Historical family demography: concepts, methods, discussions

Mikołaj Szołtysek
Laboratory of Historical Demography (MPIDR)

General plan

- Basic concepts
  - Historical demography, family history, family demography
  - The importance of coresidence and the notion of family system
  - Basic theorems

- Methods
  - Data quality checks
  - Measures of co-residence
  - Classification of family systems
  - Controlling for demographic effects

- Themes and discussions
  - Geography of family forms
  - The heterogeneity of family systems
  - Demographic underpinnings of family systems
  - Demographic outcomes of family systems
  - Family systems and social change
  - Family systems over time

BASIC CONCEPTS
Historical family demography is inherently interdisciplinary.

A look through diameter:

Historical family demography

- Past populations
- Application of demographic techniques
- Auxiliary science: checking data from pre-statistical populations

- The tools of demography and the conceptual models of anthropology, psychology, and sociology

- The structure of households and families and the processes that produce the events that alter their structure

- Historical sociology or social science history rather than traditional history
- Quantitative methods
- Hypothesis testing, general laws
- Mass sources and large databases
- Skills of archivists, historians, social scientists, and IT specialists

Historical family demography

- Hypothesis testing, general laws
- Mass sources and large databases
- Skills of archivists, historians, social scientists, and IT specialists
Family history: Two approaches

**SENTIMENTS APPROACH**
Qualitative investigation into the history of attitudes, sentiments, beliefs, ideas about family, courtship, childbirth, etc. (P. Ariès, F. Lebrun, and others).

**DEMOGRAPHIC APPROACH**
Demographic and socioeconomic lenses: spatial and structural regularities in familial characteristics; quantification and typologies; (Laslett and his followers).

Three key-concepts of HFD

- **The power of the family**
  - Social reproduction and for the transmission of values (Bourdieu 1976)
  - Expression of age and sex roles; the line, socialization and economic cooperation (Netting, W.Ik & Arnould 1984)
  - Family relationships influences economic behavior and attitudes; the model for political and welfare systems (Todd 1988; Duranton et al. 2009; Alesina & Giuliano 2010; Esping-Andersen 1999)

- **The importance of coresidence**
- **The notion of 'family system'**
The importance of coresident domestic groups (1)

- Individuals living under the same roof would also share:
  - production and consumption;
  - cultural transmission; religious/ritual
  - reproduction;
  - education;
  - security/protection; health and old age care;
  - privacy; recreation

- ‘domestic coresidence’ as a matrix of most crucible ‘statuses’, ‘functions’ and ‘relationships’ (Wall 1995)

- Different structures=different patterning of significant interactions

- What configurations people tend to live in? Who lives with whom?

The notion of family system and its quintessentials

- Laslett and HPSS: household structure – service – age at marriage
- Hajnal: household formation rules
- Das Gupta: norms of residence and inheritance
- Todd: patrilineal residence and parental authority
- Rajput: living arrangements of the aged
- Dribe/Manfredini/Derosas/Oris: sequence of life course trajectories
- Ruggles: living arrangements of the aged
- Kok: illegitimate fertility
- Wall: the size and composition of the kin group within the household

Importance of the family
### Key family-related demographic variables

<table>
<thead>
<tr>
<th>Leading Home</th>
<th>Service</th>
<th>Marriage</th>
<th>Headship</th>
<th>Aging</th>
</tr>
</thead>
<tbody>
<tr>
<td>• major transition point in the life course</td>
<td>• accumulation of savings and human capital formation; wage-labor market</td>
<td>• exposure to reproduction; adult roles; transition to adulthood</td>
<td>• postmarital residence: an end point on the road to independence</td>
<td>• Welfare functions of the family; family ties, familial loyalty, obedience, and authority</td>
</tr>
</tbody>
</table>

### Theoretical frameworks: pluralism

- **considerations** from anthropology, sociology, history, demography, and cultural ecology or even socio-biology

- **the major assumption**: multiple, context-dependent, economic, social, environmental, and institutional structures have considerable influence over the strategies of individual households and families regarding their structure, composition, and recruitment

- **very adverse research programs**, and different ontological levels (i.e., individuals and larger social structures)

- **Interrelatedness of family systems (1)**

  ![Diagram](image-url)
Interrelatedness of family systems (1)

Explain family system in Poland-Lithuania (Szoltyszek 2014)

Life course perspective

- how chronological age and common life transitions shape people's lives from birth to death

- Conceptualized:
  - as the event history of an individual: people move through different residential constellations (transits), and change their membership patterns (statuses)
  - as the family life course (or family developmental cycle): all domestic groups go through developmental cycles passing through the phases of "expansion," "dispersion," and "replacement."
Life course perspective on co-residence

Source: Szołtysek 2005, 142 (the parish of Bujakow, Oberschlesien)

Developmental cycles of domestic groups:

Methods
Sources: basic distinction

2. Aggregate Data and Microdata

Microdata
- every record represents a separate person
- all of their individual characteristics are recorded
- users must manipulate the data themselves

Aggregate data
- a table of deaths from the Bills of Mortality, 1664
- an occupation table from a published census volume from the library

General (ideal) data requirements

The data source should list individual persons, preferably by name

The data source should list all persons of a settlement or area, not only household heads, men, or adult people

The data source should list individuals by residence units (houses, hearths, domestic groups, households or housefuls)

The data should provide at least age, sex, relationship to household head, and marital status

Basic checks on data quality

Unbalanced sex ratios
Age-heaping and digit preference
Undercounting of population subsets

Russian revision lists, Belarus 1895 (in Polish)
Four distinct drawbacks in historical microdata:

(1) the lack of internal consistency of enumeration schedules
(2) missing information on individuals’ characteristics
(3) Underenumeration
(4) misreporting

https://www.census.gov/population/international/software/pas/docs.html

• 1-person-households
• Family households
• Institutions/group quarters
• Households with only relatives
• Households with only non-relatives
• Households with relatives and non-relatives

Source: Rothenbacher 1997
More elaborated measures from aggregate data

MUH (Marital Units per Household):
Number of married men as well as divorced andwidowed men and women divided by the number offamily households (Burch, 1987).

MUH represents household complexity only in the broadestpossible sense (Burch, 1980).

What a nominative listing can tell us?

- Household size
- number of families/h
- number of generations/h
- structure/composition
- Relationships, positions, memberships
- Co-residential “dyads”

How to measure and classify households?

- By characteristics of the whole household:
  - Size
  - Generations
  - Structure
  - Composition
  - Economic activity
- By characteristics of the ‘reference person’
  household head:
  - Sex
  - Marital status
  - Age, etc.
Classification of family types according to Le Play (1870s)

- Famille instable (nuclear family)
- Famille souche (stem family)
- Famille patriarcale (joint family)

Classification of family types according to Hammel and Laslett (1974)

Other classification schemes (of many...)

Schmid 1988

UNECE/Eurostat 2006
**Individual living arrangements**

Ruggles 2012: 
- household-level measures affected by
  - age composition
  - demographic behaviour
  - availability of kin

**WHO LIVES with WHOM?**
- the presence or absence of different types of kin in the household as key characteristics of individuals which vary across their lifespan
- different relationships patterns among all of the co-resident individuals
- impact of individual characteristics on residential decisions or outcomes

**Dyadic approach**

- Locator variables (pointers), identify within the household each individual's own spouse, mother, father and sibling (Ruggles 1995).

- Basic individual family relationship variables (dyads)
  - lives with spouse
  - lives with mother
  - lives with father
  - lives with child (also: married children)
  - lives with sibling (depending on – age – sex – marital status)

**Examples of individual-level measures**

Source: Ruggles 2012
Dyadic approach: example

Percent males co-residing with at least one married son by age, by major areas of Poland-Lithuania (1795)

Classification of family systems: Le Play 1878

Classification of family systems: modern concepts

Source: Oris and Ochiai 2002
Classification of family systems: ~Wall 1995

The Patriarchy Index (Gruber and Szoltysek 2014)

Domination of men over women
- Proportion of female household heads
- Proportion of young males living with married fathers
- Proportion of elderly men co-residing with younger household heads
- Proportion of elderly men co-residing with non-kin
- Proportion of young men living as non-kin

Patrilocal bias
- Proportion of elderly people living with married daughters
- Sex ratio of young men group

Son preference
- Proportion of boys among the last child
- Sex ratio of youngest age group

Domination of the older generation over the younger generation
- Proportion of elderly men co-residing with younger household heads
- Proportion of elderly people living with non-kin

Proportion of elderly people living in joint families
- Proportion of elderly people living with lateral relatives
- Proportion of elderly people living with married daughters

Patrilocal bias
- Proportion of elderly people living with married daughters
- Sex ratio of youngest age group

Son preference
- Proportion of boys among the last child
- Sex ratio of youngest age group

Predominance of nuclear households in a given locality or region:
- a preference
- unfavorable demographic conditions

You cannot live with your father if your father is dead!
You cannot live with a married son if you do not have any!

We need to know a pool of available kin!
Controlling for demographic variation (2)

FIGURE 3: Predicted and observed percent of elderly in ten families

<table>
<thead>
<tr>
<th>Control variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural employment</td>
</tr>
<tr>
<td>Decedentary</td>
</tr>
<tr>
<td>Male fertility</td>
</tr>
<tr>
<td>Female marriage</td>
</tr>
<tr>
<td>Male marriage</td>
</tr>
<tr>
<td>Non-marriage</td>
</tr>
<tr>
<td>Unmarried elderly women</td>
</tr>
<tr>
<td>Elderly couples</td>
</tr>
<tr>
<td>Depreciation</td>
</tr>
</tbody>
</table>

Source: Ruggles 2010

Controlling for demographic variation (2): computer microsimulation

apply the appropriate demographic parameters to computer program (CAMSIM, SOCSIM, MOMSIM)

1978

“simulate” the type, number, and ages of the relatives that an “average” individual would have across the life course

1986

1989

Standard microsimulation outcome: male kin sets (CAMSIM)

Source: Szołtysek/Oeppen: CAMSIM Poland-Lithuania
Controlling for demographic variation (2): computer microsimulation

Apply the appropriate demographic parameters

Simulate the type, number, and ages of the relatives that an average individual would have across the life course

Compare observed and expected (simulated)

1978
1986
1989

THEMES AND DISCUSSIONS

Basic themes

Persistence and discontinuities
Family systems and social change
Demographic outcomes of family systems
Demographic foundations of family systems
Heterogeneity of family systems
Geography of family forms
GoFFs: premises

- The extremes of familial organization within the confines of the European continent.
- Intra-continental variation has not been random.
- Macro-regional contrasts not only existed in the past but persist in the present.
- Major areas of Europe were having a particular type of household system.
- Major demographic and family divisions in historic Europe were coterminous with broad 'cultural regions'.

Le Play's hypothesis (1870s)

1977-2005, Les Ouvriers europeens

Hajnal's division of Europe and Eurasia

1977-2005, Les Ouvriers europeens
Laslett’s four region hypothesis

Laslett’s four region hypothesis

- Mediterranean pattern
- ‘European Far East’

Laslett’s four region hypothesis

- ‘European Far East’ place where the extended family was the normal background to the ordinary lives of ordinary people
- the greatest departure from the ‘English Standard’

‘Hajnal-Mitterauer’ line

- Hufenverfassungssystem
- German colonization in the East & landlords

‘Hajnal-Mitterauer’ line

- Western vs Eastern Christianity
- Western
- Eastern

Czap’s ‘Eastern European family type’

- ‘a robust non-European marriage pattern’
- The area par excellence for large multiple households or joint families
- representative of the whole continent to the east of Hajnal’s line
- complex families by default associated with Slavic ‘national characteristics’
- large patriarchal families as a feature of Eastern Europe with serfdom

Czap’s ‘Eastern European family type’

- Mishino, 1795–1858, the Eastern European family type
Heterogeneity in human domestic groups: the problem

- Different subpopulations of historical Europe represented different patterns of coresidence
- Time, space, and human-ecological setting affected family behaviour in variety of ways

Regional variation patterns: examples (1)

Eurasian divides?

- "China is to Japan as Eastern is to Western Europe" (A. Wolf & S. Hanley, Family and population in East Asian History, 1985)
- Important similarities between the two continents in terms of human motivation in family-population behavior (Tsuya et al., 2010)
- No radical differences between the family histories of Europe and Asia (Goody 1996)
Observations and agenda

- Populations are not homogenous
- Enormous diversity, especially in Eastern Europe
- We need to prioritise variation, not central tendencies

Within country variation:
- Regions
- Borders
- Transition areas
- Hybrid patterns

Why diversity was the case in some places, but not in others? What elements enhanced / reduced it?

Measurements:
- Range of diversity and middle points
- Classification of regions from most to least diverse
- Controlling for demographic effects

Greatest dispersal in measures of coresidence: greatest 'agency' and greatest scope for individual household preferences?

Demographic underpinnings of family systems (1): computer microsimulation

New questions:
- Instead of how many households of a given type are being revealed by the census - the extent to which these observable proportions might be conditioned by demographic factors?

Did people in region A prefer to live in nuclear rather than extended households, or the low frequency of complex households was a function of demographic constraints?

Was the change in frequency of extended family living in the late 19th c. caused by changing preferences or better demographic conditions (longer life expectancy)?
**Demographic underpinnings of family systems: example 1**

Agespecific proportions of males:

a) Living with at least one married son
b) Having at least one married son alive

Source: Szołtysek, CAMSIM Poland-Lithuania

**Demographic underpinnings of family systems: example 2**

**Table:** Actual and Potential Percentages of Households with Co-residing Elderly Kin, by Race, United States, 1880-1980

<table>
<thead>
<tr>
<th></th>
<th>1880</th>
<th>1910</th>
<th>1940</th>
<th>1960</th>
<th>1980</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>11.1</td>
<td>11.7</td>
<td>11.0</td>
<td>10</td>
<td>5.7</td>
</tr>
<tr>
<td>Potential percent</td>
<td>15.7</td>
<td>13.1</td>
<td>14.3</td>
<td>28.0</td>
<td>36.5</td>
</tr>
<tr>
<td>Number of actual households</td>
<td>84,988</td>
<td>70,375</td>
<td>67,134</td>
<td>47,825</td>
<td>66,167</td>
</tr>
</tbody>
</table>

Source: Ruggles 1995

**Assessing causes of variation**

- Family strategies
- Diversity
- Family variations as structural-functional adaptations
- Family variations as ecological adaptations
- Family variations as the function of inheritance and property devolution patterns
- The role of region
I argue here that the cluster of norms informing family processes may be usefully viewed as a system and that differently configured family systems affect fertility, mortality, and migration in distinctive ways


**Demographic outcomes of family systems: premises**

*Corporate kinship systems support high marital fertility*
*Societies with the nuclear family and neolocality, tend to have low fertility*
*In conjugal systems the fertility level is decided in the interests of the couple alone*
*In extended systems spouses motivated to have many children in order to strengthen the family line or and their own status*
*The role of relatives helping or substituting for the mother in child-rearing*
*Patriarchal bias and its effect on spousal communication*
*Evidence MIXED!*

**Family systems and fertility responses**

*Source: Tsuya et al. 2010*

**Family systems and infant and child mortality**

*Source: Kok et al. 2011*
Family systems and illegitimacy

Source: Kok 2009

Developmental outcomes of family systems: premises

Households are arguably the most fundamental unit of economic and demographic behavior. Moreover, household decisions about life (marriage, children, migration etc.), consumption, savings and investment in physical and human capital, are crucial for economic development. It follows that the way households function— who takes which decisions—is of fundamental importance for economic development. Households are also the place where children learn about the rules and norms of the society they live in. The way people deal with power, for example, the peer families determine if decision making is authoritarian, if all household members have a say in household decisions. In this way, how the household works determines how future societies will function.

Source: Carmichael et al. 2011

EMP and Northwestern European exceptionality

Source: Kok 2009
Identified potential links between family types and regional disparities in educational attainment, social capital, labor participation, sectoral structure, wealth, and inequality.

Medieval family structures [sic!] seem to have influenced European regional disparities in virtually every indicator considered.

Evidence mixed!

Industrialization, modernization and family change - competing views
Time (or timing) is an essential component of historical analysis and interpretation. Accordingly, a fundamental objective of social scientific research, including that of family history, has been to understand how individual behavior and circumstances change across time.

Two approaches: persistence vs discontinuities

All family systems were fairly stable between 1600 and 1900 (E. Todd, 1985, Preface).

Demographic changes
Shifts in environmental features
Changes in preferences
Powerful socioeconomic factors
Interventionist policies

Laslett and unchanged household in England

The percentage of nuclear households in England was unchanged over the centuries (Laslett 1972).
Changing Lithuanian family (16-18th centuries)

- Communal forms of living among the Lithuanian population diminishing already in the 13th century
- Increase in feudal obligations in the 18th century led to a drastic rise in multiple family households in Lithuania

<table>
<thead>
<tr>
<th>Period</th>
<th>Tot hhs</th>
<th>Nuclear</th>
<th>Multiple</th>
<th>Complex</th>
</tr>
</thead>
<tbody>
<tr>
<td>1594-1600</td>
<td>300</td>
<td>79%</td>
<td>9.3</td>
<td>21</td>
</tr>
<tr>
<td>1616-1700</td>
<td>491</td>
<td>82.9</td>
<td>5.5</td>
<td>17.1</td>
</tr>
<tr>
<td>1775-1790</td>
<td>130</td>
<td>54.6</td>
<td>33.8</td>
<td>45.4</td>
</tr>
<tr>
<td>1806-1880</td>
<td>162</td>
<td>47.5</td>
<td>30.2</td>
<td>52.5</td>
</tr>
</tbody>
</table>

The evolution of Eastern European pattern (18-19th centuries): Belarussian contributions

- After the annexation of Belarus-Lithuania by the Russian Empire, the family pattern in Belarus gradually transformed into more communal forms

<table>
<thead>
<tr>
<th>Sample/parish</th>
<th>Year</th>
<th>Tot hhs</th>
<th>MHS</th>
<th>CFUs/hhs</th>
<th>% simple</th>
<th>% extended</th>
<th>% multiple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catholic parish in Koren</td>
<td>1740</td>
<td>69</td>
<td>7</td>
<td>1.4</td>
<td>56.5</td>
<td>7.3</td>
<td>36.2</td>
</tr>
<tr>
<td>Catholic parish in Koren</td>
<td>1795</td>
<td>156</td>
<td>7.2</td>
<td>1.7</td>
<td>30.1</td>
<td>11.5</td>
<td>58.3</td>
</tr>
<tr>
<td>Catholic parish in Koren</td>
<td>1811</td>
<td>177</td>
<td>7.9</td>
<td>1.8</td>
<td>29.4</td>
<td>10.7</td>
<td>59.9</td>
</tr>
<tr>
<td>Catholic parish in Koren</td>
<td>1834</td>
<td>171</td>
<td>7.9</td>
<td>1.7</td>
<td>23.4</td>
<td>17.0</td>
<td>59.6</td>
</tr>
<tr>
<td>Catholic parish in Koren</td>
<td>1850</td>
<td>171</td>
<td>8.2</td>
<td>1.8</td>
<td>17.1</td>
<td>15.3</td>
<td>67.6</td>
</tr>
<tr>
<td>Greek-Catholic parish in Zembin</td>
<td>1740</td>
<td>70</td>
<td>6.7</td>
<td>1.5</td>
<td>40</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Greek-Catholic parish in Zembin</td>
<td>1795</td>
<td>72</td>
<td>6.9</td>
<td>1.7</td>
<td>32</td>
<td>6</td>
<td>58</td>
</tr>
<tr>
<td>Greek-Catholic parish in Zembin</td>
<td>1811</td>
<td>72</td>
<td>7.9</td>
<td>1.6</td>
<td>32</td>
<td>8</td>
<td>58</td>
</tr>
<tr>
<td>Greek-Catholic parish in Zembin</td>
<td>1834</td>
<td>59</td>
<td>7.9</td>
<td>1.6</td>
<td>32</td>
<td>20.2</td>
<td>49.2</td>
</tr>
<tr>
<td>Greek-Catholic parish in Zembin</td>
<td>1850</td>
<td>48</td>
<td>9.5</td>
<td>1.9</td>
<td>22.9</td>
<td>12.5</td>
<td>64.6</td>
</tr>
</tbody>
</table>

Comments or Questions?
www.demogr.mpg.de