Historical demography

The historical demography of industrializing Europe and North America
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The industrialising period – roughly 1750 to 1950 – is a period of massive demographic change in Europe and North America. The rough trajectory of the demographic transition has been sketched out for many countries, but aside from the Princeton project which focused just on marriage and fertility, comparative work has been limited to small selections of countries. This paper attempts to bring together a more integrated picture of all three major demographic processes – fertility, mortality and migration, for as much of these areas as possible. Broad regional differences and similarities will be sketched out and used to inform theories about the influences on changing demographic patterns and processes.

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Mismeasuring pandemics in causal research: Errors, biases, mismatched estimands, ambiguous channels, and the 1918 influenza pandemic
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Sattenspiel and colleagues (2025) have published "Death on the permafrost: revisiting the 1918-1920 influenza pandemic in Alaska using death certificates" in the American Journal of Epidemiology. This is by far the most detailed quantitative study of the 1918 pandemic mortality for the indigenous and non-indigenous populations of Alaska, and its headline conclusion is that the pandemic death rate was 8 times higher for the former than the latter. However, this study does not consider the completeness of available mortality data relative to the census. My plan is to use death distribution methods and intercensal cohort survival estimation, supplemented by the readily-available archival materials from a few case study communities, to assess the coverage of the death registration data used in the study. My hypothesis is that the completeness of the vital statistics relative to the census is markedly lower for the Alaska Natives than the non-native Alaskans and so the risk ratio of 8 is a significant underestimate. In general, this shows the value of estimating the death toll of the pandemic precisely; otherwise, associations with pre- and post-pandemic correlates can be severely biased. In the specific context of the US case, it shows the value of paying attention to differential quality in vital statistics across and within different populations.

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Adult mortality in Amsterdam, 1856-1926
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From the mid-nineteenth century up to the Second World War, Amsterdam experienced a significant decline in adult mortality prior to the introduction of most medical interventions. This study investigates the evolution of mortality patterns by age, sex, and social class for adults aged 20 to 60, using detailed individual-level cause-of-death registers. To identify key drivers of the mortality transition, all deaths are coded using the ICD-10h coding scheme, and infectious diseases are classified by mode of transmission. Findings suggest that trends initially diverged before converging by the 1920s. Gender disparities in mortality widened before equalising, driven by differences in the timing of the decline in tuberculosis mortality. By the end of the period, age also became a less prominent factor in determining cause-specific mortality in the age range studied. Multinomial logistic regressions indicate that, early on, social inequalities in mortality were most pronounced in water- and foodborne diseases as well as non-respiratory infections, and later shifted towards pulmonary tuberculosis. These findings are linked to changing conditions in the Dutch capital, including improvements in public hygiene infrastructure, living conditions and nutrition, occupational structures, demographic change, and medical knowledge.

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Lifespan inequality in times of rapid increase in life expectancy in Slovenia

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Slovenia as one of the countries of ex-Yugoslavia, during the transition from socialism to democracy achieved the highest life expectancy. In the period of 1970 to 2017, life expectancy increased by almost 12 years for males and 10 years for females. However, life expectancy as an average measure of population health might hide variation in age at death across individuals in the population. In this case study I focus on Slovenia and analyse how lifespan variation changed in a period of rapid life expectancy increase. To assess the performance of Slovenia in reducing lifespan variation, I compare it with two countries that achieved similarly high levels of life expectancy earlier in time, Spain and Greece. To allow for comparability between the countries, I use the life tables from Human Mortality Database in the period of 1983-2017, except for the years 1983-1988 for Slovenia, for which I calculated new life tables based on adjusted population estimates. I compare the life expectancy and lifespan variation, measured as the Gini coefficient and average inter-individual difference in age at death (AID), of Slovenia with those of Spain and Greece. At similar levels of life expectancy, I decompose the contributions of age groups to life expectancy and to the difference in lifespan variation. I find that females experienced higher life expectancy with lower lifespan variation compared to males. At similar levels of life expectancy, Slovenia experienced lower lifespan variation compared to Spain and Greece. Lower infant and child mortality rates were the main contributor to the difference in lifespan variation. These findings contribute to understanding of changes in lifespan variation in periods of rapid life expectancy changes by showing that rapid improvements in life expectancy can be achieved while simultaneously decreasing lifespan inequalities. The case of Slovenia is particularly unique as these improvements in population health occurred in periods of large socio-political transition from socialism to democracy and can serve as a pathfinder for countries yet to achieve Slovenian life expectancy levels.

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The Exciting Story of the Cohort Component Method of Population Projection

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In 1895 Edwin Cannan, Professor of Economics at the LSE, was asked to project the population of England and Wales for 1931 by the Metropolitan Water Commission (the predecessor of Thames Water). He gave a very entertaining lecture on the subject to Section F of the British Association in Ipswich, and in so doing introduced a new approach to population projection by the use of age cohorts. He was highly critical of the approaches taken by the Registrar General and British officialdom generally, accusing government departments of not communicating with each other. Pascal Kidder Whelpton, later to become Director of the United Nations Population Division, developed the approach further in the 1920s, criticising "curve artists [who] have been quite numerous among the forecasters, their offerings including various arcs, parabolas and logistic curves which are demonstrated to fit past growth and which are prolonged to indicate the future." Eugene Grebenik (BSPS President 1979-81) later tackled the same challenge, addressing migration and low fertility panics, and the ongoing lack of joined up approaches in government. The paper will recount the story of the development of the method and the individuals who pioneered the challenge of projecting the future. It will draw attention to the persistence of demographic doom-mongering, criticism of government methods and coordination, and the high risk of being seen to have made mistakes.

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