





MAX PLANCK INSTITUTE
FOR DEMOGRAPHIC
RESEARCH

Alignment, clocking, and macro patterns of episodes in the life course

Tim Riffe

2 motivating observations:

1. sequence analysis of trajectories ending in death
2. matrix expression for average episode count

2 motivating observations:

1. sequence analysis of trajectories ending in death
2. matrix expression for average episode count

2 motivating observations:

1. sequence analysis of trajectories ending in death (pattern detection)
2. matrix expression for average episode count (tenure statistics)

2 motivating observations:

1. sequence analysis of trajectories ending in death (**pattern detection**) (Y. Hu)
2. matrix expression for average episode count (**tenure statistics**) (C. Dudel)

2 motivating questions:

1. would different patterns emerge if trajectories were aligned on moment of death?
2. what is the age pattern of average episode duration?

2 procedural solutions:

1. trajectory shifting to state transitions:
2. flexible episode recording:

2 procedural solutions:

1. trajectory shifting to state transitions: alignment
2. flexible episode recording: clocking

An illustration

- Take transition matrix from Dudel & Myrskylä (2017).
- Simulate trajectories using `rmarkovchain()` in `markovchain` package (Spedicato, 2017).
- Demonstrate concepts of **alignment** and **clocks**
- Generate (stationary) novel macro patterns

An illustration

- Take transition matrix from Dudel & Myrskylä (2017).
- Simulate trajectories using `rmarkovchain()` in `markovchain` package (Spedicato, 2017).
- Demonstrate concepts of alignment and clocks
- Generate (stationary) novel macro patterns

An illustration

- Take transition matrix from Dudel & Myrskylä (2017).
- Simulate trajectories using `rmarkovchain()` in `markovchain` package (Spedicato, 2017).
- Demonstrate concepts of alignment and clocks
- Generate (stationary) novel macro patterns

An illustration

- Take transition matrix from Dudel & Myrskylä (2017).
- Simulate trajectories using `rmarkovchain()` in `markovchain` package (Spedicato, 2017).
- Demonstrate concepts of **alignment** and **clocks**
- Generate (stationary) novel macro patterns

An illustration

- Take transition matrix from Dudel & Myrskylä (2017).
- Simulate trajectories using `rmarkovchain()` in `markovchain` package (Spedicato, 2017).
- Demonstrate concepts of **alignment** and **clocks**
- Generate (stationary) novel macro patterns