Like Father, Like Son
Intergenerational Transmission of Social Inequality in Switzerland

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Outline

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Mobility is usually understood as “equality of opportunity” – the outcomes may be unequal, but everyone, regardless of starting point, can have the same opportunity to get a good result. (Hout 2004: 970)

This gives us a good reason why the study of intergenerational mobility is important.
Current State of Research concerning intergenerational mobility in Switzerland (selection)

  - **dataset:** SHP (1999 and 2004)
  - **method:** Logit models
  - **focus on:** education
  - **results:** slightly increasing mobility

  - **dataset:**
    - electoral investigation by the Universities of Geneva and Zurich (1971)
    - Department of Political Science at the University of Geneva conducted another electoral study (1975)
    - Les Suisses et leur société (1991)
    - SHP (1999)
  - **method:** Loglinear model
  - **focus on:** Education and class
  - **results:**
    - Education: first increasing mobility, then decreasing
    - Class: increasing mobility
Bergman, Joye and Fux (2002): Social Change, Mobility, and Inequality in Switzerland in the 1990s.
- **dataset:** Les Suisses et leur société (1991) and ISSP (1999)
- **method:** Loglinear Models
- **focus on:** Education
- **results:** Slightly increasing mobility (probably non-significant)

- **dataset:** Les Suisses et leur société (1991)
- **method:** Loglinear models
- **results:**
  - Education: after a minimum around 1950 increasing mobility
  - Class: decreasing after a maximum around 1980
Current State of Research concerning intergenerational mobility in Switzerland (selection)

  - **dataset:** Occupational Careers and New Technology (1989)
  - **method:** OLS- and Logit model
  - **focus on:** Education
  - **results:** Increasing for men, decreasing for women

**Conclusion:**

Mixed results, probably due to the use of
- different datasets
- different timepoints
Description of intergenerational mobility in Switzerland with focus on . . .

1. change over the time
2. multiple dimensions of social status: education, class, occupational prestige . . .
3. validating findings by comparing results from as many different datasets as possible
Research Objective

- Problem: Information on parents, which is required for our analysis, is only available in few datasets.
- Possible datasets are:
  - European Values Survey (2008)
  - ISSP (1987, 1999)
  - Swiss Labor Market Survey (1998)
  - Les Suisses et leur société (1991)
  - Un jour en Suisse (1960)

- If you know more, please tell us!
- In this presentation we will focus on SHP and ESS.
Methodological Approach

- Research on intergenerational mobility often employs loglinear models.
- Loglinear models, however, are not so well suited for multivariate analysis (e.g. if we want to take into account several variables describing parent’s status simultaneously).
- Hence, our analyses are based on techniques of the “fourth generation of stratification research” (Treiman and Ganzeboom 2000)
  - multinomial logistic regression for child’s education and class
  - linear regression for child’s Treiman prestige
Methodological Approach

- How do we know from such models whether intergenerational mobility increased or decreased?
- In general: The stronger the effects of parent’s status on child’s status, the less intergenerational mobility.
- “Strength of effect” may be a simple concept if applied to a single coefficient. However, things are more involved if we want to evaluate the overall strength of a relation, possibly including dozens of parameters.
- The approach we follow here is based on the PRE principle (Proportional Reduction of Error).
- That is, we ask to what degree the knowledge of the parent’s status reduces the predictive uncertainty about the child’s status.
Methodological Approach

- A PRE measure can be expressed as follows:

\[
PRE = \frac{(E_0 - E_1)}{E_0} = 1 - \frac{E_1}{E_0}
\]

where \(E_0\) are prediction errors we make under restricted information, and \(E_1\) are the prediction errors under unrestricted information.

- Different error rules lead to different PRE measures. In the case of multinomial logit sensible (information theoretic) error rules are:

\[
E_0 = - \sum_{i=1}^{N} \log_2 \left( \hat{P}_0(Y = y_i) \right) \quad \text{and} \quad E_1 = - \sum_{i=1}^{N} \log_2 \left( \hat{P}_1(Y = y_i) \right)
\]

where \(y_i\) are the observed values and \(\hat{P}_0(Y = y_i)\) and \(\hat{P}_1(Y = y_i)\) are the prediction probabilities of \(y_i\) under restricted and unrestricted information, respectively.
Methodological Approach

- Such PRE measures can be computed for different dependent variables (child’s education, class, prestige) for different time points or cohorts.
- A decrease in PRE over time/cohorts would indicate an increase in intergenerational mobility (because information on the parent’s status has less and less predictive power for the child’s status).
- We will now apply this concept using the entropy formulas above for categorical dependent variables and squared errors for continuous variables.
- All analyses separately for men and women. Age range 35–70.
Data

- **Swiss Household Panel**
  - pooled sample: SHP I from and SHP II from 2004
  - dependent variables (child): education (5 categories), simplified EGP (5 categories), Treiman occupational prestige score
  - independent variables (parents): education (5 categories), EGP (8 categories), Treiman occupational prestige score
  - sample size per cohort and sex: around 700

- **European Social Survey**
  - dependent variables (child): education (5 categories), simplified EGP (5 categories), Treiman occupational prestige score
  - independent variables (parents): education (3 categories), EGP (7 categories)
  - sample size per cohort and sex: around 700
Effect on Child's Education

PRE

Birth Cohort

1930 1940 1950 1960 1970

SHP: Male
SHP: Female
ESS: Male
ESS: Female
Effect on Child's EGP

- SHP: Male
- SHP: Female
- ESS: Male
- ESS: Female

Birth Cohort: 1930-1970
Effect on Child's Treiman Prestige

- SHP: Male
- SHP: Female
- ESS: Male
- ESS: Female

Conclusions

- The results seem to indicate that there is a slight increase in intergenerational mobility with respect to child’s education.
- For child’s EGP we find similar results for men, but results for women are inconclusive.
- No clear pattern emerges for occupational prestige.
- Some problems:
  - The changes might partially be driven by respondents’ age. Analysis of additional datasets from different time points may shed light on this issue.
  - The PRE measures depend on data quality (in fact, any statistical measure for intergenerational mobility does). Different measurement quality in different datasets leads to different results.
  - Statistical inference for PRE measures.


