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

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Overview

1. Introduction
2. The Canton of Luzern
3. Research Questions and Hypotheses
4. Data and Variables
5. Method
6. Results
7. Conclusion
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)

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Name</th>
<th>Occupation</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>July 1850</td>
<td>Josef Keller</td>
<td>Barber</td>
<td>Rickswil</td>
</tr>
<tr>
<td>13</td>
<td>July 1852</td>
<td>Josef Lenz</td>
<td>Goldsmith</td>
<td>Rickswil</td>
</tr>
</tbody>
</table>

(Continued in the document)
2 The Canton of Luzern (19th Century, I)

Source: Dufour, 1855.
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?
### Clusters Aspects Variables Effect on homogamy Change of aspect

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Aspects</th>
<th>Variables</th>
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<td>Associational life</td>
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<td>Ethnic/religious diversity</td>
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<td>Modern labor market</td>
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<td>Spatial social segregation</td>
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<td>Marriage horizons</td>
<td>Means of transportation</td>
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<td>Means of communication</td>
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<td></td>
<td>Conscriptions</td>
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<td>Communal traditions</td>
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<td>Peer group control</td>
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<td>Adult mortality</td>
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<td>Personal autonomy</td>
<td>Economic independence</td>
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<td>Social security schemes</td>
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<td>Personal preferences</td>
<td>Notions of romantic love</td>
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</table>
3 Research Questions and Hypotheses: Clusters (II)

<table>
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<th>Clusters</th>
<th>Aspects</th>
<th>Variables</th>
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<th>Change of aspect</th>
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</thead>
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<td></td>
<td>Modern labor market</td>
<td>“Some industry” area</td>
<td>-</td>
<td>+</td>
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<tr>
<td></td>
<td>Spatial social segregation</td>
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<tr>
<td>Marriage horizons</td>
<td>Means of transportation</td>
<td>Nearby train station</td>
<td>-</td>
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<td></td>
<td></td>
<td>Locally rooted</td>
<td>+</td>
<td>-</td>
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<td></td>
<td>Means of communication</td>
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<td>Conscriptions</td>
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<tr>
<td>Social pressure</td>
<td>Parental control</td>
<td>Father: 1st sector</td>
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<td>Communal traditions</td>
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<td>Adult mortality</td>
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<td>Personal autonomy</td>
<td>Economic independence</td>
<td>Age of bride and groom</td>
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<td>+</td>
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<td></td>
<td>Social security schemes</td>
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<td>Notions of romantic love</td>
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</tbody>
</table>

Source: van Leeuwen & Maas, 2005, p. 21
3 Research Questions and Hypotheses: Clusters (II)

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<tr>
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<th>Aspects</th>
<th>Variables</th>
<th>Hypotheses</th>
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</thead>
<tbody>
<tr>
<td>Meet someone from another class</td>
<td>Modern labor market</td>
<td>“Some industry” area / City of Luzern</td>
<td>-</td>
</tr>
<tr>
<td>Marriage horizons</td>
<td>Means of transportation</td>
<td>Nearby train station</td>
<td>-</td>
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<tr>
<td></td>
<td>Migration</td>
<td>Locally rooted: Bride</td>
<td>+</td>
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<td></td>
<td></td>
<td>Locally rooted: Groom</td>
<td></td>
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<tr>
<td>Social pressure</td>
<td>Parental control</td>
<td>1\text{st} sector: Bride’s father</td>
<td>+</td>
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<tr>
<td></td>
<td></td>
<td>1\text{st} sector: Bride’s father</td>
<td></td>
</tr>
<tr>
<td>Personal autonomy</td>
<td>Economic independence</td>
<td>Age of Bride</td>
<td>-</td>
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<tr>
<td></td>
<td></td>
<td>Age of Groom</td>
<td></td>
</tr>
</tbody>
</table>
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).
4 Data and Variables: Occupations (HISCLASS)
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
- Bride’s father’s HISCAM

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

5 Method: Multilevel Mixed Effect Model

Groom’s father’s HISCAM

Bride’s father’s HISCAM

Covariates
5 Method: Multilevel Mixed Effect Model

\[
\ln(HSCAM_{ij}^{bf}) = (\alpha_1 + \zeta_{ij}) + \beta_2 \ln(HSCAM_{ij}^{gf}) + \delta_1 x_{ij1} + \ldots + \delta_K x_{ijK} \\
+ \ln(HSCAM_{ij}^{gf}) (\gamma_1 x_{ij1} + \ldots + \gamma_K x_{ijK}) + \epsilon_{ij}
\]

> HSCAM_{ij}^{gf}: Bride’s father’s HISCAM
> HSCAM_{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

> \(\zeta_{ij}\): Random intercept
> Clusters: Parish x cohort
Homogamy by area and cohort (bride's father->groom's father)

<table>
<thead>
<tr>
<th>no industry</th>
<th>some industry</th>
<th>city of Luzern</th>
</tr>
</thead>
<tbody>
<tr>
<td>1834-54</td>
<td>1855-75</td>
<td>1834-54</td>
</tr>
<tr>
<td>Change</td>
<td>Change</td>
<td>Change</td>
</tr>
</tbody>
</table>

- 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
6 Results: Area and cohort

Homogamy by area and cohort (groom's father->bride'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
6 Results: Explaining Factors (Base Model)

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)
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 (Train Station)

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 (Locals)

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 $(\text{centered age})/10$
Bride's $\text{sq}((\text{centered age})/10)$
Groom's $(\text{centered age})/10$
Groom's $\text{sq}((\text{centered age})/10)$

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

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### 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)

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

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)

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

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

<table>
<thead>
<tr>
<th>Main effect</th>
<th>Marriage horizon</th>
<th>Parental pressure</th>
<th>Personal autonomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bride’s father: ln(HISCAM)</td>
<td>Close to railway station</td>
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<td></td>
</tr>
<tr>
<td>Interactions: Area and cohort</td>
<td>Area: No industry (ref.: some industry)</td>
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<tr>
<td></td>
<td>Area: City of Luzern (ref.: some industry)</td>
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<td></td>
<td>Year of Marriage: 1855-75</td>
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<tr>
<td></td>
<td>No industry # 1854-75</td>
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<tr>
<td></td>
<td>City of Luzern # 1855-75</td>
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<tr>
<td>Interactions: Marriage</td>
<td>Local (groom)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Local (bride)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interactions: Parental</td>
<td>Bride’s father: 1st sector</td>
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<tr>
<td>Interactions: Personal</td>
<td>Bride’s (centered age)/10</td>
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<td></td>
<td>Bride’s sq((centered age)/10)</td>
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<td></td>
<td>Groom’s (centered age)/10</td>
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<tr>
<td></td>
<td>Groom’s sq((centered age)/10)</td>
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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)

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

**April 2, 2016; ESSHC in Valencia**

<table>
<thead>
<tr>
<th>Main effect</th>
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</thead>
<tbody>
<tr>
<td>Groom’s father: ln(HISCAM)</td>
</tr>
</tbody>
</table>

**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)

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

**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

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Aspects</th>
<th>Variables</th>
<th>Hypotheses</th>
<th>Result</th>
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</thead>
<tbody>
<tr>
<td>Meet someone from another class</td>
<td>Modern labor market</td>
<td>“Some industry” area</td>
<td>-</td>
<td>(+)→(=)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>City of Luzern</td>
<td>-</td>
<td>=→(+)</td>
</tr>
<tr>
<td>Marriage horizons</td>
<td>Means of transportation</td>
<td>Nearby train station</td>
<td>-</td>
<td>0</td>
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<tr>
<td></td>
<td>Migration</td>
<td>Locally rooted: Bride</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Locally rooted: Groom</td>
<td>+</td>
<td>(+)</td>
</tr>
<tr>
<td>Social pressure</td>
<td>Parental control</td>
<td>1st sector: Bride’s father</td>
<td>+</td>
<td>+</td>
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<tr>
<td></td>
<td></td>
<td>1st sector: Bride’s father</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Personal autonomy</td>
<td>Economic independence</td>
<td>Age of bride</td>
<td>-</td>
<td>-?</td>
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<tr>
<td></td>
<td></td>
<td>Age of groom</td>
<td>-</td>
<td>(-)?</td>
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</tbody>
</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!
References (I)

> References
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)

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

- some industry, 1834-54
- no industry, 1834-54
- city of Luzern, 1834-54

- some industry, 1855-75
- no industry, 1855-75
- city of Luzern, 1855-75

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
  - City of Luzern # 1864-75
  - City of Luzern # 1855-63
  - 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.
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.