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# Trajectories of vulnerability: a multi-dimensional approach

## How are employment, cohabitation and health related?

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**Abstract** Our paper explores vulnerable trajectories across three life course domains: employment activity, cohabitation and health status. We embrace a comprehensive point of view applying multichannel sequence analysis to a sample of about 1250 residents of the Canton de Vaud considering the period from age 1 to 40. Our results confirm the diffusion of the effects of vulnerable statuses across life course domains.

## 1 Extended abstract

### *1.1 Theoretical background*

The idea that different life domains are interrelated is present in life course literature from the very beginning (Elder 1974). This concept is now well established in the literature (Mayer 2009; Sapin, Spini, and Widmer 2007) and suggests dense and multidirectional relations among the involved life-course domains. Nevertheless, the empirical application of this theoretical frame is often reduced to an analysis of a single life course domain. Numerous are the study focusing exclusively on either employment trajectories (Bühlmann 2008, 2010; Fuller and Martin 2012; Fuller and Stecy-Hildebrandt 2015; Manzoni, and Mooi-Reci 2011; Scherer 1999), education (Brzinsky-Fay 2016; Cooksey and Rindfuss 2001), household structure (Chaloupková 2010) or health condition (Cullati 2015; Cullati et al. 2014; Friedli 2009). Equally frequent are papers that take a step further and link two life course domains. Nevertheless, in many papers, one of the life course do-

main is the central topic of investigation, while the other is used as a time-variant independent variable (Charles and Harris 2007; Jacob and Kleinert 2008; Oesterle et al. 2010; Teachman 2010). Much less frequently, two life course domains are placed on the same level and analyzed together with descriptive aims (Davia and Legazpe 2014; Gauthier et al. 2010; McMunn et al. 2015; Oesterle et al. 2010). This strategy is even rarer if we consider three or more life course domains (Pollock 2007). In our paper, we follow this road and analyze three life course domains together: employment activity, cohabitation and health status. These life course domains are conceptualized in a wider sense than usually. “Activity” includes indicators on work status, education and other related conditions (e.g. social help). “Cohabitation” contains the household structure including the changes due to family formation processes. Finally, “health” includes both mental sickness and physical impairments - from chronic condition to isolated episodes -, accidents and operations. We aim to take all these pieces of information together in order to build a comprehensive view of individuals’ lives. This perspective relies on the idea that the partition of different life course domains is a useful analytical tool, but is rather artificial. Every life course domain is interrelated with the others: each one influences, but, at the same time, it is also influenced by the others (Elder 1974; Pollock 2007).

### ***1.2 Objectives of our paper***

The objective of our paper is twofold. First, we aim to describe individuals’ life courses looking for recurrent patterns. Which configurations are more frequent and which ones are less usual? This question concerns both the trajectories in a single life course domain and the compresence of different patterns across the life course domains.

Second, we look at the connections among life course domains when vulnerable situations are present. Given the mutual relation among life course domains the question is double. On the one hand, which trajectories are more likely to be related to vulnerable situations? On the other, what are the biographical consequences of a transition through a period of vulnerability?

### ***1.3 Data and method***

Our data come from a retrospective life calendar of a sample of residents in the canton of Vaud, Switzerland. Our data oversamples the presence of households with a lower income. Starting from these data we select a subsample including all the people aged 40 years or more with valid sequence data in every life course domain: employment activity, cohabitation and health status.

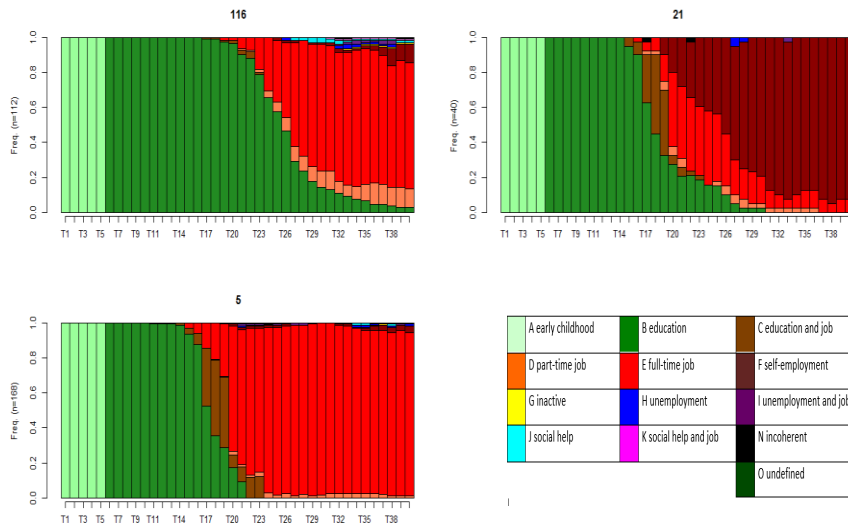
We use two types of variables in our analyses: time-invariant variables and time-variant variables. Time-invariant variables are sociodemographic characteristics: sex, age, cohort, nationality. Time-variant variables include the measures linked to the life domains at the center of our analyses. The states describing cohabitation include: living with parents, with siblings, alone, with parent without children, with the partner and children, with children only, with friend, and a residual category gathering all the other situations. Health status has less categories: physical illness, mental illness, operation, accident, multiple events among the previous and no event. Employment activity includes: education, part-time job, full-time job, self-employment, inactivity, unemployment, social help. Employment activity categories can overlap creating statuses that mix two previous categories. As education was not explicitly addressed in the calendar questionnaire, we filled up the empty parts of the work sequences with a specific imputation procedure using the educational level.

In order to conduct a comprehensive analysis of our data, we use multichannel sequence analysis (Gauthier et al. 2010, 2013) and single-channel sequence analyses (Abbott 1990) connected using Yule's group-to-group association (Yule 1912). These techniques are applied to sequences describing individuals' life course from birth until the age of 40 years.

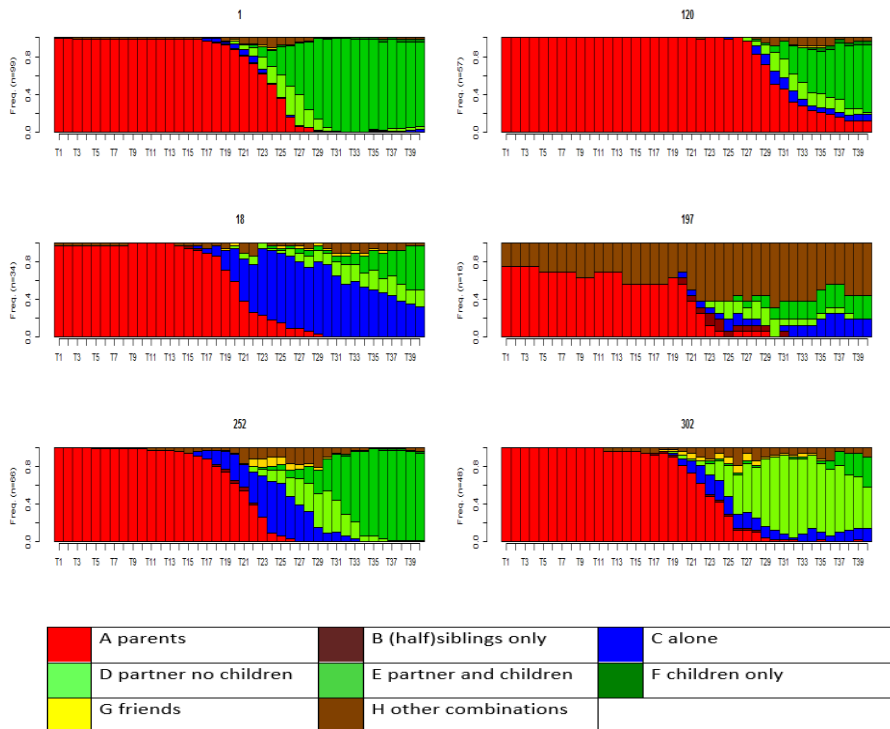
#### ***1.4 Results***

To date, only a series of preliminary single-channel sequence analyses that shows the differences among men and women trajectories have been carried out.

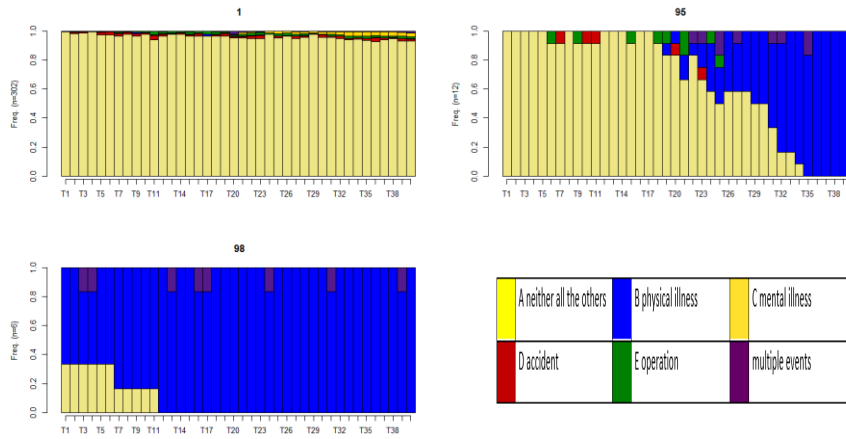
**Figure 1 – Males: trajectories of employment activity**



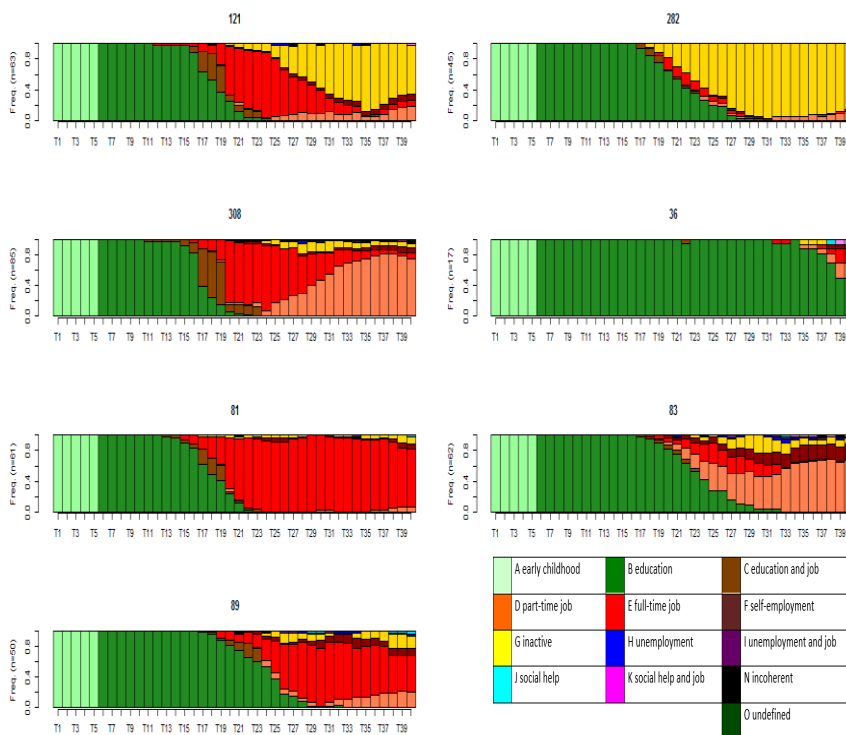
**Figure 2 - Males: trajectories of cohabitation**



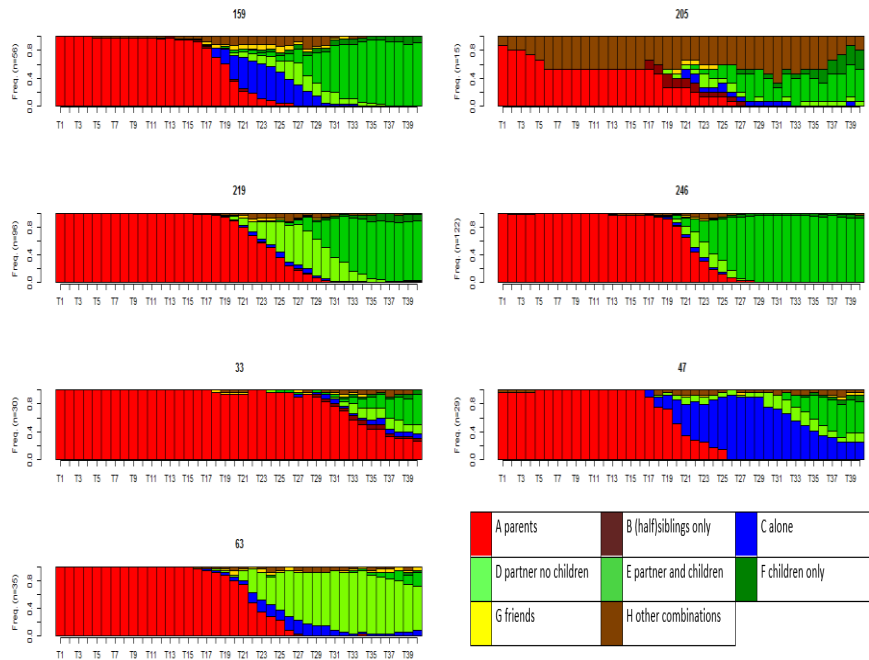
**Figure 3 - Males: trajectories of health status**



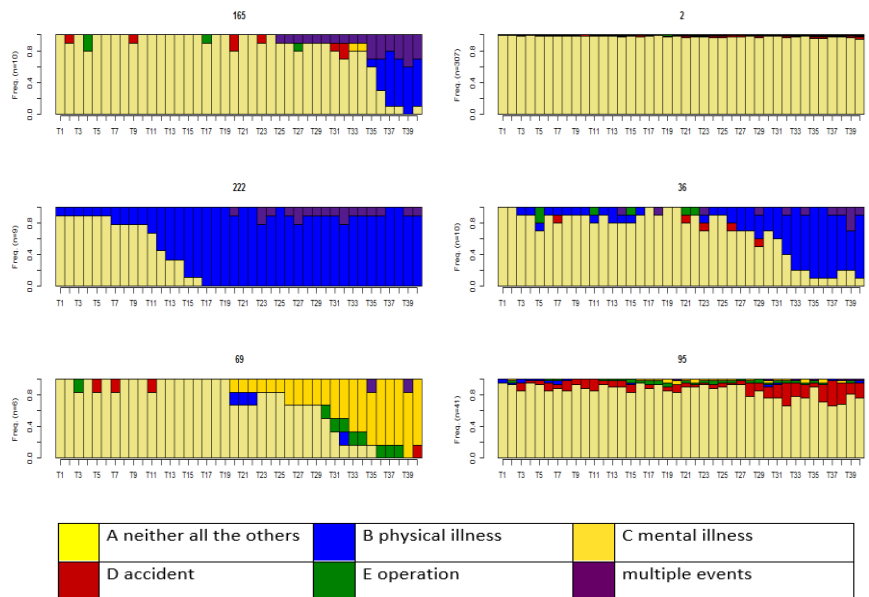
**Figure 4 - Females: trajectories of employment activity**



**Figure 5 - Females: trajectory of cohabitation**



**Figure 6 - Females: trajectories of health status**



## 1.5 Conclusion

Our paper explores the link between three life course domains: employment activity, cohabitation and health status. Our results confirm that the life course domains are deeply connected and that the vulnerable statuses affect individuals' life across the life domains. This relation seems to be behind the accumulation of advantages/disadvantages.

## References

- Abbott, Andrew. 1990. "A Primer on Sequence Methods." *Organization Science* 1(4):375–92.
- Brzinsky-Fay, Christian. 2016. "Leavers Transition ? Labour Sequences of School Market." 23(4):409–22.
- Buhlmann, F. 2008. "The Corrosion of Career?--Occupational Trajectories of Business Economists and Engineers in Switzerland." *European Sociological Review* 24(5):601–16. Retrieved September 29, 2014 (<http://esr.oxfordjournals.org/cgi/doi/10.1093/esr/jcn019>).
- Buhlmann, Felix. 2010. "Routes into the British Service Class Feeder Logics according to Gender and Occupational Groups." *Sociology* 44(2):195–212.
- Chaloupková, Jana. 2010. "The De-Standardisation of Early Family in the Czech Republic : Trajectories A Cross-Cohort Comparison." *Czech Sociological Review* 46(3):427–51.
- Charles, Nickie and Chris Harris. 2007. "Continuity and Change in Work-Life Balance Choices." *The British Journal of Sociology* 58(2):277–95. Retrieved (<http://www.ncbi.nlm.nih.gov/pubmed/17610623>).
- Cooksey, Elizabeth C. EC and RR Ronald R. Rindfuss. 2001. "Patterns of Work and Schooling in Young Adulthood." *Sociological Forum* 16(4):731–55. Retrieved (<http://www.jstor.org/stable/684831> \n<http://link.springer.com/article/10.1023/A:1012842230505>).
- Cullati, Stéphane. 2015. "Socioeconomic Inequalities in Health Trajectories in Switzerland: Are Trajectories Diverging as People Age?" *Sociology of Health & Illness* 0(0):n/a – n/a. Retrieved (<http://doi.wiley.com/10.1111/1467-9566.12232>).
- Cullati, Stéphane, Emmanuel Rousseaux, Alexis Gabadinho, Delphine S. Courvoisier, and Claudine Burton-Jeangros. 2014. "Factors of Change and Cumulative Factors in Self-Rated Health Trajectories: A Systematic Review." *Advances in Life Course Research* 19(1):14–27.
- Davia, M. a. and N. Legazpe. 2014. "Female Employment and Fertility



- Trajectories in Spain: An Optimal Matching Analysis.” *Work, Employment & Society* 28(4):633–50. Retrieved (<http://wes.sagepub.com/content/28/4/633?etoc>).
- Elder, G. .. 1974. *Children of the Great Depression. Social Change in Life Experience*. 25th anniv. Boulder: Westview Press.
- Friedli, Lynne. 2009. “Mental Health , Resilience and Inequalities.” *Health San Francisco* 1–64. Retrieved (<http://www.mentalhealthpromotion.net/resources/mental-health-resilience-and-inequalities.pdf>).
- Fuller, Sylvia and Todd F. Martin. 2012. “Predicting Immigrant Employment Sequences in the First Years of Settlement.” *International Migration Review* 46(1):138–90.
- Fuller, Sylvia and Natasha Stecy-Hildebrandt. 2015. “Career Pathways for Temporary Workers: Exploring Heterogeneous Mobility Dynamics with Sequence Analysis.” *Social Science Research* 50:76–99. Retrieved (<http://linkinghub.elsevier.com/retrieve/pii/S0049089X14001999>).
- Gauthier, A., E. D. Widmer, P. Bucher, and C. Notredame. 2013. “Multichannel Optimal Matching: A Multidimensional Approach to Sequence Analysis.” in *Gendered life courses*, edited by E. Widmer. Berlin: Lit Verlag.
- Gauthier, Jacques-Antoine, Eric D. Widmer, Philipp Bucher, and Cédric Notredame. 2010. “Multichannel Sequence Analysis Applied To Social Science Data.” *Sociological Methodology* 40(1):1–38. Retrieved September 29, 2014 (<http://smx.sagepub.com/lookup/doi/10.1111/j.1467-9531.2010.01227.x>).
- Jacob, Marita and Corinna Kleinert. 2008. “Does Unemployment Help or Hinder Becoming Independent the Role of Employment Status for Leaving the Parental Home.” *European Sociological Review* 24(2):141–53.
- Manzoni, Anna and Irma Mooi-Reci. 2011. “Early Unemployment and Subsequent Career Complexity: A Sequence-Based Perspective.” *Schmollers Jahrbuch* 131(2):339–48.
- Mayer, K. .. 2009. “New Directions in Life Course Research.” *Annual Review of Sociology* 35:413–33.
- McMunn, Anne et al. 2015. “De-Standardization and Gender Convergence in Work-Family Life Courses in Great Britain: A Multi-Channel Sequence Analysis.” *Advances in Life Course Research* 26:60–75. Retrieved (<http://www.sciencedirect.com/science/article/pii/S1040260815000313>).
- Oesterle, Sabrina et al. 2010. “Men ’ S and Women ’ S to Adulthood Pathways Adolescent and Their Precursors.” *Journal of Marriage and Family* 72(5):1436–53.
- Pollock, Gary. 2007. “Holistic Trajectories: A Study of Combined Employment, Housing and Family Careers by Using Multiple-Sequence Analysis.” *Journal of the Royal Statistical Society. Series A: Statistics in Society* 170(1):167–83.
- Sapin, M., Dario Spini, and Eric Widmer. 2007. *Les Parcourse de Vie*. Lausanne:

Presses polytechniques et universitaires romandes.

Scherer, Stefani. 1999. *Early Career Patterns – a Comparison of Great Britain and West Germany*.

Teachman, Jay. 2010. “Family Life Course Statuses and Transitions: Relationships With Health Limitations.” *Sociological Perspectives* 53(2):201–20.

Yule, G. U. 1912. “On the Methods of Measuring the Association between Two Attributes.” *Journal of the Royal Statistical Society* 75:579–652.

