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

Mikko Tolonen, Jani Marjanen, Hege Roivainen, Leo Lahti

2016-07-14

## From particular data to global perspective?

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

**How?** Combine library catalogues (Fennica, Kungliga, ESTC, CERL HPB database)

**Important**: cleaning up the data (90% of the effort!) and considering 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.

**Overcoming a national gaze** by focus on knowledge production through more complex cross-national network of cities

#### Data: bibliographic catalogues 1640-1828

#### Fennica Finnish National bibliography

19241 documents 1640-1828

#### Kungliga Swedish National bibliography

▶ 69108 documents 1640-1828

#### Why this project?

 Visible roots of the diversity of "Finnishness" reflected in knowledge production, 1640-1828



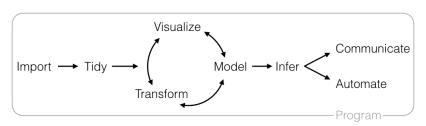
## Methods: Open data analytical ecosystem

**Customized** dedicated R packages for bibliographic analysis combine flexibility with automation

**Automated** scales well with new data and unforeseen changes; a million documents  $\sim 30$  minutes

**Open source** fully transparent and reproducible data analytics: https://github.com/rOpenGov/fennica

**Research potential** greatly underestimated; world is full of metadata collections



## Preprocess & Enrich

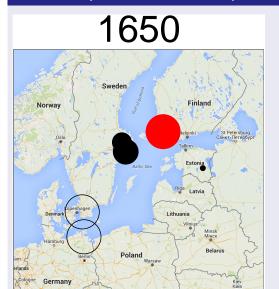
#### Clean up messy entries

```
polish_physical_extent("iii-xxiv, 118, [2] p.")$pagecount
## [1] 142
Augment data (geocoordinates, gender, ..)
get_country("Porvoo")
## [1] "Finland"
```

1. General trends and political events

#### [General trends & political events]

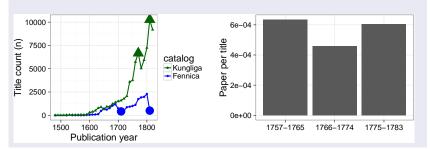
Turku as a Swedish University Town among Uppsala, Tartu and Stockholm (+ Lund & Greifswald)



#### [General trends & political events]

#### Publishing activity over time

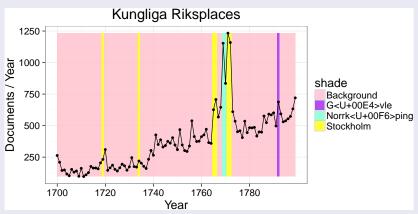
- ▶ 1700-1721 Fennica drop
- ▶ 1760-1770 Pamphleteering plays a crucial role during abolished censorship
- ▶ 1803-1815 Napoleonic wars



#### [General trends & political events]

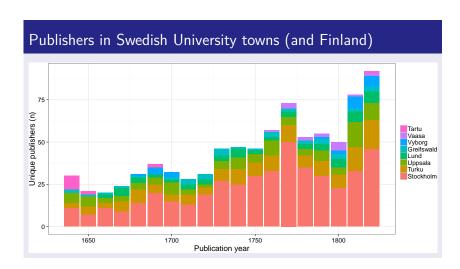
## Swedish knowledge production & cycles of representation

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



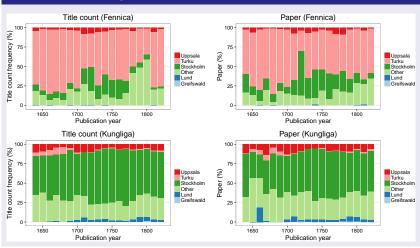
2. Publishers in Sweden and Turku

#### [Publishers in Sweden and Turku]



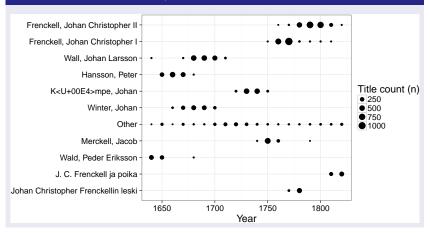
#### [Publishers in Sweden and Turku]

## Turku in Sweden: proportions for title count and paper in Swedish University towns



#### [Publishers in Sweden and Turku]

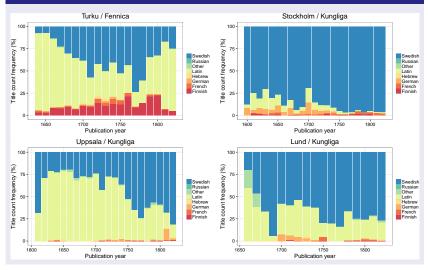
## Top publishers in Turku/Fennica



3. Languages and religious texts in Finland

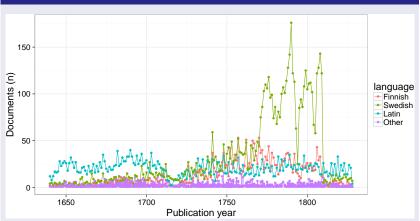
#### [Languages & religious texts in Finland]

## Different languages in Turku, Stockholm, Lund and Uppsala



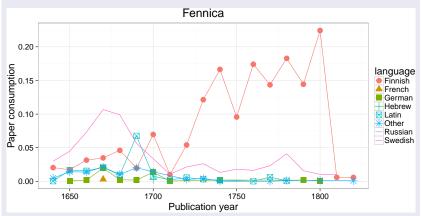
#### [Languages & religious texts in Finland]

## Topic richness per language (Finnish publications)



#### Devotional literature (catechisms, hymns, prayers, etc.)

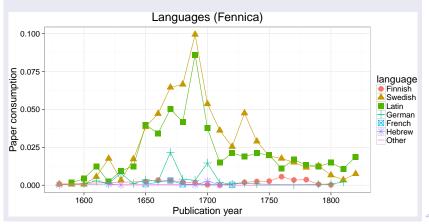
Form of literature denoting the advancement of reading in Finland in the 19th century. It has been unclear when does it show up as a relevant category.



#### [Languages & religious texts in Finland]

#### Temporary sermons in Latin and Swedish

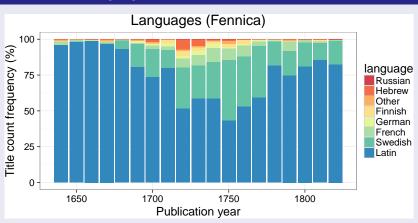
Important role in early modern knowledge production. It has not been analysed in what language they were in Finland (and Sweden).



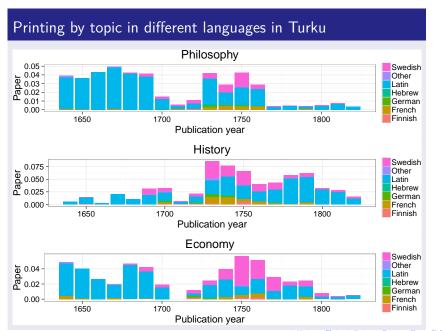
4. University curriculum and Enlightenment in Finland

#### [University curriculum & Enlightenment in Finland]

## Dissertation languages in Turku 1640-1828



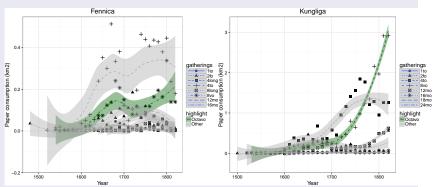
## [University curriculum & Enlightenment in Finland]



#### [University curriculum & Enlightenment in Finland]

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

Paper consumption: different document formats over time



#### Thanks!

#### Institutional support:

- Academy of Finland
- University of Helsinki
- Digitalia / The Regional Council of South Savo

#### Data providers:

- National Library of Finland
- National Library of Sweden

#### For more info, see:

► https://github.com/rOpenGov/fennica

## Duplicate publications in Fennica/Kungliga

