

Categorical parallel coordinate plot

Reto Bürgin, Gilbert Ritschard

Swiss National Science Foundation LIVES “Overcoming vulnerability: life course perspectives” and Institute for demography and life course studies, University of Geneva



Description

The categorical parallel coordinates plot is an extension of the well known *parallel coordinates plot* a.k.a. *time series plot*. The original plot principle has been modified to offer a *tool* for the *descriptive* or *exploratory* analysis of the *ordering of events*.

The *method* is the following: In a scatter plot, a vertical coordinate is assigned to each event-category and each unique event order is visualised as a slightly shifted polyline connecting all events in the exact order they appear in the sequence.

Key features:

- Reveals the whole diversity of event orderings
- Allows of the visualisation of simultaneous events
- Line widths represent the possibly weighted sample frequency
- Side by side plotting for group comparison

The plot will soon be available as a function in the environment of the library R TraMineR.

Contact: reto.buergin@unige.ch.

Application

The ordering of family-life events

The following plot grid allows a multi-level analysis for the ordering of the events *Leaving Home*, *First Union*, *First Marriage* and *First Child*.

The data source for this demonstration are the 2006 European Social Survey (ESS) Round 3 data. In the data preparation we constructed the ordering of events by means of the year the events happened. Events after age 45 were omitted.

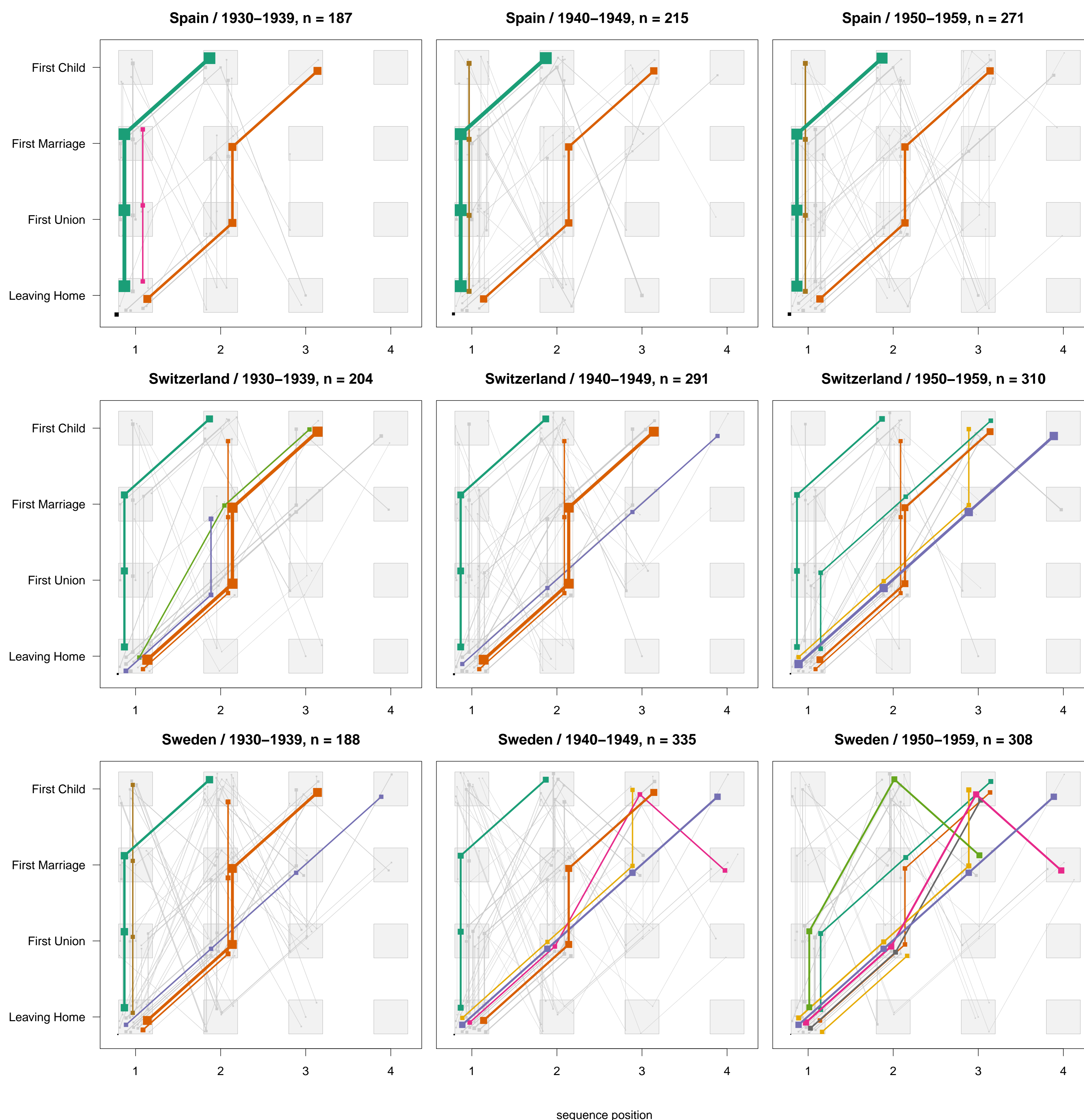


Figure 1: A grid of categorical parallel coordinate plots for a multilevel analysis of event orderings. Lines are coloured if their frequency is above 5% within the plot sub-sample.