

# Individualism, Identity, and Institutional Change: Evidence from First Names in Germany, 1700–1850

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# The Individual Self

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The rise of **individualism** is seen as a hallmark of the transition from traditional to modern societies (Durkheim 1893, Weber 1922, Henrich 2020)

- Individual agency ↔ collectivism, prescribed norms
- Impact on cooperation, migration, innovation, . . . (Gorodnichenko and Roland 2011, Enke 2019, Beck Knudsen 2021)

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This project explores **how and when** societies adopted this cultural trait:

Can the **experience of institutional change** shape individualism?

# Culture and Institutions

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## Common explanations of cultural change

- link rapid turnover to supply-side **indoctrination**
  - Nazism (Voigtländer and Voth 2015), Communism (Alesina and Fuchs-Schündeln 2007)
- highlight **slow-moving, bundled** factors:
  - Renaissance (Petrarch 1336), Reformation, Marriage rules (Schulz et al. 2019)

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Isolating the “demand-side” cultural response to institutional change is **challenging**:

1. Gradual institutional turnover is **underpowered**
2. Discontinuities in institutions are **rare** and **messy** (war, migration, indoctrination)
3. Comparable **control groups** and high-frequency, long-term **measures** are required

## Our Context: The Crossroads to Modernity

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“Germany” in the 18th and 19th century is a uniquely suitable study context:

1. Collapse of the Holy Roman Empire 1789-1815 ends **hundreds of territories**
2. Overwhelmingly **peaceful** redrawing of borders, without cultural integration
3. Large treatment **variation** within narrow geographic space

High-frequency, long-term cultural proxy:

- “Germany Births and Baptisms, 1558–1898”, collected by the Genealogical Society of Utah
  - 44 million records
  - Precisely geolocated, yearly 1700–1870

How did the experience of institutional change shape first name choice patterns?

1. Culture **rapidly** and **persistently** tilted toward individualism 1789–1815
2. Change is linked to **institutional turnover**
3. Channel: search for new identities following experience of **cultural mismatch**
4. Methodological contribution: naming practices as **sparse language**

## 1. Institutional Roots and Persistence of Cultural Traits

- (Grosjean 2011, Voigtländer and Voth 2012, Grosfeld et al. 2013, Alesina and Giuliano 2015, Lowes et al. 2017, Becker and Pascali 2019 )

## 2. Individualism

- (Greif 1994, Olsson and Paik 2016, Schulz et al. 2019, Buggle 2020, Henrich 2020)

## 3. Formation and Intergenerational Transmission of Identity

- (Bisin and Verdier 2001, 2011, Dehdari and Gehring 2022, Falck et al. 2012, Giuliano and Nunn 2021, Nunn 2022)

## 4. Measuring Cultural Traits Through First Names

- **Individualism** (Bazzi et al., 2020; Beck Knudsen, 2021), **nationalism** (Jurajda and Kovac, 2021; Assouad, 2021; Kersting and Wolf 2021), **religiosity** (Bentzen 2019, Bentzen and Andersen, 2022), **ethnicity** (Fryer and Levitt, 2004), **immigrant assimilation** (Abramitzky et al., 2020; Fouka, 2020; Algan et al., 2022)



1. **Historical Context**
2. **Data**
3. **Theory and Measurement**
4. **Change in Naming Practices**
5. **Name Choices and Individualism**
6. **Institutional Change and Names**
7. **Conclusion**

## Historical Context

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## Ending a “World” Order

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In the decades following 1789, the political order in Central Europe dissolved.

Before 1789 — **Holy Roman Empire:**

- **Stability:** average of 280 years under same ruling dynasty
- **Homogeneity:** median territory is entirely Catholic or Protestant

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After 1789 — **German Union:**

- More than half of the population **change** rulers
- Hundreds of territories reduced to 41
- consolidation driven by **geopolitical concerns**, without regard for cultural disparities

# Ending a "World" Order

1789



1815



**Data**

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## Names: Data Source and Coverage

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### “Germany Births and Baptisms, 1558–1898”

- About 44 million birth records, covering mostly the years 1700–1870
  - No last names for now!
- 11,000 locations from across Germany
- We focus on the areas with consistent coverage: Baden-Württemberg, Rheinland-Pfalz, Hessen, Saarland, and Nordrhein-Westfalen
- Locations (*Städtebuch* towns) that have  $> 100$  births in a decade
- We standardize name spellings

### Additional data:

- Yearly **ruler affiliation** of towns (Cantoni, Mohr, and Weigand 2019)
- **Town characteristics**: Agricultural suitability, ruggedness, markets, Protestant, distances to: coast, navigable river, HRE border, trade route, conflict incidents

# Ending a “World” Order (In Our Data)

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Territories 1789



Territories 1815



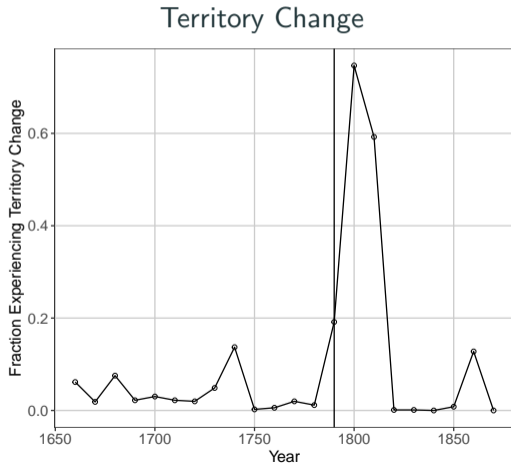
Territory Change





# Territory Change Over Time

The scope of this territorial reorganization is unprecedented:



# Theory and Measurement

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## Three (Actual) Name Distributions

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Aim: measure **existence** of cultural equilibria, as well as **type** and **transition** dynamics.

**Top 5 names, 1720**

Johannes	0.508
Joseph	0.029
Georg	0.027
Franziskus	0.025
Heinrich	0.024

**Top 5 names, 1770**

Johannes	0.479
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**Top 5 names, 1820**

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2. Decline in concentration on top names, especially 1770→1820
3. New, less “traditional” names enter (Karl, Friedrich, Heinrich)

## Measuring Change

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1. To capture the difference between two naming distributions, we use the well-known **Theil** (or entropy, or segregation, ...) index:
  - Normalized between 0 and 1
  - Measures change *relative* to another distribution [▶ Details](#)
    - To the previous time period  $t - 1$
    - To another fixed point in time
    - or to the distribution in another town  $i \neq j$



## Measuring Concentration, Name “Quality”

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  - Gini coefficient
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  - share of individuals with a name among the top-5 or top-10

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  - share of individuals with a name among the top-5 or top-10
3. To capture qualitative changes, we must
  - resort to external validation — a “dictionary” of names with e.g. certain traits
  - generate such a definition of name qualities endogenously, through the relative frequencies in specific subpopulations (e.g., Local Names Index (Fryer and Levitt 2004)) or language models

## Naming Choice As Sparse Language

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- First name choices of parents can be viewed as speech that occurs very infrequently.
- Asking “How likely is a person to be Republican if they use the words ‘Death tax’?” is analogous to asking “How likely is a baby to be born to a specific person if he is called ‘Friedrich’?”
- Even if we aggregate to the town level, this form of language will often still be sparse: number of births is limited.
- We need to address the concern that our measures are not just picking up changes in birth rate.

# Finite Sample Bias

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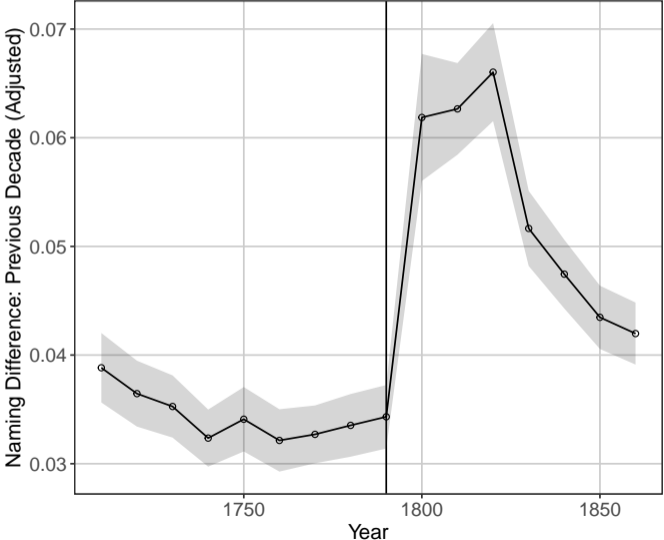
In all three measures, we hence need to be aware of **finite sample bias**:

- Employ robust estimators
  - exist for segregation (Gentzkow, Shapiro, Taddy 2019)
  - less clear for other concentration and qualitative measures
- Alternatively, compare to random benchmark
  - for segregation, can reshuffle the (actually drawn) names across two time periods (or locations)
  - For concentration and qualitative measures, need simulation-based adjustment

# Change in Naming Practices

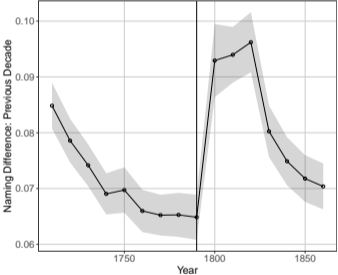
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# Decade-to-decade Change (Theil Index)

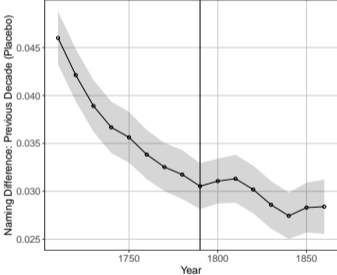


# The Importance of Finite Sample Correction

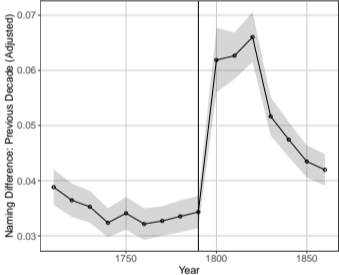
### Unadjusted



### Placebo Benchmark



### Adjusted



## Where is the Change Leading to?

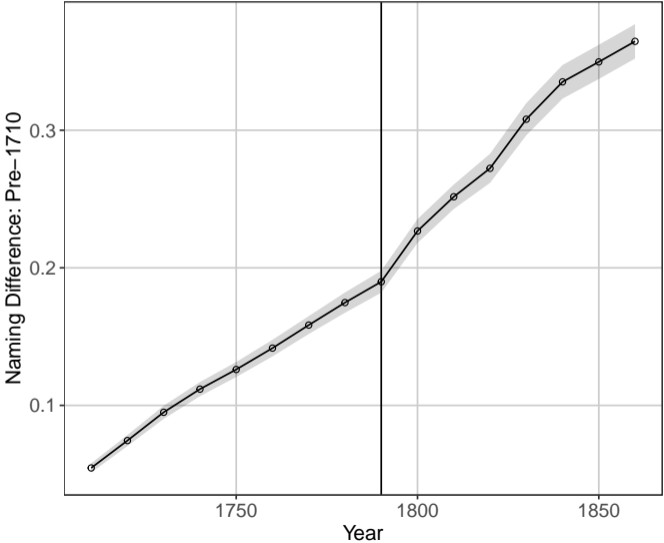
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Conceivably, the changes in naming patterns could lead to very different new equilibria:

- The new distribution in 1850 could have reverted to the “old” one, after a brief period of revolutionary fervor
- Or, it could turn to a completely different distribution
  - more or less concentrated on few names
  - spatial convergence or divergence



# Cumulative Change (Theil Index), relative to 1700

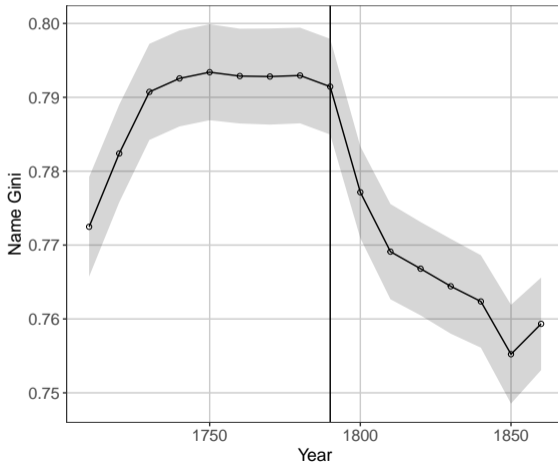


## **Name Choices and Individualism**

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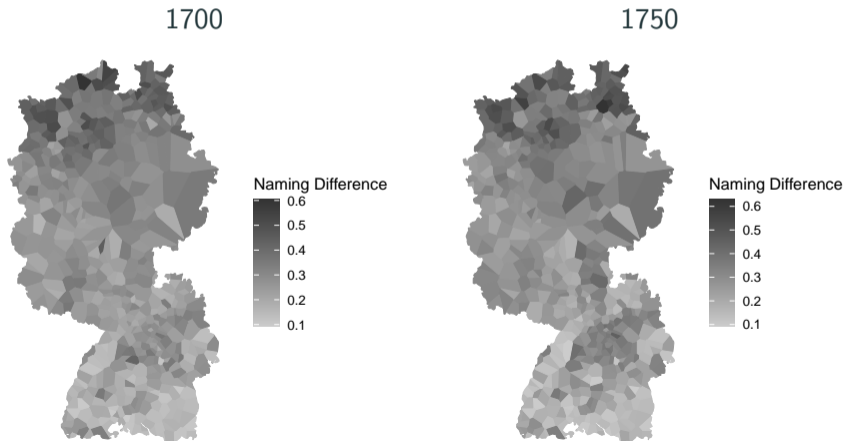
# Concentration

Change results in a strong reduction in the concentration of first names: ▶ random benchmark

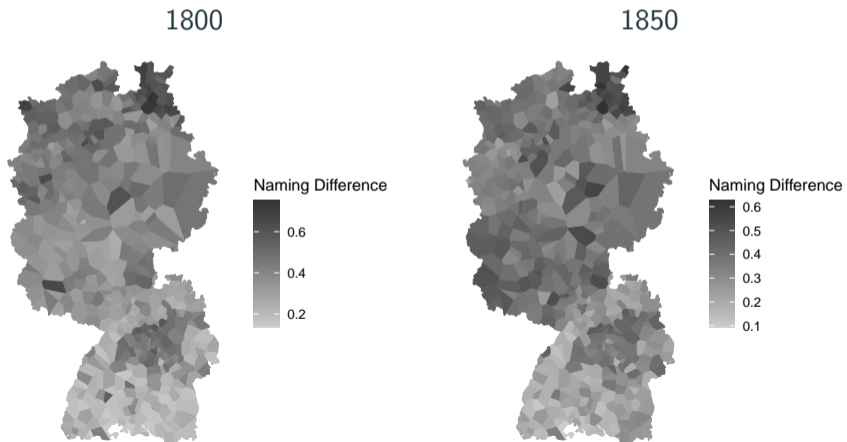


## Regional Divergence

At the same time, regional differences become more marked: Calculate segregation measures relative to town of Waldshut in South-East (Falck et al. 2010)



## Regional Divergence (II)



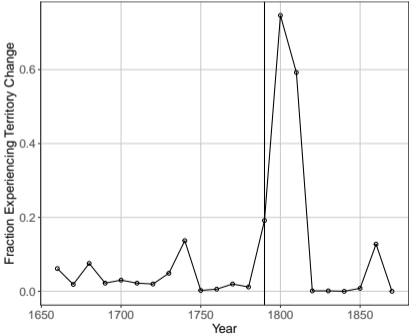
## **Institutional Change and Names**

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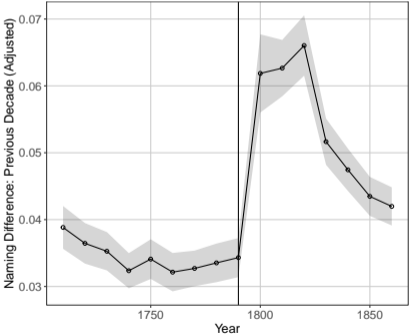
# Territorial Changes, Name Changes?

We have observed the concurrence of territorial changes and changes in naming practices. Are the two actually related?

### Territory Change



### Naming Change



## Experiencing Changes

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We argue that the **experience of institutional instability** triggered cultural change.



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Through the lens of evolutionary anthropology (Giuliano and Nunn, 2021; Nunn, 2022):

- Before 1789:
  - Stable environment
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Through the lens of evolutionary anthropology (Giuliano and Nunn, 2021; Nunn, 2022):

- Before 1789:
  - Stable environment
  - **Tradition** prescribes suitable actions
  - → stable naming patterns
- After 1789:
  - Drastic institutional change
  - **Mismatch** of culture and institutions
  - Search for new “optimal cultural traits”
  - → naming practices reflect individualism

## Experiencing Changes

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Accounts of contemporaries speak to this interpretation:

- *“... our era has brought together completely incompatible principles in the three generations alive. The enormous contrasts of the years 1750, 1789 and 1815 lack any form of transition.”* (Friedrich Perthes 1818)

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- *“Life and travel have become three or four times faster. . . the customs and the way of life of the years before 1789 feel so distant, as if they were centuries away”* (Johanna Schopenhauer 1839)
- (in France:) *“So grave and rapid an alteration as this must be morbid; for a society cannot change its structure so suddenly.”* (Durkheim, 1952 [1897], p. 369)

## Experience of Institutional Change

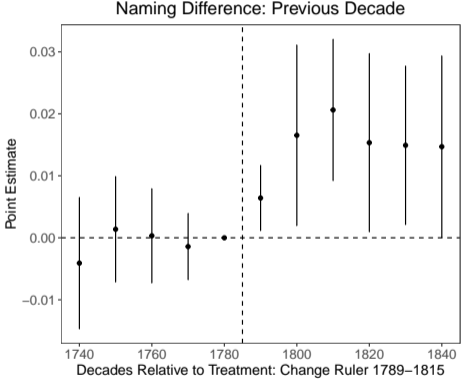
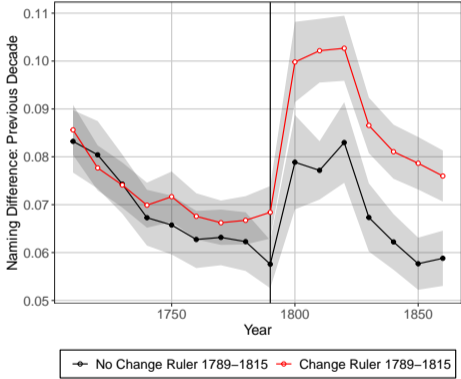
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To address this channel, we record whether a town has changed territory from 1789 to 1815 (after the Congress of Vienna)

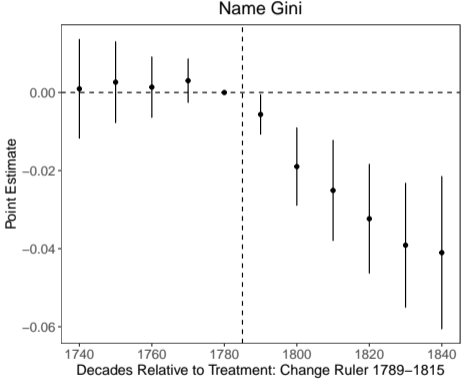
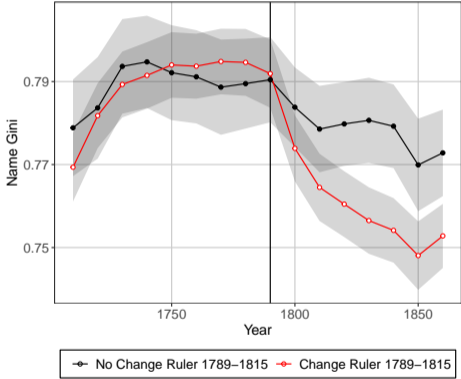
Territory Change



# Institutional Change Begets Name Change



# Institutional Change Begets More Name Dispersion





# Individualism and 1848 Revolutionary Activity

	Opposition Members (ihs)			
	(1)	(2)	(3)	(4)
Name Concentration 1840s	-0.8956** (0.3503)	-1.168*** (0.4040)	-1.088*** (0.3620)	-1.088*** (0.3288)
R <sup>2</sup>	0.01067	0.17156	0.17411	0.17411
Observations	540	540	540	540
Outcome Mean	0.6725	0.6725	0.6725	0.6725
Territory FEs		✓	✓	✓
Controls			✓	✓
Standard Errors	Robust	Robust	Conley (50km)	Territory

## Conclusion

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Study of first names shows that 1789 — the **end of the “old world”** in continental Europe — was a turning point also in cultural terms.

- events set off a search for fitting identities and norms
- more pronounced in areas that experienced more institutional upheaval
- individualism as a by-product of this search

The first half of the 19th century was the first episode in the contest for modern ideology

- solidifies after 1848 (political parties, state indoctrination)
- precursor to ideological conflicts of the 20th century

## **Appendix Slides**

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$$\mu = \frac{1}{n} \sum_{i=1}^n y_i$$

$$T_T = T_{\alpha=1} = \frac{1}{n} \sum_{i=1}^n \left( \frac{y_i}{\mu} \cdot \ln \frac{y_i}{\mu} \right)$$

Normalize by dividing by  $\ln N$

# Gini Index (Random Benchmark) ▶ Gini

