

**IUSSP Seminar on The Emergence of Social Differences in Mortality:  
Time Trends, Causes, and Reactions  
*Alghero, Italy, 29-30 May 2008***

Seminar organized by the IUSSP Scientific Panel on Historical Demography in cooperation with the Società Italiana di Demografia Storica (SIDES), the University of Sassari and the Netherlands Interdisciplinary Demographic Institute (NIDI).

**Long Report**

The international seminar on “The Emergence of Social Differences in Mortality: Time Trends, Causes and Reactions”, organized by the IUSSP Scientific Panel on Historical Demography in cooperation with the Società Italiana di Demografia Storica (SIDES), the University of Sassari and the Netherlands Interdisciplinary Demographic Institute (NIDI) took place in Alghero, Italy 29-30 May 2008. The seminar brought together 18 people, mostly historians and demographers but also sociologists, geographers and economists. The intention of the seminar was to bring together scholars from a variety of settings to provide new information on what is one of the key issues for health policy in many countries, to wit the trends over time in social class differences in mortality. A number of studies reported a widening of socioeconomic inequalities in mortality in the 1960s, 1970s and 1980s and past trends in socio-economic inequalities in mortality from then on became a central topic for epidemiologists and demographers. Extending the time horizon of the studies that contain information on trends in socioeconomic status (SES) inequalities in mortality was the primary purpose of the meeting. Given the fact that mortality nowadays in Western societies is almost completely limited to adult and old age, our interest was focused on social class mortality differences in adult and old age. The time period that we wanted to discuss stretched from the 18th and 19th centuries to the post WWII period. By analysing mortality for men and women separately we wanted to find out whether the relationship between mortality, social class and gender has changed over time. A central issue was whether locality or social class were the main factors determining group differences in mortality (social context).

We hoped to have at the seminar an exchange of ideas between historians and demographers on one hand, and epidemiologists and health researchers on the other. We selected three papers proposed by epidemiologists, to allow us to link the historical and contemporary views on mortality inequality. Unfortunately, all three papers were withdrawn shortly before the start of the workshop.

The remaining scholars presented papers on a variety of countries and their studies covered data from the early 17<sup>th</sup> to the end of the twentieth century. The seminar was divided into three parts to do justice to the changing context in which SES-related mortality was studied: Social Class and Mortality in Pre-and Early Industrial Societies, Social Class and Mortality in the 19th Century Agrarian Societies, and Social Class Differences: Late Twentieth century Experiences and Historical Political Reactions.

Session I was inaugurated by Michel Oris who spoke about social differences in Geneva over a period of four centuries. Oris and his co-author contrasted the pioneering work by Perrenoud with recently collected information on 19<sup>th</sup> and late 20<sup>th</sup> century Geneva. The main finding was that social differentials in mortality in the late 20th century were completely different from those of the previous centuries. Mortality differentials between the top and bottom of the social ladder were in the past much higher than in the contemporary Geneva population.

Alain Gagnon and colleagues focused on the pre-industrial population of Quebec. They examined mortality trends after age 50 for cohorts of men born between 1650 and 1750. In their study the mortality among the elite (nobles, landlords, bourgeois, civil and military officers, etc.) was compared with the rest of the population. Gagnon took great care to separate the effects of familial influences (parental, spousal, and sibling survival) and of residence (urban/rural, East/West parts of the territory) from social class effects. It turned out that social position had no significant effect on survival. This finding could not be explained by sample selection bias due to mortality prior age 50. Razzell and Spence presented a large variety of local studies from which they concluded that the wealthy may have suffered slightly higher adult mortality than the general population before the twentieth century. This was probably the result of the 'hazards of wealth', such as the greater consumption of rich foods, alcohol and tobacco, accompanied by a lack of physical activity. The reductions in all forms of mortality first took place in wealthy families and then subsequently amongst the poor, suggesting that cultural factors involving knowledge of disease prevention were central to mortality decline, and that economic factors were only very secondary to health improvements.

The paper presented by Bengtsson and Dribe discussed socio-economic differences in mortality in rural Southern Sweden between 1815-1894. The results of a multilevel Cox regression did not support the idea that socio-economic differences grew considerably in magnitude over the 19th century. At the beginning of the nineteenth century, there were clear socio-economic differences in child mortality but they remained constant or declined over the century. For adults and elderly it could be concluded that socio-economic status was not of prime importance for mortality in these ages, and certainly did not increase in importance over the nineteenth century. In the northern part of Sweden, presented in the paper by Edvinsson and Lindkvist, geography was more important as a factor influencing adult mortality than social class. Urban people had much higher mortality than people from predominantly rural areas. Gendered patterns were also obvious in the social differences in mortality. For example, working class women had the highest mortality whereas men in this social group did relatively well. Edvinsson pointed to differences in life style as a factor. The paper by Breschi et al on 19th and 20th century Italy reported that infants in the highest social group showed considerably lower risk of death compared to children of farmers. Social differentiation of mortality emerged only in the first cohorts of the 20th century. Late childhood mortality (5-17) did not show any variation over time in the pattern of the social differentiation in mortality.

The third session focused on data issues in measuring the impact of social class on mortality. Robert Woods stressed in his paper how important it is when studying social mortality differences in historical populations to pay attention to definitions of key concepts such as social groups, absolute and relative differences, and the various dimensions of mortality (age, gender, maternal). Data problems were also central in the paper presented by Van de Putte. He presented an evaluation of indirect estimation procedures to measure mortality differentials by class, a method which can be applied relatively easily when large databases with vital registration data come available. Van de Putte applied indirect estimation techniques on marriages certificates. Possible bias in the estimation of life expectancy due to selection effects (the healthy are overrepresented among the married) and composition effects (groom's social class is considered as a proxy for the social class of the father) were discussed. In the discussion various procedures were discussed to reduce the biases in the method. Frans van Poppel and Ruben van Gaalen in their study of SES-related mortality in the Netherlands (1850-2000) did not find an effect of the social class of origin (occupation of father) nor of achieved social class on adult mortality. This also applied to women when

social class of origin and social class of their husband were analysed. Where one lived was more important than social class in explaining adult mortality.

Perez and Turra's paper on educational differences in adult mortality in Brazil reported that there was a statistically significant negative relationship between education and mortality of the mothers, e.g. mothers with more than 9 years of schooling had about half the death rates of those without any schooling. Educational differentials in mortality persist with age but they are lower at older ages, which is consistent with results for developed countries. Ivan Lind Christensen presented a semantic analysis of social categories used in Danish epidemiological research from 1858-1914. This paper investigated the transition in the conceptual architecture of epidemiological research on social differences in mortality. During the period 1850-1870, researchers thought that the poor experienced higher rates of mortality because of their moral inadequacy. Later on, researchers argued that mortality differences were the result of unequal social structures.

The main conclusion from the workshop is that there is no uniform trend observable in the development of SES-related mortality in the period between 1700 and WWII. Depending on the country and its specific context, on the age groups studied and the measures used, one comes across situations in which no social differences can be found, or strong differences in the expected direction but also cases in which the social gradient runs in unexpected directions. Strong and unequivocal conclusions regarding the evolution of SES-related mortality in the past are impossible and this is already an important message to communicate. In the final discussion, various issues were raised that would improve the quality of research in the historical development of social differentials in mortality. These issues ranged from selection of age groups, data quality, the number of classes to be used, the inclusion of family effects and the use of inequality measures. It was stressed that in the analysis of data, much more focus has to be laid on the importance of basic models with only social class, gender and age as variables. Only in a second step should more extended models be used in which intermediate variables (such as a specific family composition) are introduced in order to understand which specific factors better explain the relationship between social class and mortality. Questions were also raised regarding the social class categories used and the possibility to use the same categorization for socio-economic differentials to compare the results from different periods and countries. The majority of the authors decided to continue to work on the issue, taking into account the various suggestions made to improve the comparability of their results. A series of guidelines for that purpose was suggested. Bengtsson and Dribe will try to convene a follow-up of the Seminar at the XVth World Economic History Congress in Utrecht, The Netherlands, from August 3 to 7, 2009.

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**PROGRAMME**

**Day 1: 29 May 2008, Porto Conte Ricerche Institute**

8.45 Transfer from the Hotel Calabona to the Porto Conte Ricerche Institute, Alghero

9.30 Opening of the Workshop by the Chair of the Panel on Historical Demography

**Session 1: Social class and mortality in pre- and early industrial societies**

Chair: Tommy Bengtsson

9.45 Michel Oris, Reto Schumacher

Laboratory of Demography and Family Studies, Geneva University

*Social mortality Differentials in Mortality in Geneva. A comparison over four centuries*

11.00 Coffee break

11.15 Alain Gagnon, Bertrand Desjardins and Robert Bourbeau

Population Studies Centre, Department of Sociology, University of Western Ontario and Department of Demography, Université de Montréal

*Was old age mortality lower among men from the elite in pre-industrial Québec (1700-1850)?*

Peter Razzell and Christine Spence

Department of History, University of Essex, United Kingdom

*Socio-Economic Status and Adult Mortality in England, 1700-1900*

13.00 Lunch at Porto Conte Ricerche Restaurant

**Session 2: Social class and mortality in the nineteenth-century agrarian societies**

Chair: Bart van de Putte

14.30 Tommy Bengtsson and Martin Dribe

Centre for Economic Demography and Department of Economic History

Lund University, Sweden

*Socioeconomic status and mortality during the mortality transition: A micro-level study of age-specific mortality in rural southern Sweden 1815-1894*

Marco Breschi, Alessio Fornasin, Matteo Manfredini, Paola M. Melis, Stanislao Mazzoni, Lucia Pozzi  
Dipartimento di Economia, Impresa, Regolamentazione, Università di Sassari, Sassari, Italy  
*Socioeconomic conditions, health and mortality from birth to early adulthood, Italy XIX-XX centuries*

Sören Edvinsson & Marie Lindkvist,  
Centre for Population Studies, Umeå University Department of Statistics, Umeå University  
*Wealth and Health in 19th Century Sweden. A Study of Social Differences in Mortality in the Sundsvall region*

17.30 Transfer to the hotel.

Dinner at restaurant Le Vele, Hotel Calabona

## **Day 2: 30 May 2008, Alghero City Hall Building, Piazza del Municipio**

### **Session 3: Social class and mortality in the nineteenth-century agrarian societies**

Chair: Sören Edvinsson

9.45 Robert Woods  
University of Liverpool  
*It all depends on how you look and what you want to see: The emergence of social mortality differentials in early modern England:*

11.00 Coffee break

Bart van der Putte  
Department of Sociology, Ghent University, Ghent, Belgium  
*An evaluation of indirect estimation procedures to measure mortality by class. A case study of Ghent (Belgium) in the 19th century*

Frans van Poppel & Ruben van Gaalen  
Netherlands Interdisciplinary Demographic Institute, The Hague, Netherlands & Statistics Netherlands  
*Social class, social mobility and mortality in The Netherlands 1850-2000*

13.00 Lunch at Refettorio Restaurant

## **Session 4: Social class differences: Late twentieth century experiences and historical political reactions**

Chair: Lucia Pozzi

14.30 Elisenda Rentería Perez & Cassio M. Turra

Department of Demography & Cedeplar, Federal University of Minas Gerais, Belo Horizonte, MG, Brazil

*Educational differences in adult mortality in Brazil*

Ivan Lind Christensen

PhD. candidate, Department of Health Services Research, Institute of Public Health, Copenhagen University

*Lethal differences. A conceptual analysis of the social categories used in Danish epidemiological research 1860 – 1930*

16.30 **General discussion**

Chair: Michel Oris

17.30 **Closing**

20.30 Dinner at Osteria Machiavello

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