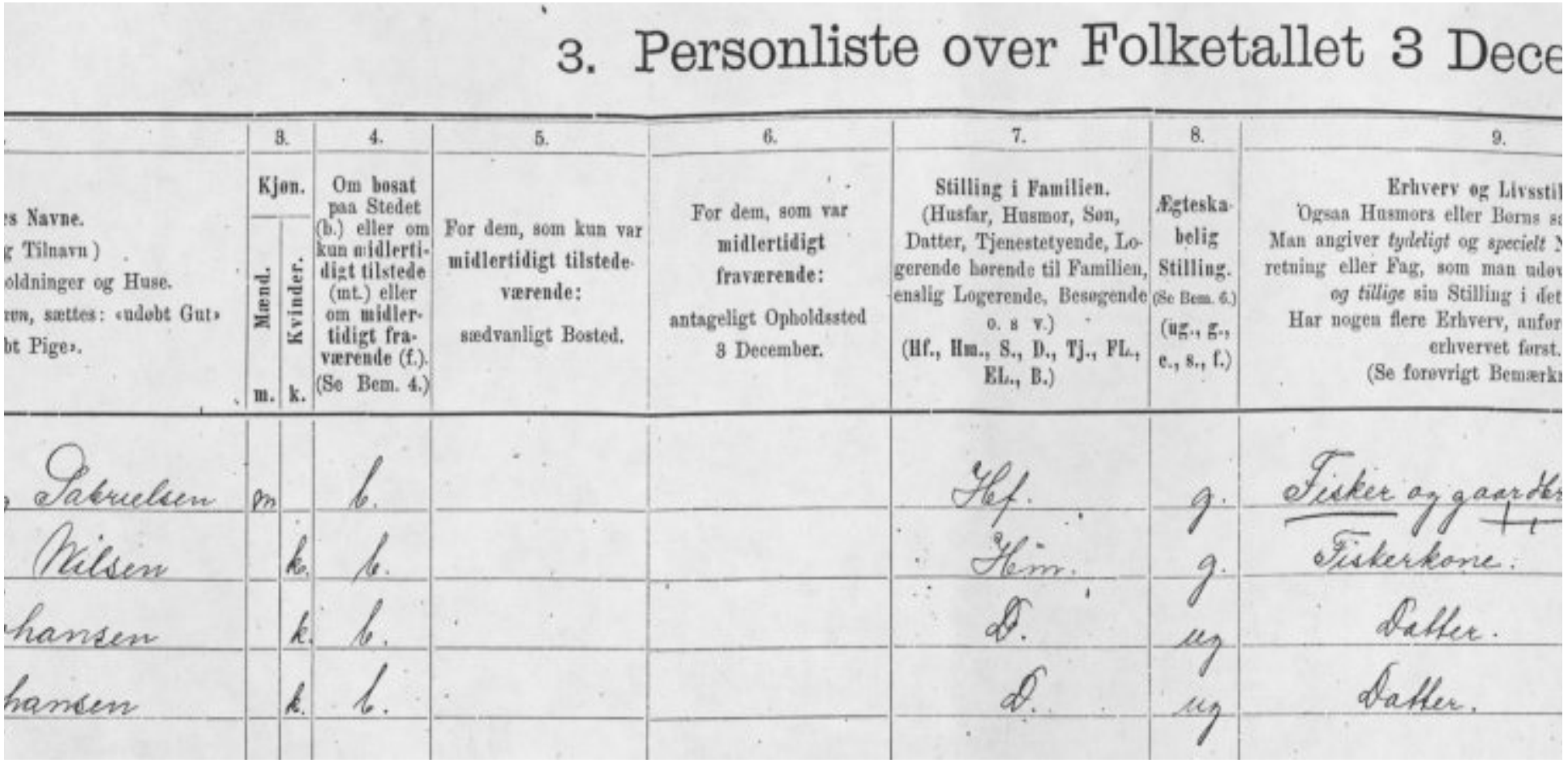
UiT Digital Humanities Conference 2017

# The Norwegian Historical Data Centre as a National Infrastructure

Gunnar Thorvaldsen
Norwegian Historical Data Centre
www.rhd.uit.no



3. Personliste over Folketallet 3 Dece

| s Navne. g Tilnavn) oldninger og Huse. ren, sættes: «udebt Gut» bt Pige». | 3. Kjøn. Mænd. m. | Kvinder. k. | 4. Om bosat paa Stedet (b.) eller om kun midlertidigt tilstede (mt.) eller om midlertidigt fraværende (f.). (Se Bem. 4.) | 5. For dem, som kun var midlertidigt tilstedeværende: sædvanligt Bested. | 6. For dem, som var midlertidigt fraværende: antageligt Opholdssted 3 December. | 7. Stilling i Familien. (Husfar, Husmor, Søn, Datter, Tjenestetyende, Logerende hørende til Familien, enslig Logerende, Besøgende o. s. v.) (Hf., Hm., S., D., Tj., Fl., El., B.) | 8. Ægteskabelig Stilling. (Se Bem. 6.) (ug., g., e., s., f.) | 9. Erhverv og Livsstil Ogsaa Husmors eller Børns s Man angiver *tydeligt* og *specielt* retning eller Fag, som man udø *og tillige* sin Stilling i det Har nogen flere Erhverv, anfør erhvervet først. (Se forøvrigt Bemærk |
|---|---|---|---|---|---|---|---|---|
| Pakuelsen | m | | b. | | | Hf. | g. | Fisker og gaardb |
| Nilsen | | k. | b. | | | Hm. | g. | Fiskerkone. |
| hansen | | k. | b. | | | D. | ug | Datter. |
| hansen | | k. | b. | | | D. | ug | Datter. |

*7. Rubrik 9. Næringsveiens eller Erhvervets Art* må tydeligt og, specielt betegnes. *For hjemmeværende voksne Børn eller andre Pårørende* samt for *Tjenere* oplyses, hvorvidt de er sysselsatte med Husgjerning, Jordbrugsarbeide, Kreaturstel eller andet Slags Arbeide, og i Tilfælde hvilket. For Enker og voksne ugifte Kvinder må anføres, om de lever af sine Midler eller driver nogenslags Næring, såsom Pensionat, Syforretning, Handel o. l., eller om de har nogen særlig Beskjæftigelse.

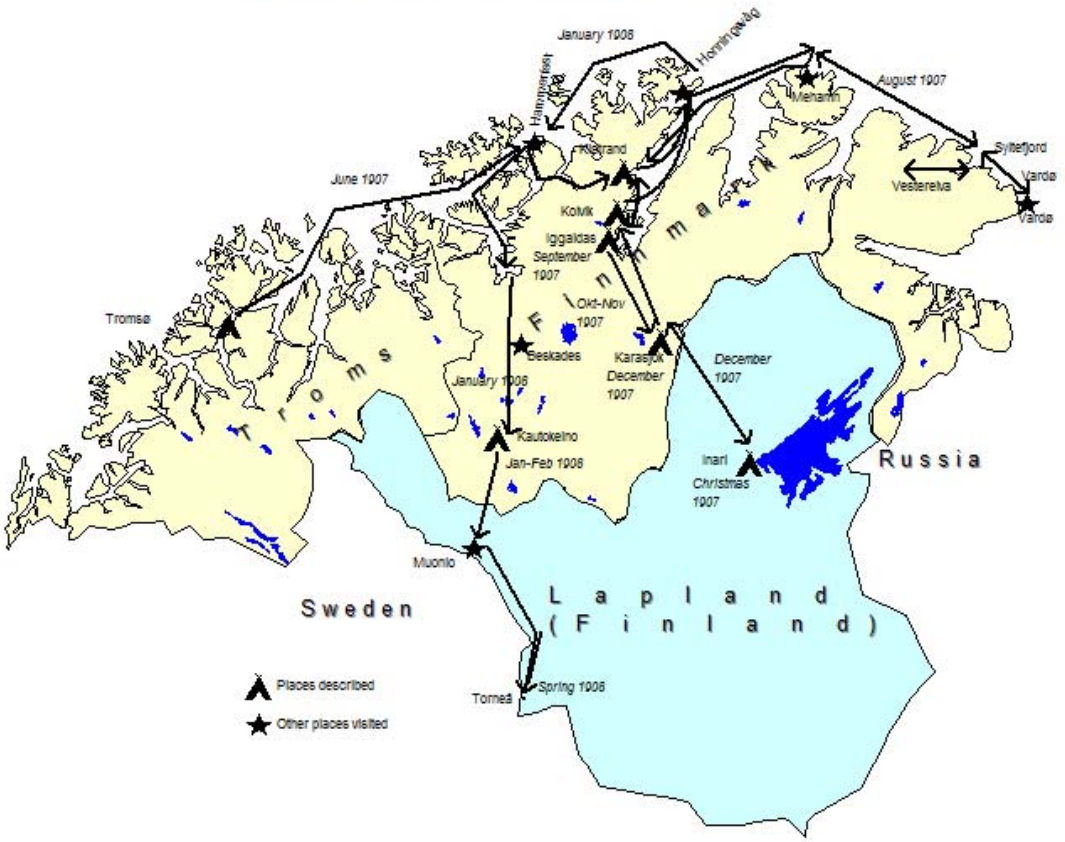

# Sergej Sergel's field research in Finnmark 1907-8

**Sergej Sergel's Field Research in Northern Norway and Finland: Contextualizing Early 20th-Century Sami**

Elena Glavatskaya
Gunnar Thorvaldsen

**Arctic Anthropology 2013/1**

## Sergej Sergel's travels in Finnmark 1907-8



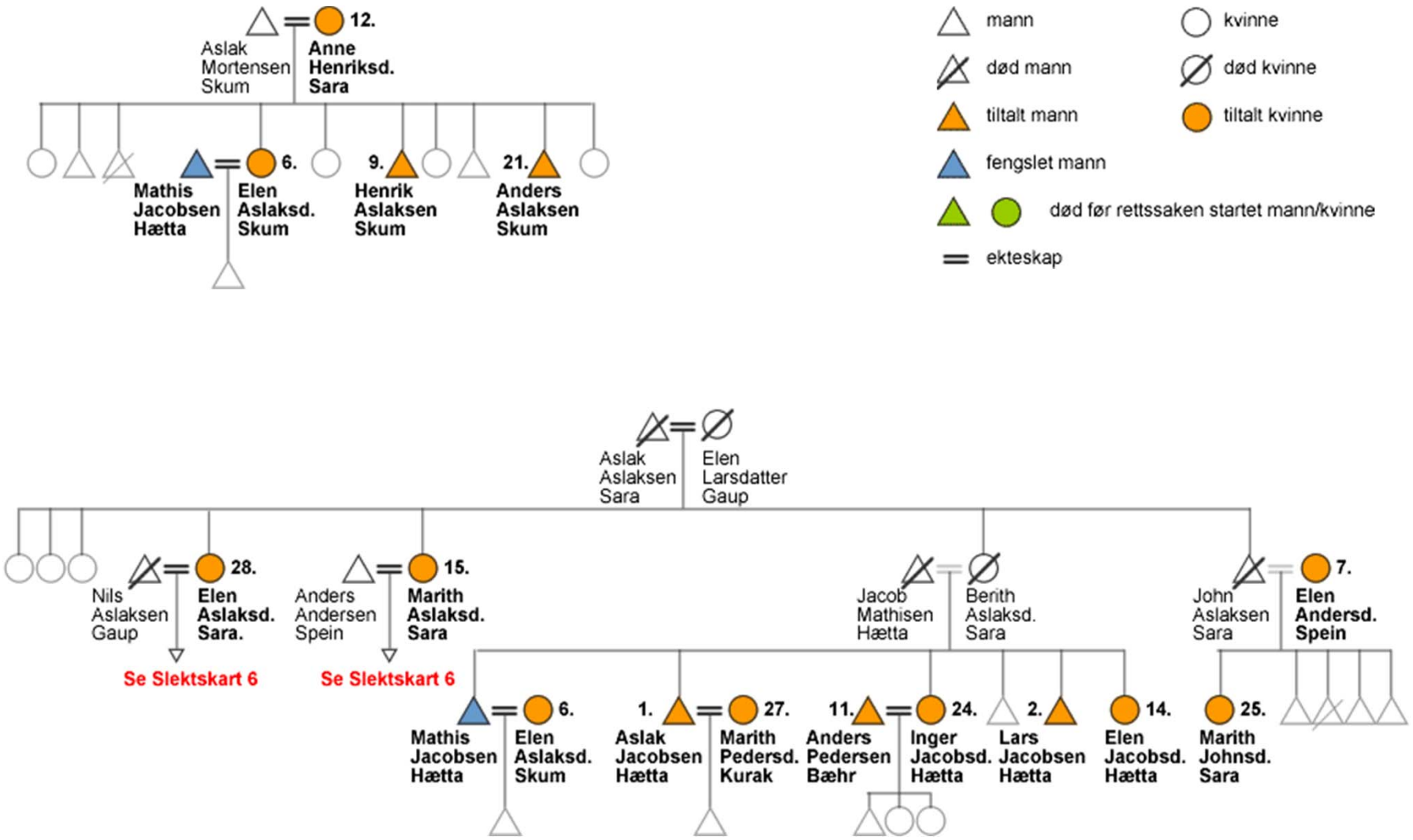
# INFORMATION ON DOMICILE

Previous domicile Next domicile

- Census year: **1910**
- Municipality: **Karasjok**
- Municipality number: **2021**
- Name of domicile: **%Sammulasgappir%**

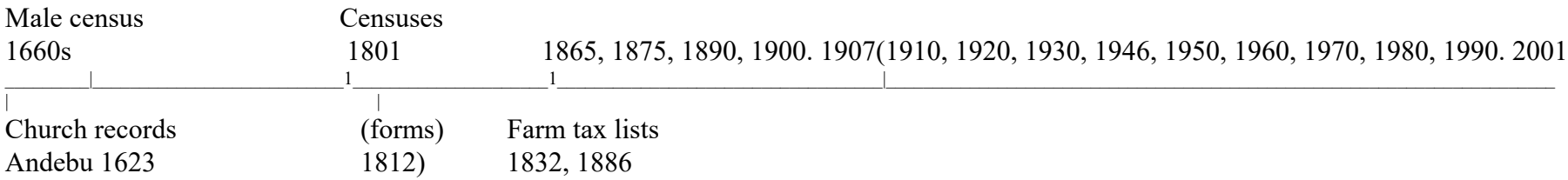
Number of persons in this domicile: 9

| Name | Family status | Marital status | Occupation | Birth year | Place of birth | Ethnicity |
|---|---|---|---|---|---|---|
| **Marit Aslaksdatter Skum** | **hm** | **e** | **Rendrift** | **1835** | **Kautokeino** | **ln** |
| Hendrik Andersen Sara | s | ug | Rendrift | 1877 | Kautokeino | ln |
| **Aslak Andersen Sara** | **hf** | **g** | **Rendrift** | **1863** | **Kautokeino** | **ln** |
| Kirsten Hansdatter Stabursnæs | hm | g | Rendrift | 24.08.1861 | Kistrand | ln |
| Marit Aslaksdatter Sara | d | ug | | 1898 | Kistrand | ln |
| Karen Aslaksdatter Sara | d | ug | | 11.12.1900 | Karasjok | ln |
| Klemet Aslaksen Sara | s | ug | | 1903 | Karasjok | ln |
| Anna Lisabet Aslaksdt. Sara | d | ug | | 1905 | Karasjok | ln |
| Elen Kristine Aslaksdt. Sara | d | ug | | 01.05.1908 | Kistrand | ln |




Source: Statsarkivet i Tromsø http://www.arkivverket.no/kautokeino-opproret/

# Historical nominative data in Norway




## Censuses

Male 1660-, 1701
Numeric 1769, 1815-1855
Nominative, public 1801, 1865, 1875, 1900, 1910
Nominative, restricted 1920-1950
Nominative, restricted, digital 1960-1990

## Population registers

Urban from 1905
National, municipal coverage from 1946
Central Population Register from 1964

# 1801 census Lenvig

http://www.rhd.uit.no/art/brox.html

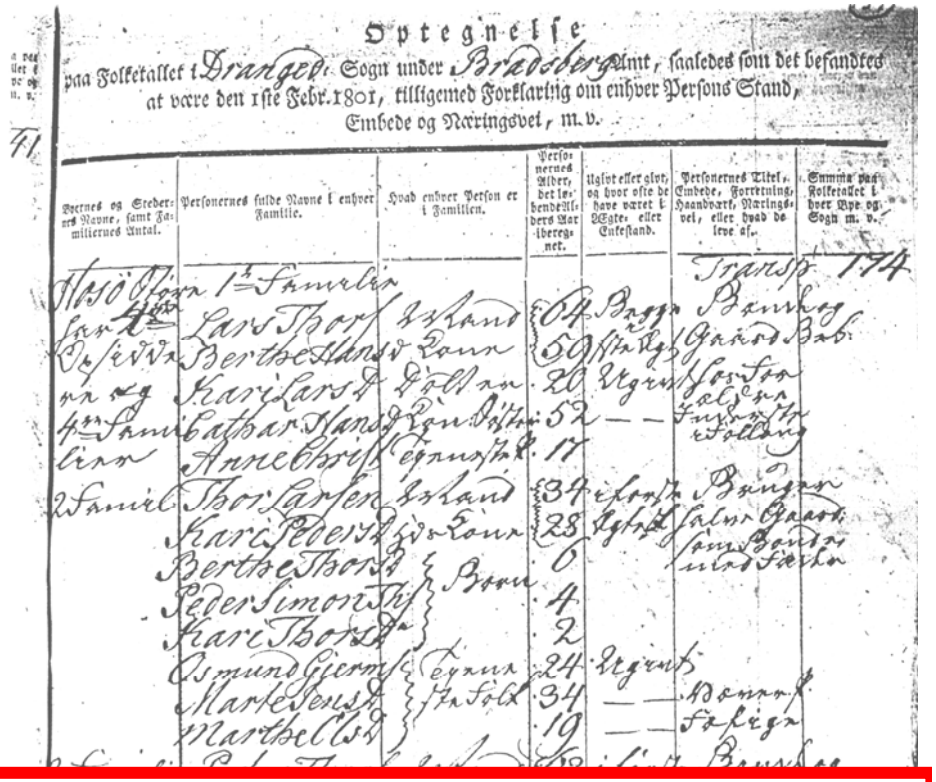
| Province | Parish | Tract | Farm /house | |
|---|---|---|---|---|
| Finnmarkens | Lenvig | Hillesøe | Tudsøe | |

| First name | | Surname | Household position | Age | Marital status | Occupation, status | Sex |
|---|---|---|---|---|---|---|---|
| Hans | Henrich | Brox | Husbonde | 40 | Begge i første ægteskab | Jægteskipper og giæstgiver | M |
| Mette | Maria | Thrane | Hans kone | 36 | Begge i første ægteskab | | K |
| Anne | Margrethe | Brox | Der es børn | 16 | Ugift | | K |
| Jens | Johan | Brox | Deres børn | 9 | | | M |
| Rasmus | | Brox | Deres børn | 6 | | | M |
| Hans | Matthias | Brox | Deres børn | 3 | | | M |
| Elisabeth | Maria | Brox | Deres børn | 1 | | | K |
| Østen | | Hansen | Konens søsterbørn | 12 | | | M |
| Erica | | Hansdtr | Konens søsterbørn | 10 | | | K |
| Willum | | Johnsen | Tienestefolk | 37 | | | M |
| Hans | Peter | Olsen | Tienest efol k | 31 | | | M |
| Christen | | Johnsen | Tienestefolk | 30 | | | M |
| James | | Hansen | Tienestefolk | 21 | | | M |
| Andreas | | Jørgensen | Tienestefolk | 20 | | | M |
| Karen | | Bendixdtr | Tienestefolk | 51 | | | K |
| Maren | Kirstina | Hansdtr | Tienestefolk | 32 | | | K |

| First | Last name | Sex | Family | Marital stat | Occupation | Year | Place of birth |
|---|---|---|---|---|---|---|---|
| *27* | *Tussøen* | | | | | | |
| Hans Hagerup | Brox | M | Hf | G | Farmer Fisher | 1827 | |
| Sara | Brox | K | Hf | G | Farmer wife | 1845 | |
| Albert | Brox | M | S | U | Son | 1874 | |
| Edevard | Brox | M | S | U | Son | 1877 | |
| Nekolai | Brox | M | S | U | Son | 1885 | |
| Anne | Gunders. | K | Tj | U | Servant girl | 1860 | Lenvik |
| *27* | *Tussøen* | | | | | | |
| Johanne | Brox | K | Hm | E | Grocer's widow, farmer | 1836 | Tromsø |
| Regine | Brox | K | D | U | Daughter | 1875 | |
| Else | Anders. | K | Tj | U | Servant girl | 1876 | |
| *7* | *Tussøen* | *J* | | | | | |
| Hans A. | Brox | M | Hf | G | Farmer Fisher | 1833 | |
| Margrethe | Brox | K | Hm | G | Farmer's wife | 1841 | Berg i Senjen Tr |
| Else M. | Brox | K | D | U | Daughter | 1873 | |
| Daniel | Brox | M | S | U | Son | 1874 | |
| Haakon | Brox | M | S | U | Son | 1884 | |
| Hans M. | Brox | M | S | U | Son | 1886 | |
| Johanne | Brox | K | D | U | Daughter | 1869 | |
| Magnhild | Ols. | K | Pld | U | Step daughter | 1897 | |
| Karoline | Karls. | K | Pld | U | Step daughter | 1891 | |
| Mette | Øyen | K | Tj | U | Servant girl | 1879 | Tromsøsund |
| Lorentine | Karesius. | K | Forsør. | U | Poor relief | 1840 | |
| Edvard | Antons. | M | Hf | G | Fisher, lodger | 1873 | Tromsøsund |

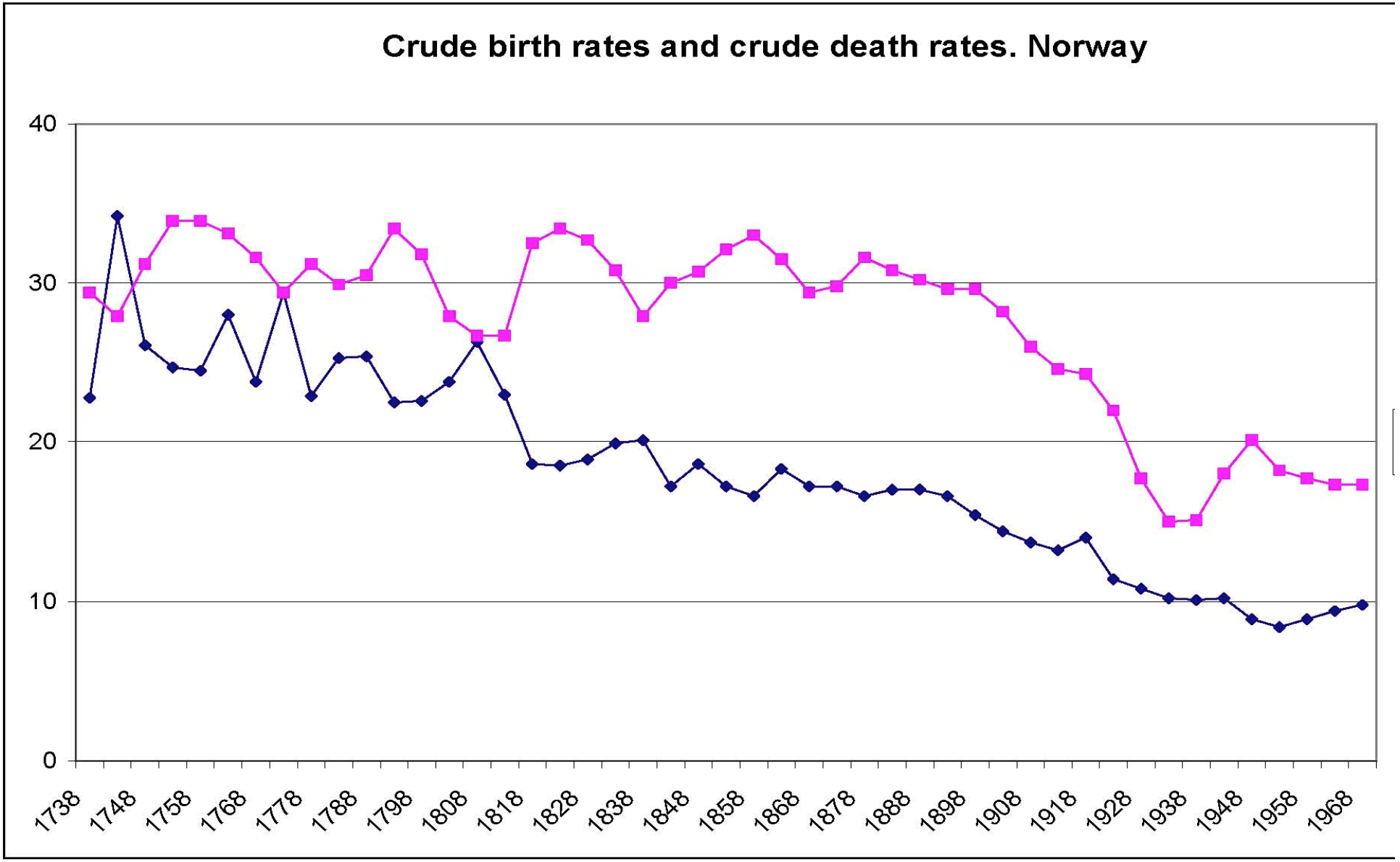
# 1801 in Denmark, Iceland and Norway

- 925000+880000+25000
- World's first?
- Transcription complete
- Encoded for statistics



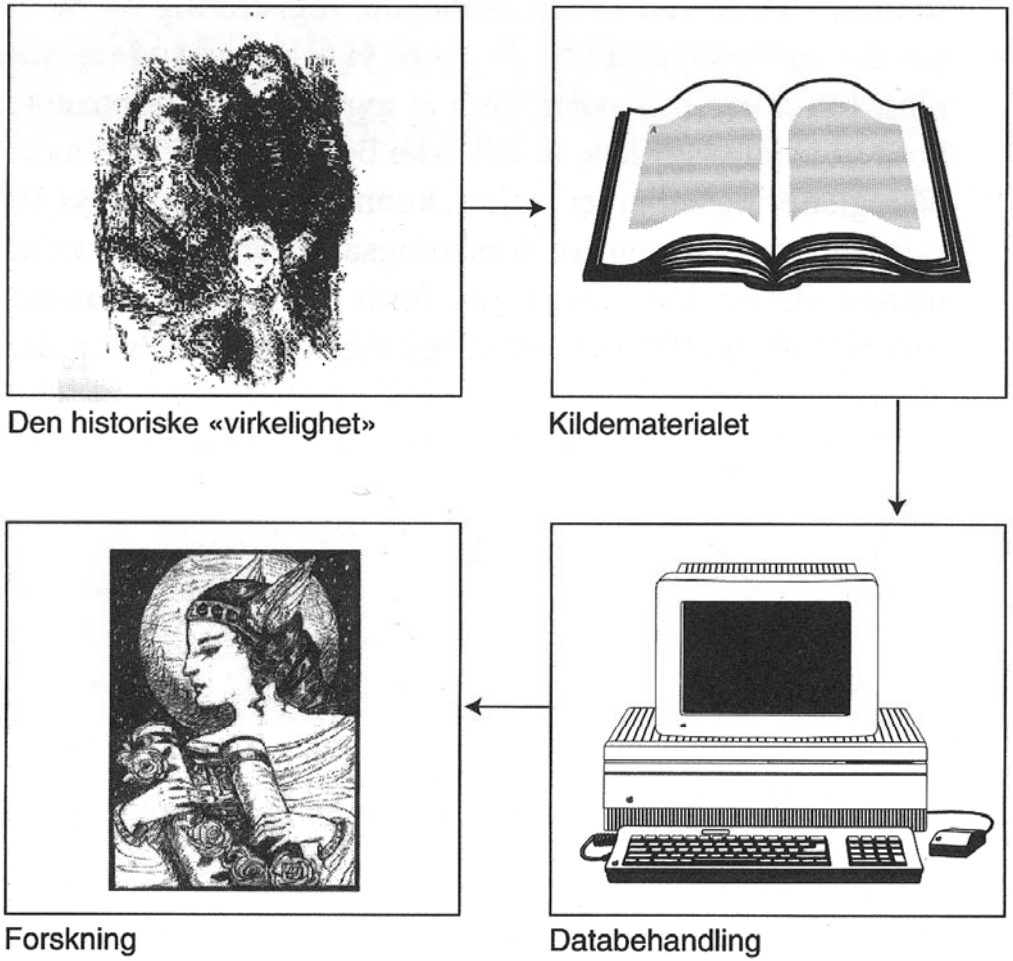

**When is a census, a census? Goyer (1986):**

1. **National legal authority**
2. **Defined enumeration area**
3. **Complete coverage**
4. **Simultaneous enumeration**
5. **Individual enumeration**
6. **Periodic enumeration**
7. **Publication of results**
8. **Dissemination of results**


Crude birth rates and crude death rates. Norway
40
30
20
10
0
1738
1748
1758
1768
1778
1788
1798
1808
1818
1828
1838
1848
1858
1868
1878
1888
1898
1908
1918
1928
1938
1948
1958
1968

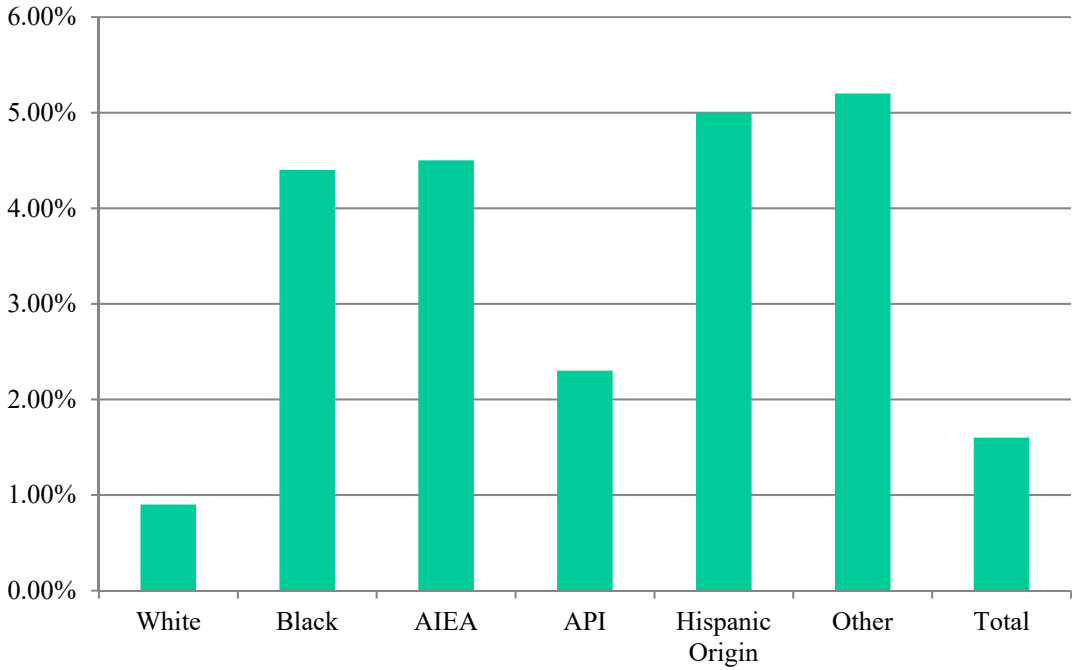
# From “reality” to research
# The research rectangle





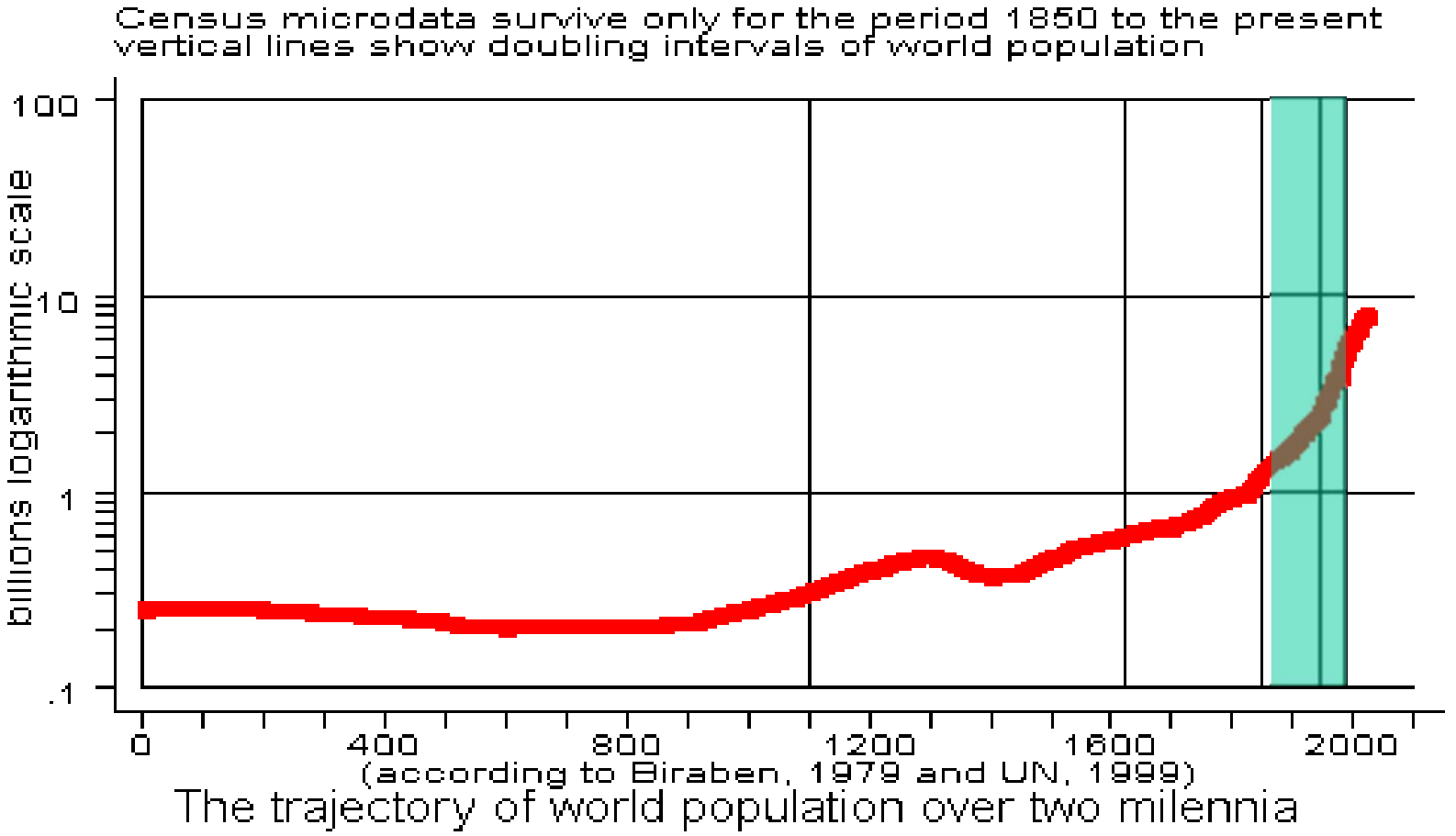
# *Net Undercount and Undercount Rate for the US 1990*

| | Adjusted | Official | Net undercount | Rate |
|---|---|---|---|---|
| White | 201.505.234 | 199.686.070 | 1.819.164 | 0,90 % |
| Black | 31.380.567 | 29.986.060 | 1.394.507 | 4,40 % |
| AIEA | 2.051.915 | 1.959.234 | 92.681 | 4,50 % |
| API | 7.447.361 | 7.273.662 | 173.699 | 2,30 % |
| *Hispanic Origin* | *23.527.851* | *22.354.059* | *1.173.792* | *5,00 %* |
| Other | 10.345.292 | 9.804.847 | 540.445 | 5,20 % |
| **Total** | **252.730.369** | **248.709.873** | **4.020.496** | **1,60 %** |




Kilde: Encyclopedia of the US Census

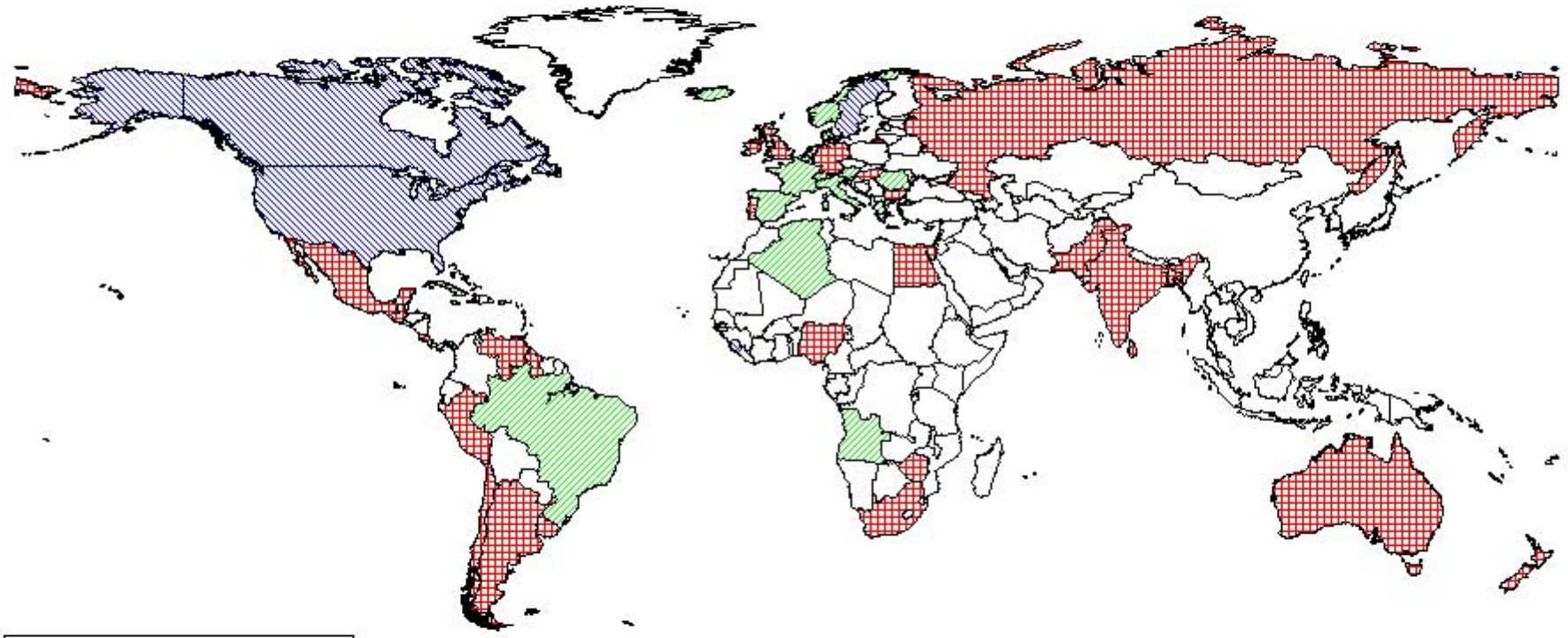
# On a millennial scale, censuses and census microdata survive for only a short, but significant period




The trajectory of world population over two milennia

## Sources: The Handbooks of National Population Censuses

D S Goyer and E Domschke: Latin America and the Caribbean, North America and Oceania. Greenwood Press 1983.
E. Domschke and D S Goyer: Africa and Asia. Greenwood Press 1986.
D S Goyer and G E Draaijer: Europe. Greenwood Press 1992



# Endcoded microdata from the censuses

Id Gender Age

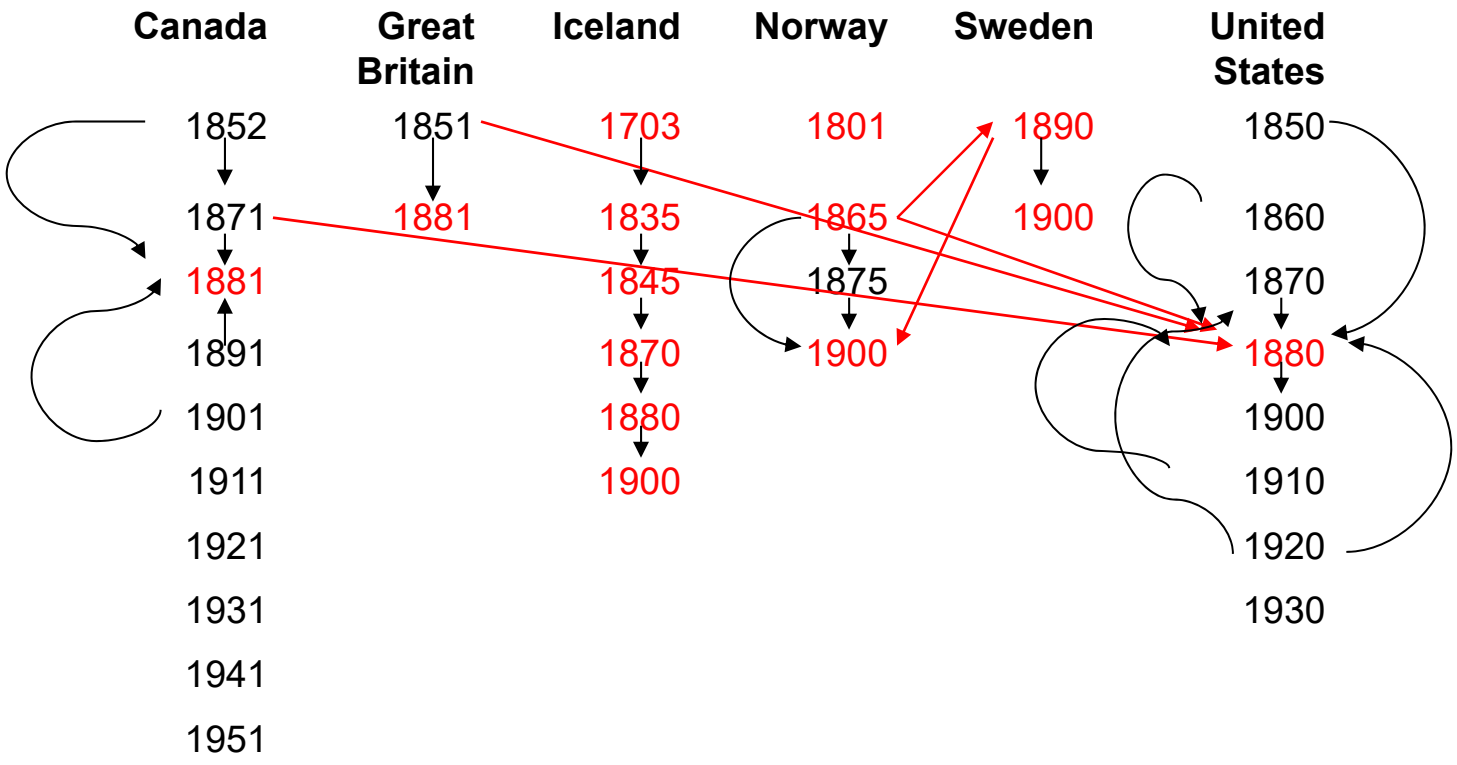
```
121001026007007200001121000010 4
222002026007007200001121000010 4
323001006007007200001212300000 0
423002004007000000000000000000 0
523002002007000000000000000000 0
623002000007000000000000000000 0
```

# NAPP - North Atlantic Population Project

## 2001-> Integrated with constructed variables

- Britain 1881 29 mill
- Canada 1881 4.3 mill
- USA 1880 50 mill
- Iceland 1703 50000
  1880 70000
  1901 72000
- Norway 1865 1.7 mill
  1875 1/3 -> 1,8 mill
  1900 2.2 mill
  1910 2.4 mill
- Sweden 1880, 1890, 1900, 1930, 1950
- Denmark, Iceland, Norway 1801
  1 + 0,05 + 0,9 mill
  Denmark 1789 - 1901
- Emigration harbour protocols 0,83 mill

# NAPP II – Harmonized and Linked Samples



www.aeaweb.org/articles.php?doi=10.1257/aer.102.5.1832

Suggested Sites | Web Slice Gallery | Imported From IE | Scientific journals, s... | Norges forskningsråd | Telefonkatalogen™ ... | Andre bokmerker

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*American Economic Review*: Vol. 102 No. 5 (August 2012)

*AER* Volume. 102, Issue 5 | Previous Article | Next Article

# Europe's Tired, Poor, Huddled Masses: Self-Selection and Economic Outcomes in the Age of Mass Migration

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Abramitzky, Ran, Leah Platt Boustan, and Katherine Eriksson. 2012. "Europe's Tired, Poor, Huddled Masses: Self-Selection and Economic Outcomes in the Age of Mass Migration." *American Economic Review*, 102(5): 1832-56.

**DOI:** 10.1257/aer.102.5.1832

## Abstract

During the age of mass migration (1850-1913), one of the largest migration epis
the United States maintained a nearly open border, allowing the study of migrant
unhindered by entry restrictions. We estimate the return to migration while accou
selection by comparing Norway-to-US migrants with their brothers who stayed in
late nineteenth century. We also compare fathers of migrants and nonmigrants b
occupation. We find that the return to migration was relatively low (70 percent) a
from urban areas were negatively selected from the sending population. (JEL J11

## Article Full-Text Access

Full-text Article

## Additional Materials

Download Data Set (6.60 MB) | Online Appendix (77.66 KB)

## Authors

Abramitzky, Ran (Stanford U)
Boustan, Leah Platt (UCLA)
Eriksson, Katherine (UCLA)

ARTICLE IN PRESS

DEVEC-01710; No of Pages 13

Journal of Development Economics xxx (2012) xxx–xxx

Contents lists available at SciVerse ScienceDirect

Journal of Development Economics

journal homepage: www.elsevier.com/locate/devec

## Have the poor always been less likely to migrate? Evidence from inheritance practices during the age of mass migration ☆

Ran Abramitzky [a,b,*], Leah Platt Boustan [b,c], Katherine Eriksson [c]

[a] Department of Economics, Stanford University, 579 Serra Mall, Stanford, CA 94305, United States
[b] NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138, United States
[c] Department of Economics, UCLA, 8283 Bunche Hall, Los Angeles, CA 90095, United States

ARTICLE INFO

*Article history:*
Received 7 June 2012
Received in revised 3 August 2012
Accepted 13 August 2012
Available online xxxx

*JEL classification:*
O15
N33
R23

*Keywords:*
Migration
Selection
Wealth
Childhood environment
19th century

ABSTRACT

Using novel data on 50,000 Norwegian men, we study the effect of wealth on the probability of internal or international migration during the Age of Mass Migration (1850–1913), a time when the US maintained an open border to European immigrants. We do so by exploiting variation in parental wealth and in expected inheritance by birth order, gender composition of siblings, and region. We find that wealth discouraged migration in this era, suggesting that the poor could be more likely to move if migration restrictions were lifted today. We discuss the implications of these historical findings to developing countries.

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### 1. Introduction

Rural-to-urban and international migration offers residents of developing economies a potential strategy for economic advancement. Hanson (2010) and Clemens (2011) forcefully argue that easing na-

educated than the typical non-migrant (e.g. Chiquiar and Hanson, 2005; Mishra, 2007), although this conclusion has been challenged by Ibarraran and Lubotsky (2007) and Moraga (2011). McKenzie and Rapoport (2007, 2010) reconcile these contrasting results by showing

# From Swedish cathecetical record

## Märtha Larsdatter with family in Tuna parish 1820 to 1880

```
01728 WF LARSDR., MÄRTA
03227    EKBERG, LARS ERIC
03336    EKBERG, MARTHA STINA
03692    EKBERG, CATARINA
03881    EKBERG, WILHELMINA
04048    EKEBERG, MARIA CHARLOTT
04233    EKBERG, ANDERS PETTER
04857    EKBERG, DOROTHEA

     ÅR   1820      1830      1840      1850      1860      1870      1880
          !.........!.........!.........!.........!.........!.........!
92  1794  ----------------------D
28  1793  ----------------------W---------------------D
27  1814  -------------CCCC-CCCC-MC----O
36  1815  -------------CC--C-C--MC--------C------------C--W---D
92  1820  B---------------CC--O  -----C---CO
81  1822    B--------------CC-CC-O       M------------------------C-
48  1823     B----------------C-CCM----------D
33  1826       B--------------C------C-C-C-M-------------------------
57  1832              B-----------------C--CC-CO
```

# Historical Population Register for Norway 1800-1964

## Introduction

We currently build a historical population register based on the censuses supplemented with other source material such as the church books. The register aims to include as many as possible of the 9.7 million people that were born in Norway or immigrated between 1735 and 1964. The latter year marks the introduction of the national Central Population Register (CPR). Where possible local data from the 18th century will be included.

## Characteristics of a population registry

•It is longitudinal, maintaining a continuously updated overview of the population in an administrative geographic area.

•Records about migrants are linked together when they move inside the administrative area, ideally also when they cross its administrative borders.

•The population registry is often based on census records and reports about vital events, linking these together at the individual level and ideally in addition to record information about migration.

•The composition and the whereabouts of the population are documented more or less continuously.

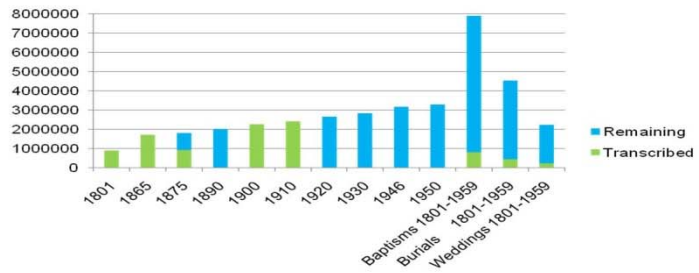
•Modern, contemporary population registries are updated in real time so that migration and vital events are mirrored in the database as they are reported.

•The continuous updating of historical population registers must not be interpreted literally.

•There may be underreporting of events, especially of co-habitation, illegal in-migration or short-distance mobility.

## Source transcription

*Even if 5,5 pre-CPR censuses have been transcribed, much transcription work needs to be completed:*





Norwegian Historical Data Centre, University of Tromsø

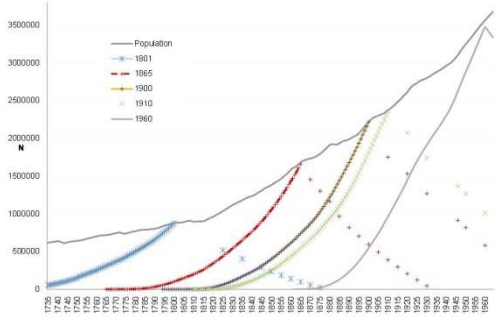
Gunnar.Thorvaldsen@uit.no

**http://www.rhd.uit.no/nhdc/hpr.html**


### Full count censuses

The figure below shows when the persons present in the censuses were born and died, thus defining when they can be identified there by record linkage. Death and survival data are from cohort mortality tables, emigration statistics and subsequent censuses. The diagram should be read vertically to see what part of the population can be linked between censuses. More than half a million people present in 1900 and more than a million present in 1910 can be found in the 1960 census and thus generally in the Central Population Register (CPR):

**Cumulative cohorts in full count censuses**




## Partners

The National and Regional Archives
Statistics Norway
University of Oslo
University of Stavanger
Norwegian Computing Center
The Norwegian Institute of Local History

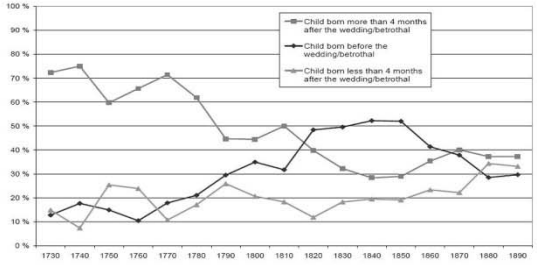
BSS-database (Busetnadsoge)
Computers in Genealogy (DIS-Norway)
The Norwegian Institute of Public Health
Demographic Database, Umeå University
Historical Sample of the Netherlands
Minnesota Population Center

## Project summary

The complete count 1801, 1865, 1875, 1900 and 1910 censuses are available as text and encoded versions. In addition to building upon these censuses in order to create retrospective longitudinal population registers on the local and national levels, baptism, wedding and burial information from the church books is added together with tax data, emigration lists etc. We are also indebted to experiences from the longitudinal databases based on the more continuous population registers that have been kept in Sweden and the Netherlands. Our national population register will cover the period from the first nominative complete count census in 1801 until the Norwegian Central Population Registry was started in 1964.

These sources will be linked internally and to the CPR with automatic record linkage software supplemented with the genealogical wiki-system weRelate. The laws of statistics and privacy protection limit public access to the registry for the most recent 100 or 80 years.

More in-depth local databases cover also the 18th and parts of the 17th centuries. With the help of existing name standardization tables, record linkage software and on line, wiki-based help from genealogists for periods with open sources, we can trace also the mobile population groups and those whose characteristics may be inconsistently noted in the source material. Presently, local and nationally linked datasets are available as relational databases and in flat file NAPP compatible file structures respectively, but we aim to transfer all data sets into the newly launched Intermediate Data Structure.




*Research example:* Proportion of pregnant brides or having the first child before marriage among all married mothers. Decades. Marriage in Rendalen 1734-1900. Source: Bull 2006..

# HBR – Historical Population Register

## Summary

- Use: Research, genealogy, teaching
- Periods: 1801-1910, 1910-1964 1964 ->
- Sources: Censuses, church records, emigration lists (etc)
- Geographic areas: Nation, regions, municipalities
- Challenges: Scanning, transcription, record linkage, judicial issues

**Project host: The University of Tromsø / Norwegian Historical Data Centre**

Partners:
- The National and Regional Archives of Norway (Arkivverket)
- Statistics Norway
-The Norwegian Computing Center
- The Universities of Oslo, Bergen and Stavanger
- The Norwegian Institute of Public Health
- The Norwegian Institute of Local History
- BSS-database (Busetnadsoge)

- The Demographic Database at Umeå University
- The Historical Sample of the Netherland
- The Minnesota Population Center
- Local historians and genealogists

# Name standardization

Prof Gulbrand Alhaug, UiTø has standardized the censuses 1801-1910

| A. Graphemic level | | B. Phonemic level | | C. Lexicographic level | |
|---|---|---|---|---|---|
| Orthographic variants | | Linguistic variants | | | |
| | | | | | |
| Caroles | 5 | Karoles | 51 | Karolus | 391 |
| Carolus | 107 | Karolus | 340 | | |
| Charolus | 2 | | | | |
| Karoles | 46 | | | | |
| Karolus | 231 | | | | |
| 5 variants | 391 | 2 variants | 391 | 1 variant | 391 |

Table 1: A three level model of name variants

+ Name standardization algorithms (Jaro-Winkler)

http://www.rhd.uit.no/postere/postere.html

# At a household level, how did sibling's death affect index child's mortality?
# Infant mortality in Tana parish in the period 1750-1918

## Introduction

The Norwegian demographic development during most of the 19th century was dominated by a decreasing infant mortality, and this decrease became even stronger after the turn of the century. Such a corresponding decrease never took place in Tana. From mid 1800 until the beginning of 20th century, the national infant mortality was reduced by 50 per cent. In Tana it was 4 per cent, and the average infant mortality for this period was 13 per cent.
In this study the aim is to test how sibling's death affected individual child's mortality as I posit that household as a unit had a decisive impact on infant's mortality. Not only households may allocate comparable resources and cares among children but children born to the same mothers may also share similar genetic characteristics thereby affecting their risks of dying.

## Data, method and variables

By linking information from the baptism and burial records, I have constructed household units with information about the household's fertility history and the story about the children dying before reaching one year. The index child has been right censored if he or she lived through one-year-old birthday, or being considered as a 'failure' case if death occurred before age one. Since one of my objective is to investigate whether preceding sibling's death affected index child's risk of dying during the infancy, households without any child, and households with only one child, have been excluded from the sample.
I have used the Cox regression with cluster control at the household level.

Table: Descriptions of Variables used in the Proportional Hazard Model

| Variable | No. indv | No. house-holds | Percent-age | Mean | Std. Dev | Min | Max |
|---|---|---|---|---|---|---|---|
| **Tana households** | 5025 | 1125 | | | | | |
| **Sex (1=male)** | | | 50.6 | | | | |
| **Parity** | | | | 3.46 | 2.42 | 2 | 17 |
| **Previous sibling dead as infant(1=yes)** | | | 9.2 | 0.09 | 0.29 | | |
| **Illegitimacy (1=yes)** | | | 4.8 | 0.04 | 0.21 | | |


Hilde L. Jåstad
Phd. Student
Centre for Sámi Studies
University of Tromsø
hilde.jaastad@sami.uit.no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*Komsekula*

## Hypothesis

The mortality of the index child is intra-correlated with immediate preceding sibling's death.

*Table 1:* Hazard of infant death, Tana Parish 1750-1918. With cluster controlled at the household level.

| | Hazard ratio | Robust SE | P> \|z\| |
|---|---|---|---|
| **Sibling's mortality** | | | |
| Previous sibling dead as infant | 2.006 | 0.233 | 0.000 |
| **Index Child Characteristics** | | | |
| Parity | 0.922 | 0.042 | 0.077 |
| Parity, squared | 1.008 | 0.003 | 0.040 |
| Illegitimacy | 1.506 | 0.242 | 0.011 |
| Sex | 1.099 | 0.089 | 0.239 |

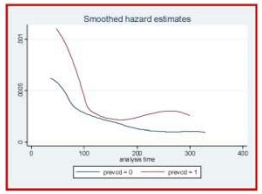
*Note:* I am well aware of the possible effects of parent's characteristics, such as mother's age, her death and her birth intervals. These data has not yet been linked to the database, but hopefully it will be done in the future. In addition, controlling for variables such as occupational status and ethnicity would also be of interest.

## Results and Conclusion

In order to estimate the underlying household frailty on index child's death I have chosen to use the immediately preceding sibling's death.

- The result in table 1 shows that the death of the prior immediate sibling significantly increased the index child's risk of dying by 100 per cent.

*Figure:* Smoothed Hazard Estimates of Index Child's Mortality




- This graph shows the different mortality hazard for index child with the effect of whether or not immediate sibling died. Here you can clearly see that the effect is more or less diminishing after approximately the 3 first month of life, slightly increasing after six month.

I have not been able to indicate if having more siblings dying during infancy was associated with an increased hazard of index child's death. This because of a correlation between the previous sibling's death and the total number of sibling's dying before index child.

Was the hazard of being born as first child the same as being born as number 2, 3, 4 and so forth? In addition to analyse the parity I have added the square term of the parity that allows the relationship between the hazard of death and parity to be non-linear.

- My results suggest, with a p-value of 0.07, that higher parity decreased the hazard – meaning that the earliest born in a family experienced higher risk of dying than their siblings. In addition, the results (weakly) suggest as parity gets really high that the hazard actually started going up again.

The characteristics of the index child did matter.

- Compared to their female counterpart, male infants had 10% higher hazard of mortality, though not significantly. This may be seen as a normal distribution between the sexes due to genetic causes.
- Compared to legitimate children, children baptized as illegitimate faced 50% higher hazard of dying, significant at 0.011.

How come, when clustering on household level, and by excluding all households with only one child, we still get a significant higher hazard for illegitimate infants? Is it possible that families with illegitimately born children, in this context understood as the 'result of carelessness', had some common features that resulted in a higher hazard for the index child?

## Reference


Hilde L. Jåstad (2007), 'Is the infant death clustering in the households? Infant mortality in Tana parish in the period 1750-1918'. Paper presented at 32th Meeting of The Social Science History Association, November 15-18 2007, Chicago.

# Is it the Mother's Health that really matters?

# Infant mortality in Asker and Bærum during the late 18th and early 19th century

Data digitized by Norwegian Historical Data Center at Tromsø and Bardufoss

## Introduction

Yearly figures on infant mortality in Norway are available at the national level from 1836, but in order to find out more, it is necessary to explore at the individual level. Parish investigations indicate an average level of infant mortality around 18 per cent at the beginning of the 19th century. This level is also found in Asker and Bærum, the area chosen for this study.

Asker and Bærum is a parish in the coastal area of southeastern Norway, close to the capital.

Analysis has shown that women who were born in years with high infant mortality had an increased risk of giving birth to infants who died neonatally. A possible explanation is that some of these mothers were born under adverse conditions, either caused by disease or undernourishment, in utero or in early infancy. They might have been programmed to bear weaker infants, e.g. children with lower birth weights than women who were born in years with low infant mortality.


Infant mortality in Asker and Bærum, 1733-1878.

Five-years moving average.

Eli Fure

Riksarkivet

elfu@arkivverket.no

Mother and child. Motive from Skotta in Bærum. Harriet Backer, without title, 1887.

## Question

Were mothers born in difficult years imprinted by the adverse conditions so that they in turn, when they gave birth, had an increased risk of seeing their infants die?

## Data

The Asker and Bærum data set consists of linked records at the individual level. The data originate from censuses, church records, and land registers.

We do not know the health status at birth of the mothers in this study, so it is necessary to use a proxy. We know that infant mortality was rather low in Asker and Bærum during the 1790s, and rather high during the first decade of the 1800s.

First cohort = the 'good' periode, mothers being born between 1790-1799.

Second cohort = the 'bad' periode, mothers being born between 1800-1809.

N=2298, 42 dead.

**Cox regression analysis of mortality for infants whose mothers were born in the 1790s and 1800s and who survived from the second to the 31th day after birth.**

| Variable | Parameter estimate | Standard Error | P-value Chi-Square | Risk Ratio |
|---|---|---|---|---|
| *Birth year of mother (ref. 1790s)* | | | | |
| Mother born in 1800-1809 | 0.63 | 0.27 | **0.02** | **1.89** |
| *Multiple births (ref. single birth)* | | | | |
| Twin | 2.41 | 0.36 | **0.00** | **11.18** |

## Results and Conclusion

The Cox regression analysis shows that the neonatal mortality was twice as high for infants whose mothers were born in years with high infant mortality. The adverse effect of having a mother born in years of crisis is even stronger if we look at children born before 1830. After the neonatal period there were no differences according to year of birth of mother.

In a society where breastfeeding was prevalent, neither food shortage nor contagious diseases were important as immediate causes of neonatal deaths. Indirectly these causes may have had an effect, through the infancy (or fetal stage) of the mothers.

Thus the old commonsensical hypothesis of a correlation between improved living conditions and a decline in infant mortality may after all have something to recommend it, if the effect is allowed to work through a generation.

## Reference

Eli Fure (2002), 'Is it the Mother's health that really matters? Infant mortality in the parish of Asker and Bærum 1814-1878', in Hilde Sandvik, Kari Telste, Gunnar Thorvaldsen (eds), *Pathway of the past. Essays in honour of Sølvi Sogner* […], Tid og Tanke, Oslo.

En av artiklene doktorgradsavhandlingen; *...en besynderlig Regelmæssighed Dødeligheten i Asker og Bærum på 1800-tallet med særlig vekt på Spedbarnsdødeligheten*, Doktorgradsavhandling. Oslo: Historisk institutt, Universitetet i Oslo, 2004

# Jødiske innvandrarar i Kristiania 1851-1942

I 1851 vart den såkalla jødeparagrafen fjerna frå den norske grunnlova, og fyrst då opna landet grensene for jødisk innvandring. Dei fyrste åra var det likevel få jødar som kom. Men frå om lag 1880 vart òg Noreg mottakar av ein liten del av den store emigrasjonen av jødar frå Aust-Europa. Til saman har det fram til hundreårsskiftet vore snakk om omlag 1000 jødar som kryssa dei norske grensene. Fleirtalet kom til å halda til i hovudstaden. Kven var desse innvandrarane, og korleis gjekk det med dei i det nye landet?

## Migrasjon og integrasjon på individnivå

Ein metode å studera migrasjon og integrasjon på er å fylgja Innvandrarane på individnivå. Kjeldene som har blitt brukt er folketeljinga frå 1900 og deler av folketeljinga frå 1910. Folketeljingane inneheld opplysningar om kva trussamfunn personane tilhøyrte, og på den måten kan ein raskt søka seg fram til dei mosaiske trusvedkjennarane. (Kristiania 1900: 392 individ, Jakob og Paulus sokn 1910: 423 individ).

I tillegg har det i samband med hovudfagsprosjektet som denne framstillinga bygger på, vorten henta individ og samla individopplysningar frå ei rekke andre nominative kjelder. Dette har spesielt vore viktig for å kunna fylgje innvandrarane sine livsløp framover i tid, sidan det ikkje er vorten dataregistrert kjelder frå den nyaste tida. Den gruppa som vart fylgd er jødiske innvandrarar som kom til Kristiania i perioden 1851 til 1900 (551 individ), samt barna deira fødd i Kristiania i same perioden (183 individ).

## Nokre resultat

### . Ein stor del av innvandrarane kom frå dei same områda

- ½ av innvandrarane i undersøkingsgruppa var fødd i det russiske tsarriket og ¾ av dei frå dei nærliggande guvernementa Kovno, Vilna, Suwalki og Lomza.
- Innanfor her var det igjen tre kjerneområde for emigrasjonen, og fleire kom òg frå dei same landsbyane.

*Kart: Det jødiske busetnadsområdet i Russland*


### . Innvandringa hadde element av kjedemigrasjon

Dei fyrste innvandrarane bidrog direkte til at fleire kom etter. Ofte reiste familiefaren fyrst, medan resten av familien kom etter. Det hende òg at einslege menn etterkvart gifta seg med nokon frå heimstaden sin som så flytta etter.

- Blant ektepar frå undersøkingsgruppa der nøyaktig innvandringsår er oppgjeven, hadde mannen reist fleire år i førevegen i litt under 1/3 av tilfella.
- 2/3 av mennene i undersøkingsgruppa som gifta seg i Noreg, gifta seg med utanlandske kvinner. Over ¼ av desse kvinnene innvandra samtidig med eller etter giftarmålet.

### . Innvandrarane reiste i etappar

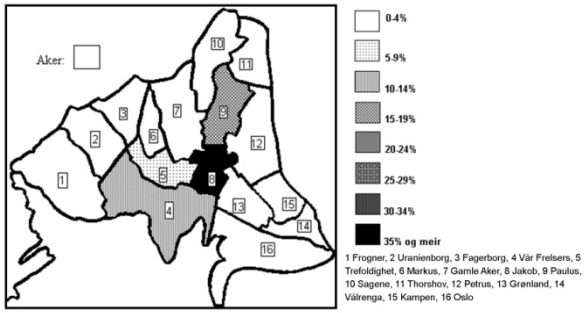
Spesielt var det mange som hadde opphelde seg ei tid i Sverige. Det var heller ikkje alle som vart verande i Kristiania.

- ¼ av innvandrarane frå Aust-Europa i undersøkingsgruppa hadde eitt eller fleire barn eller yngre søsken fødd i Sverige før dei kom til Kristiania.
- ½ av innvandrarane i undersøkingsgruppa slo seg ned i Kristiania for godt. Dei som reiste drog vidare til USA, reiste tilbake eller slo seg ned andre stader i Noreg.

### . Innvandrarane busette seg spesielt i eit område i byen

Dei sette sitt preg på området Hausmannskvartala og nedre del av Grünerløkka, sjølv om busetnaden aldri gav grunnlag for å snakke om noko jødekvarter slik det var tilfelle i ei rekke andre europeiske byar.

*Kart: Busetnadsmønsteret hjå den jødiske innvandrargruppa i 1900*




1 Frogner, 2 Uranienborg, 3 Fagerborg, 4 Vår Frelsers, 5 Trefoldighet, 6 Markus, 7 Gamle Aker, 8 Jakob, 9 Paulus, 10 Sagene, 11 Thorshov, 12 Petrus, 13 Grønland, 14 Vålrenga, 15 Kampen, 16 Oslo

- I 1900 budde 39% og i 1910 44% av alle dei jødiske innbyggjarane innanfor Jakob sokn (=Hausmannskvartala og nedre del av Grünerløkka)
- I 1900 var under 2‰ og i 1910 under 3‰ av den totale folkemengda jødiske. I Jakob sokn var dei tilsvarande tala 1,1% i 1900 og 2,4% i 1910. I Osterhausgate var begge åra over 7% av innbyggjarane jødiske.

### . Etablerte innvandrarar flytta ut av det jødiske busetnadsområdet

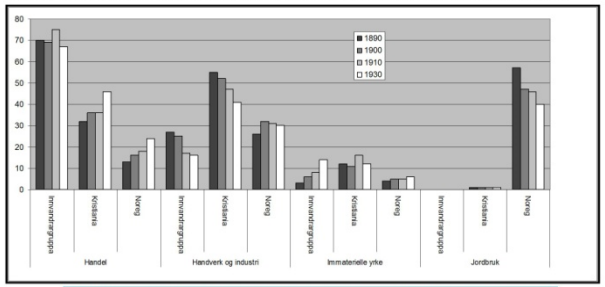
Spesielt var det andre generasjonen som flytta ut frå dette området då dei stifta eige bu. Foreldra deira velde oftare å bli verande i området.

- 28% av 1. generasjon i undersøkingsgruppa og 8 % av 2. generasjon (under 15 år ved innvandring eller fødd i Kristiania) budde i Jakob og Paulus sokn i 1940

### . Innvandrarane plasserte seg i spesielle nisjar i arbeidslivet

Fleirtalet av innvandrarane vart sysselsett i handelsnæringa. Dette var spesielt for Kristiania, samanlikna med andre europeiske hovudstadar, der fleirtalet av dei jødiske innvandrarane etterkvart vart sysselsett i handverk- og industrisektoren. Delen sysselsette i handelsnæringa var her òg tydeleg høgare hjå den jødiske innvandrargruppa enn hjå resten av folkemengda, spesielt når det gjaldt varehandel med forbruksvarer som manufakturvarer, frukt og tobakk. Dei same varene var sentrale for dei som arbeidde i handverk og industrisektoren.

*Figur: Yrkesfordelinga hjå den jødiske innvandrargruppa,1851-1900, folkemengda i Kristiania og folkemengda i Noreg*




- I 1900 var 69 % og i 1910 67 % av alle dei jødiske yrkesaktive innbyggjarane sysselsett i handelsnæringa. (Tala for 1910 gjeld for Jakob og Paulus sokn)
- Både i 1900 og 1910 var over 80% av jødane i handelssektoren sysselsett med handel med manufakturvarer, sko eller frukt og tobakk og over 60% i handverk- og industrisektoren sysselsett i konfeksjons- eller skotybransjen eller i sigarettindustrien.

### . Innvandrarane opplevde positiv sosial mobilitet

Den sosiale mobiliteten skjedde dels ved at einskilde individ klatra oppover og dels ved ei heving av posisjonen mellom generasjonane. Fabrikkarbeidarar vart innehavarar av små forretningar, omførselshandlarar vart grosserarar, og barna deira tok utdanning.

- I 1900 var 60 % av jødane i handelsnæringa omførselshandlarar medan 17 % hadde eige forretning. I 1920 var dei tilsvarande tala for undersøkingsgruppa 6% omførselshandlarar og 69% forretningsdrivande.

Referanse: Gjernes, Marta (2007): *Jødar i Kristiania: dei fyrste innvandrarane si geografiske og sosioøkonomiske plassering i samfunnet frå 1851 til 1942*, HL-senteret sin skriftserie, 2. Opphavleg levert som hovudoppgåve i historie ved Universitetet i Oslo 2002.

Marta Gjernes
Stipendiat
Institutt for arkeologi, konservering og historie
Universitetet i Oslo
marta.gjernes@iakh.uio.no

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# The Rise and Fall of Illegitimacy in a Rural Society
# The Case of Rendalen, Norway 1750-1900

## Introduction

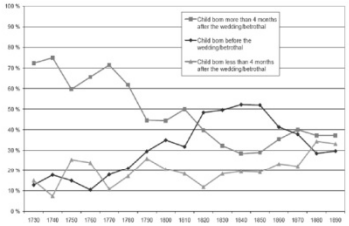
In the second half of the 18th century there was a rise in the number of illegitimate births in Europe. The number fell a century later. While the question of increased levels of illegitimacy has received a great deal of attention connected to a possible romantic revolution, there has been little study of why these levels again fell.

## Previous findings and further questions

Premarital sexuality was not an uncommon feature in Rendalen in the 18th century, and many brides were pregnant or had their first child before marriage. Still, around 1790 there was a great surge in premarital sexual activity, involving girls from both the landowning and the (semi-) landless group. This surge had two faces. One was the fact that a premarital pregnancy and especially a premarital birth became the normal way to start a marriage. The other is that simultaneously there was a surge in looser premarital sexual relations.

The article which constitute the basis for this poster addresses two questions concerning this. When the normal way to start a marriage was to have a sexual relationship that ended in a pregnancy, it is also obvious that not all relationships based on mutual attraction would culminate in marriage. Was it a situation whereby the young men and women of Rendalen began to pursue a vision of romantic love in a society already in possession of a relaxed view on premarital sexuality? Or is it more a result of a process of proletarianisation where parents had little to offer a large flock of siblings, who then of necessity had to provide and find a partner for themselves?

*Figure:* Proportion of pregnant brides or having the first child before marriage among all married mothers. Decades. Marriage in Rendalen 1734-1900.




*Note:* A bride is considered pregnant when the child is born within four months after the wedding. Betrothal is used as date of marriage before 1799. Data only for first marriages for men and women.


## Reference

Hans Henrik Bull (2006), 'The Rise and Fall of Illegitimacy in a Rural Society. The Case of Rendalen, Norway 1750-1900', article no 3, *Marriage decisions in a peasant society […]*, Doctoral thesis, Faculty of Humanities, University of Oslo.



Hans Henrik Bull

h.h.bull@iakh.uio.no


A farmer's family in Rendalen, c. 1870; four of the five daughters married sons of farmers. Nordosterdalsmuseum, Tynset.

## Method

A logistic regression of remaining a farmer as an adult for sons and daughters of farmers.

The regression shows the effect of marriages initiated by an extramarital pregnancy on social mobility - controlled for social origin of the spouses and their age of marriage.

## Data

The basis for the analysis is the Rendalen database. The foundation of the database is parish registers from 1734-1900 that are linked together by a family reconstitution procedure. In addition there are linkages to several other sources such as censuses, probate registers and court journals.

*Table:* Mean age of men and women from Rendalen at the birth of a child conceived out of wedlock according to the parents' social class. Number of cases i brackets.

| | Men | | Women | |
|---|---|---|---|---|
| **Time period** | **Farmers** | **Farm workers** | **Farmers** | **Farmworkers** |
| 1750-1775 | 28.9 (60) | 28.2 (24) | 26.7 (53) | 25.6 (16) |
| 1775-1800 | 30.4 (96) | 30.5 (86) | 26.9 (82) | 28.4 (70) |
| 1800-1825 | 28.7 (119) | 28.8 (98) | 26.3 (110) | 27.8 (92) |
| 1825-1850 | 29.4 (152) | 29.6 (198) | 26.0 (134) | 27.4 (188) |
| 1850-1875 | 29.2 (157) | 28.4 (288) | 26.2 (141) | 25.8 (238) |
| 1875-1900 | 27.3 (150) | 27.1 (326) | 25.4 (132) | 24.5 (282) |

*Source:* Rendalen database

*Note:* Extramarital pregnancy is defined as pregnancy wherein the child is born before or less than four months after the wedding (or official betrothal).

## Regression I - main findings

During the whole period it was only the farmer who had the clear ability to affect the outcome of whether an extramarital pregnancy would result in marriage for their children. In the early period (1750-1800), it may be seen that the farmer's wife had a positive effect on securing a marriage for her daughter, irrespective of the social status of the girl's suitor.

## Regression II

*Table:* Logistic regression coefficients of becoming a farmer after marriage. First marriages for sons and daughters of farmers from Rendalen 1750-1900. Only couples registered as having a child.

| | 1750-1800 | | 1800-1850 | | 1850-1900 | |
|---|---|---|---|---|---|---|
| | mean | odds ratio | mean | odds ratio | mean | odds ratio |
| (Intercept) | | 0.48 | | 3.25 | | 3.49 |
| *Birth of first child (ref. More than 4 months after the betrothal/wedding)* | | | | | | |
| Before the wedding | (0.57) | 1.00 | (0.40) | 1.00 | (0.41) | 1.00 |
| Within four months after the wedding | (0.20) | **0.25**** | (0.41) | **0.49**** | (0.38) | **0.36***** |
| | (0.23) | **0.38**** | (0.19) | 0.88 | (0.21) | **0.44*** |
| -2LogL | | 949.8 | | 972.2 | | 737.2 |
| 1-(Residual deviance/Null deviance) | | 0.189 | | 0.109 | | 0.138 |
| N | | 305 | | 311 | | 231 |
| Events | | 180 | | 177 | | 159 |

***p<0.10 **p<0.05 ***p<0.01**

Source: Rendalen Database

## Results and Conclusion

During the whole period under study, having a child before the wedding or betrothal had a clearly negative impact on the propensity of becoming a farmer. Experiencing an extramarital pregnancy can be seen as a result of a mating process where parents had limited control. Opposite, when economically strategic considerations were included in the mating process, there was seldom any early pregnancy. Therefore, the result from the above table shows that couples established more on the basis of a sexual or romantic attraction was less likely to succeed economically.

The differences over time offer some additional information to the decision making in the courting process over time. Despite that premarital pregnancy was a common feature in the 18th century it is a very clear tendency that these marriages were not part of economic strategic considerations. It seems that men and women from the group of farmers that had few options of acquiring a farm were given the possibility of finding a partner of their own.

For those men and women marrying in Rendalen in the second half of the 19th century, the chance of remaining a farmer had increased. This was mainly due to the fact that there was a surge in the number of farms combined with many moving out from the parish. Despite this large access to becoming a farmer, there was a continuation of the negative effect of initiating the marriage with a premarital pregnancy. This indicates that parental control was still at play in the courtship procedure and the choice of marriage partner. The social differences between the landowning and the labour class had become more pronounced in the second half of the 19th century, and thereby the farmers had more to defend both economically and socially.


Data digitized by Norwegian Historical Data Center at Tromsø and Bardufoss