Scientific report of the EHPS-Net International Summer School in Historical Demography - Introductory course, 24 -31 May 2015, Cluj-Napoca, Romania

Summary

During the period 24th-31th of May 2015 the European Historical Population Samples Network (EHPS-Net) and the Babeş-Bolyai University (Cluj-Napoca, Romania) organised the third edition of the International Summer School in Historical Demography at the Babeş-Bolyai University, Cluj-Napoca, Romania.
The summer school was open for post-doctoral researches, PhD students and MA students, from socio-economic sciences, humanities, geography and medical sciences. Twenty-five students attended the summer school, coming from Croatia, Romania, Russia, Portugal, France, Hungary and United Kingdom. The teachers of the summer school were very well-known scholars in the field of historical demography and their specific research areas (Kees Mandemakers, Jan Kok, Siegfried Gruber, Peter Teibenbacher, Péter Öri) and two young researchers, Christa Matthys and Richard Zijdeman.
Based on the experience gained after the first two editions and keeping in mind the evaluation reports delivered both by the students and the teachers, the program was organised in sessions addressing theoretical and methodological issues in the mornings and practical exercises in the afternoon. In line with the previous editions and following the EHPS-Net new standard, the course included three days practical and theoretical lectures in R and R-Studio. All students ended the course with sufficient results to receive the certificate.

Scientific content and discussions at the event

The summer school opened on Sunday, 24th of May with a welcome reception offered to the participants by Kees Mandemakers, the chair of EHPS-Net, in the presence of Ioan Bolovan, the vice-rector of Babeş-Bolyai University and the chair of Education Group and Luminița Dumănescu, the organizer of the summer school.

The first day – 25th of June – was dedicated to an introduction in the field. The first section was about "Introduction to cross-sectional data". It gave a brief overview about the sources and the characteristics of microdata. The students were reminded to be critical about this kind of data as about any other data used in research (e.g. what is the intention of the people creating this source?). The challenges of these data (e.g. incomplete or fuzzy data) were discussed and the possibility to analyse demographic events with cross-sectional data. Examples of different census-type sources were shown to the students so that they have an impression of their outlook and contents. This part meant also to show them the different style of different countries in different centuries. The next part introduced to them major data bases of census-type data: IPUMS-USA, NAPP, and Mosaic and their common features were presented. The final section was about possible research questions and how to deal with them. A whole range of analyses using census-type data was shown to the students in the form of graphs (e.g. age pyramids, sex ratios, fertility levels, singulate mean age at marriage etc.).

The second section was about “Household classification systems”. The major possibilities are to classify households by size, generations, or structure respectively composition. The most important systems are the one introduced by Eugene A. Hammel and Peter Laslett for historical demographers and the one suggested by the United Nations and Eurostat for contemporary censuses and surveys.
In the second part of the morning, Peter Teibenbacher delivered a two-hours lecture on *Nuptiality*, in which the main points were the importance of nuptiality for demographical patterns, nuptiality patterns outside Europe and European marriage pattern and Hajnal line (18th to 21st centuries). Teibenbacher stressed that, beyond the main indicators (marriage rates, first marriage rate, mean/median marriage age, male-female gap) it is important to analyse the marriage as a societal issue.
The Monday afternoon sessionhad two goals: An introduction into database design and a first try of data entry by way of Access. The starting lecture introduced Entity Relationship Diagramming, the first three Data Normalization Rules and the definition and concepts of databases (records, primary key etc.). The students were divided into small groups to make their own design from a sheet of the New York Census 1889. After the results were presented, the teacher selected the best solution to be used for data entry. After a short explanation the students started to enter the data of the first five families on the sheet. The results of the data entry were checked and discussed next day and were sufficient to good.
In addition Siegfried Gruber assisted Kees Mandemakers in the practical lessons about MS-Access on Monday and Tuesday.

The morning session of the second day was dedicated to the sources and methods in historical demography. Péter Öri delivered two lectures: on life table and family reconstitution.
The first one aimed at demonstrating one of the most basic methods of historical demographic mortality studies, the construction and use of life tables. The lesson was gradually proceeding towards the necessity of the use of life tables. First the concept of mortality was demonstrated then the possible historical sources were shown. By discussing the problems of constructing and using crude death rates the methods of standardisation were also taught. Then the concept and aim of constructing life tables were demonstrated, the necessary sources were determined. The different life table functions, the meaning of the columns of life tables, the way of calculation of different life table functions, the construction of the tables and their interpretation were all discussed. Meantime, basic demographic phenomena like central rates, probabilities, population at risk were made known. Using the example of a concrete case (county Pest and Budapest city in 1900-1901), the characteristics of mortality during the demographic transition were shown and it was compared to contemporary life table experiences.

In the second lecture, on Family Reconstitution, Péter Öri dealt with the family reconstitution method by focusing on the possible sources, the development of the method, the process of reconstitution, the results and shortcomings of the method. The different interpretations of ‘family reconstitution’ were also discussed by differentiating between the approaches of different research fields. The development of historical demography in the 20th century was demonstrated in detail, including the special research questions, approaches and sources which were used. The method of family reconstitution together its advantages as compared to former methods was also discussed, and the parish registers as historical sources were also demonstrated. The teacher and the students followed step by step the logic of creating family cards, discussed the possibilities of non-nominative analysis. After that the process of calculating age-specific and total marital fertility rates was shown by using the example of families having lived in the German village of Zsámbék in 19th century Hungary. By doing this, some basic demographic concepts like population at risk or person-months/years were taught. The results of several-decade demographic studies based on the method of family reconstitution were briefly demonstrated, and the shortcomings of the method were also discussed.

The afternoon session had the goal to practice query-language. Kees Mandemakers explained the concept of queries and what kind of queries you can expect and how they appear in Access. The lecture included logical and relational operators and the joining of tables by way of the linking of the primary keys. The practical step for the students was to make and run their own queries on the basis of a dataset from the Historical Sample of the Netherlands. In this practicel the students made queries like ”How many male persons were married and over the age of 60 years” and more complex ones such as ”How many persons where born from females while being married wih a husband able to sign a marriage certificate and living in the province of North-Holland at the moment of birth”. Siegfried

Gruber assisted during the practical part of this part of the course. The results were discussed in a plenary session on the fifth day (Thursday morning).
The day was closed with a lecture about occupational classifications and HISCO. In this lecture Kees Mandemakers explained the two main concepts behind social stratification (social class or social prestige) and the way it is used in scientific analysis. Secondly he went into the basic ideas behind the HISCO coding system (based on 1968 ISCO) and the way it is handled in practice. This included the use of classification systems such as HISCLASS and HISCAM and how they are derived from HISCO.

In the morning session of the third day (27th of May) Jan Kok split the session into three parts. The first part started with theories of fertility decline, in which Jan Kok offered an overview on the classic theories (demographic transition theory of Notestein and other, European Fertility Project and diffusion theory, views on supply and demand (Easterlin, Reher & Sanz Gimeno), new research of the social context of fertility decision-making (social mobility context, N. Cummins), communicating communities, S. Szreter, extended kin, spousal relations and female bargaining power). Then the economists' views on the interrelation between demographic transition and industrial revolution (Unified Growth Theory) was discussed and the critique of this approach. Jan Kok finished this part with a synthesis of the fertility transition of Therborn. In the second part, he discussed how different types of sources allow for different methodologies. Discussion and examples of child-woman ratio, CBR, GFR, age-specific fertility and TFR, own-children method, McDonald's stepwise destandardisation, stopping analysis with logistic regression, and spacing&stopping with event history (simple explanation of how survival curves can apply to fertility) were delivered to the students. Finally, in the third part, he discussed hypotheses and examples of research in several topics: religion and fertility (how can religious norms and social control affect the proximate determinants of fertility), childlessness, premarital pregnancies, extramarital fertility.
After lunch Peter Teibenbacher delivered his second lecture on 'Big waves' in migration: European and Extra-European Examples (18th to 21st centuries). He focused on transition in migration in a long term perspective. He explained the fifth phase of migration, the migration network, migration systems theory, and Zelinsky model of migration, according to which migration (variants and frequency) is dependent on (economic) development.
The third section was a hands-on computer workshop by Siegfried Gruber on downloading and setting up census data and classifying households. The students were shown how to download census and census-like data from the portals of the North Atlantic Population Project (NAPP, www.nappdata.org/napp) and Mosaic (www.censusmosaic.org). The next step was to explain them how they can set up this data to use it. In the second part of the workshop the students had to classify households from three different censuses (Rostock in 1900, Serbian villages in 1884, and Russian villages in 1897) into the scheme advocated by Eugene A. Hammel and Peter Laslett.

On Thursday, the 28th of May, the first morning session belonged to Jan Kok who taught about mortality. Jan Kok started with a case of very high infant mortality, St Kilda in outer Hebrides, which allowed him an effective connection with more theoretical parts later on, such as Mosley and Chen's conceptual framework of the proximate determinants of infant and child mortality. He briefly discussed definitions and measures, and showed some overall trends and variation in mortality.
The afternoon session was split in two parts: in the first hour after the lunch Kees Mandemakers delivered an introduction about 'Database structures and the Intermediate Database Structure (IDS)' and subsequently discussed the results of the practical of Tuesday
In the afternoon Richard Zijdeman, assisted by Christa Matthys and Mihaela Hărăgus, started the course on 'R and RStudio'. For the first time an introductory course on R was given in the EHPS-Net summer courses. The aim of the course was to teach students how to install R and RStudio, install packages, read in datafiles (.csv and .xlsx files), perform descriptive analysis and how to perform basic statistical analysis. To achieve the aims 3 sessions of 3.5 hours were provided (we shall not insist on the content of each session). Students had access to their own laptops (mostly running MS windows, some on MacOSX). Most students had no prior experience in quantitative methods, although 5 of them turned out to be somewhat more familiar with quantitative research methods in general and even R in particular. Students achieved to decently master three of the four aims of the course. Moreover, they appeared to grasp the concept of the PTE cycle (Problem, Theory, Empirical test) and were able to provide short presentations using this cycle.

On Friday, 29th of May, the schedule was split between life course transition (in the morning) and R practical course. This lecture offered an introduction to life course analysis.
Christa Matthys started by explaining the main principles and the general life course framework, providing the students with references for further reading. Secondly, she elaborated on event history analysis, the statistical technique that is mainly used in historical demographic life course studies. She talked about the sources and the database management steps that have to be taken before EHA is possible. Finally, Matthys expanded on how life course analysis is possible without EHA, in situations where less detailed source data are available. This would be useful in particular for many of our students who do not have population registers available for their region of analysis.

On Saturday, May 30, Antoinette Fauve-Chamoux delivered an introduction to the French historical demography and also brought into the students attention some of the most important debates of the moment: the legitimacy of Hajnal line was one of these!
Starting with 11 a.m. Christa Matthys offered a theoretical overview of literature on adult mortality, with a particular emphasis on social differences in mortality and the mortality decline.

On Sunday, May 31th, the teachers (Christa Matthys and Mihaela Hărăguș) and students worked on assignments. Students could choose between two topics: marriage (partner choice) or migration (leaving home). The students read two articles: one using traditional historical demographic methods and one using life course analysis. After reading, they had to critically assess the methods used by comparing the two approaches, outcomes and by answering some more detailed technical questions.
The general setup of the assignment was useful: it combined elements from the entire course (methodology, thematic variation, etc.).

All the students succeeded to accomplish the tasks and, as a consequence, they all received certificates hand over by Luminita Dumanescu during the last meal together.

Schedule

24 May, Sunday	
09:00-	Arrival and accommodation of the trainees and trainers.
20:00	Welcome and introductory briefing. Euphoria Biergarten, Cardinal Iuliu Hossu St., no. 25, Cluj-Napoca (Ioan Bolovan, Kees Mandemakers, Luminița Dumănescu)
25 May, Monday	Introduction in Historical Demography (Siegfried Gruber, Peter Teibenbacher, Kees Mandemakers
09:00-10:45	Introduction to cross-sectional data: sources, uses of cross-sectional data, challenges (Introduction to IPUMS, NAPP and MOSAIC) (Siegfried Gruber) • Household classification systems (measurement, different systems and methods for applying to household listings (Siegfried Gruber)
11:00 -13:00	Nuptiality (Peter Teibenbacher) • Importance of nuptiality for demographical patterns • Nuptiality patterns outside Europe European marriage pattern and Hajnal line (18th to 21st centuries)
	Break at 10:45

13:00-14:30	Lunch
14:30-15:30	Database design (Kees Mandemakers)
15:45 – 18:30	Access: Creating Tables, Data Entry, Simple Queries (Kees Mandemakers and Siegfried Gruber)
	Breaks from 15:30-15:45 and 16:45-17:00
26 May, Tuesday	Sources And Methods (Péter Őri)
09:00-13:00	• Mortality and mortality tables (Péter Őri) • Family Reconstitution (Péter Őri) (method, its advantages and shortcomings, the results of the approach)
10:45	Break
13:00-14:30	Lunch
14:30-17:15	Database Tools (Kees Mandemakers and Siegfried Gruber) • More complex queries Joining tables
17:30 – 18:30	Social stratification and mobility (Kees Mandemakers) (social class, social position, social structure, HISCO, structural and cyclical mobility)
	Breaks from 15:30-15:45 and 16:45-17:00
27 May, Wednesday	Fertility, Migration and Computer Workshop (Jan Kok, Peter Teibenbacher, Siegfried Gruber, Kees Mandemakers)

09:00-13:00	• Research Issues (Jan Kok)
	• Fertility transition
	• Geographic diffusion, socio-economic gradients
	• The Natural Fertility Model
	• The Princeton European Fertility Project
	• Adaptation versus Innovation
	• Marital and non-marital fertility
	• Theories: Malthus, Coale, Becker, Easterlin
	• Measuring Fertility
	  • Introduction and motivation
	  • Aggregate measures
	Own-children method

	Break: 10:45
13:00-14:30	Lunch
14:30-16:45	Big 'waves' in migration: European and Extra-European Examples (18th to 21st centuries)

	Transition in Migration in a Long Term Perspective (Zelinsky model) (Peter Teibenbacher)
17:00-18:30	Hands-on computer workshop (Siegfried Gruber and Kees Mandemakers) • Downloading and setting up data (census) Classifying households
	Break: 16:00
28 May, Thursday	Mortality, IDS and R Computer Workshop (Jan Kok, Kees Mandemakers, Richard Zijdeman)
09:00-11:00	Mortality and Child Mortality (Jan Kok) • Mosley and Chen's conceptual framework • trends and variation • Breastfeeding • Death clustering • Household composition and mortality • Infanticide
	Break: 11:00
11:15 – 13:15	Database structures and the IDS system (Kees Mandemakers)
13:15-14:30	Lunch
14:30-16:45	Introduction into R (Richard Zijdeman)
	Break: 16:00
17:00 – 18:30	R computer workshop (Richard Zijdeman and Kees Mandemakers)
29 May, Friday	Life Course Transitions, R Computer Workshop
09:00-13:00	• Life course transitions (Christa Matthys) Nuptiality (aggregate measures and event history analysis) Migration (focus on age at leaving home)
	Break: 10:45
13:00-14:30	Lunch
14:30-18:00	R computer workshop (Richard Zijdeman, assisted by Christa Matthys and Mihaela Hărăguș)
30 May, Saturday	Family and Household Systems; R Computer Workshop
09:00-10:45	Family and Household Systems, Regional Patterns and Transition, 18th to 20th century (Antoinette-Fauve Chamoux) • Hajnal • Laslett and Wall • The French School

11:00 – 13:00	• Timing and Patterns Life Mortality Decline (Christa Matthys)
	Breaks from 10:15-10:30 and 11:45-12:00
13:00-14:30	Lunch
14:30-18:00	R computer workshop (Richard Zijdeman, Christa Matthys, Mihaela Hărăguș)
31 May, Sunday	Working on Assignments and Evaluation
09:00 – 10:00	Instructions Assignments (Christa Matthys, Mihaela Hărăguș)
10:00 – 12:30	Working on Assignments
13:00 - 14:30	Lunch
14:30 – 17:00	Working on Assignments
17:00 – 17:30	Intake Assignments
18:00 – 18:30	Course Evaluation
19:00	Closure ceremony. Farewell party (Café Bulgakov)

Assessments of the results and impact of the event on the future directions of the field

According to the reactions of the students (based on the course evaluation and also derived from face to face discussions) and the teachers the summer school was successful. The evaluation resulted in several suggestions with the aim to improve a possible succeeding course of which all agreed that this should be realised in the following year.
Main problems encountered during the courses came from the practical exercises. While some students were already familiar with Access and even R, most of them had no statistical background. The general impression is that in the given time frame and given the students unfamiliarity with quantitative methods, there was too little time to properly introduce them into both R and basic statistics. One issue, general to teaching workshops in any statistical package, is related to the student's ability to master their computer. Most of the issues with reading in data-files were actually not related to reading data, as much as being allowed to install packages on their computer, or unable to properly read the file path of a file on their PC. There were also one or two issues with students bringing smaller laptops in terms of memory size and speed, being problematic for reading the bigger files used.
General opinion was that the course was too condensed and the time allocated for some specific issues too short; especially the practices where they learned to work with software Access and R. The students claimed more time for exercise since, in their opinion, working with the specific software is the easiest way to learn theory.

Also, they suggest for the next edition to concentrate on one only one data program, since it is hard to learn two or more programs in a such short time.
After talking with the students, it seemed that they principally appreciated the interactive moments during the lecture, where they had to think about their own research etc. Therefore, it might be a good idea to expand on this for next year.

Also, at the end of the current edition it might be a good idea to summarise all three introductory courses, held in Cluj in the last three years. Where did the students came from – countries, institutions, projects etc. - and which was their professional progress after having attended this school? Did they apply for other, advanced courses of EHPS-Net program?

Annexes

Full list of instructors

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