Social Homogamy in the Canton of Luzern
(Switzerland, 1834-75)

Simon Seiler
Institute of Sociology
University of Bern

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Overview

1. Introduction
2. The Canton of Luzern
3. Research Questions and Hypotheses
4. Data and Variables
5. Method
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1 Introduction: The Broader Project

Intergenerational social mobility in Switzerland
— 20th century: gender differences; international comparison.
— 19th century:
  Industrialized (Glarus) vs. mainly rural (Luzern) area;
  General Trends.

Social Homogamy:
Most important path of status transmission for women.
1 Introduction: Marriage Registers (1834-75)

Social Homogamy in the Canton of Luzern (Switzerland, 1834-75)
2 The Canton of Luzern (19th Century, I)
2 The Canton of Luzern (19th Century, II)

> Political:
  — Until 1847: Sovereign state within the Swiss Confederation
  — 1831-47: Oscillation between liberal and conservative poles (culture war)
  — After 1847/48: Partially forced and conflict-laden integration into the liberal federal state of Switzerland (Bossard-Borner, 2010).

> Economy:
  — Mainly rural canton with the city of Luzern as a clear capitol.
  — Some industry:
    Mainly around Luzern and in the Wiggertal (north-east).
  — Acceleration with the connections to the railway system 1856 and 1864
  — With this: strong growth of tourism (2. half of 19th century)  
    (Dubler, 1983; Schnider, 1996)

> Marriage: Restricted access to marriage for poor.
Result: Highest illegitimacy rate in Switzerland (Head-König, 1993).

> City of Luzern: Strong growth, driven by immigration with a high share of female domestic workers (Balthasar, 1988; Head-König, 1999).
3 Research Questions and Hypotheses

Research Questions:

— Did social homogamy differ between area (no industry, some industry, city of Luzern)?
— Did it change over time?
— Can social homogamy be explained by individual and contextual factors?
### 3 Research Questions and Hypotheses: Clusters (I)

#### Clusters

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Aspects</th>
<th>Variables</th>
<th>Effect on homogamy</th>
<th>Change of aspect</th>
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<td>Modern labor market</td>
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<td>Marriage horizons</td>
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<td>Adult mortality</td>
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<td>Personal preferences</td>
<td>Notions of romantic love</td>
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Source: van Leeuwen & Maas, 2005, p. 21
### 3 Research Questions and Hypotheses: Clusters (II)

#### Clusters

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<td>Communal traditions</td>
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<td>Age of bride and groom</td>
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Source: van Leeuwen & Maas, 2005, p. 21
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<td>1\textsuperscript{st} sector: Bride’s father</td>
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<td>Age of Bride</td>
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<td>Age of Groom</td>
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4 Data and Variables: Sampling (I)

4 Data and Variables: Sampling (II)

> 3 strata:
  — No industry: 25 of 63 parishes
  Two-stage sampling (Jann, 2007).
  — Some industry: all 13 parishes
  — City of Luzern:
    Catholic and protestant parish

> Aim: 750 observations per strata
  — Parish size: Estimation (counting 10% of entries).

> Realized: 2 212
> Usable for this study: 1 825
4 Data and Variables: Occupations

> **Occupational titles** of groom, bride and fathers (rarely: mothers).

> Coded to **HISCO** (van Leeuwen, Maas, & Miles, 2002).

> Assigned to **HISCAM**: single dimensional, **continuous scale of stratification** (Lambert et al., 2013).

  — Version 1.3.1 E (constructed for the period 1800-1890) is used here (HISCAM, 2013).

> Recoded to **HISCLASS**: Historical class-scheme (van Leeuwen & Maas, 2011).
Social Homogamy in the Canton of Luzern (Switzerland, 1834-75)

4 Data and Variables: Occupations (HISCLASS)

Note: most graphs produced with “coefplot” (Jann, 2014).
4 Data and Variables: Covariates by Area and Cohort.

Proportions Railway Station <2.5h

Proportions of Locals

Proportions of 1st Sector Occupations

Median Age of Grooms and Brides
5 Method: Measuring Social Homogamy

Social Homogamy in the Canton of Luzern (Switzerland, 1834-75)

Groom’s father’s HISCAM

Correlation := Social Homogamy

Bride’s father’s HISCAM
5 Method: Multilevel Mixed Effect Model

Groom’s father’s HISCAM

Bride’s father’s HISCAM

Covariates
5 Method: Multilevel Mixed Effect Model

\[
\ln(HISCAM_{ij}^{bf}) = (\beta_1 + \zeta_{1j}) + \beta_2 \ln(HISCAM_{ij}^{gf}) + \delta_{ij1} + \cdots + \delta_{ijK} x_{ijK} \\
+ \ln(HISCAM_{ij}^{gf}) (\gamma_{1x_{ij1}} + \cdots + \gamma_{kx_{ijK}}) + \epsilon_{ij}
\]

> HISCAM_{ij}^{gf}: Bride’s father’s HISCAM
> HISCAM_{ij}^{bf}: Groom’s father’s HISCAM
> Covariates (x_{ijk}):
- Nearby train station (<2.5h)
- Local bride, local groom
- First sector occupation (bride’s father, groom’s father)
- Age: linear and quadratic (bride, groom)
- Full interaction between type of area and cohorts

> \zeta_{1j}: Random intercept
> Clusters: Parish x cohort

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6 Results: Area and cohort

Social Homogamy in the Canton of Luzern (Switzerland, 1834-75)

Homogamy by area and cohort (bride's father->groom's father)

Association between bride's father's and groom's father's HISCAM
- Difference of associations between cohorts
- Difference to "some industry"
- Difference to "city of Luzern"
- Difference to "no industry"

Note: Spikes represent 90% (thick) and 95% (thin) confidence intervals
Social Homogamy in the Canton of Luzern (Switzerland, 1834-75)

6 Results: Area and cohort

Homogamy by area and cohort (groom's father->bride's father)

- **no industry**
  - 1834-54
  - 1855-75
  - Change

- **some industry**
  - 1834-54
  - 1855-75
  - Change

- **city of Luzern**
  - 1834-54
  - 1855-75
  - Change

Note: Spikes represent 90% (thick) and 95% (thin) confidence intervals

- **Association between bride's father's and groom's father's HISCAM**
- **Difference of associations between cohorts**
- **Difference to "some industry"**
- **Difference to "city of Luzern"**
- **Difference to "no industry"**
6 Results: Explaining Factors (Base Model)

Main effect
Bride's father: \( \ln(\text{HISCAM}) \)

Interactions: Area and cohort
- Area: No industry (ref.: some industry)
- Area: City of Luzern (ref.: some industry)
- Year of Marriage: 1855-75
  - No industry # 1854-75
  - City of Luzern # 1855-75

Interactions: Marriage market horizon
- Close to railway station
  - Local (groom)
  - Local (bride)

Interactions: Parental pressure
- Bride's father: 1st sector

Interactions: Personal autonomy
- Bride's (centered age)/10
- Bride's sq((centered age)/10)
- Groom's (centered age)/10
- Groom's sq((centered age)/10)

Note: Spikes represent 90% (thick line) and 95% (thin line) confidence intervals.
Effects on "Bride's Father->Groom's Father"

Main effect
- Bride's father: ln(HISCAM)

Interactions: Area and cohort
- Area: No industry (ref.: some industry)
- Area: City of Luzern (ref.: some industry)
- Year of Marriage: 1855-75
  - No industry # 1854-75
  - City of Luzern # 1855-75

Interactions: Marriage market horizon
- Close to railway station
  - Local (groom)
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Interactions: Parental pressure
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- Bride's (centered age)/10
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- Groom's (centered age)/10
- Groom's sq((centered age)/10)

Note: Spikes represent 90% (thick line) and 95% (thin line) confidence intervals.
6 Results: Explaining Factors (Locals)

Social Homogamy in the Canton of Luzern (Switzerland, 1834-75)

Interactions: Area and cohort
- Area: No industry (ref.: some industry)
- Area: City of Luzern (ref.: some industry)
- Year of Marriage: 1855-75
  - No industry # 1854-75
  - City of Luzern # 1855-75

Interactions: Marriage market horizon
- Close to railway station
  - Local (groom)
  - Local (bride)

Interactions: Parental pressure
- Bride's father: 1st sector

Interactions: Personal autonomy
- Bride’s (centered age)/10
- Bride’s sq((centered age)/10)
- Groom’s (centered age)/10
- Groom’s sq((centered age)/10)

Main effect
- Bride’s father: ln(HISCAM)

Note: Spikes represent 90% (thick line) and 95% (thin line) confidence intervals.

Effekt on "Bride's Father->Groom's Father"
6 Results: Explaining Factors (1st Sector)

Main effect
Bride’s father: ln(HISCAM)

Interactions: Area and cohort
Area: No industry (ref.: some industry)
Area: City of Luzern (ref.: some industry)
Year of Marriage: 1855-75
No industry # 1854-75
City of Luzern # 1855-75

Interactions: Marriage market horizon
Close to railway station
Local (groom)
Local (bride)

Interactions: Parental pressure
Bride’s father: 1st sector

Interactions: Personal autonomy
Bride’s (centered age)/10
Bride’s sq((centered age)/10)
Groom’s (centered age)/10
Groom’s sq((centered age)/10)

Note: Spikes represent 90% (thick line) and 95% (thin line) confidence intervals.
6 Results: Explaining Factors (Age)

Main effect
Bride's father: ln(HISCAM)

Interactions: Area and cohort
Area: No industry (ref.: some industry)
Area: City of Luzern (ref.: some industry)
Year of Marriage: 1855-75
No industry # 1854-75
City of Luzern # 1855-75

Interactions: Marriage market horizon
Close to railway station
Local (groom)
Local (bride)

Interactions: Parental pressure
Bride's father: 1st sector

Interactions: Personal autonomy
Bride's (centered age)/10
Bride's sq((centered age)/10)
Groom's (centered age)/10
Groom's sq((centered age)/10)

Note: Spikes represent 90% (thick line) and 95% (thin line) confidence intervals.
6 Results: Explaining Factors (Full model)

Main effect
Bride's father: ln(HISCAM)

Interactions: Area and cohort
Area: No industry (ref.: some industry)
Area: City of Luzern (ref.: some industry)
Year of Marriage: 1855-75
  No industry # 1854-75
  City of Luzern # 1855-75

Interactions: Marriage market horizon
Close to railway station
Local (groom)
Local (bride)

Interactions: Parental pressure
Bride's father: 1st sector

Interactions: Personal autonomy
Bride's (centered age)/10
Bride's sq((centered age)/10)
Groom's (centered age)/10
Groom's sq((centered age)/10)

Effects on "Bride's Father->Groom's Father"

Note: Spikes represent 90% (thick line) and 95% (thin line) confidence intervals.
6 Results: Explaining Factors (the other Way)

Main effect
Groom's father: ln(HISCAM)

Interactions: Area and cohort
Area: No industry (ref.: some industry)
Area: City of Luzern (ref.: some industry)
Year of Marriage: 1855-75
  No industry # 1854-75
  City of Luzern # 1855-75

Interactions: Marriage market horizon
Close to railway station
  Local (groom)
  Local (bride)

Interactions: Parental pressure
Groom's father: 1st sector

Interactions: Personal autonomy
Bride's (centered age)/10
  Bride's sq((centered age)/10)
Groom's (centered age)/10
  Groom's sq((centered age)/10)

Note: Spikes represent 90% (thick line) and 95% (thin line) confidence intervals.
6 Results: Explaining Factors (Groom’s Age)

Average Marginal Effects of Groom's Father's ln(HISCAM) on Bride's Father's ln(HISCAM); with 95% CIs
6 Results: Explaining Factors (Bride’s Age)

Average Marginal Effects of Bride's Father's $\ln$(HISCAM) on Groom's Father's $\ln$(HISCAM); with 95% CIs
### 6 Results: Summary

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<thead>
<tr>
<th>Clusters</th>
<th>Aspects</th>
<th>Variables</th>
<th>Hypotheses</th>
<th>Result</th>
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<tr>
<td>Meet someone from another class</td>
<td>Modern labor market</td>
<td>“Some industry” area</td>
<td>-</td>
<td>(+)→(=)</td>
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<tr>
<td></td>
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<td>City of Luzern</td>
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<td>=→(+)</td>
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<tr>
<td>Marriage horizons</td>
<td>Means of transportation</td>
<td>Nearby train station</td>
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<td>Migration</td>
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<td>Economic independence</td>
<td>Age of bride</td>
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<td>Age of groom</td>
<td>-</td>
<td>(-)?</td>
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</table>
7 Conclusion: Summery

> Change and area:
  — No decline of social homogamy; increase in the city of Luzern
  — Convergence: No industry / some industry (not robust)
  — Divergence: City of Luzern / other areas (not robust)

> Explaining factors:
  — In line with hypotheses (except railway stations); age effects not robust
  — Explains some of the difference between city and countryside
7 Conclusion: Outlook & Open Questions

> Relationship between bride’s father’s and groom’s own status
> More context variables (especially on education)
> Method:
  How to deal with the symmetric nature of parental homogamy?
Thank you!
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References (I)

> References
> HISCAM (2013). *HIS-CAM scale version 1.3.1*. 

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References (I)

4 Data and Variables: Occupations (HISCAM)

Histograms of fathers' HISCAM (version 1.3.1 E)

- Groom's father: HISCAM
  - Some industry
  - No industry
  - City of Luzern

- Bride's father: HISCAM
  - Some industry
  - No industry
  - City of Luzern

> HISCAM, 2013; Lambert, Zijdeman, van Leeuwen, Marco H. D., Maas, & Prandy, 2013
4 Data and Variables: Occupations (HISCAM)

Histograms of fathers' ln(HISCAM) (version 1.3.1 E)

- Groom’s father: ln(HISCAM)
- Bride’s father: ln(HISCAM)

- some industry
- no industry
- city of Luzern

HISCAM, 2013; Lambert, Zijdeman, van Leeuwen, Marco H. D., Maas, & Prandy, 2013
Appendix: Lowess Smoother

Status of bride's father and groom's father:
Lowess smoother

Bandwidth = .8
Appendix: Additional cohort after 1850

Effects on "Bride's Father->Groom's Father" (add. cohort)

- Main effect:
  - Bride's father: ln(HISCAM)
  - Year of Marriage: 1855-63
  - Year of Marriage: 1864-75
  - Year of Marriage: 1855-75

- Interactions: Area and cohort
  - Area: No industry (ref.: some industry)
  - Area: City of Luzern (ref.: some industry)
    - No industry # 1855-63
    - No industry # 1864-75
    - No industry # 1855-75
    - City of Luzern # 1855-63
    - City of Luzern # 1864-75
    - City of Luzern # 1855-75

- Interactions: Marriage market horizon
  - Close to railway station
  - Local (groom)
  - Local (bride)

- Interactions: Parental pressure
  - Bride's father: 1st sector

- Interactions: Personal autonomy
  - Bride's (centered age)/10
  - Bride's sq((centered age)/10)
  - Groom's (centered age)/10
  - Groom's sq((centered age)/10)

- Note: Spikes represent 90% (thick line) and 95% (thin line) confidence intervals.

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Appendix: Additional cohort after 1850 (the other Way)

Effects on "Groom's Father->Bride's Father" (add. cohort)

Main effect
- Groom's father: ln(HISCAM)
- Year of Marriage: 1855-63
- Year of Marriage: 1864-75
- Year of Marriage: 1855-75

Interactions: Area and cohort
- Area: No industry (ref.: some industry)
- Area: City of Luzern (ref.: some industry)
  - No industry # 1855-63
  - No industry # 1864-75
  - No industry # 1855-75
  - City of Luzern # 1855-63
  - City of Luzern # 1864-75
  - City of Luzern # 1855-75

Interactions: Marriage market horizon
- Close to railway station
- Local (groom)
- Local (bride)

Interactions: Parental pressure
- Groom's father: 1st sector

Interactions: Personal autonomy
- Bride's (centered age)/10
- Bride's sq((centered age)/10)
- Groom's (centered age)/10
- Groom's sq((centered age)/10)

Note: Spikes represent 90% (thick line) and 95% (thin line) confidence intervals.
Appendix: Outlook: Bride’s Father -> Groom

Main effect
- Bride's father: ln(HISCAM)
- Year of Marriage: 1855-75

Interactions: Area and cohort
- Area: No industry (ref.: some industry)
- Area: City of Luzern (ref.: some industry)
  - No industry # 1854-75
  - City of Luzern # 1855-75

Interactions: Marriage market horizon
- Close to railway station
- Local (groom)
- Local (bride)

Interactions: Parental pressure
- Groom’s father: 1st sector
- Bride’s father: 1st sector

Interactions: Personal autonomy
- Bride’s (centered age)/10
- Bride’s sq((centered age)/10)
- Groom’s (centered age)/10
- Groom’s sq((centered age)/10)

Note: Spikes represent 90% (thick line) and 95% (thin line) confidence intervals.