sanitary provision.

Email: rjd23@cam.ac.uk