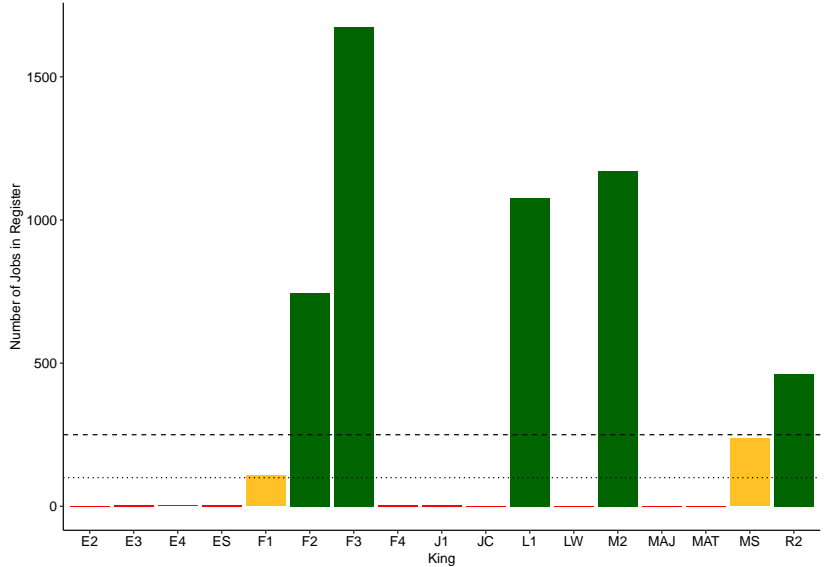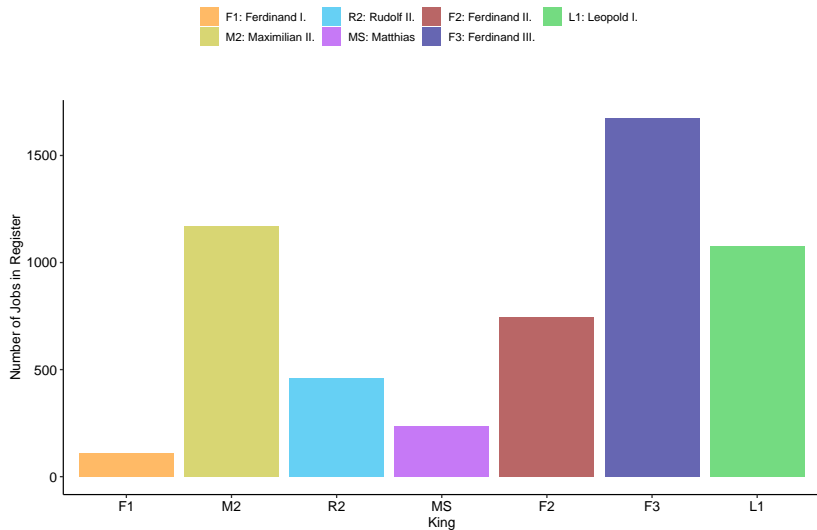# Kaiserhof

Cornelius

1/27/2020

Fragestellungen

1. Welche Kaiser sind für die Analyse interessant?
2. Welche Job-Wechsel wurden beobachtet?
3. Welche Kovariablen könnten die Job-Wechsel erklären?
4. Welche Akteure sollten berücksichtigt werden?
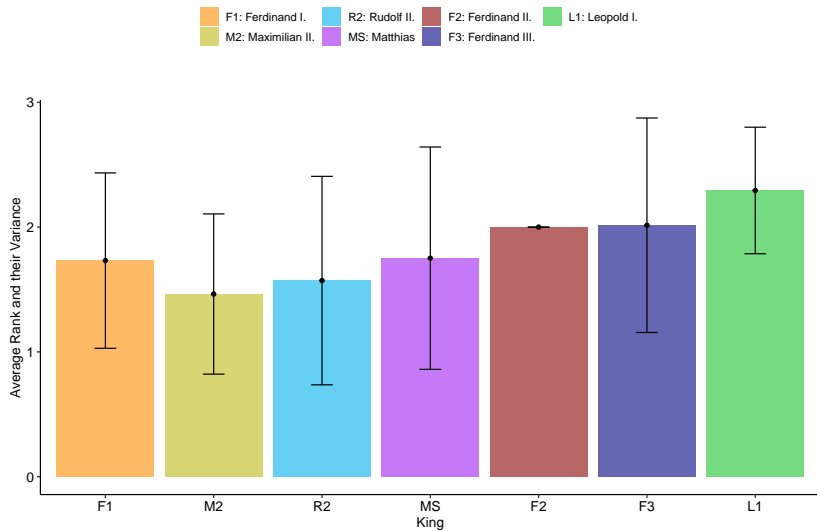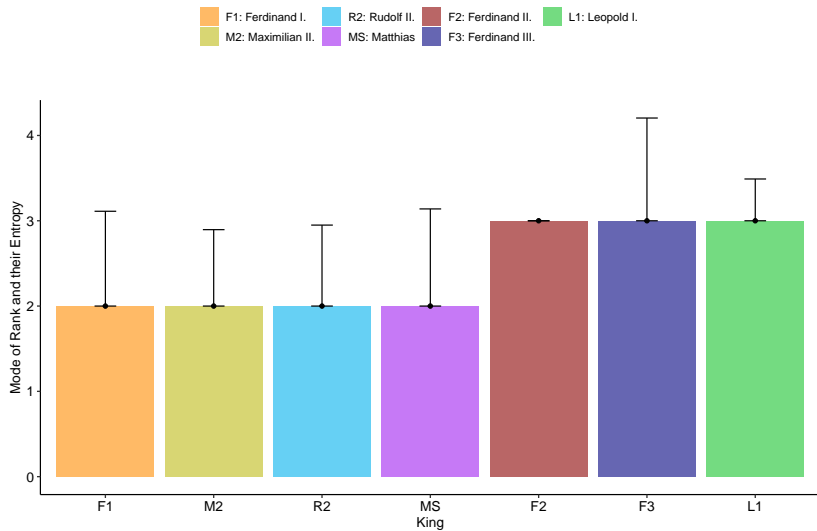5. Welche Akteure sind in dem Hofstaat bestimmter Kaiser?
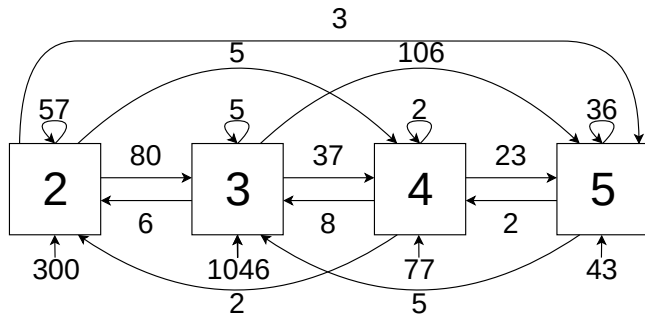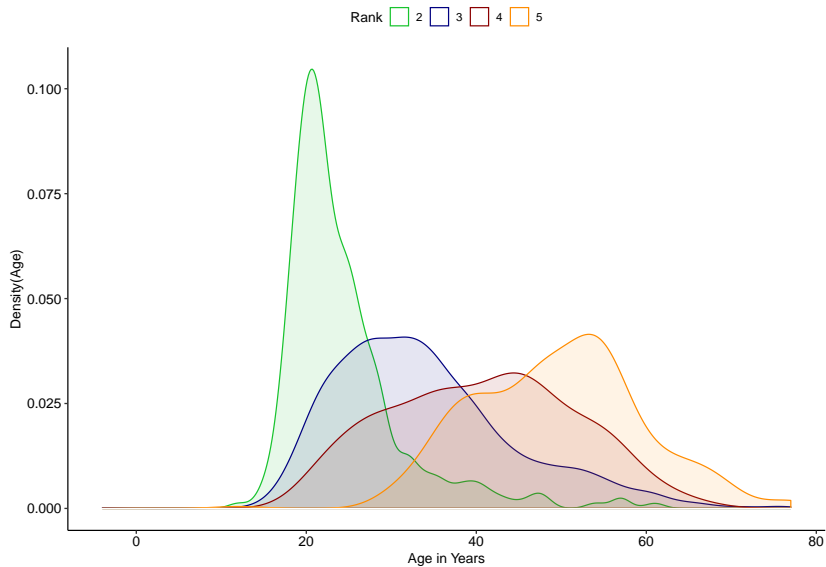
Kaiser (1)

Kaiser (2)

Kaiser (3)

Kaiser (4)

- Was für Job-Wechsel gibt es in den Daten?
- Ein Großteil der Beobachtung bleibt in dem gleichen Job

All Job Changes
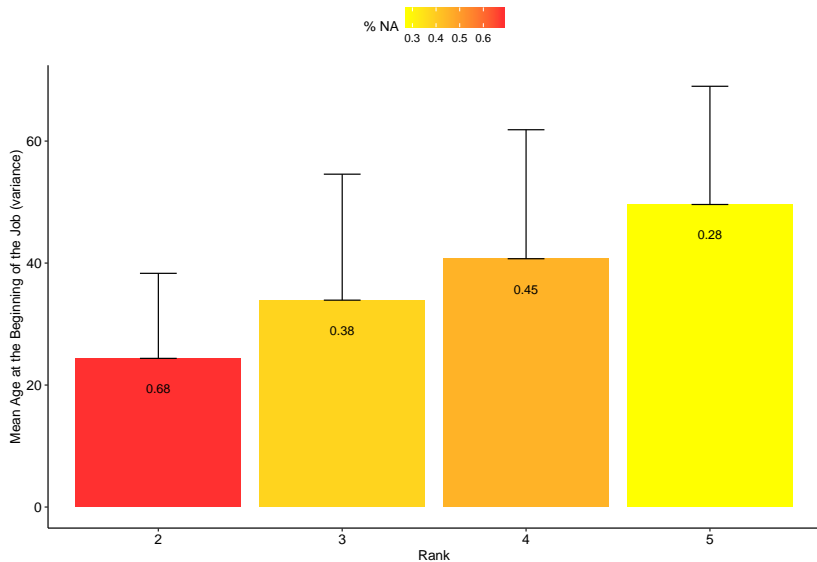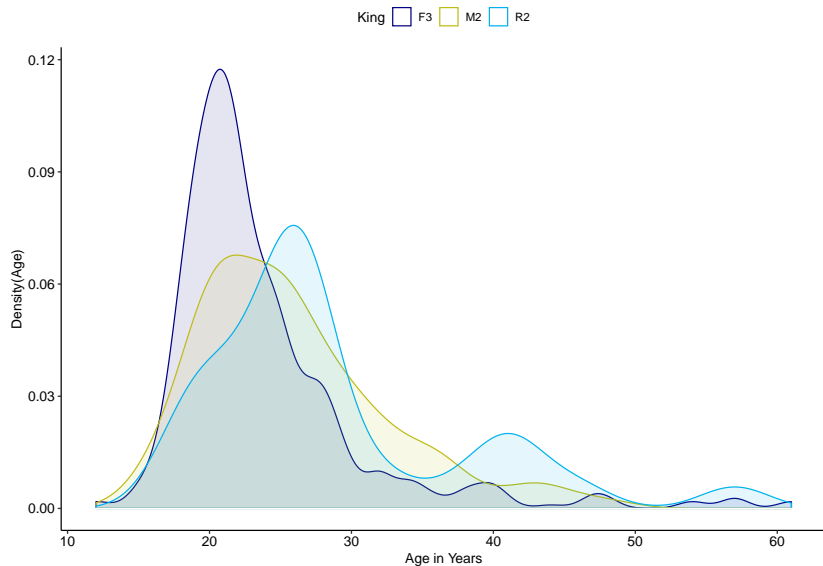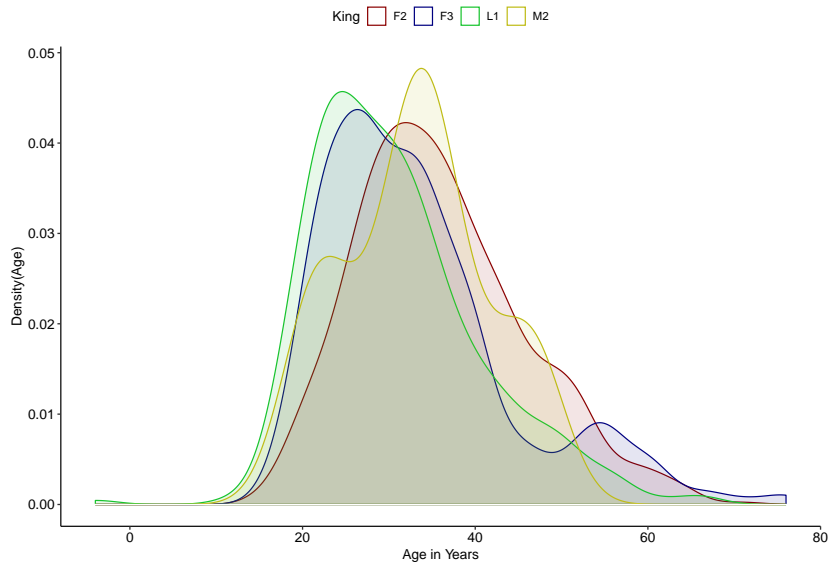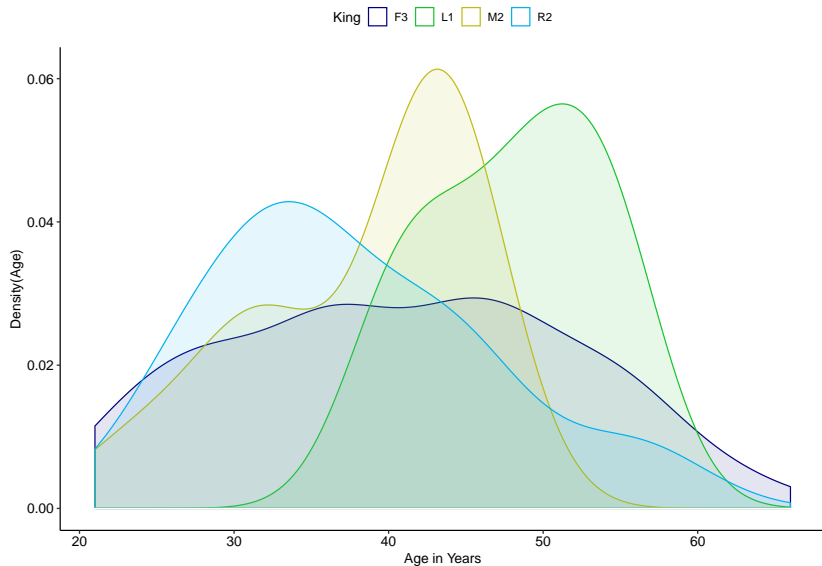
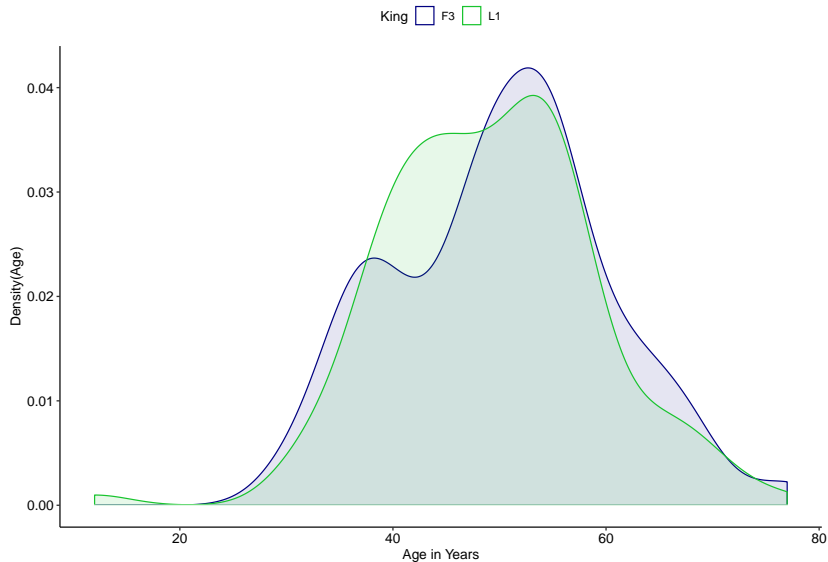# Job: All (Age)

Job: All (Age)

Job: Rank 2 (Age per King)

Job: Rank 3 (Age per King)
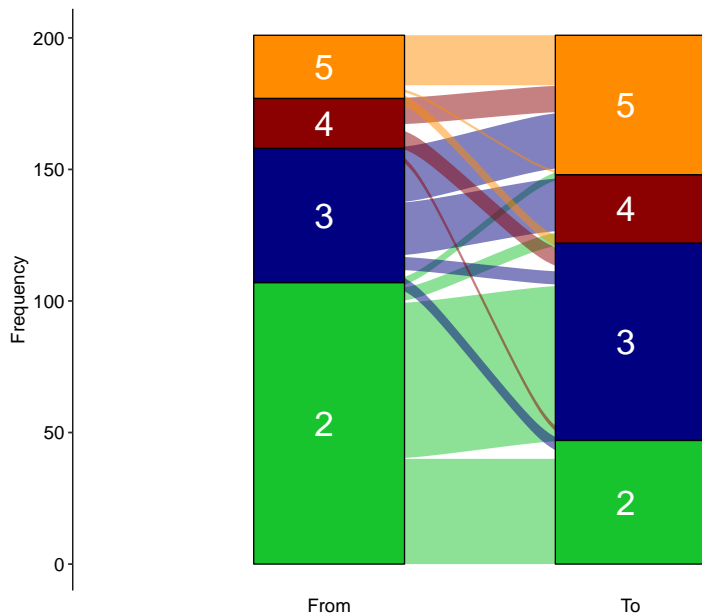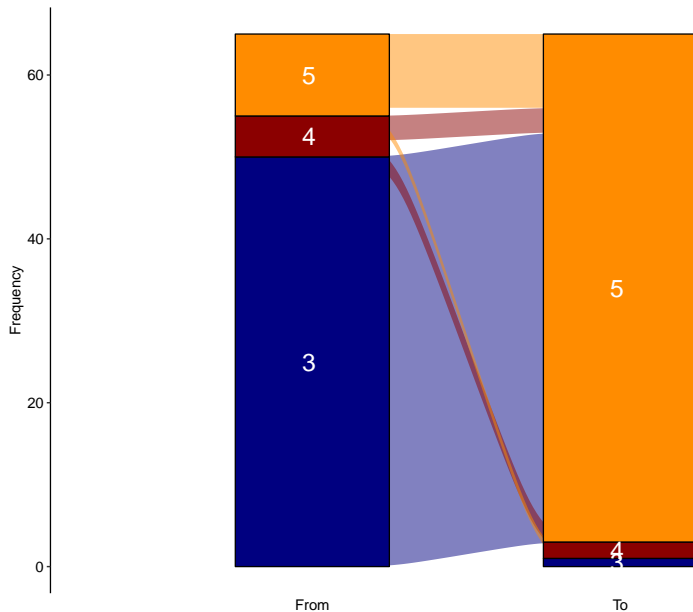
Job: Rank 4 (Age per King)

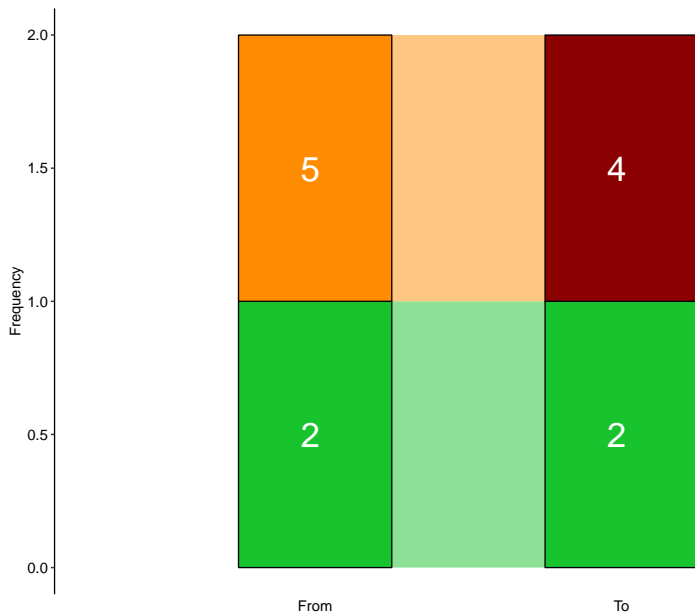# Job: Rank 5 (Age per King)

Job: Ferdinand III. (Changes)

Job: Leopold I. (Changes)

Job: Rudolf II. (Changes)
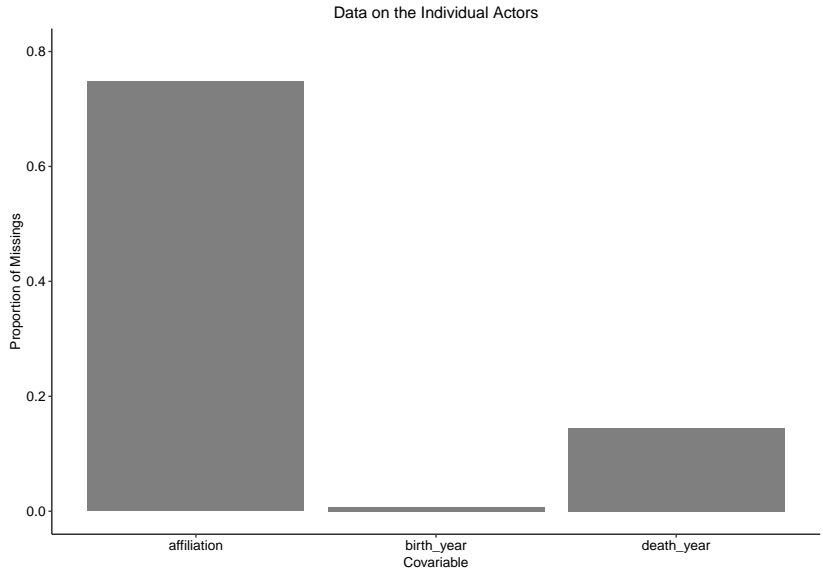
Missing Data: Alle Akteure (1)

Data on the Individual Actors

Missing Data: In Job (2)

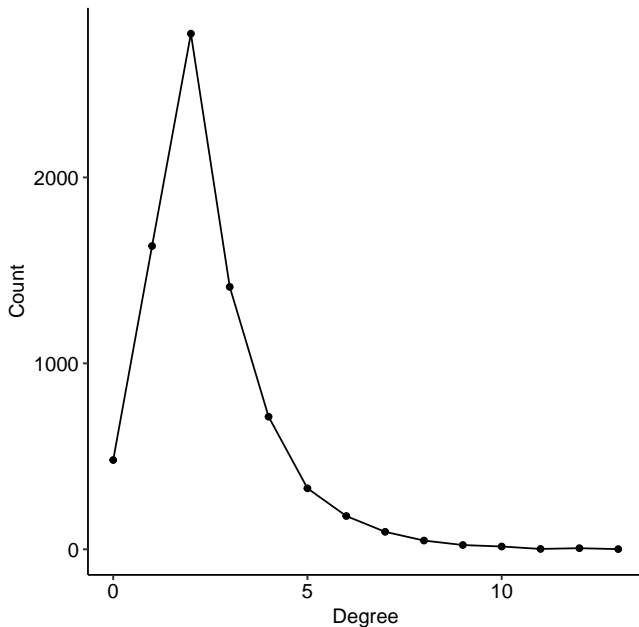Data on the Individual Actors
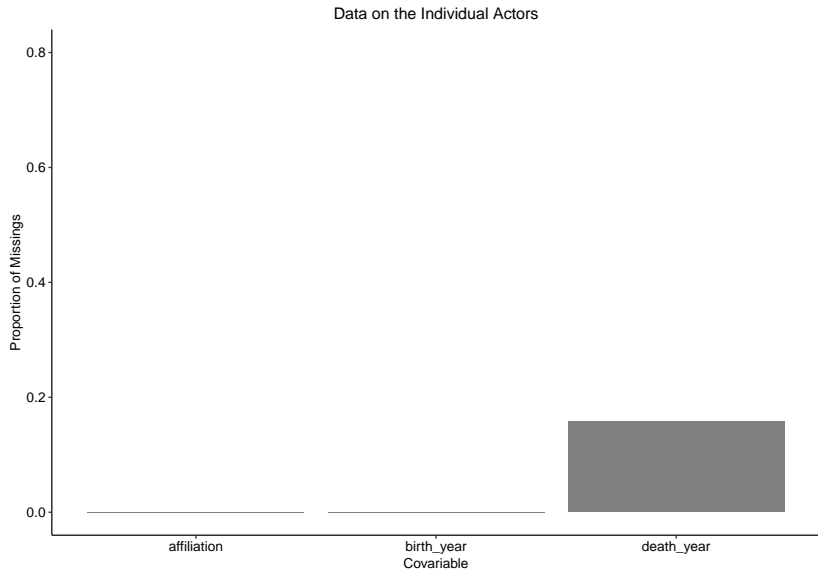
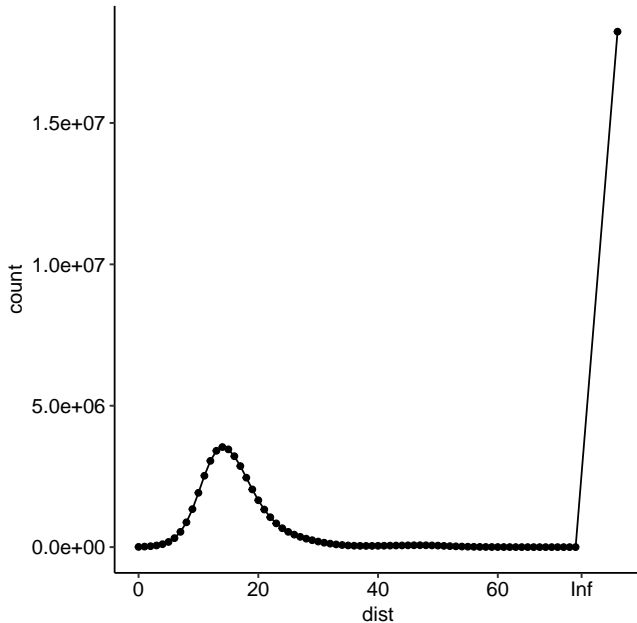# Missing Data: In Job (3)

Data on the Job Histories
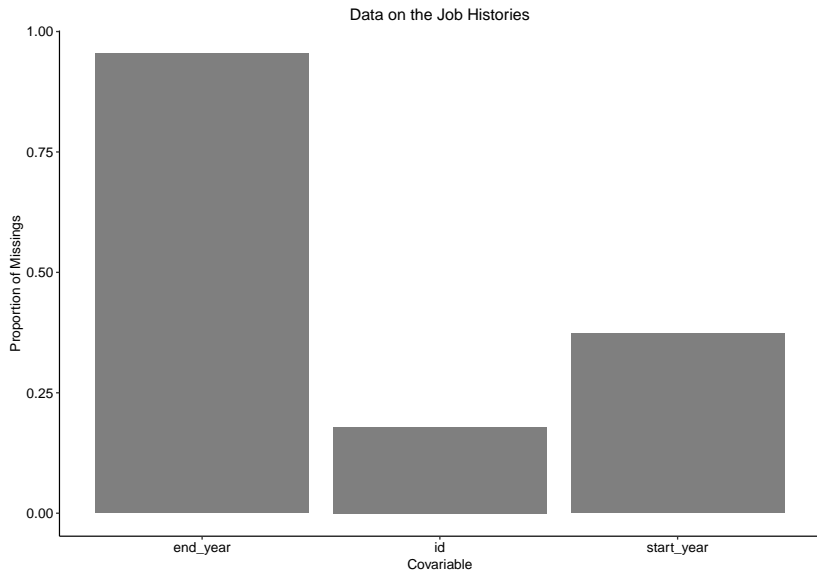
Time-Constant Network Measures (1)

- ▶ Aggregated marriages and births over all observations
- ▶ Average Degree: 2.558
- ▶ Clustering Coefficient: 0.196
- ▶ Number of weakly connected components: 185
- ▶ Percentage of biggest component: 88.76%

Time-Constant Network Measures (2)

Time-Constant Network Measures (3)

- ▶ Only the biggest component is regarded in the graph drawings!
- ▶ Used Color-Scale (Exception is the Modularity Group Allocation):
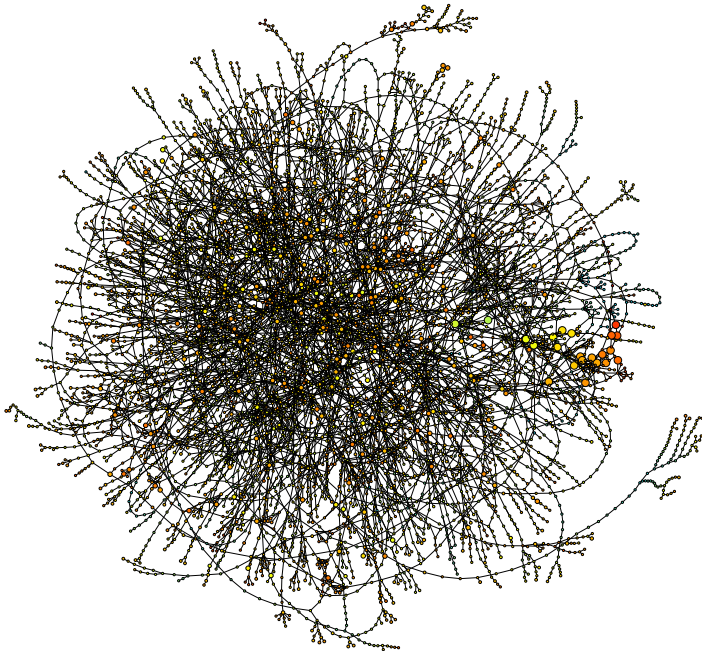

Low   Middle   High
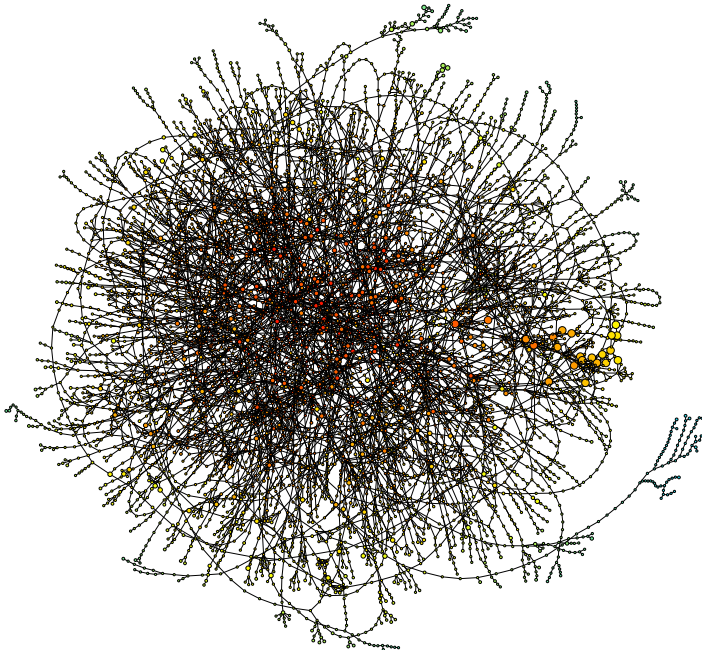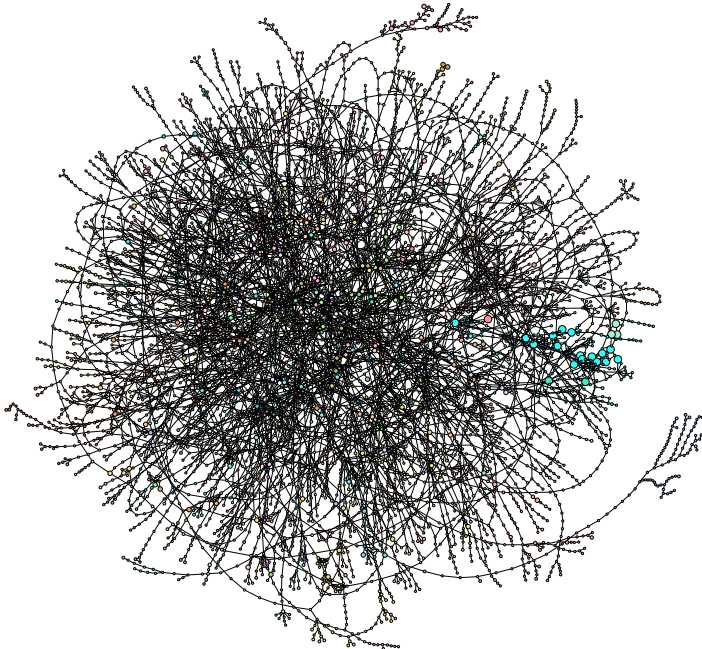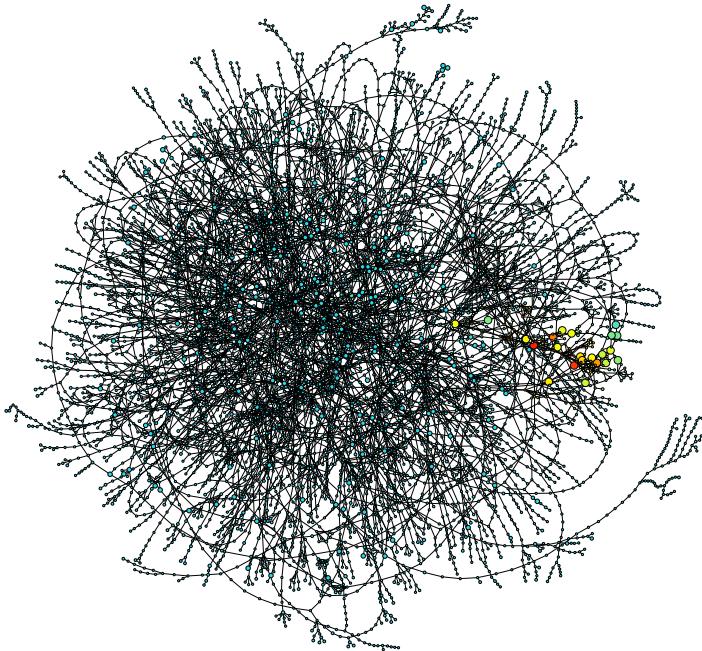
Time-Constant Networks: Age

Time-Constant Networks: Closeness Centrality

Time-Constant Networks: Modularity

Time-Constant Networks: Authority
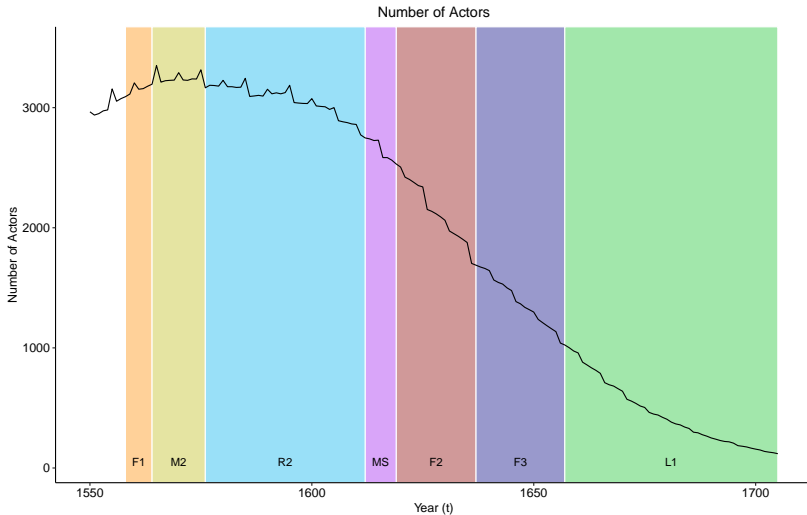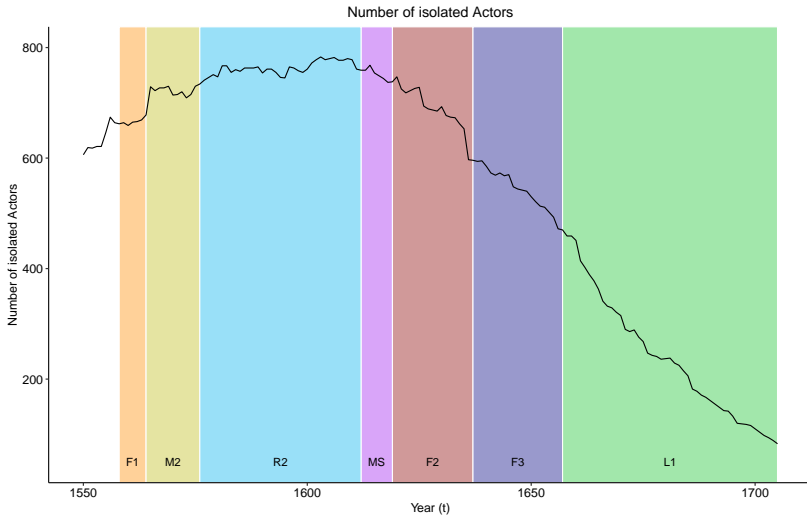
Time-Varying Networks: Graphics

▶ We define the time-varying network at time-point t as the
network including all actors whose birth lies within a 35-year
radius of t

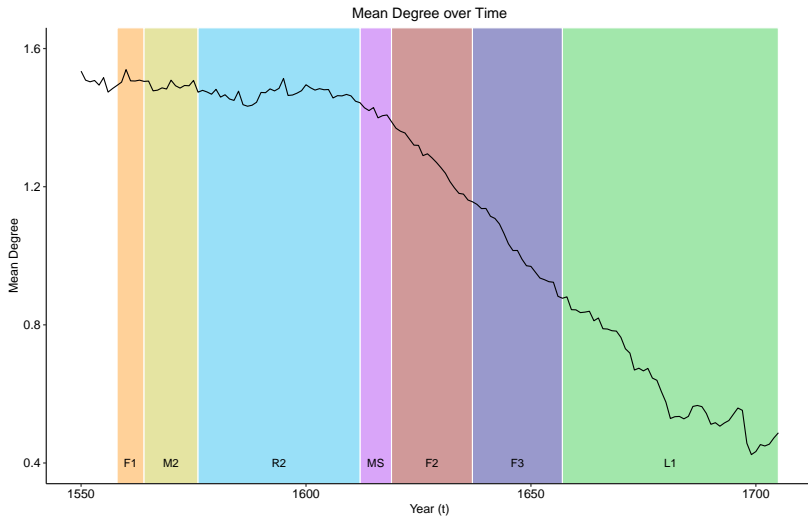# Time-Varying Networks: Number of Actors

Time-Varying Networks: Number of Isolates

Number of isolated Actors

Legend:
- F1: Ferdinand I.
- M2: Maximilian II.
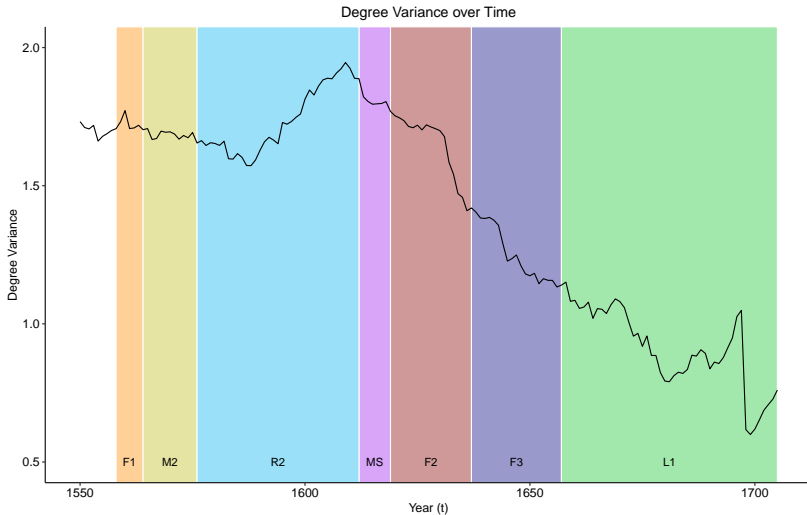- R2: Rudolf II.
- MS: Matthias
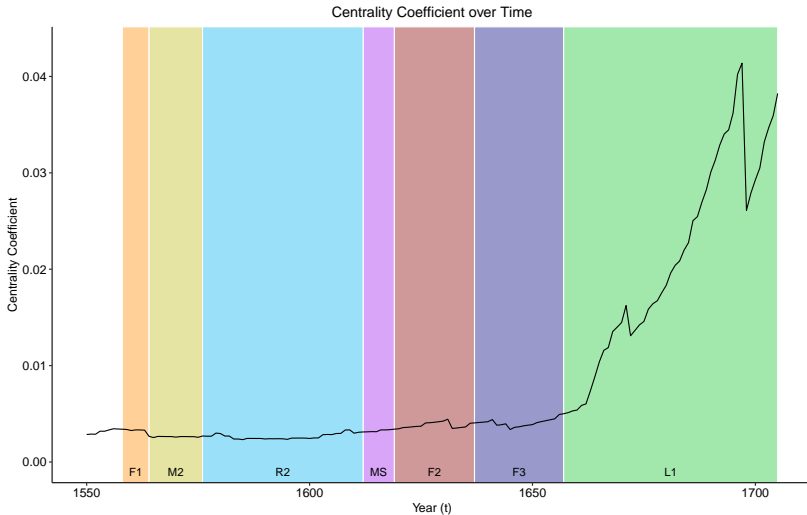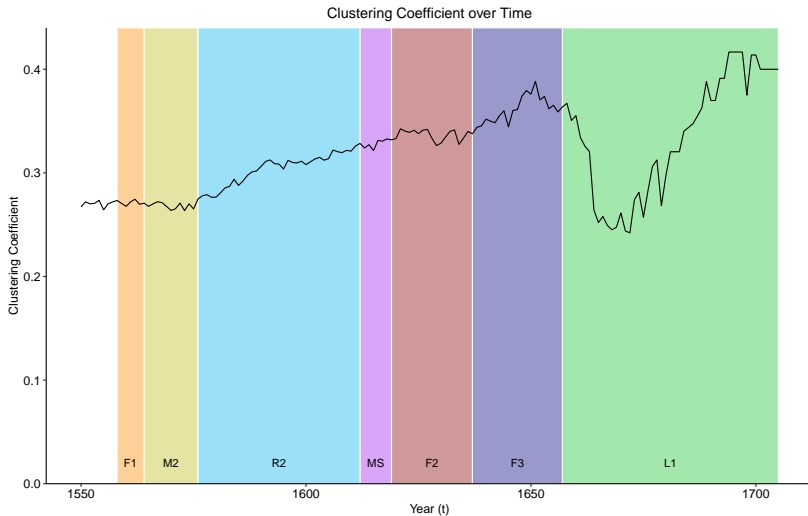- F2: Ferdinand II.
- F3: Ferdinand III.
- L1: Leopold I.

Time-Varying Networks: Mean Degree

Time-Varying Networks: Degree Variance

Degree Variance over Time

Time-Varying Networks: Centrality

Legend:
- F1: Ferdinand I.
- M2: Maximilian II.
- R2: Rudolf II.
- MS: Matthias
- F2: Ferdinand II.
- F3: Ferdinand III.
- L1: Leopold I.

Centrality Coefficient over Time

(x-axis: Year (t), y-axis: Centrality Coefficient)
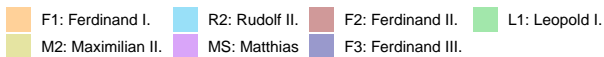
Time-Varying Networks: Transitivity

Legend: F1: Ferdinand I.   R2: Rudolf II.   F2: Ferdinand II.   L1: Leopold I.
M2: Maximilian II.   MS: Matthias   F3: Ferdinand III.

Clustering Coefficient over Time
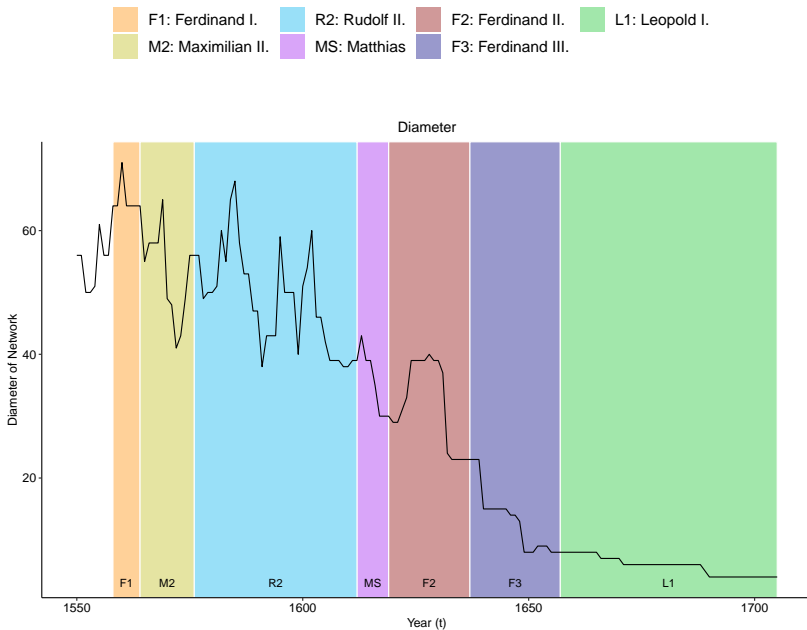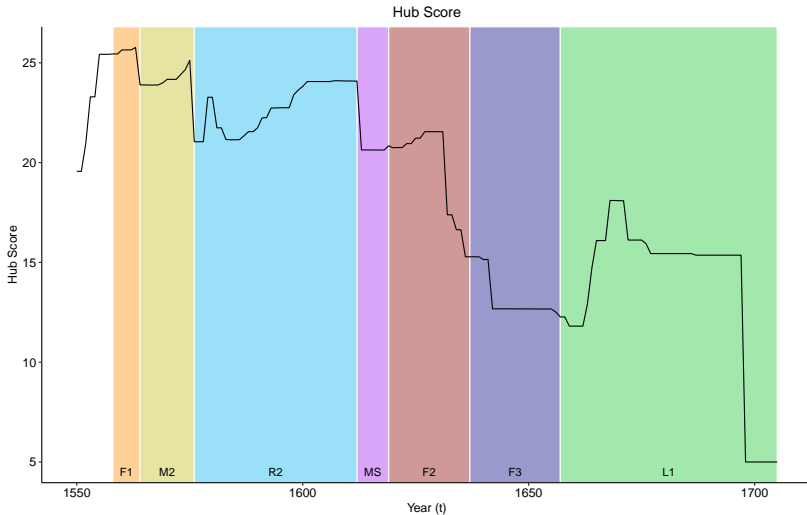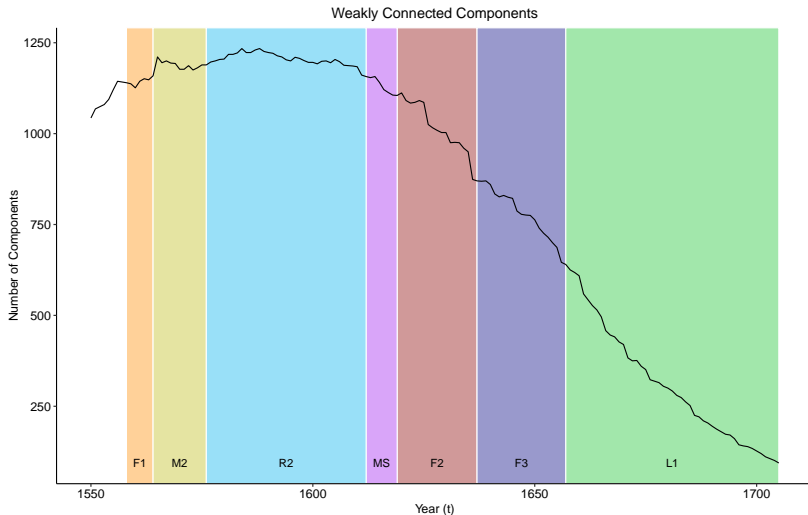
Time-Varying Networks: Paths

Time-Varying Networks: Paths

Time-Varying Networks: Paths

Legend: F1: Ferdinand I. | R2: Rudolf II. | F2: Ferdinand II. | L1: Leopold I. | M2: Maximilian II. | MS: Matthias | F3: Ferdinand III.
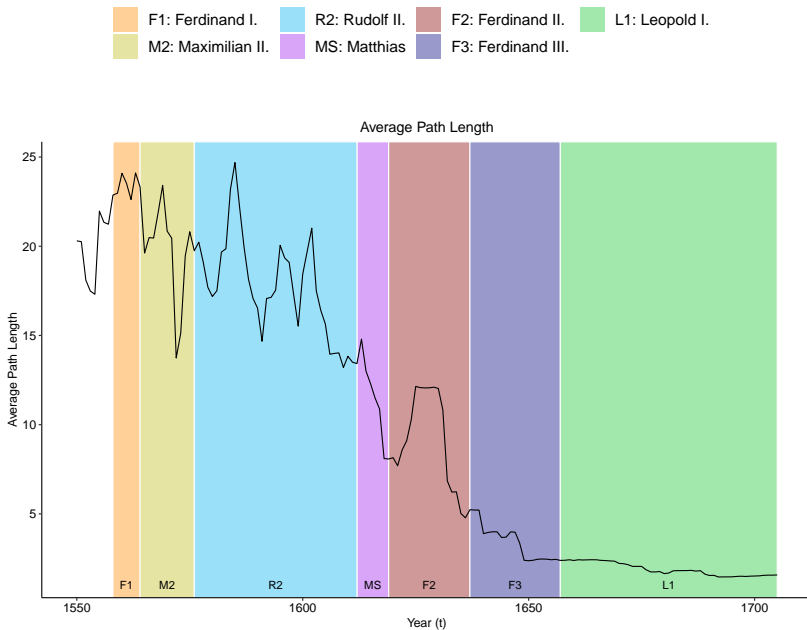
Time-Varying Networks: Sex of Actors

Time-Varying Networks: Components

F1: Ferdinand I.   R2: Rudolf II.   F2: Ferdinand II.   L1: Leopold I.
M2: Maximilian II.   MS: Matthias   F3: Ferdinand III.

Weakly Connected Components
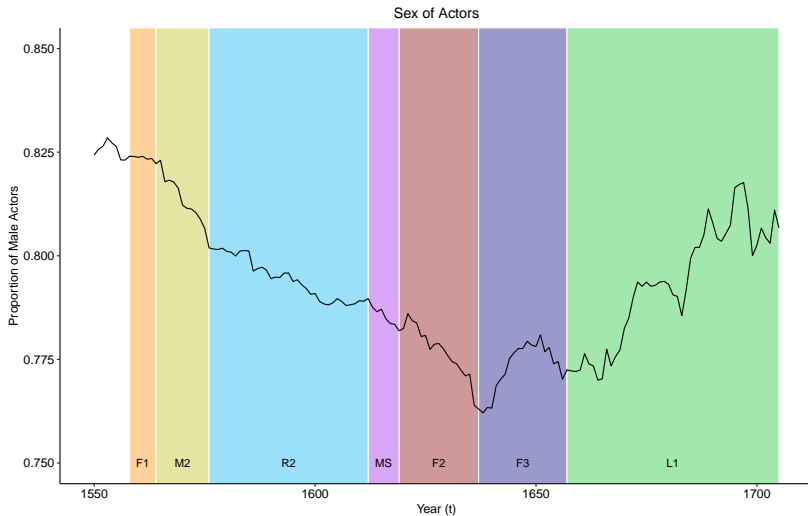
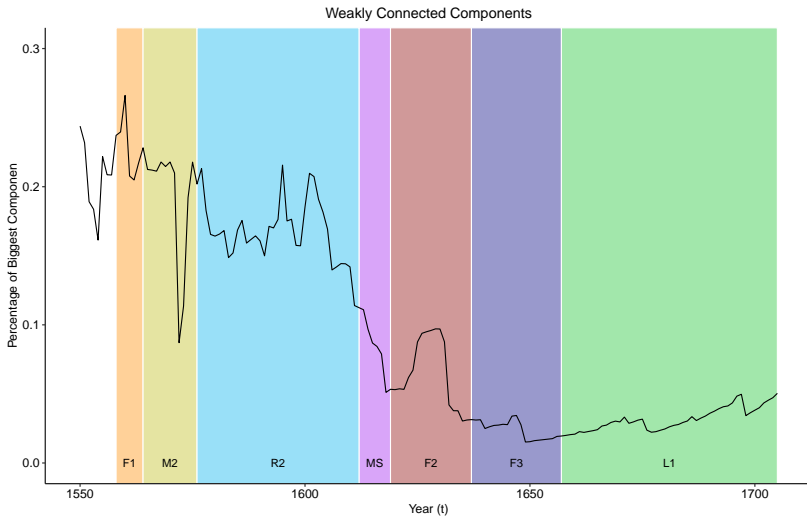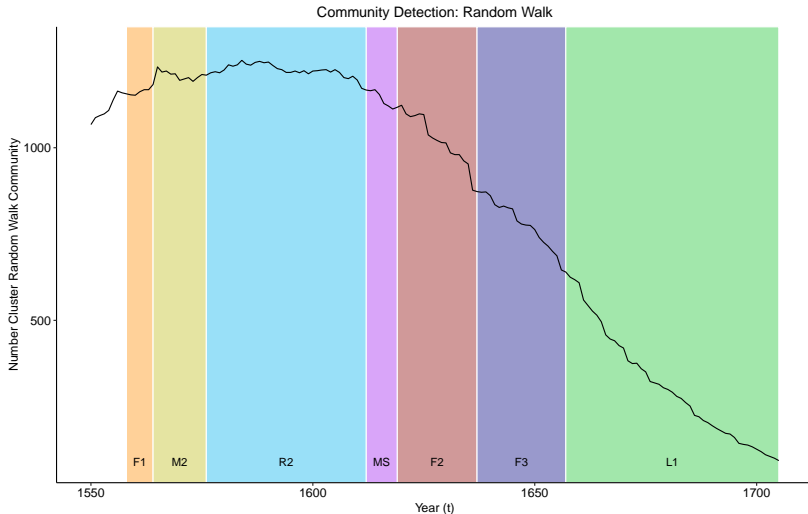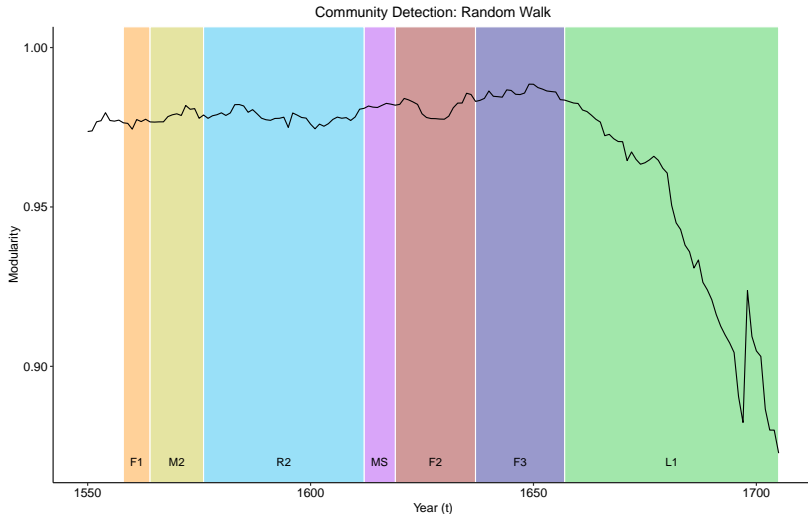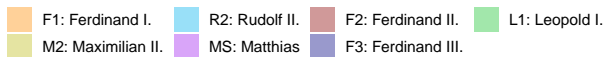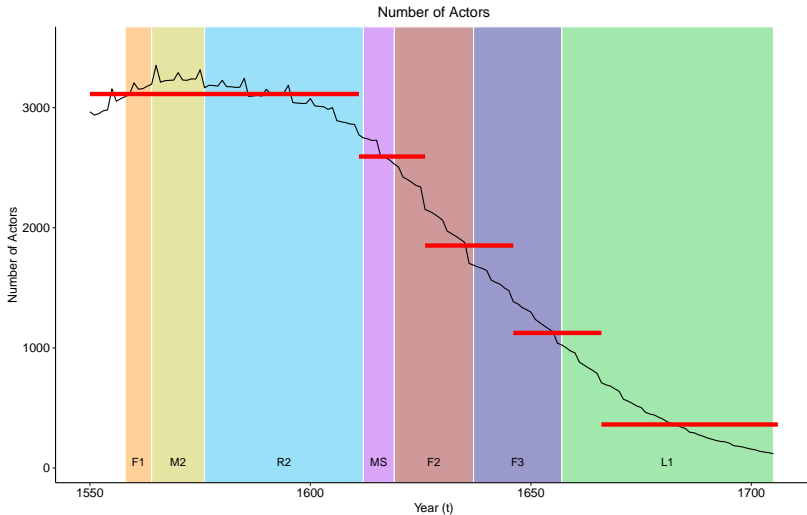# Time-Varying Networks: Components

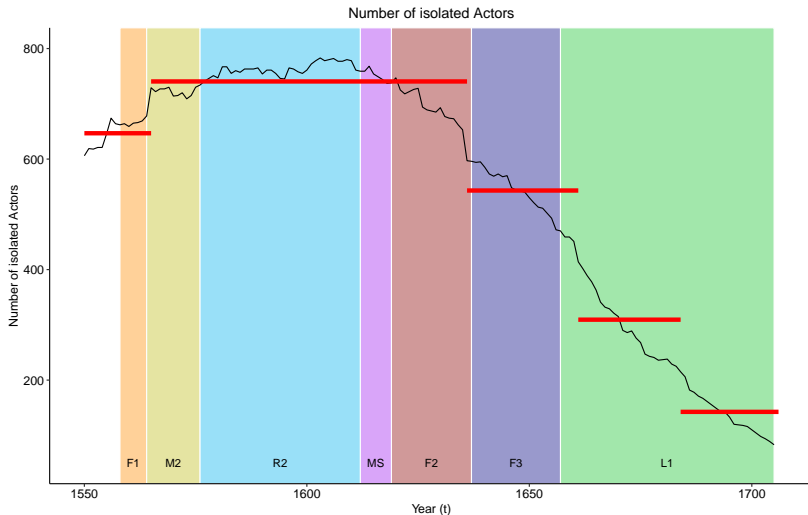# Time-Varying Networks: Community Detection

Time-Varying Networks: Community Detection

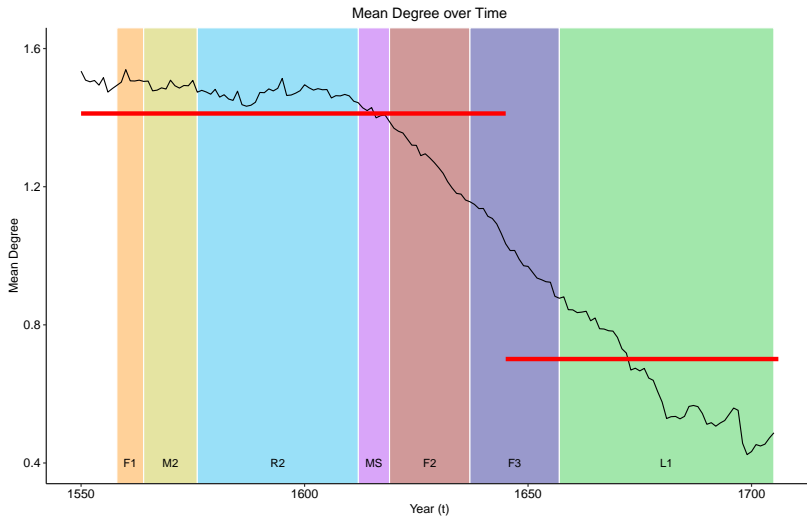# Change Point Detection: Number of Actors

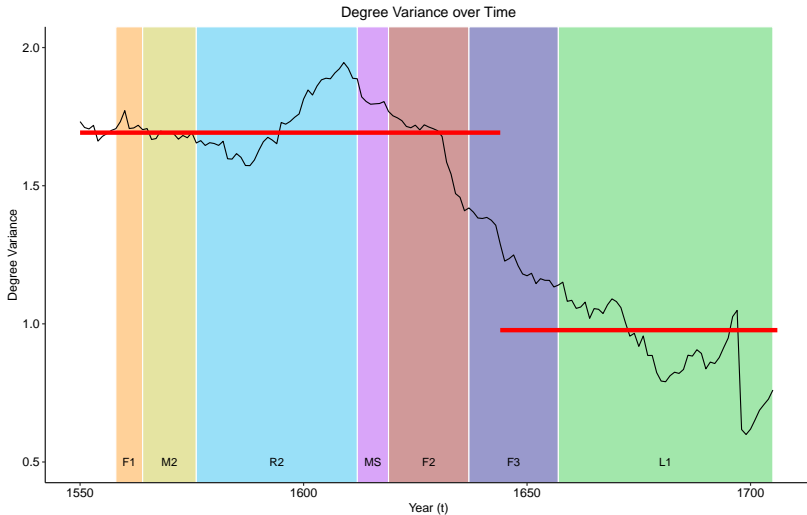F1: Ferdinand I. R2: Rudolf II. F2: Ferdinand II. L1: Leopold I.
M2: Maximilian II. MS: Matthias F3: Ferdinand III.

Number of Actors

Change Point Detection: Number of Isolates
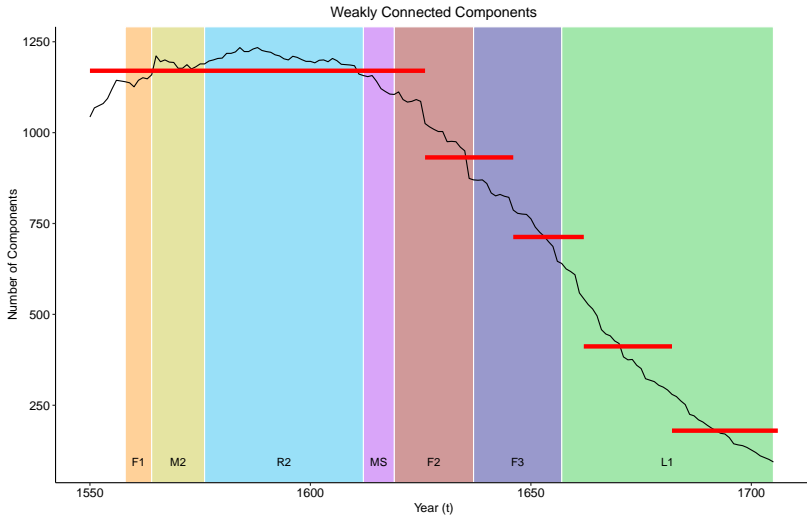

Number of isolated Actors

Change Point Detection: Mean Degree

Change Point Detection: Degree Variance

Change Point Detection: Components

Weakly Connected Components

Change Point Detection: Path
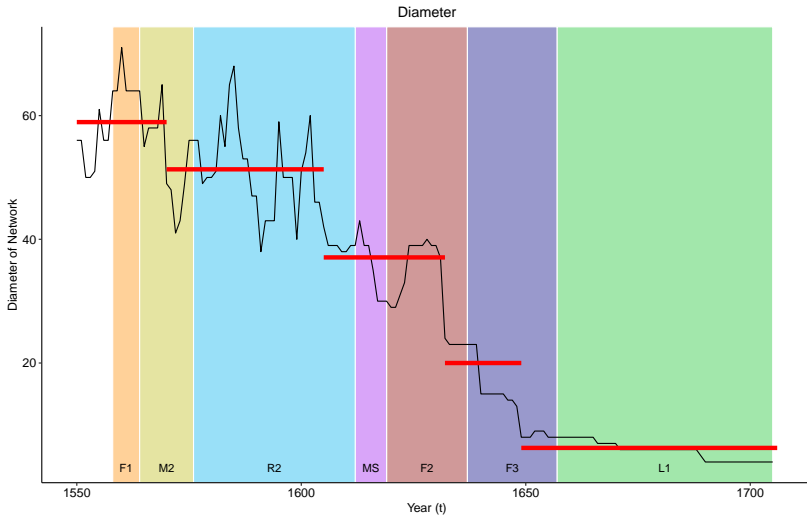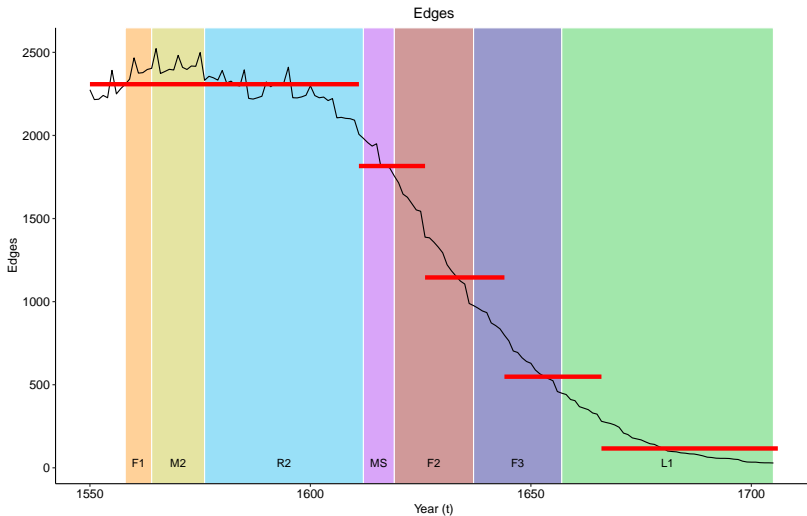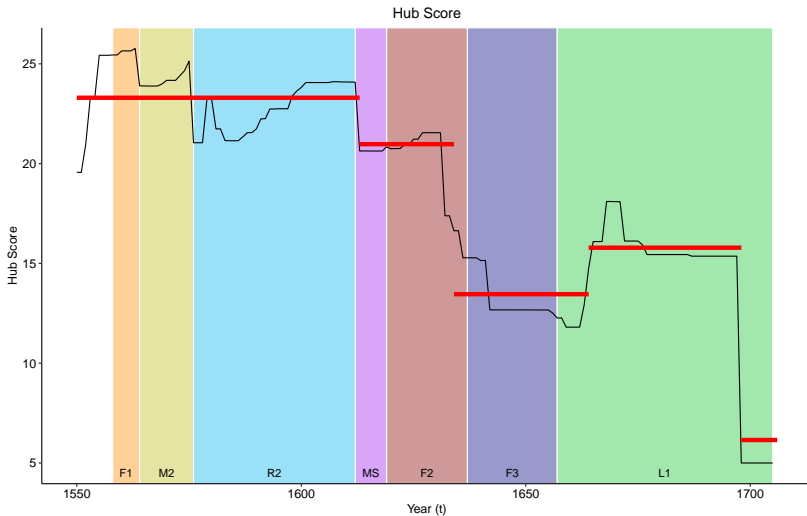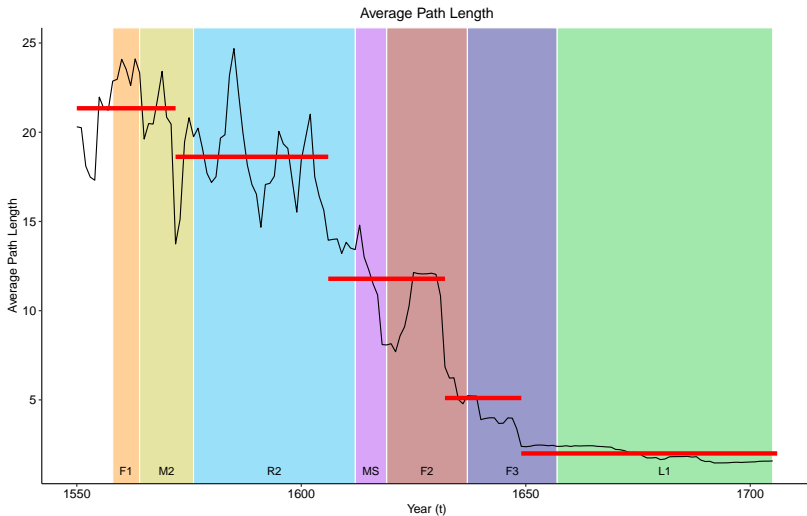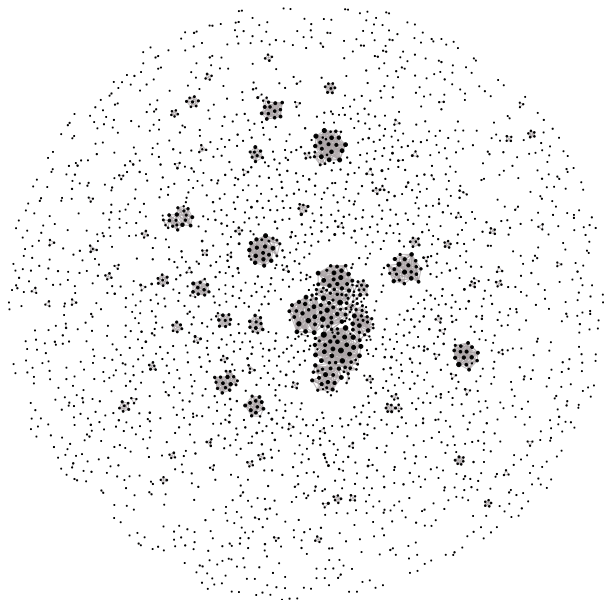
Change Point Detection: Path

Change Point Detection: Path

Change Point Detection: Path

Average Path Length

Time-Varying Networks

Time-Varying Networks