

# Printing in a Periphery: a Quantitative Study of Finnish Knowledge Production, 1640-1828

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# From particular data to global perspective?

**Idea:** study early modern knowledge production, all of it (1470-1830)

**How?** By combining library catalogues (Fennica, Kungliga, ESTC, CERL)

**Important:** to clean up the data (90% of the work!) and to take into account how particular data collections (Finnish National Bibliography, English Short-Title Catalogue etc.) have been formed.

**How to fail:** take worldcat or similar combination of datasets and analyse it as a whole without cleaning it up first.

[Intro 2/3]

## Data (1470-1828):

- ▶ Fennica (Finnish National Bibliography): 20328 documents
- ▶ Kungliga (National Library of Sweden): 73165 documents

## Method

- ▶ Open source tools for library catalogues (Github)
- ▶ Fully transparent and reproducible
- ▶ Scales up to new catalogues and tasks
- ▶ Benefit no. 1: once the work has been done, the data is available for everyone to use and to enrich it. The ecosystem is constructed with even unforeseen changes in mind.

## Context

- ▶ Finnish knowledge production 1640-1828 can only be understood in the Swedish context.
- ▶ Academy of Turku as part of the Swedish University system is the centre of Finnish knowledge production.

## Findings

Enlightenment in Finland after “the rock bottom” of 1700-1721

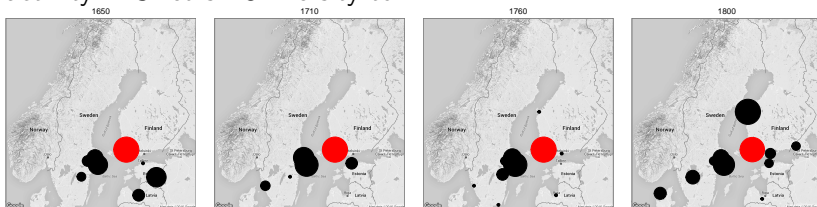
1. Changes in University curriculum reflected in published theses
2. Religious publishing in Finnish language
3. Economy and social science published in Swedish language

→ Deep roots of the diversity of “Finnishness” reflected in knowledge production, 1640-1828.

[Big Picture 1/4]

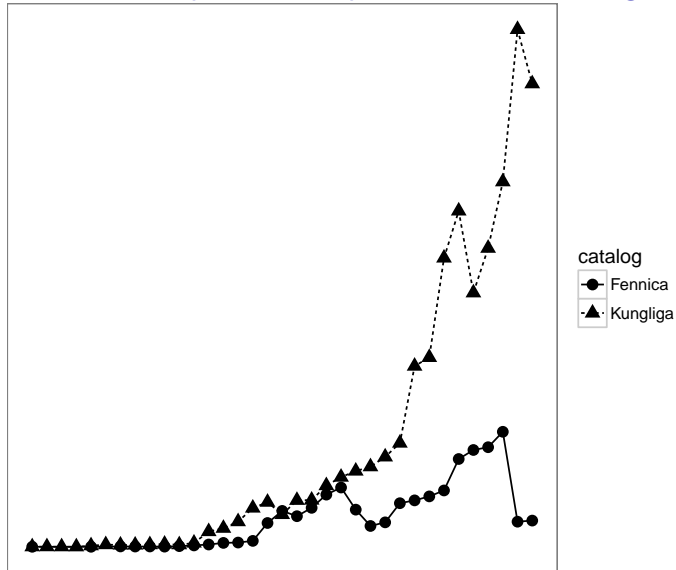
## Publishing activity in Turku

Voi miettiä, jos tämä korvaisi alla tulevan “Comparing publishing activity in Swedish University town”.



[Big Picture 2/4]

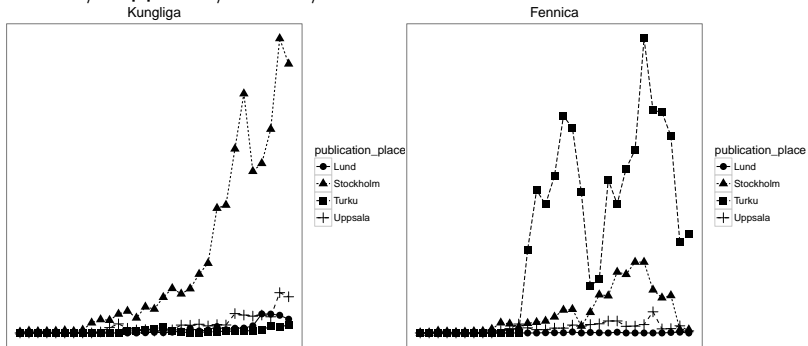
## Peaks and drops – role of publishers and contingency



[Big Picture 3/4]

## Comparing publishing activity in Swedish University towns

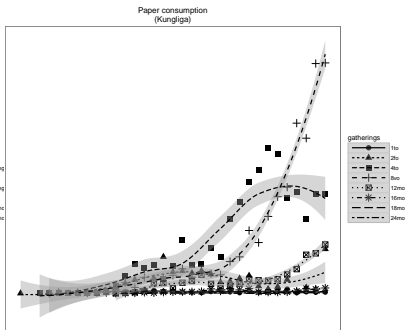
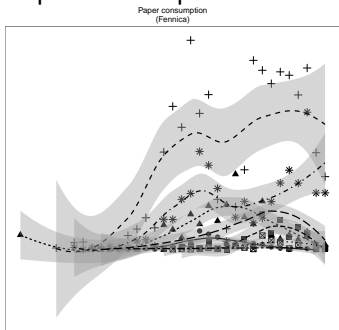
Turku / Uppsala / Lund / Stockholm



[Big Picture 4/4]

## Rise of the octavo sized book as vehicle of Enlightenment

Paper consumption for different document formats over time.



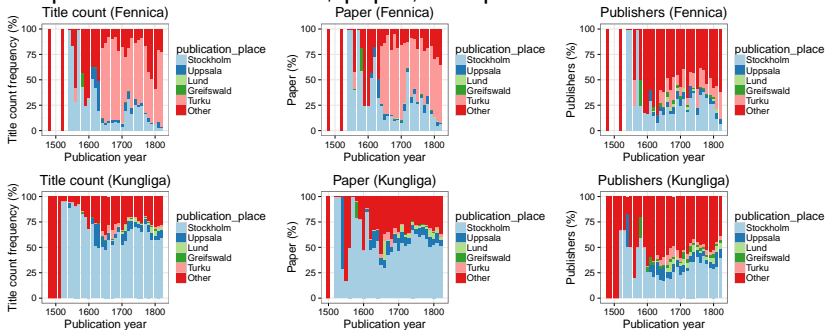


Publishers

[Publishers 1/6]

## TODO Turku in Sweden

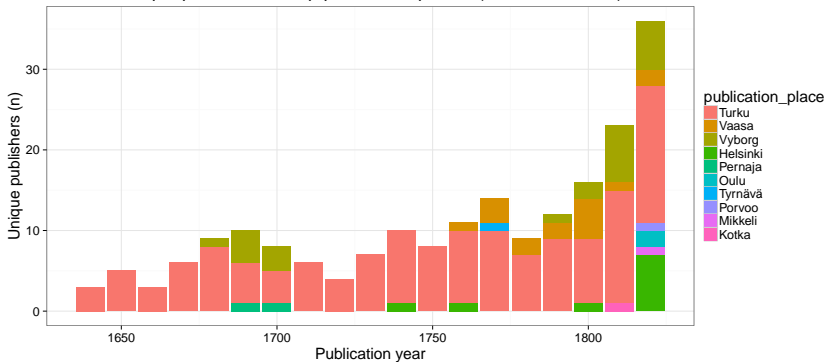
Proportions for title count, paper, and publishers



## [Publishers 2/6]

### Development of number of publishers in Finland

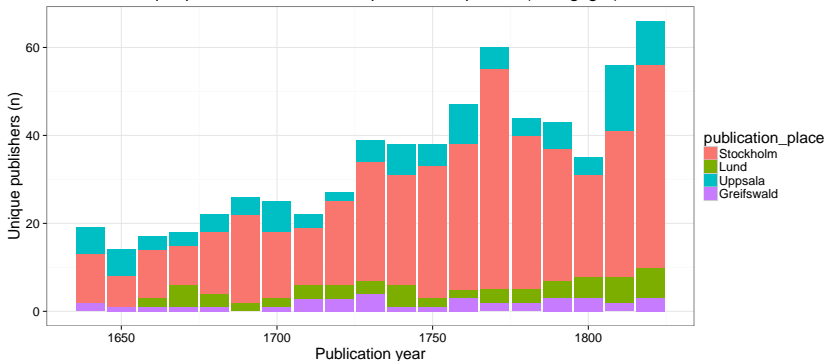
Unique publishers in top publication places (Finland/Fennica)



[Publishers 3/6]

## Development of number of publishers in Swedish University towns

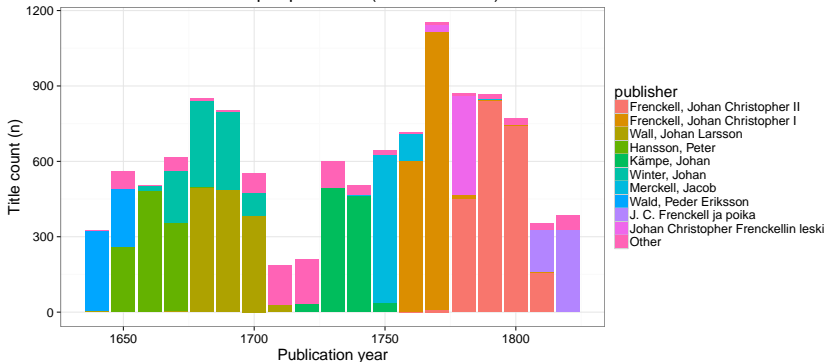
Unique publishers in selected publication places ( Kungliga )



[Publishers 4/6]

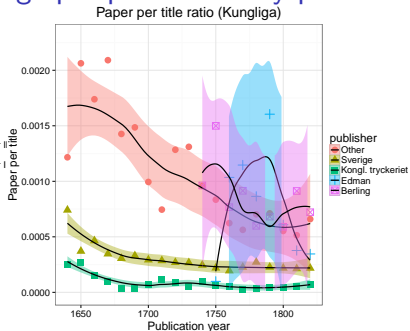
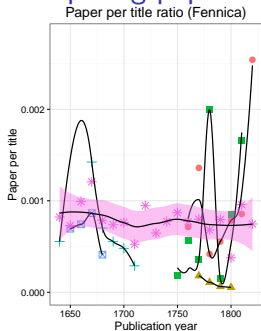
## Title count of the output of publishers in Turku

Title count per publisher (Turku/Fennica)



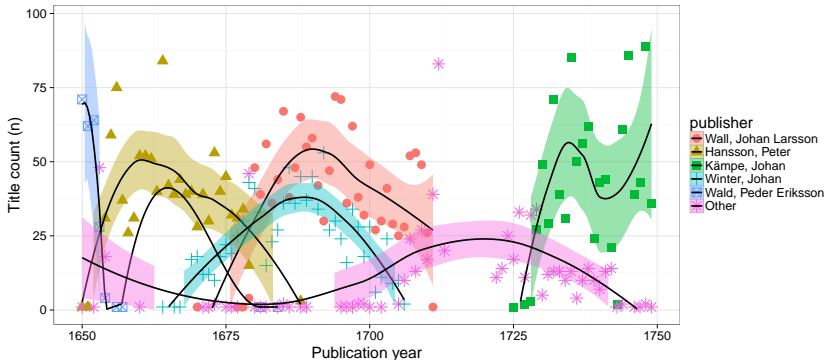
## [Publishers 5/6]

### Comparing paper used on average per publication by publishers



## Rock Bottom of the Great Northern War (1700-1721)

Title count (Turku/Fennica)



[Swedish age of Freedom and abolishment of censorship 1/2]

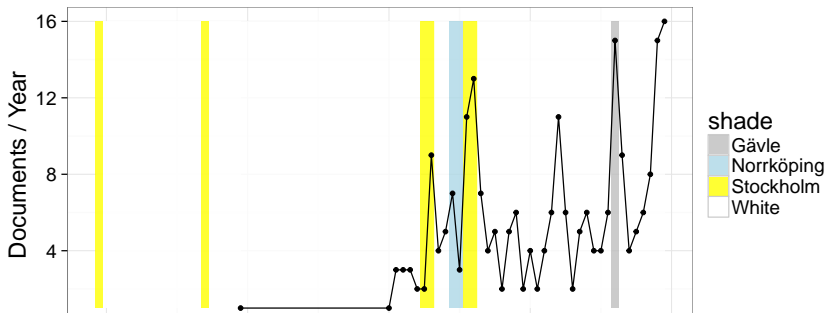
## Gävle in Riksdagar

An example how historical events, namely parliamentary assemblies in the Swedish case, have an impact on local knowledge production.

Gävle (gray) during riksdagar (Kungliga) TODO: TÄÄ EI TOIMI  
NYT OLLENKAAN KUN ON AIKA PIENI TOI NOUSU  
NÄKYVISSÄ TÄSSÄ. MENEKÖ OIKEIN? ERI NÄKÖINEN  
TUOLLA MANUSKRIPTIN PUOLELLA. - NO KAATU KUN  
myplace kohdalle pistää skandeja eli olin vaihtanu tukholmaksi.

Vaihdoin takas Gävleen, katotaan tuleeko virhe.

Gävle (Kungliga)





## Number of publishers in Stockholm 1760-1770

Figure 1 consists of four bar charts, labeled (a) through (d), each showing the number of publications (n) on the y-axis against the year (year) on the x-axis. The x-axis for all charts ranges from 1760 to 1780, with major ticks every 10 years. The y-axis scales vary: (a) ranges from 0.0 to 7.5, (b) from 0 to 20, (c) from 0.0 to 2.0, and (d) from 0 to 5. Each chart shows a general upward trend in the number of publications over time, with a notable peak around 1770-1775.

Year	n
1760	6.0
1761	5.0
1762	5.0
1763	5.0
1764	5.0
1765	8.0
1766	5.0
1767	8.5
1768	5.0
1769	2.0
1770	5.0

Year	n
1760	12
1761	10
1762	11
1763	12
1764	13
1765	14
1766	15
1767	16
1768	17
1769	18
1770	15
1771	10
1772	15
1773	10
1774	10
1775	10
1776	10
1777	10
1778	10
1779	10
1780	10

Year	n
1760	2.0
1761	1.0
1762	1.0
1763	1.0
1764	1.0
1765	1.0
1766	1.0
1767	1.0
1768	1.0
1769	1.0
1770	1.0
1771	1.0
1772	1.0
1773	1.0
1774	1.0
1775	1.0
1776	1.0
1777	1.0
1778	1.0
1779	1.0
1780	1.0

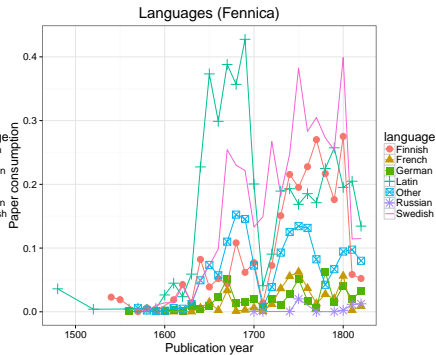
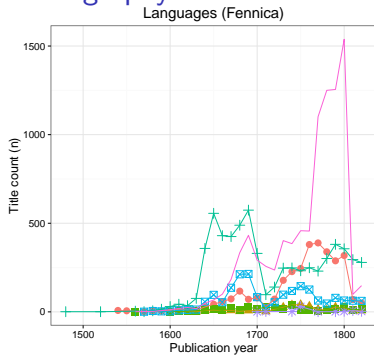
Year	n
1760	5.0
1761	2.0
1762	1.0
1763	1.0
1764	1.0
1765	1.0
1766	1.0
1767	1.0
1768	1.0
1769	1.0
1770	1.0
1771	3.0
1772	4.0
1773	2.0
1774	3.0
1775	3.0
1776	3.0
1777	3.0
1778	3.0
1779	2.0
1780	2.0

## Languages

TODO: "Other" kielikategorian selvittäminen seuraavissa kuvissa. Onko siellä joku tietty kieli joka näkyy hyvin selvästi mukana analyysissä? Nousee isoksi kategoriaksi. Nyt oon merkannut, että Kreikan kieli (Greek - huom on kielet Greek, Modern (1453-) sekä Greek, Ancient (to 1453) mutta ei pelkka Greek) mukaan moneen kohtaan. Jos kyseessä joku muu kuin Kreikka niin sitten se. Jos taas paljon kombinaatioita pieniä kieliä, niin antaa siinä tapauksessa olla. LL: Lisäsin Kreikan mutten muuten ehdi tutkia asiaa. Voit katsoa R:llä `top(df0, "language", 10)`

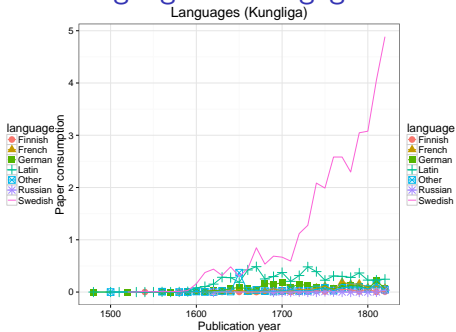
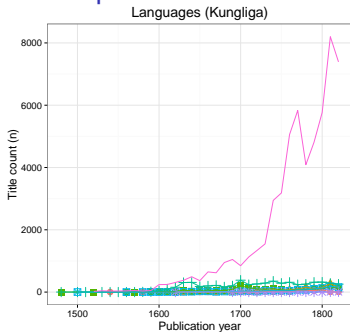
[Languages 1/4] #TODO: TÄSSÄ OLISI HYVÄ JOS v. 1800  
julkaistut ei tippuisi nollaan! LL: I cannot change the data. This is  
the results from this analysis.

## Development of use of different languages in Finnish National Bibliography



## [Languages 2/4]

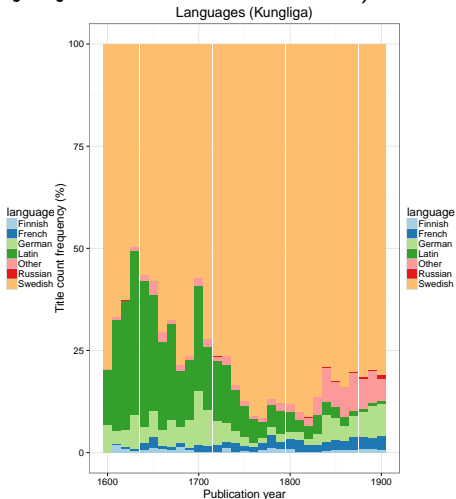
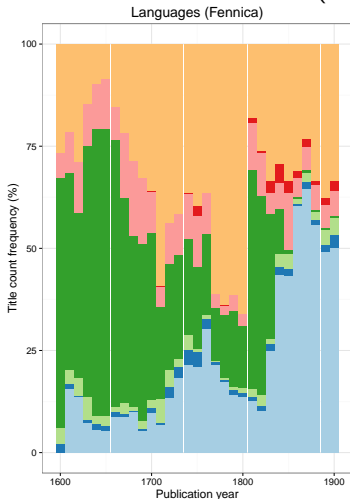
### Development of use of different languages in Kungliga data



## [Languages 3/4]

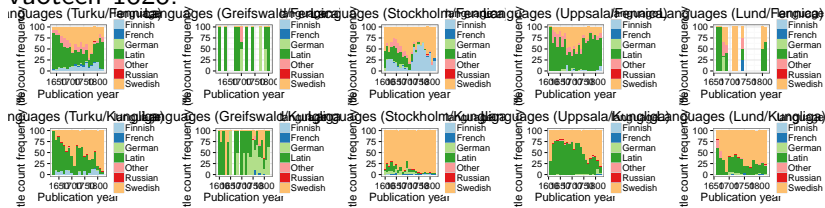
### Different languages in Fennica and Kungliga (percentage)

TODO: GREEK mukaan (tai jos joku muu iso kieli niin se)!



TODO: KIELI% !!!!!!!!!!!!!!!

Sama prosenttianalyysi kielistä kuin edellisessä slidessä mutta paikkakuntaakohtaisesti (sekä Fennican että Kungligan mukaan):  
Turku, Greifswald, Stockholm, Uppsala, Lund. Rajataan analyysi vuoteen 1828.



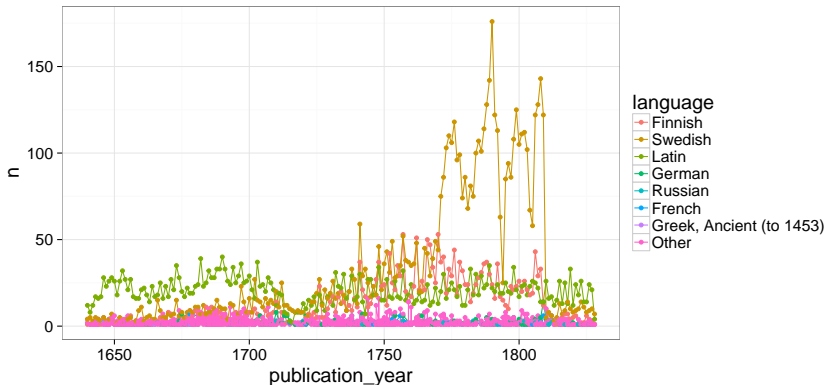
[Languages 4/4]

## Topic diversity in different languages in Finnish publications

TODO: TÄMÄ PITÄISI RAJATA LOPPUMAAN VUOTEEN 1828.

LL: on rajattu jo mun nähdäkseni ?

Number of subject topics



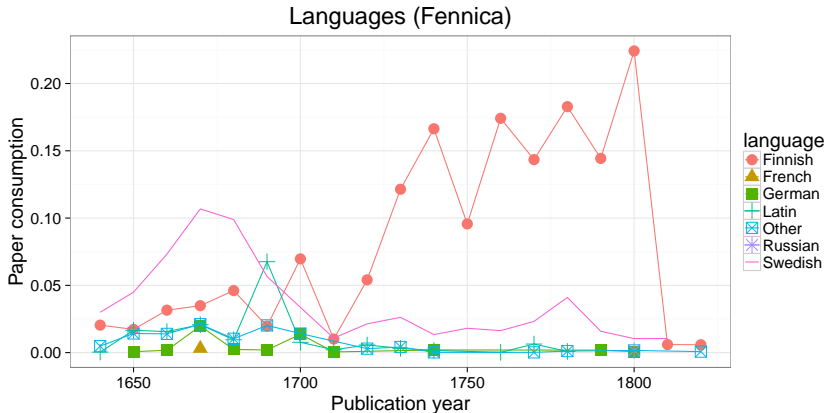
Religious texts in Finland



## [Religious texts in Finland 1/3]

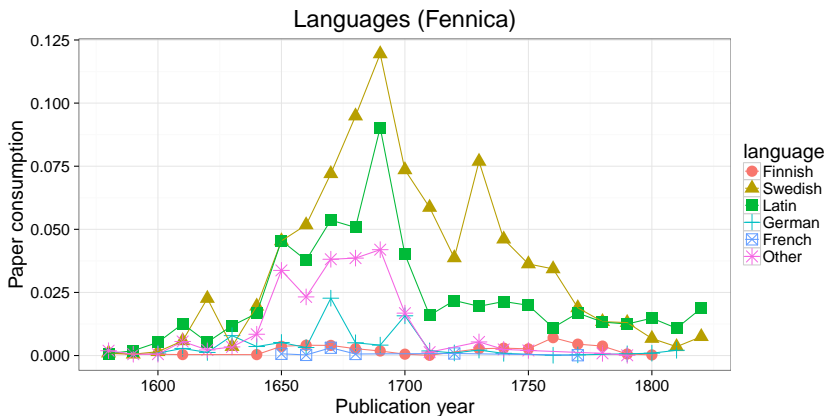
Devotional literature (catechisms, hymns, prayer collections, etc.)

- Form of literature denoting the advancement of reading in Finland in the nineteenth century. It has been unclear when does it show up as a relevant category.



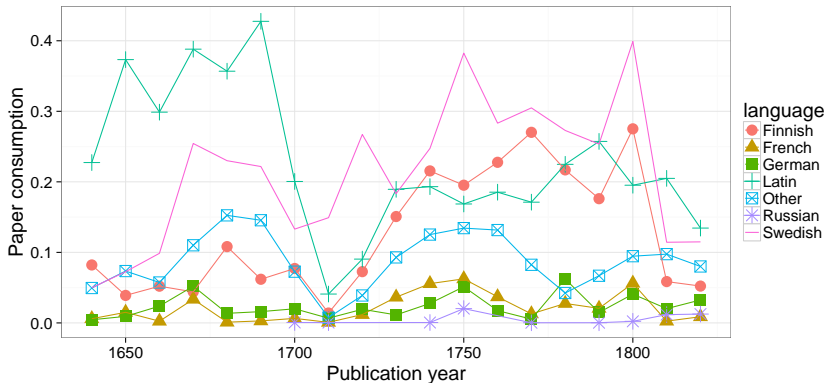
## Temporary sermons in Latin and Swedish

- ▶ play an important role in early modern knowledge production. It has not been analysed in what language they were in Finland (and Sweden).



## [Religious texts in Finland 3/3]

### Combining devotional literature and temporary sermons Languages (Fennica)



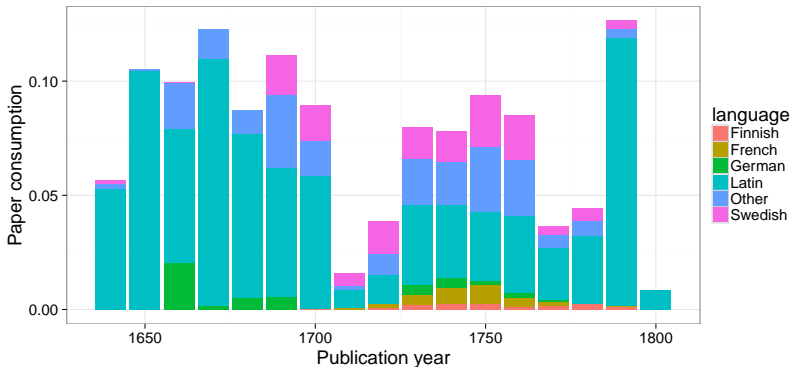
University curriculum in Turku 1640-1828

[University curriculum 1/5]

TODO: OISKO NÄMÄ VIELÄ SELVEMPIÄ VÄRIKKÄINÄ  
BARPLOTTEINA?

## Printing of theology in different languages in Turku

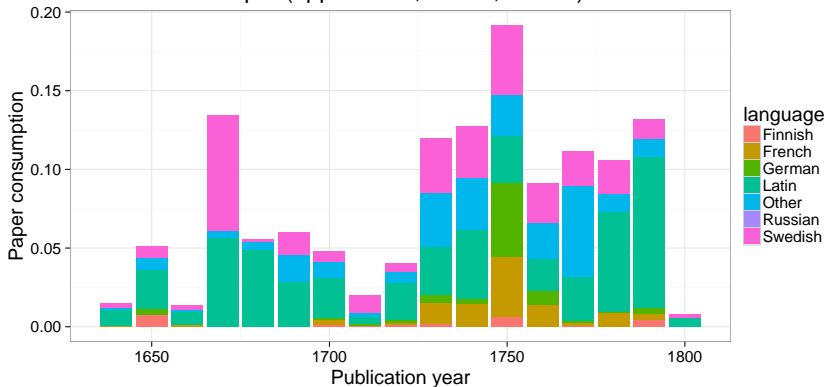
er (kirkkohistoria;raamatunhistoria;eksegetiikka;homiletiikka;dogmatiikka;teologia)



[University curriculum 2/5]

## Printing of history in different languages in Turku

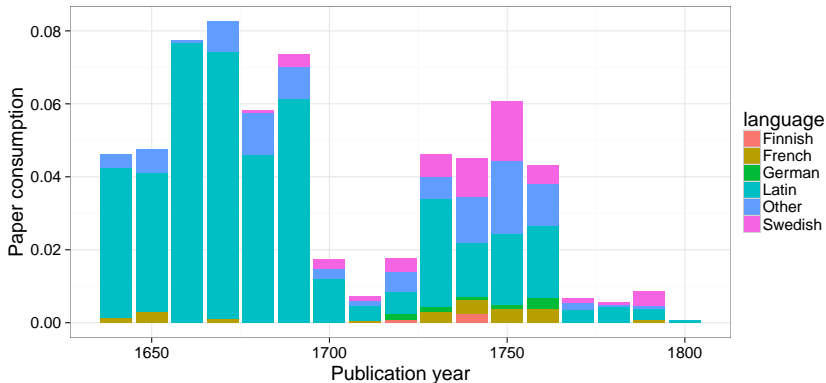
Paper (oppihistoria;antiikki;historia)



[University curriculum 3/5]

## Printing of philosophy in different languages in Turku

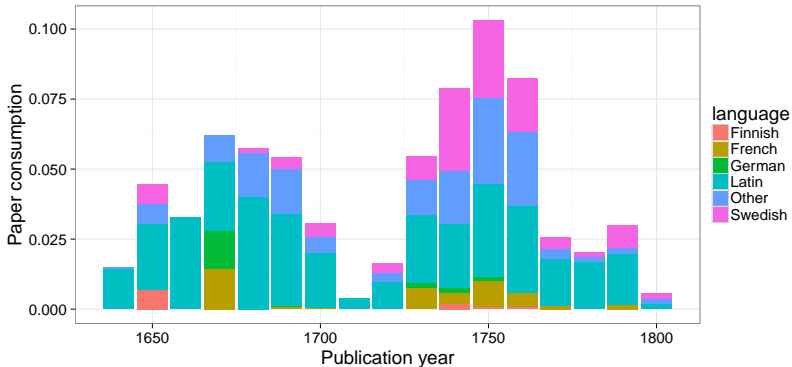
Paper (filosofia;luonnonfilosofia;metafysiikka;logiikka)



[University curriculum 4/5]

## Printing of natural science in different languages in Turku

ntieteeet;matematiikka;fysiikka;kemia;tähtitiede;maantiede;geodesia;geofysiikka;m

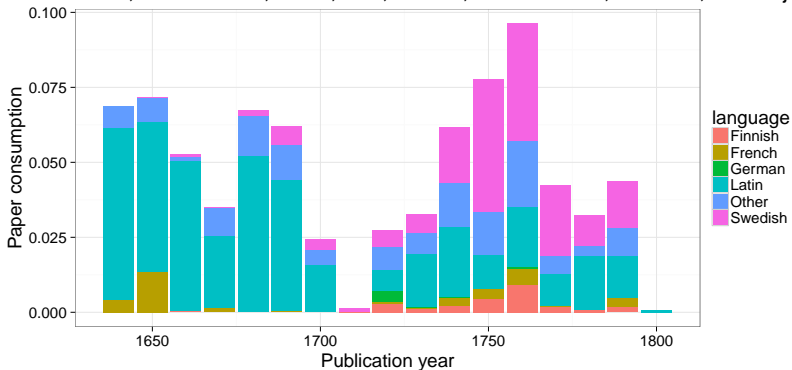




[University curriculum 5/5]

## Printing of economy and social science in different languages in Turku

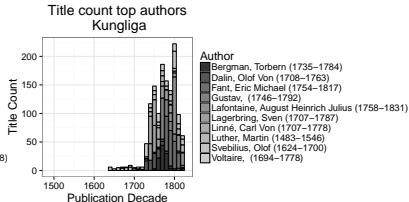
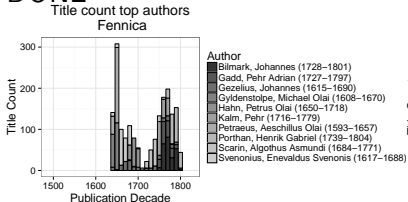
kuntafilosofia; valtiofilosofia; talous; raha; moraali; velvollisuudet; kasvatus; maanviljely



## Effects of the Enlightenment in Finland

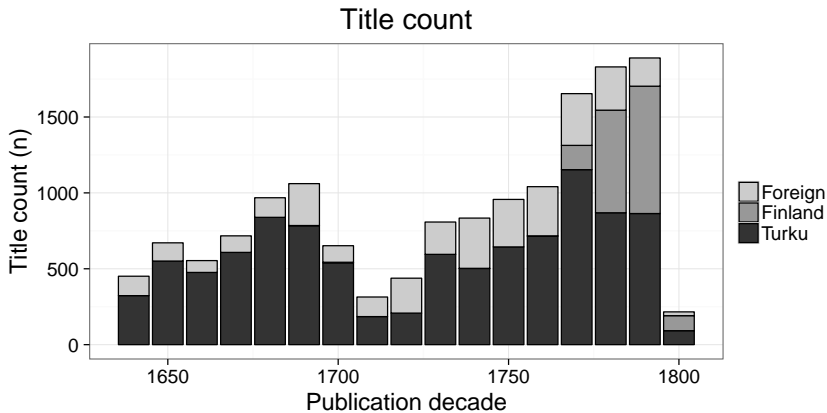
- ▶ Decline of metaphysics, rise of social and economic theory
- ▶ The Enlightenment literature read in Finland mainly printed elsewhere

TODO: KUVA PITÄIS RAJATA 1640-1828, EN ONNISTUNUT -  
DONE



## Finland in the Swedish context

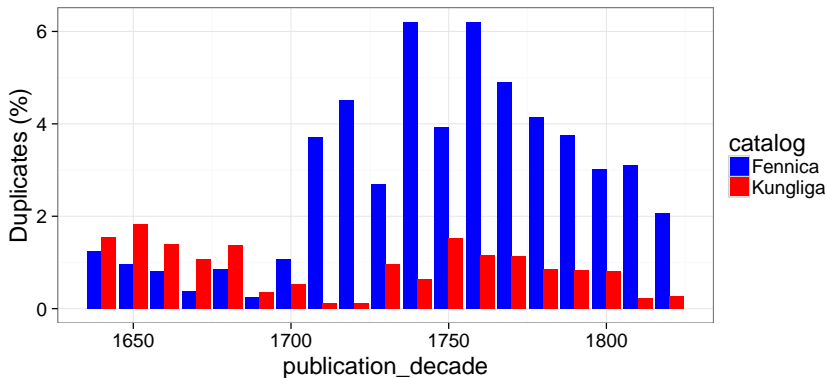
- Dramatic events regarding the diversity of “Finnishness” take place in the early nineteenth century — but the analysis of Finnish knowledge production 1828-2016 is for another day.



## Duplicate publications

TODO: General analysis (any simple picture) of duplicates between Kungliga and Fennica based on Hege's deduplication code.

Duplicates Inf--Inf



Thanks !

- ▶ Academy of Finland
- ▶ University of Helsinki
- ▶ National Library of Finland
- ▶ National Library of Sweden
- ▶ Digitalia / The Regional Council of South Savo