

Naming the Precious Child: the quantity-quality trade-off and aggregate fertility

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HFD Symposium, June 2016



Josh and Arden

Thanks

- Tomas and Vladimir for the invitation
- To entire HFD team (h.t. to Aiva)
- To all of you researchers: you make HFD worth all of the work

Agenda for today's talk

What can we learn about fertility from children's names?

1. Historical micro-analysis (from PAA 2016)
2. More recent, population-level changes in naming and fertility
3. Discussion of opportunities and challenges

TIKI-TIKI-TEMBO

ANONYMOUS

A LONG time ago, in old Japan, when a mother loved a little boy very, very much she gave him a long, long name, but when she did not love a little boy very much she gave him hardly any name at all.

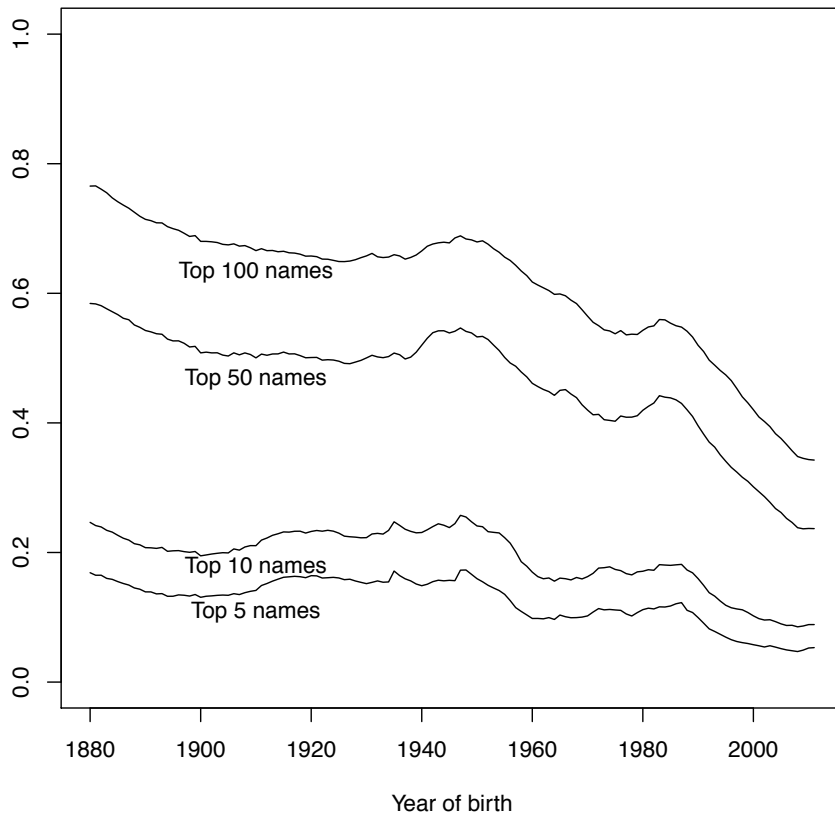
Once there was a mother who had two little boys,—one she loved very, very much, and so she called him “Tiki-tiki-tembo-no sa rembo-Hari bari broohski-Peri pen do-Hiki pon pom-Nichi no miano-Dom bori ko,” which means everything nice in Japanese. The other one

Names and fertility

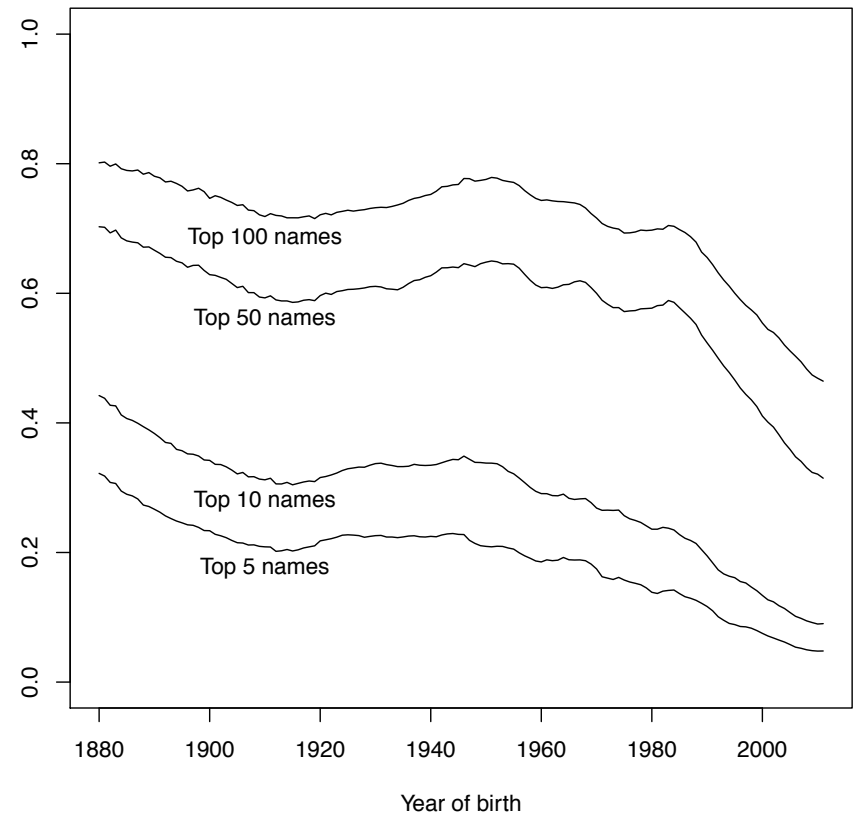
- Think of name as very short answer to qualitative interview:
 - “What does your child mean to you?”
- If code can be cracked, then names can be used to measure fertility intentions, telling us intended life-time fertility (and “quality”).

Downs and ups and downs in concentration of names

Concentration of Female names by year of birth
(SocSec data)



Concentration of Male names by year of birth
(SocSec data)

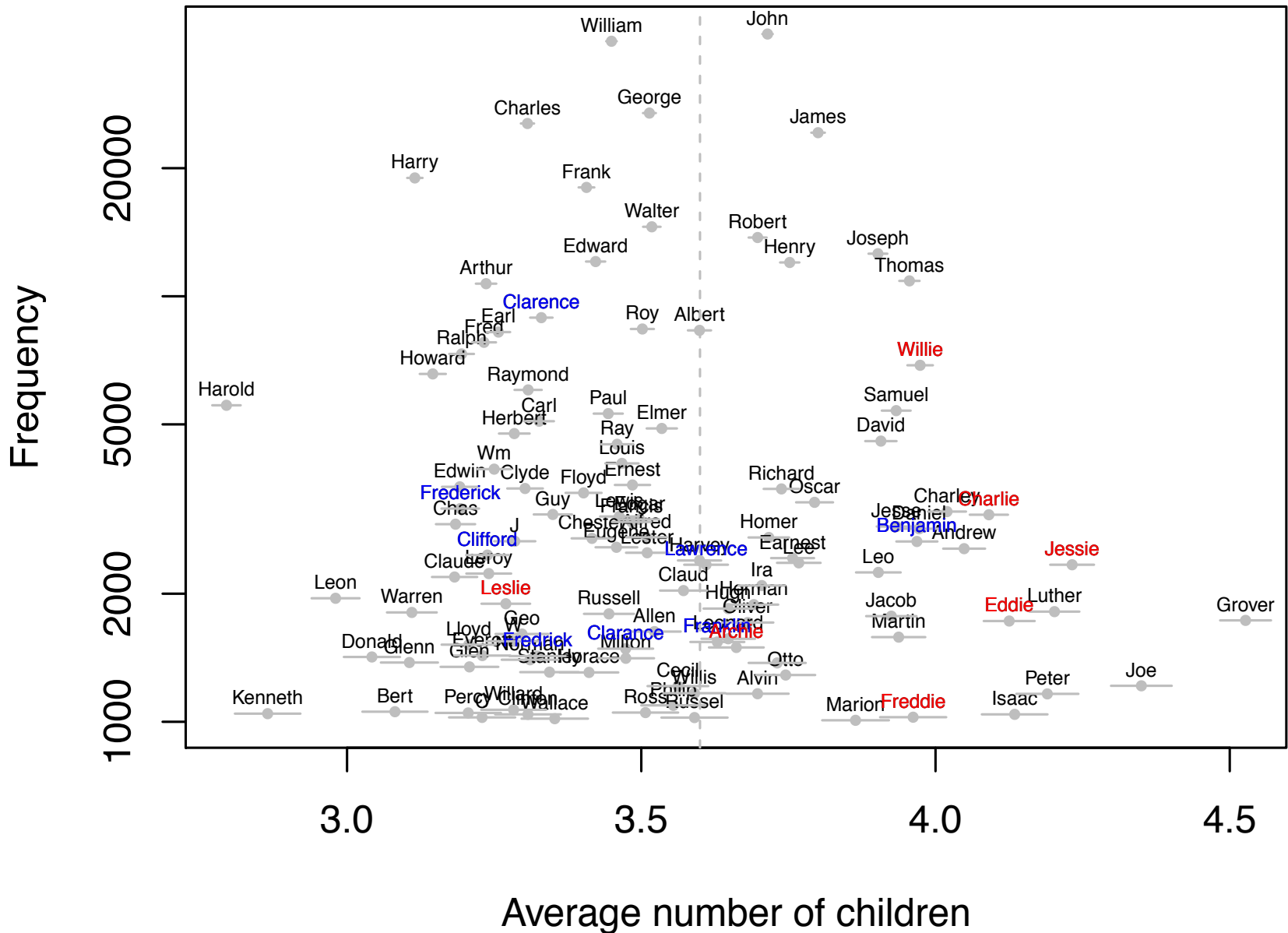


Micro-level evidence

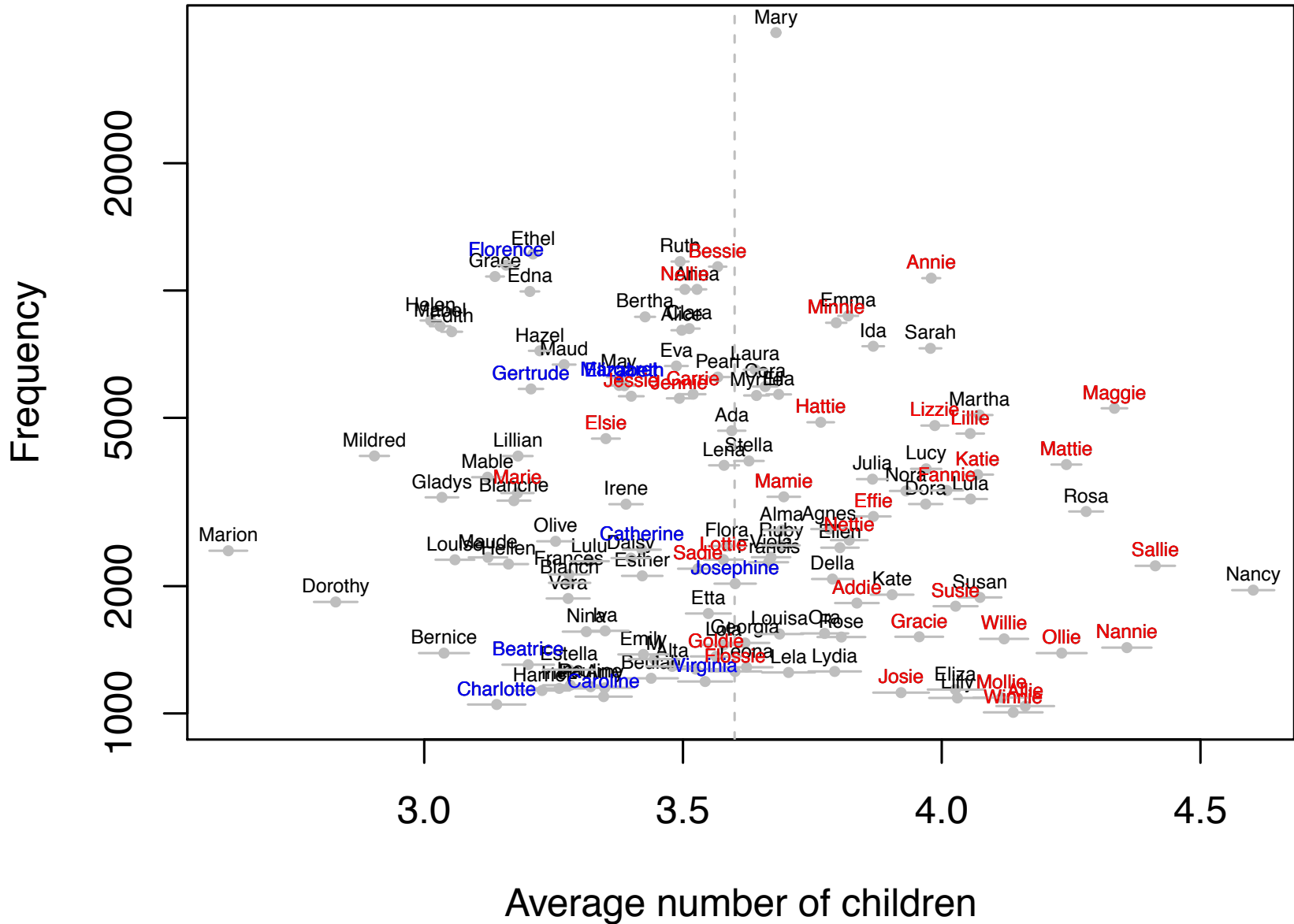
- Are names predictive of fertility at the micro-level?
- U.S. IPUMS S 1850-1930
- Use name of 1st born
 - So we're not seeing birth order effect
 - Causal ordering
- “Preciousness” of names defined empirically, not *a priori*

Family size by name of oldest child, Male

1900 Complete Census Count



Family size by name of oldest child, Female



Statistical approach

Noise?

(Statistical learning approach)

Confounding?

(Multivariate + our best cultural control:
last names)

Statistical approach

- Split sample in half
- On **training**, estimate “fertility name scores”
(scores = average family size by name of oldest child)
- In **test** sample, regress name scores on fertility

Fertility, 1900 results

	M0-Training	M0-Test	+Age	+Geo+Occ	+lastname

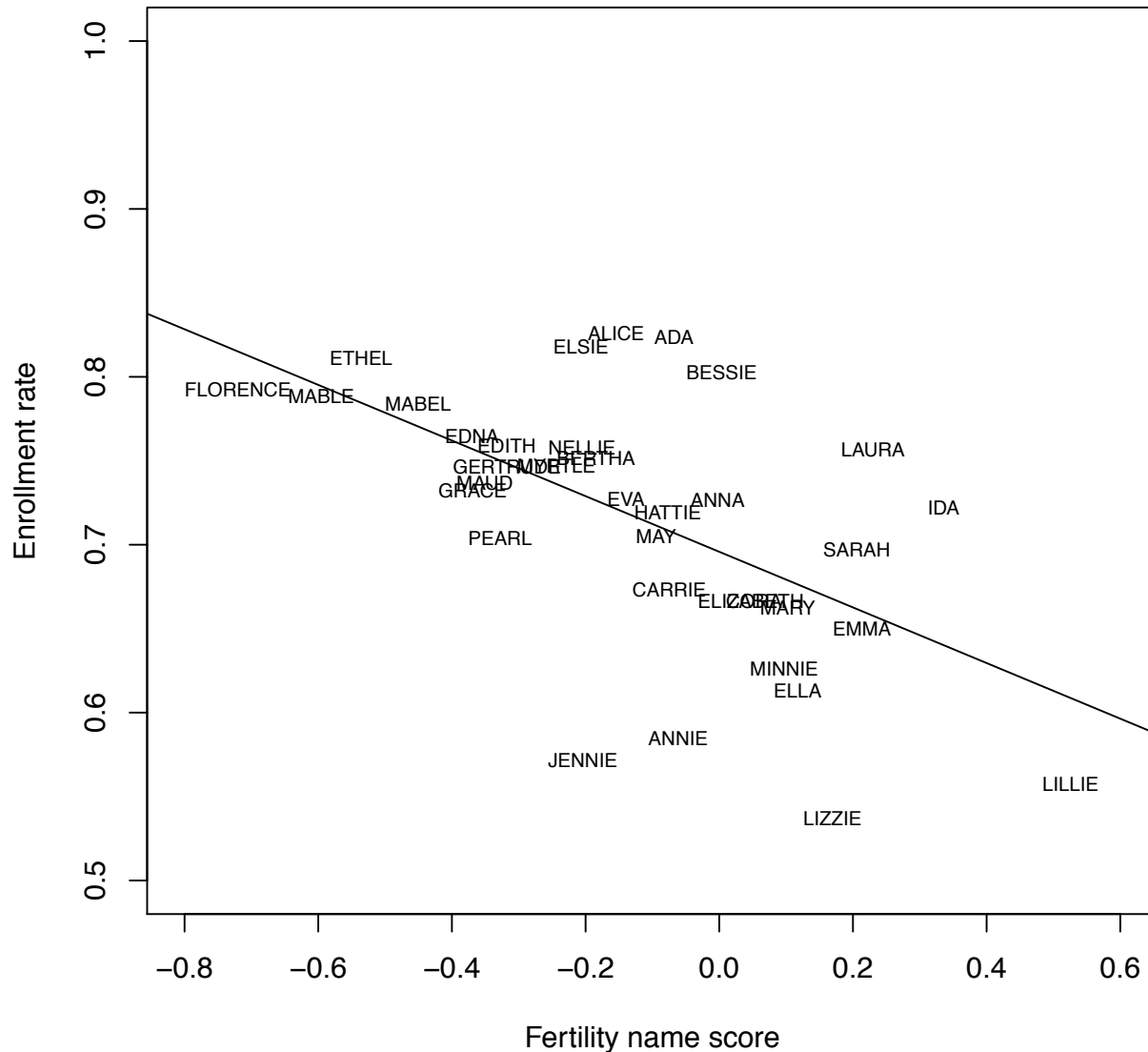
Fert. Name Score	1.00***	0.45***	0.34***	0.28***	0.17***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
urban/rural				-0.45***	-0.51***
Father's income (occupational 1950 \$100)				-0.02***	-0.02***
Age of eldest child			X	X	X
Geography			X	X	X
Last name (FE)					X

Observations	about 64,000				
R-squared	0.08	0.02	0.16	0.20	0.23
					NA

Education results, Females 1900

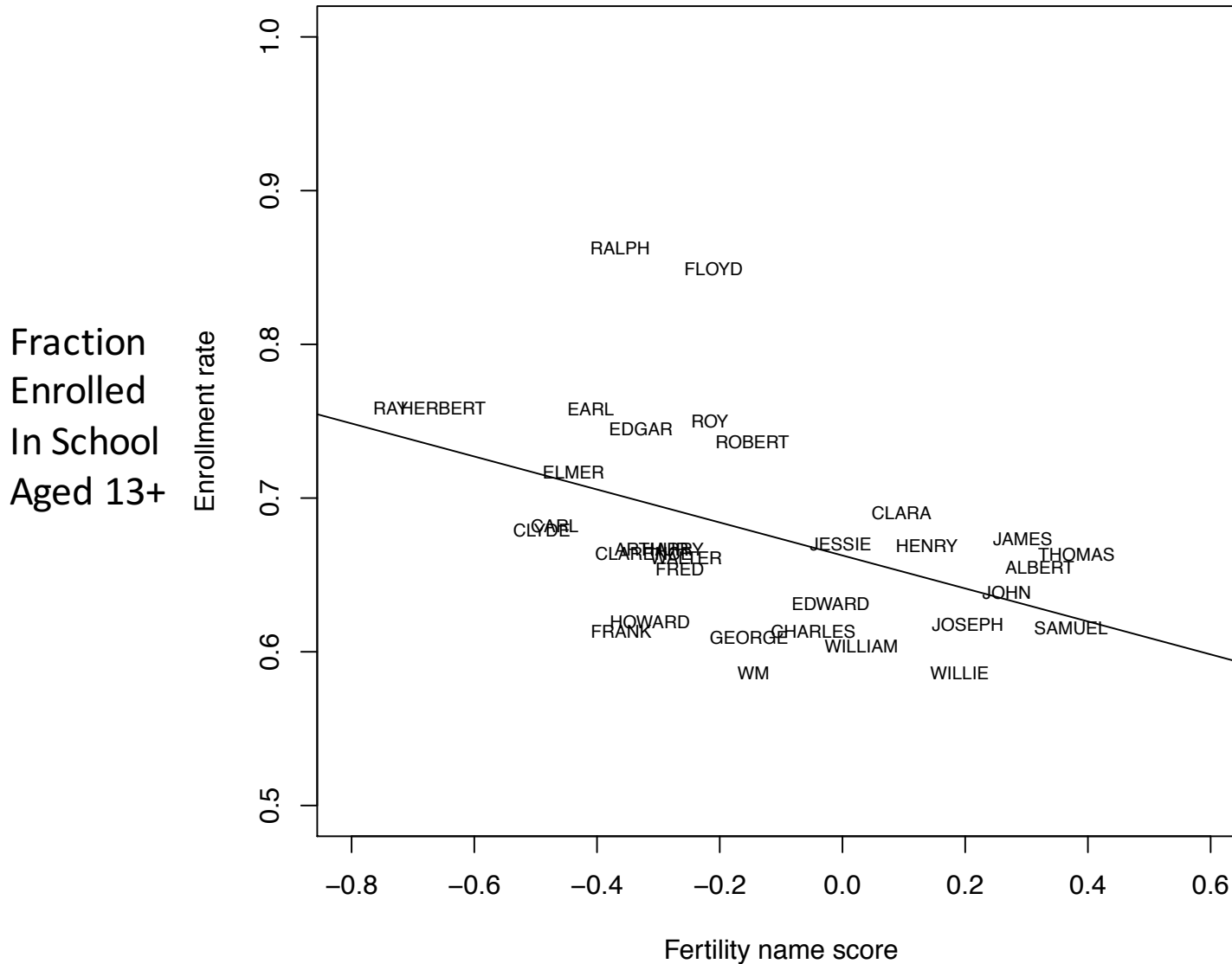
Female enrollment by fertility score

Fraction
Enrolled
In School
Aged 13+



Education results, Male 1900

Male enrollment by fertility score



Intentionality over the course of the fertility transition

Year	1850	1880	1900	1930
β_{score}	0.06***	0.24***	0.25***	0.18***

- Intentional parenting, even before transition
- Choices matter most in middle of transition

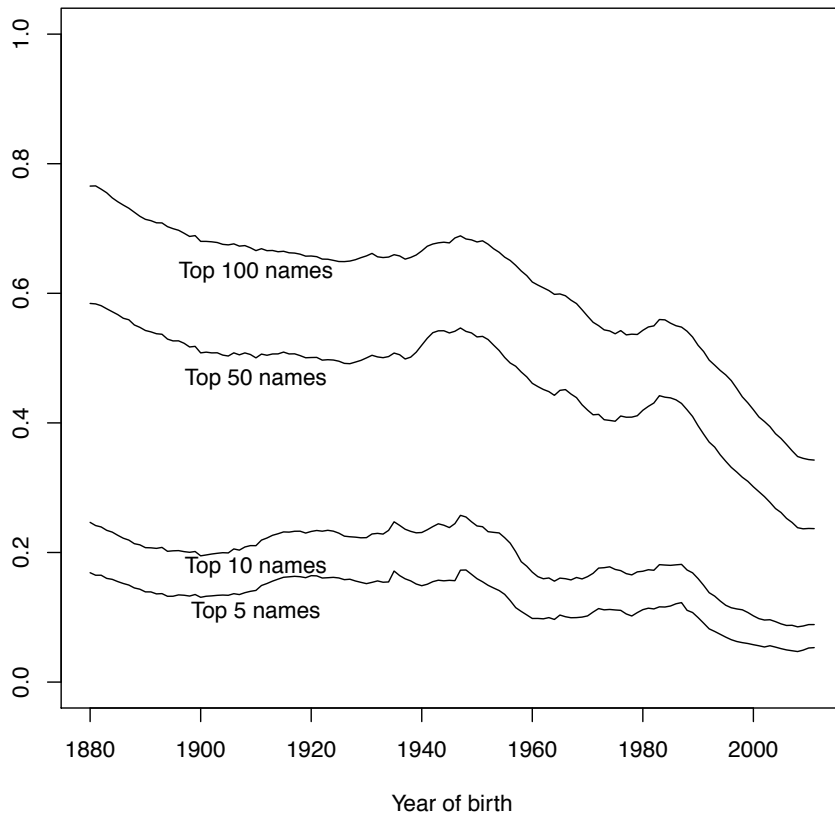
Historical conclusions about fertility

- By 1880, parents were planning their families from the birth of 1st child (quantity and quality)
- Intentionality predates demographic transition? No revolution in “calculus of conscious choice”?
- Simplistic economic model of parents deciding *ex ante* finds surprising support.

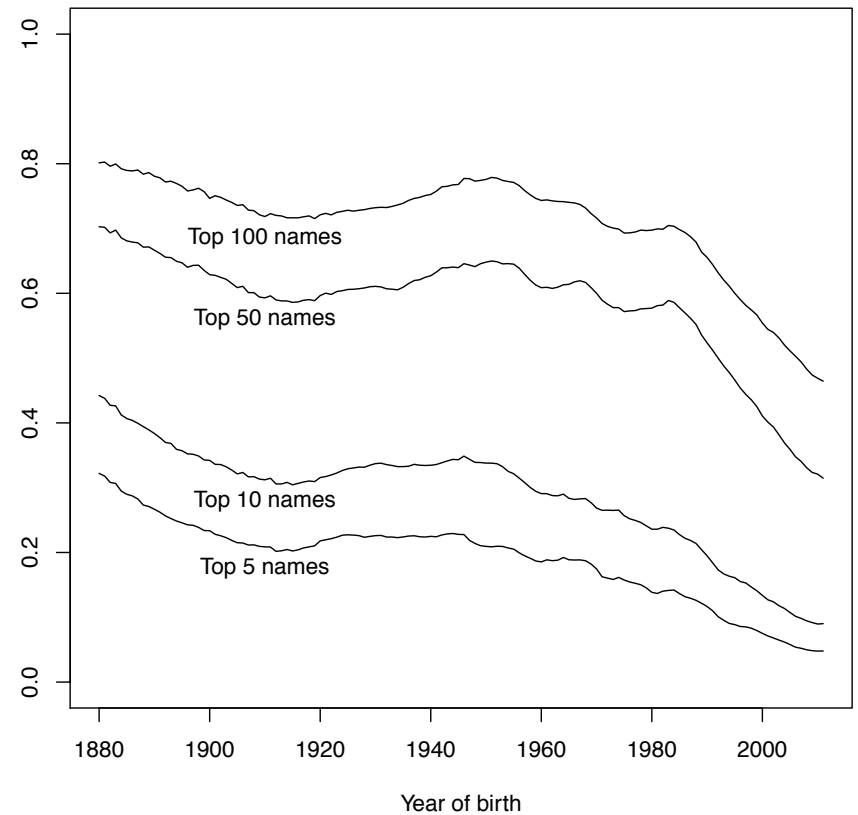
Do names still matter? (modern evidence)

Baby boom, revisited

Concentration of Female names by year of birth
(SocSec data)



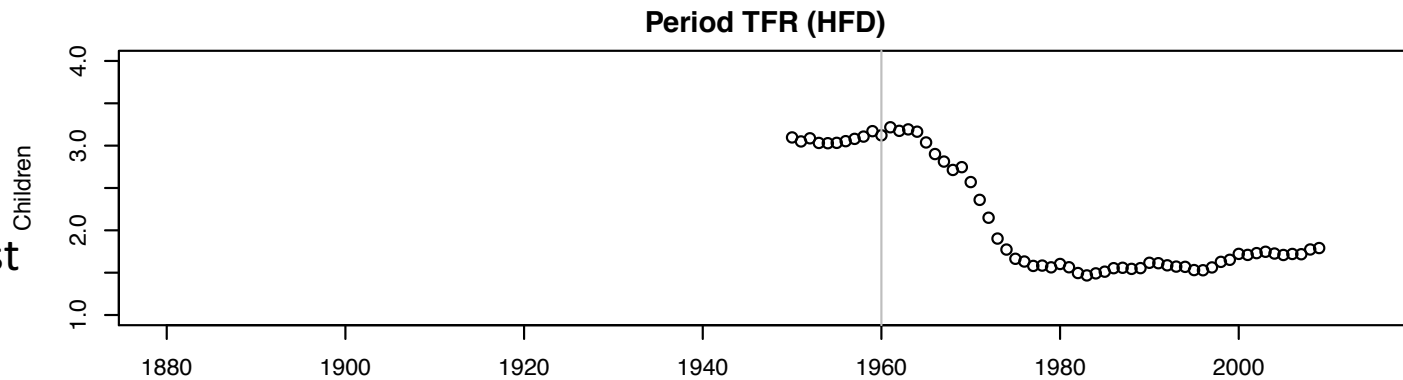
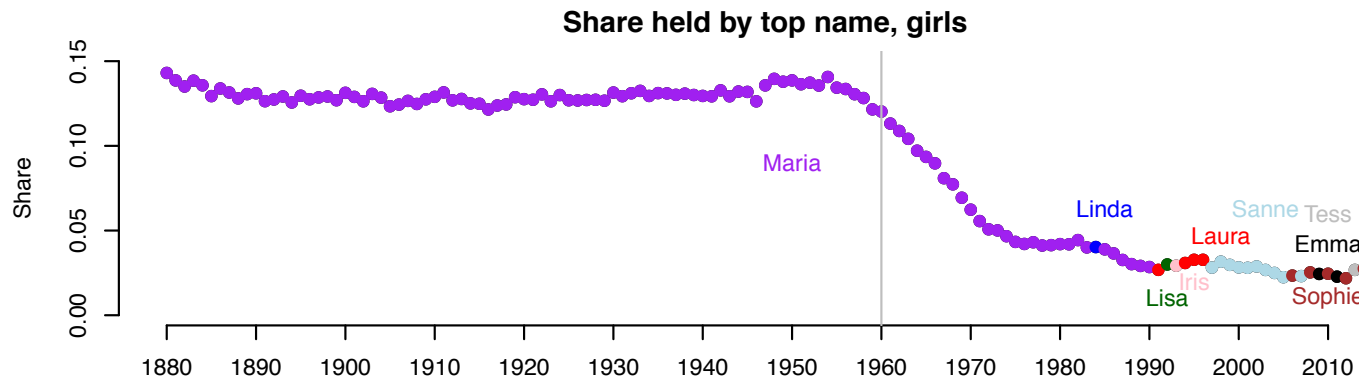
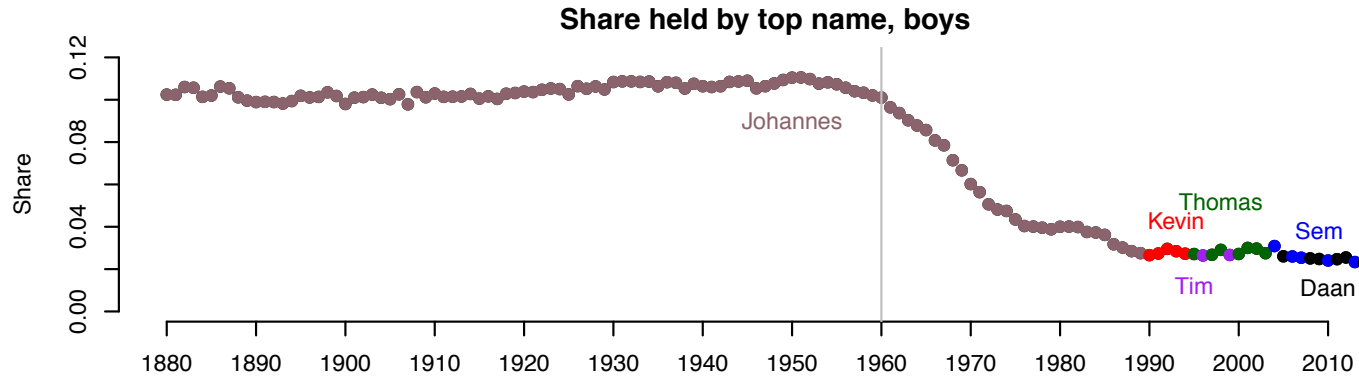
Concentration of Male names by year of birth
(SocSec data)



Shift to small families (Netherlands)

- Data: top-100 lists
- Can look at concentration of names
- Here we look just at share taken by top name
- When do you think the key change was?

Netherlands



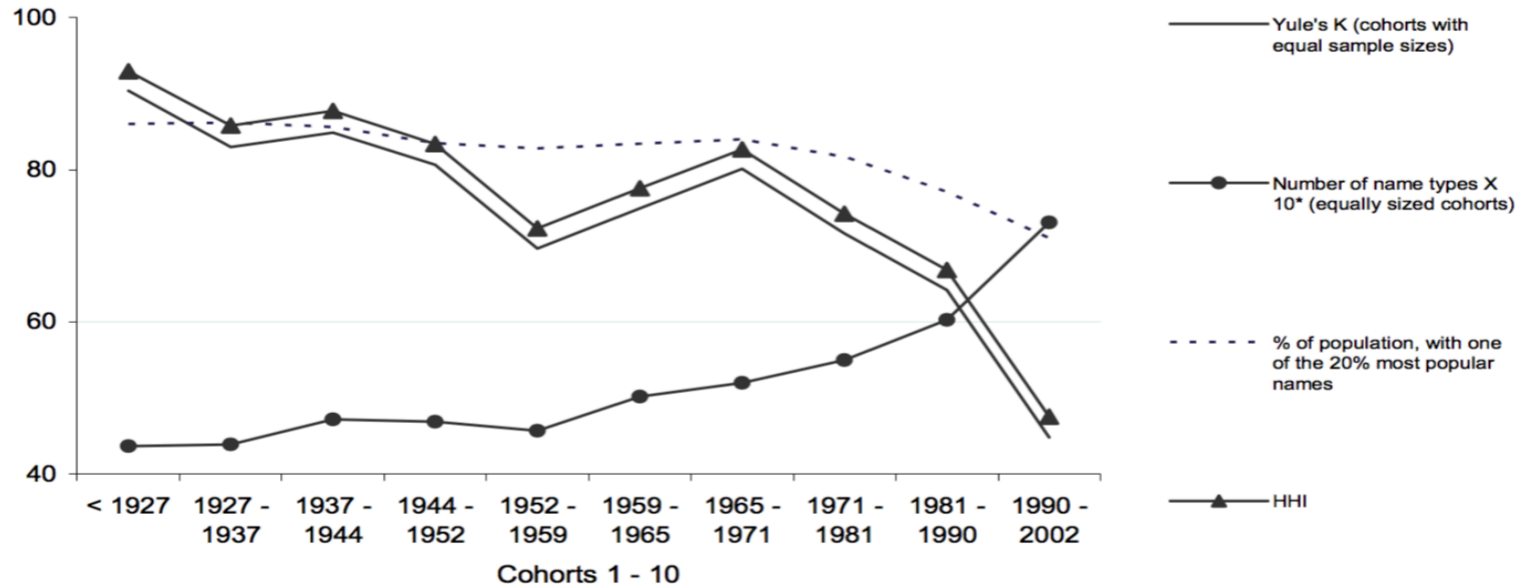
Source:
Dutch First
Name
Database

A German Opportunity

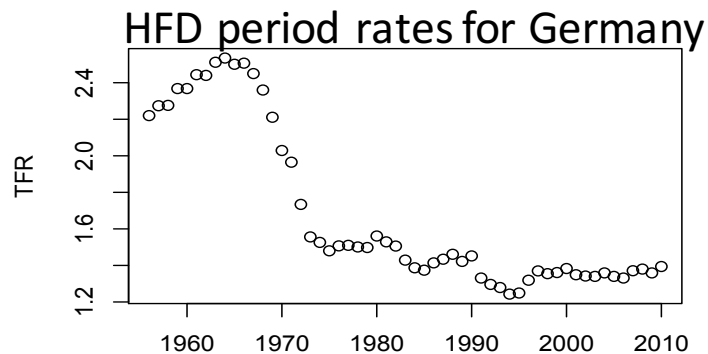
- SOEP has first names of children
- Huschka and Wagner looked at concentration of names (but didn't look at fertility)
- Germany like Holland, with decline in common names → fertility decline
- Opportunity for micro-level analysis.

Germany, Socio-Economic Panel

Some characteristic numbers describing the distribution of given names in German birth cohorts (with equal sample sizes) 1900 - 2002



Source: Huschka & Wagner (2010)



Conclusions from modern examples

- Shifts in naming distributions appear linked to big changes (baby-boom in U.S., fertility decline in Netherlands & Germany)
- We've barely scratched the surface, using name distributions
- Opportunities for using micro-level age (a new covariate: age, education, "name")

Opportunities

- Detect “phase changes” in fertility, not just period fluctuations
- Learn about processes driving fertility change (quantity/quality tradeoff, individualization)
- Compare “meaning” of children across groups: married /unmarried; older/younger parents; birth order; ...

Challenges

- Data access and privacy
- Censoring: can't see children not born
- Weak signal + small changes in cohort fertility
- Immigration and population heterogeneity

Concluding challenge

- For your research, if you could interview parents at birth, what you would like to ask them
- There may be a way to hear parents' answers, using names