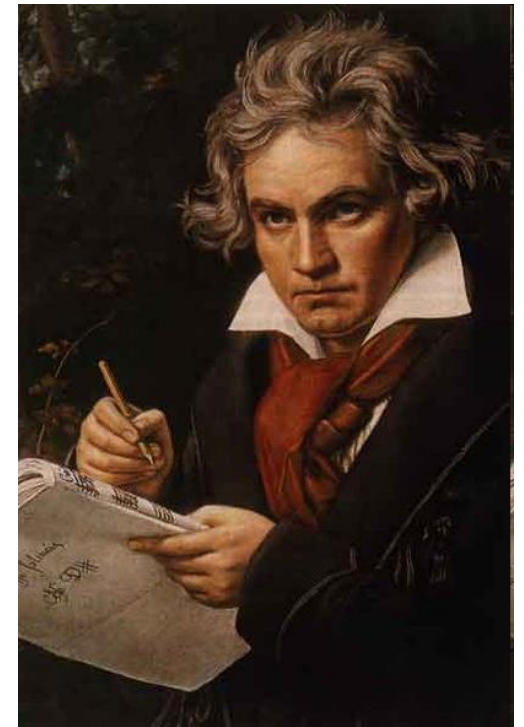


# **Personal relationships and the formation of cultural heritage: The case of music composers in history**



Karol Jan Borowiecki  
University of Southern Denmark

## **The cultural heritage of famous music composers**

- In my talk I will present evidence on the above topic based on historical periods, as
  - history offers great data,
  - history is persistent (Borowiecki, 2013),
  - study of creativity over ones lifetime becomes possible,
  - it allows to overcome methodological issues of mainstream research and
  - one can cover periods from pre-digitisation times, from before the telephone and radio was invented and mostly before the telegraph was in wide use.

## Schedule

Evidence on geographic clustering

Clustering and creativity

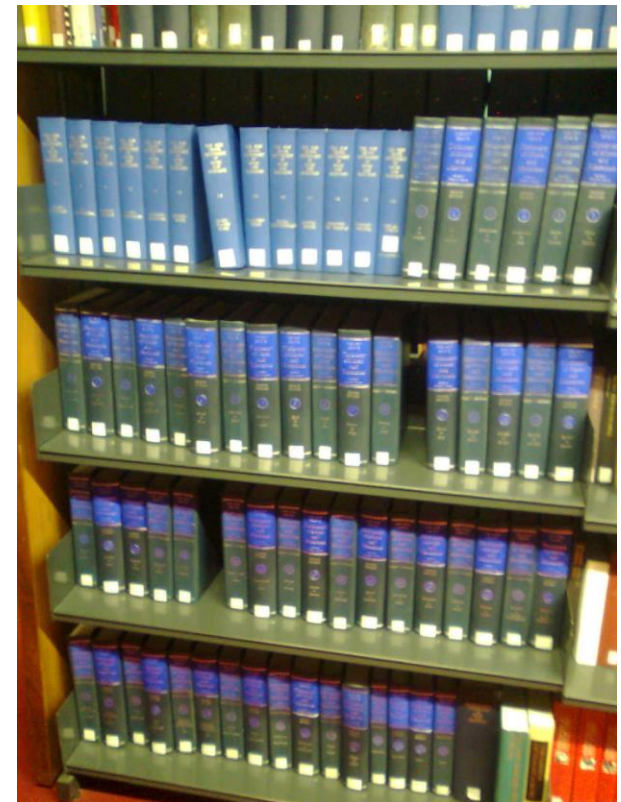
Relevance for nowadays

## **Selection of the sample**

- Take names of famous composers from Murray (2003) who conducted a reliable selection of creative people for several disciplines based on a number of international sources.

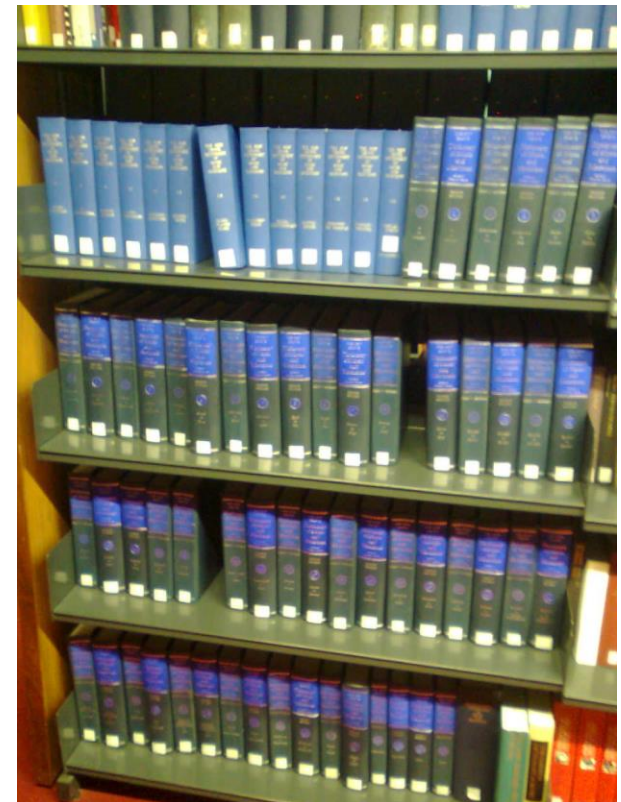
## Selection of the sample

- Take names of famous composers from Murray (2003) who conducted a reliable selection of creative people for several disciplines based on a number of international sources.
- Extract information on migration from Grove Music Dictionary.
- Time frame: obtain detailed records for 522 composers in about 6 months with research assistance.

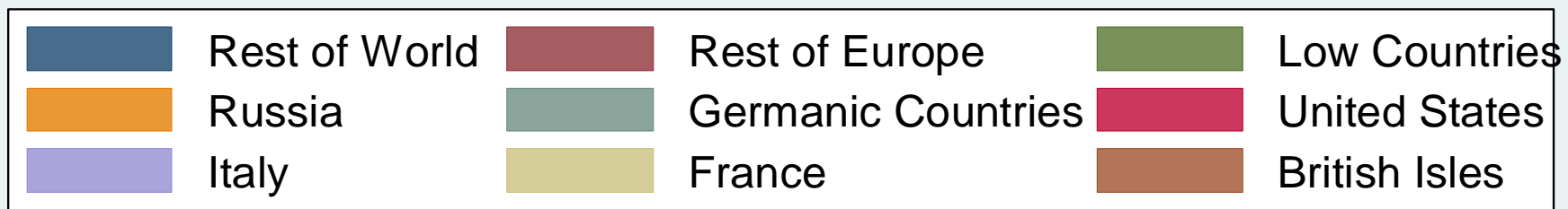
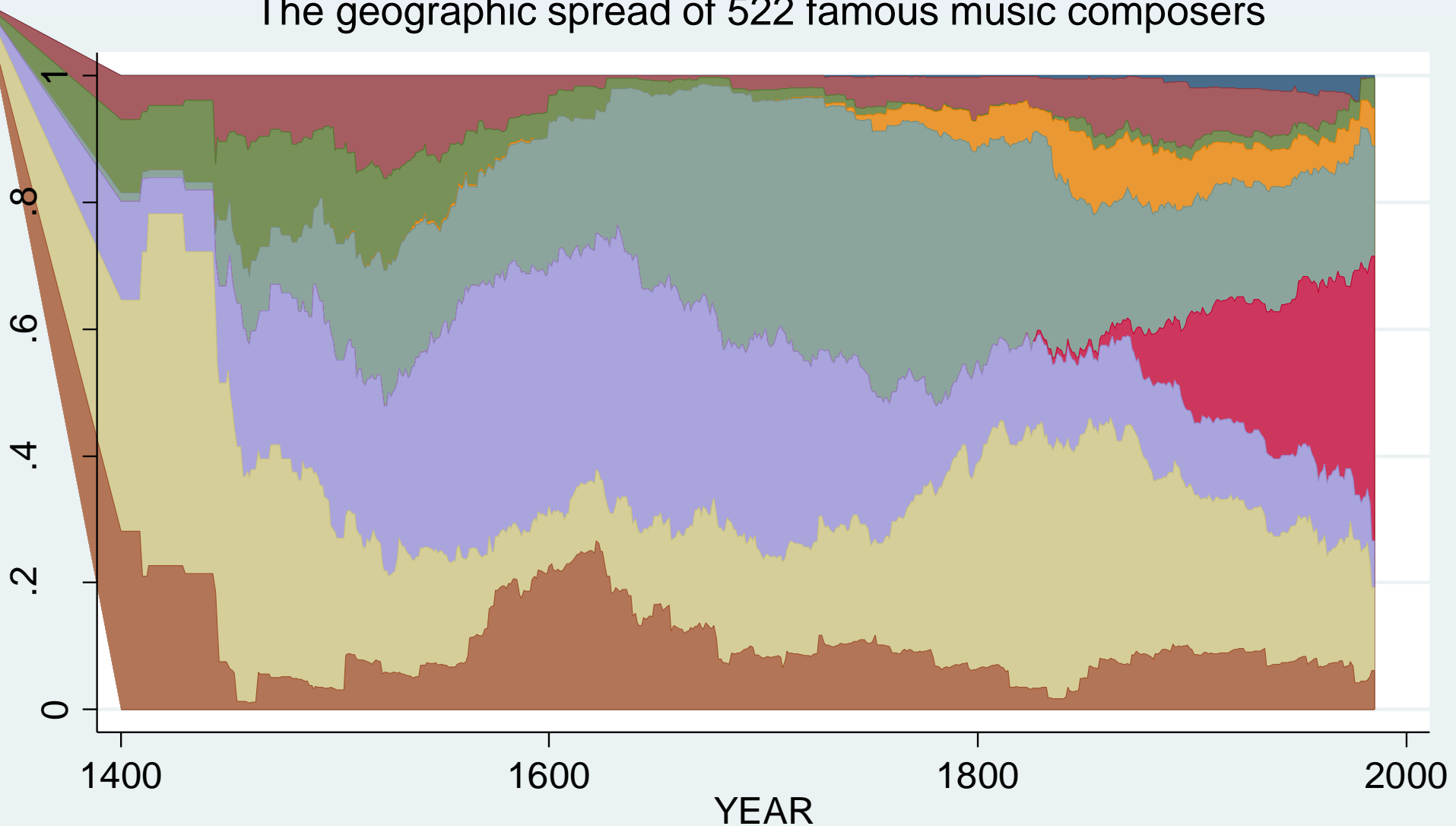


## Selection of the sample

- Take names of famous composers from Murray (2003) who conducted a reliable selection of creative people for several disciplines based on a number of international sources.
- Extract information on migration from Grove Music Dictionary.
- Time frame: obtain detailed records for 522 composers in about 6 months with research assistance.
- Alternatively, write a computer application which automatically extracts (less detailed) information for all composers (15'000+) covered in the electronic version of the Grove Dictionary (about 5 days for a java programmer).



The geographic spread of 522 famous music composers



## Type of Permanent Movement of Composers by Century

Century of Birth	Movement						All
	None		Internal		External		
	total	relative	total	relative	total	relative	
12th	2	0.50	2	0.50	0	0.00	4
13th	0	0.00	2	0.50	2	0.50	4
14th	2	0.18	8	0.73	1	0.09	11
15th	0	0.00	31	0.61	20	0.39	51
16th	14	0.13	66	0.63	24	0.23	104
17th	14	0.17	52	0.62	18	0.21	84
18th	16	0.17	41	0.44	36	0.39	93
19th	27	0.18	88	0.59	34	0.23	149
20th	2	0.09	16	0.73	4	0.18	22
All	77	0.15	306	0.59	139	0.27	522

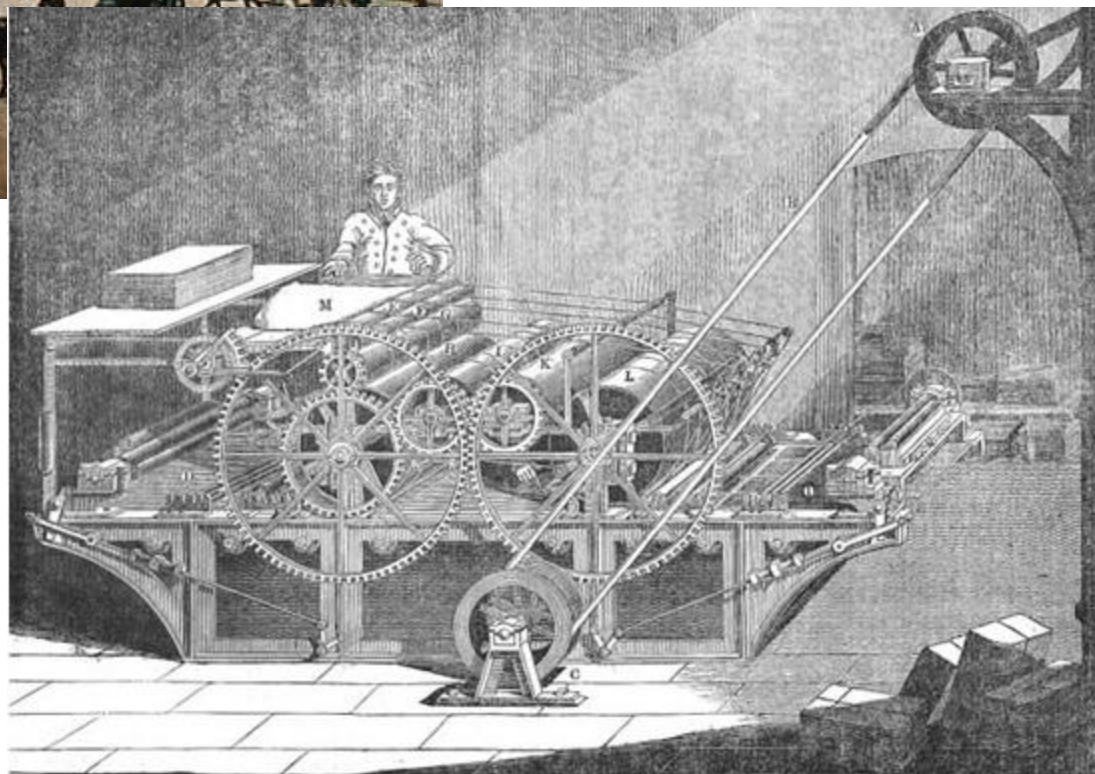


Table 6. Importance of cities. Word count per thousand words in the life section (N=14,087).

15th		16th		17th		18th		19th		20th	
Name	Count	Name	Count	Name	Count	Name	Count	Name	Count	Name	Count
Rome	0.694	Venice	1.163	Paris	1.108	Paris	2.31	Paris	2.071	Paris	1.065
Nuremberg	0.584	Rome	1.047	Rome	0.979	London	1.56	London	1.318	New York	0.822
Florence	0.472	Naples	0.745	Bologna	0.868	Vienna	1.267	Berlin	1.214	Berlin	0.654
Venice	0.434	Milan	0.551	Venice	0.832	Naples	0.879	Vienna	1.033	London	0.620
Strasbourg	0.383	Bologna	0.443	London	0.748	Berlin	0.726	New York	0.792	Moscow	0.455
Paris	0.375	Paris	0.442	Naples	0.561	Munich	0.511	Leipzig	0.732	Rome	0.442
Vienna	0.309	London	0.342	Vienna	0.497	Prague	0.495	Warsaw	0.654	Vienna	0.440
London	0.294	Florence	0.33	Hamburg	0.403	Rome	0.462	Prague	0.596	Prague	0.412
Leipzig	0.236	Nuremberg	0.317	Leipzig	0.372	Leipzig	0.452	Rome	0.482	Bucharest	0.295
Geneva	0.209	Madrid	0.312	Dresden	0.341	Venice	0.431	Moscow	0.422	Budapest	0.247

Note: The word count measures the occurrence of city names per thousand words in the main description.









## Schedule

Evidence on geographic clustering

Clustering and creativity

Relevance for nowadays

## The theory: Knowledge spillovers

Geographic proximity enables faster and easier knowledge spillovers between firms in an industry (Marshall, 1890, Arrow, 1962 and Romer, 1986).

## Anecdotal evidence

Carl Kragen writes to Robert Schumann (1810-1856):

*“Tomorrow (...) Liszt is to play at our house with Lipinski! Do come for it! Ah, if you could only induce Mendelssohn and his wife to come too!”* (Letter of 27 March 1840).



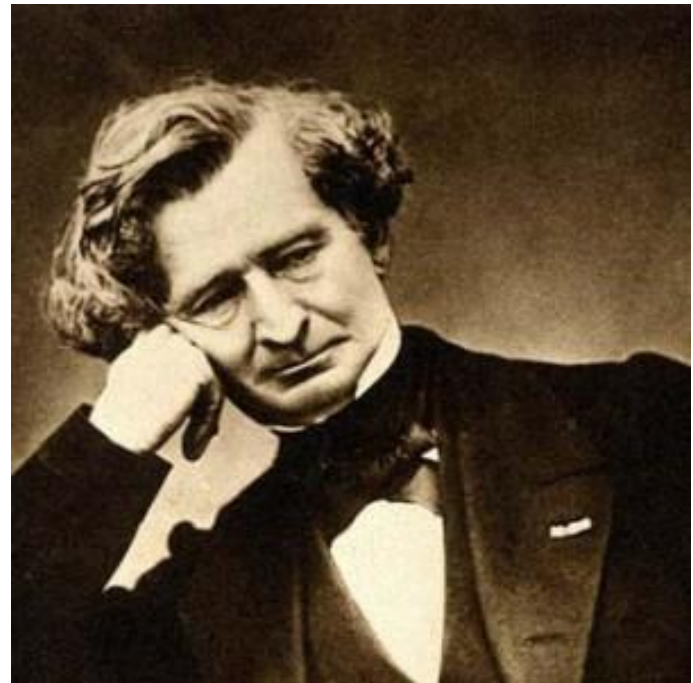
## The theory: Diversity

A high level of diversity in the cluster might lead to increasing returns (Jacobs, 1969).

## Anecdotal evidence

Hector Berlioz (1803-1869) writes to his sister Adele:

*“Last Monday we had a kind of little country outing. My friends came to spend half a day with us. They included famous musicians and poets, Messrs. Alfred de Vigny, Antoni Deschamps, Liszt, Hiller and Chopin. We talked and discussed art, poetry, thought, music, drama, in short everything that constitutes life (...)”* (Letter of 12 May 1834).





## The theory: Competition

Local competition in specialized, geographically concentrated industries is the biggest stimulus for growth (Porter, 1990).



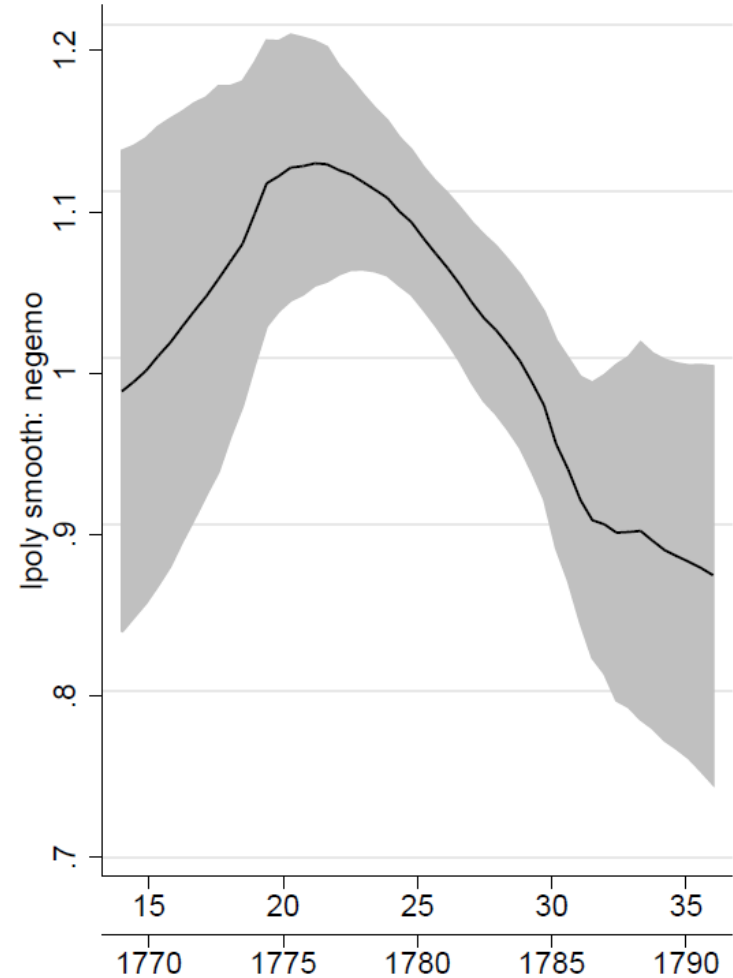
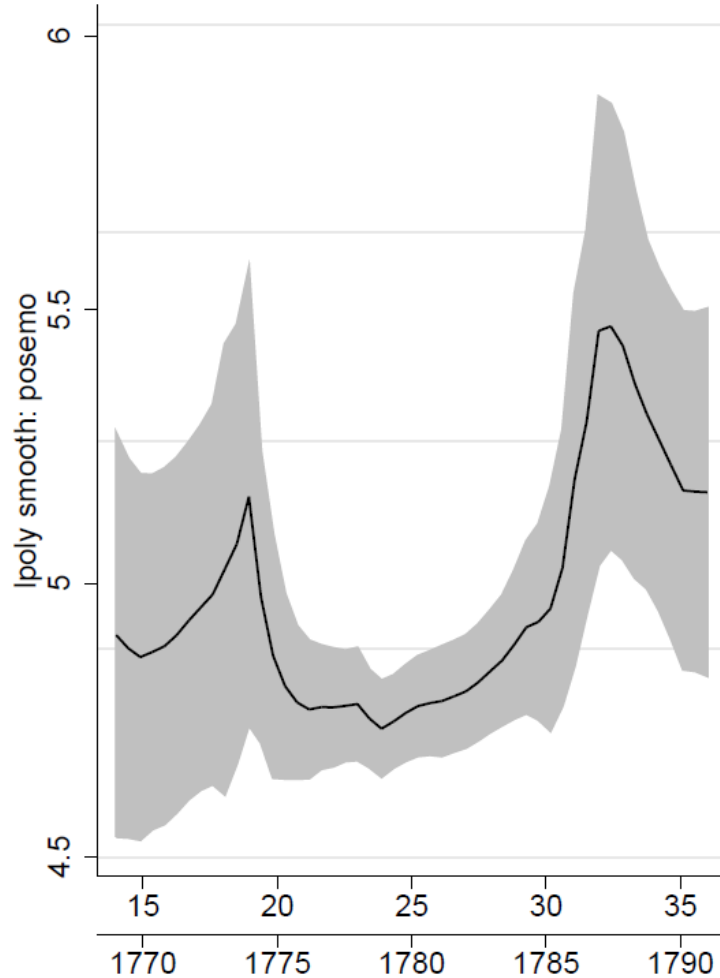
### Anecdotal evidence

Amadeus Mozart (1756-1791) is mostly motivated to outcompete his rivals:

*“In Paris they are accustomed to hear nothing but Gluck's choruses. Only place confidence in me; I shall strive with all my might to do honor to the name of Mozart. I have no fears at all on the subject.”* (Letter of 28 February 1778).



# Positive and negative emotions of Wolfgang Amadeus Mozart (1756-1791)

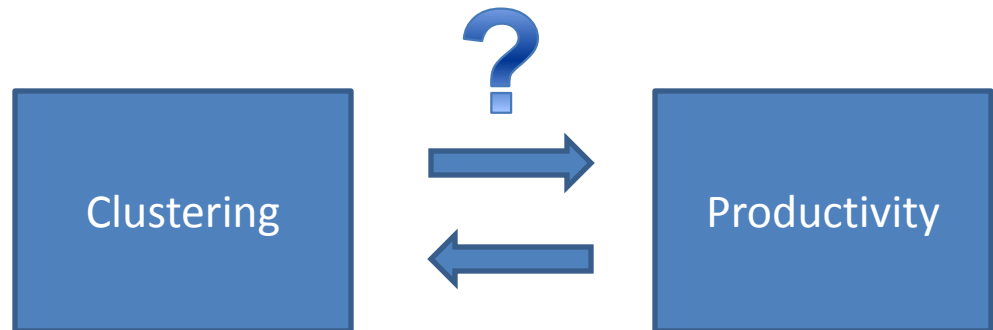


## Clustering and creativity of composers

- Let experts select the most influential works for the composers covered.
- From biographies we have the location where a composer was working when a composition has been written.
- And let's go a step further and investigate causality!

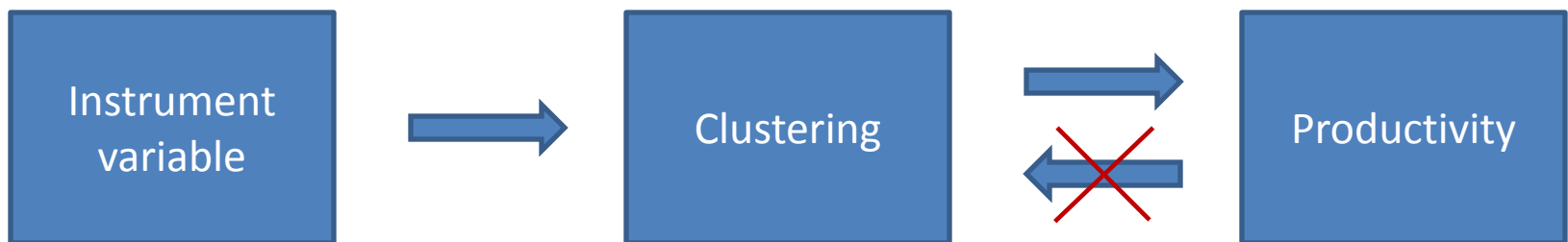
## Clustering and creativity of composers

- Let experts select the most influential works for the composers covered.
- From biographies we have the location where a composer was working when a composition has been written.
- And let's go a step further and investigate causality!
- Does clustering benefit productivity or are more productive individuals more prone to cluster?



## Clustering and creativity of composers

- Let experts select the most influential works for the composers covered.
- From biographies we have the location where a composer was working when a composition has been written.
- And let's go a step further and investigate causality!
- Does clustering benefit productivity or are more productive individuals more prone to cluster?



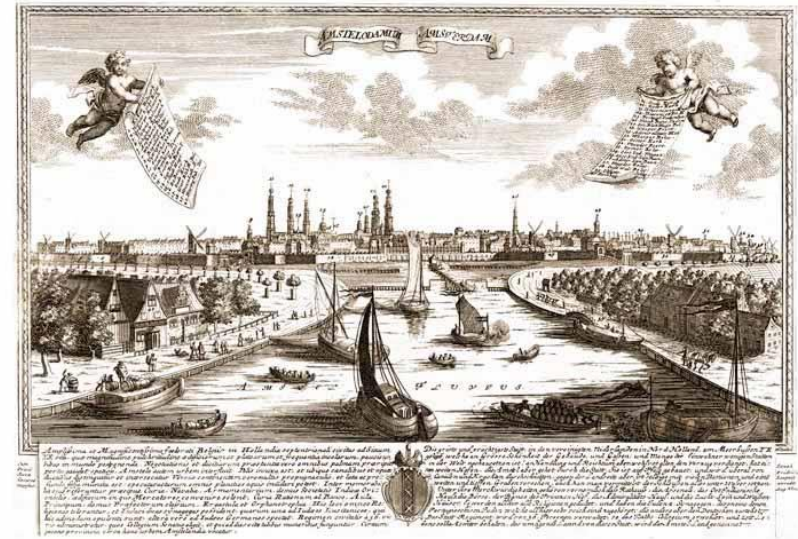
- Use an 'Instrumental Variable', e.g. geographic distance between composer's birthplace and a geographic cluster. Need a historical period when distance mattered: work with composers born between 1750 and 1899.

## Clustering increases creativity of composers

- One additional work has been composed every three years spent in either of these locations, which implies a **large productivity increase** of close to 50 per cent.
- Best composers and those who migrated to Paris from other cities appear to be the greatest beneficiaries of clustering.
- On life-time quality of composers: those who have chosen Paris, Vienna or London as their primary work location have been ranked significantly higher on Murray's Index Score (which is based on the length of biographical entries).
- An arising question is whether the disclosed location effect is attributable to the concentration of other artists (e.g. peer-effects) or rather caused by some large city specific factors.

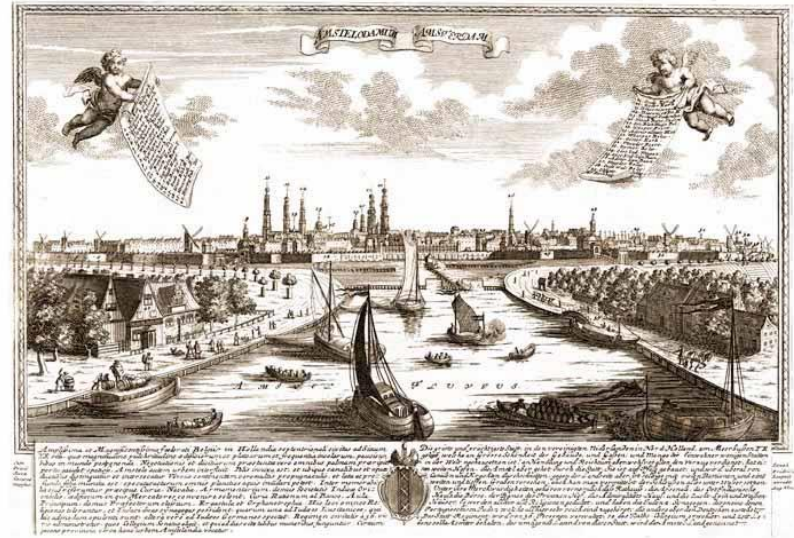
## Clustering and creativity of composers

- Study location premium in **large cities** that were not a common destination for classical composers (i.e. large cities with few composers; e.g. Amsterdam), or



## Clustering and creativity of composers

- Study location premium in **large cities** that were not a common destination for classical composers (i.e. large cities with few composers; e.g. Amsterdam), or



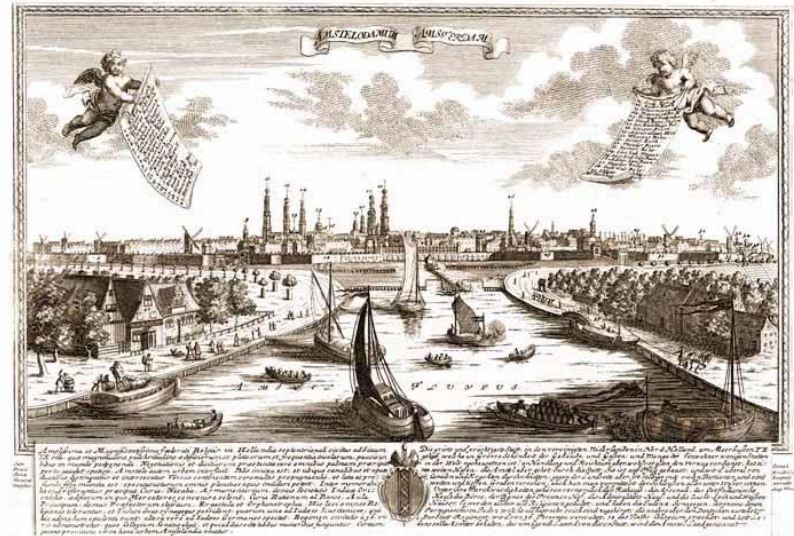
- in **historical cluster locations** which once served as geographic clusters and supposedly own still much of relevant cultural infrastructure (e.g. Venice).





## Clustering and creativity of composers

- Study location premium in **large cities** that were not a common destination for classical composers (i.e. large cities with few composers; e.g. Amsterdam), or



- in **historical cluster locations** which once served as geographic clusters and supposedly own still much of relevant cultural infrastructure (e.g. Venice).

- The conducted placebo test imply that there is **no productivity benefit** in large cities nor in cities that have been once geographic clusters for classical music.

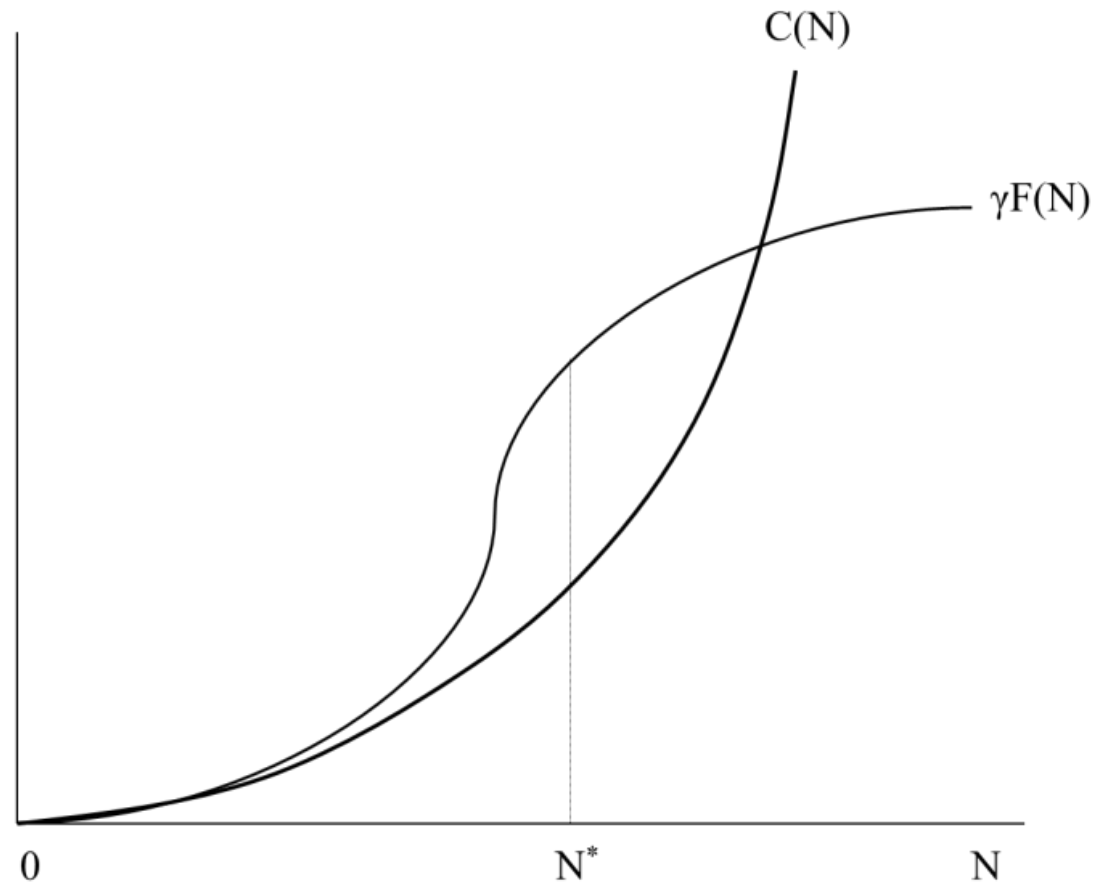




## **The role of peer-effects in music composition**

- One can also look directly what is the impact on productivity of an additional composer located in same city. In other words, how important are peer-effects.
- I estimate the impact of the number of peers located in the same place and time on ones creativity.
- Composers' productivity increases with the number of composers, but...
- ...the association is not linear!

**Figure 2. The determination of population of composer**



**Figure 3. Productivity gains as a function of composer population**

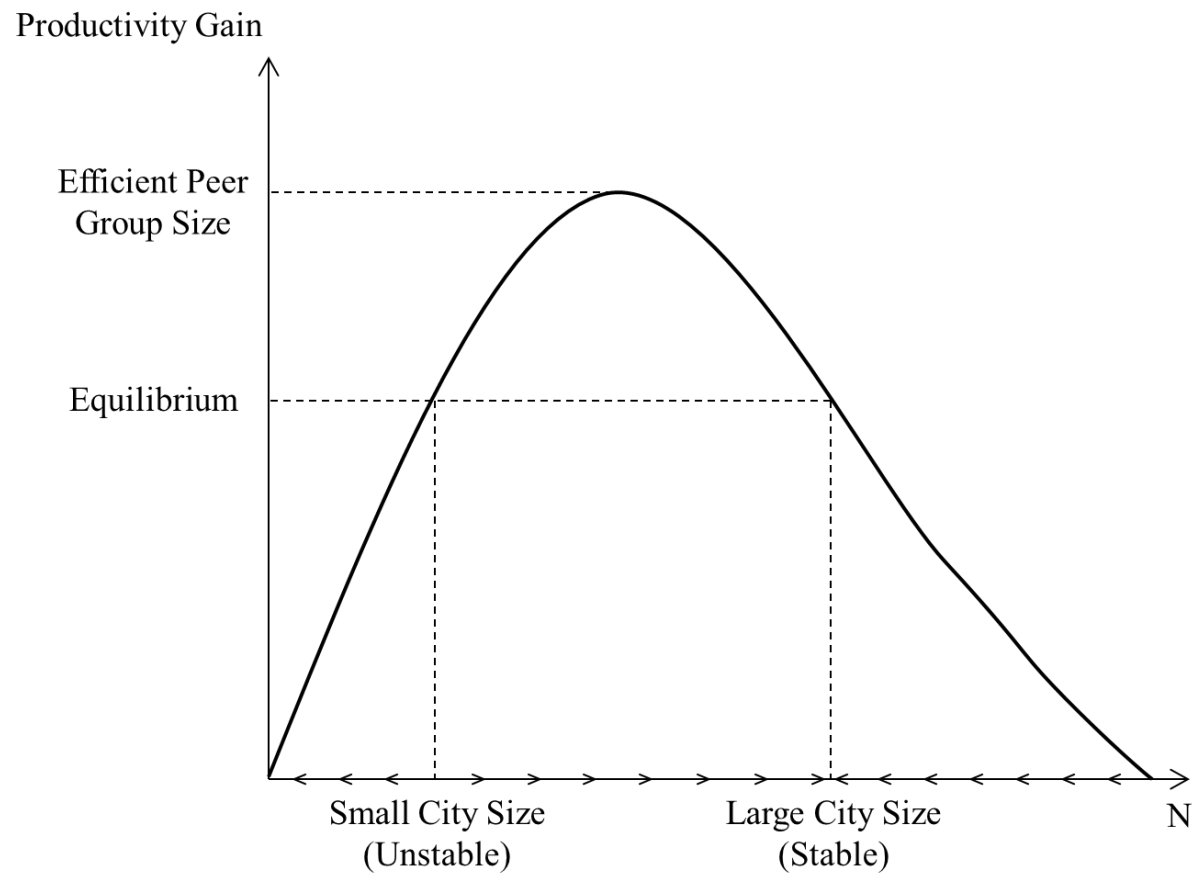
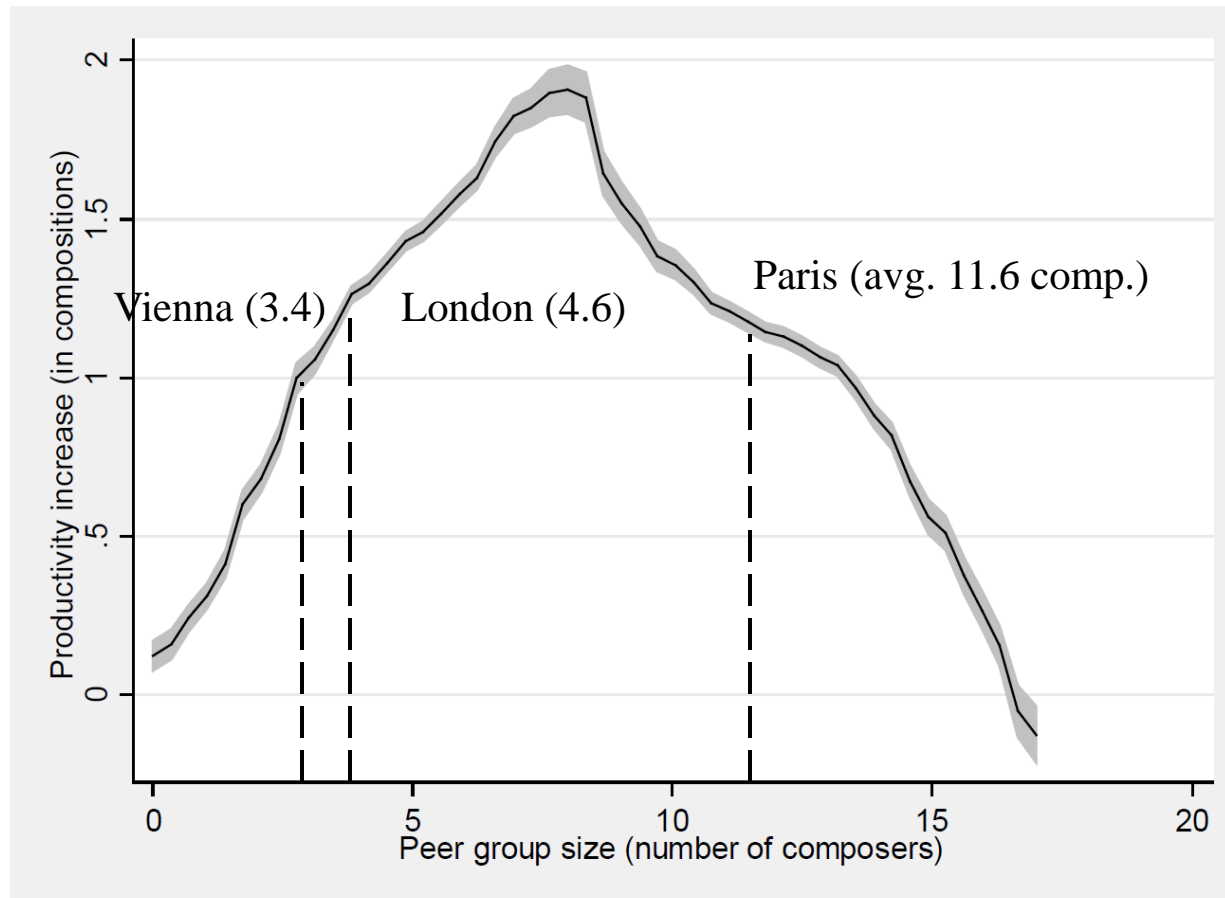


Figure 6. Productivity gains and peer group size

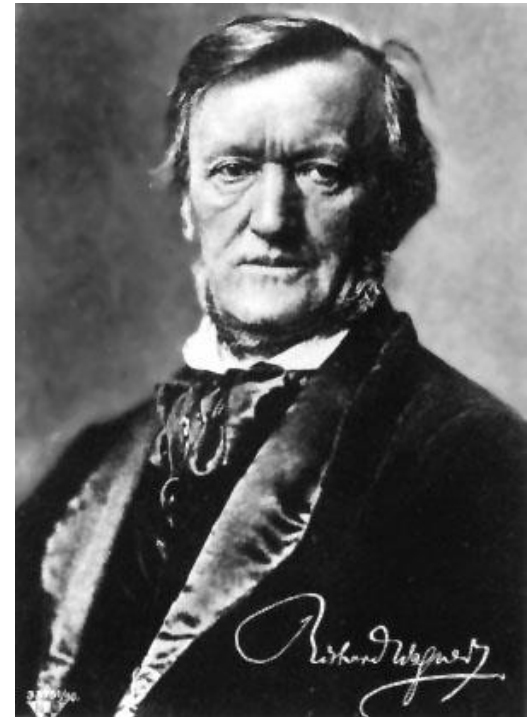


The depicted prediction is based on a local polynomial regression method with an Epanechnikov kernel and it is presented along with a 95 per cent confidence interval. The estimation is based on the model presented in column 4 of Table 3.

## Status anxiety and increased stress levels in geographic clusters

One of Wagner's rehearsals in Paris, as described in the composer's memoirs, was attended by Berlioz - his rival in opera composition:

“What is certain is that at that time I felt like a little schoolboy next to Berlioz; (...) Berlioz (...) remained silent throughout; he neither encouraged nor discouraged me, but only sighed with a weary smile that ‘things in Paris were difficult’” (Wagner, 2008).





## Clustering and longevity in cities

- Composers' productivity increases due to clustering and the associated peer effects. But at what cost?
- Borowiecki and Kavetsos (2012) investigate the impact of peer competition on composers' longevity.
- Work-related stress and status anxiety can be detrimental to well-being and might hence impact longevity (medicine literature).
- A one percent increase in the number of composers located in the city, results in a shorter duration of life by about 9 weeks.
- Besides the widely known economic benefits associated with competition, these findings suggest that significant negative welfare externalities exist as well.

## Conclusions on geographic clustering and formation of cultural heritage

- I have talked about some ways to identify important creators and measure their artistic creativity.
- The results point at significant clustering patterns of famous music composers, primary by an impressive migration rate.
- The disclosed cluster cities shift over time.
- Those who cluster experience large increases in productivity.
- The observed gains are attributable to a large extent to peer effects (possibly at a diminishing rate and possibly at a non-negligible cost of shorter life).



## Schedule

Evidence on geographic clustering

Clustering and creativity

Relevance for nowadays

## How does digitisation (possibly) affect creation of heritage?

- Digitisation affects the cost of communication and costs of exchange of information and ideas.
- Access to music by audiences and promotion of works by composers is significantly easier.
  - Music can be downloaded online (legally or not).
  - Radio stations are now even better accessible via online streaming.
  - Digital broadcasting expands the capacity of live performing arts venues (Bakhshi and Throsby, 2014).
- Competition increased markedly.
  - It is much more difficult to excel; increased status anxiety may partly explain why depression rates are at all their all-time peak (McManus et al., 2000; National Institute of Mental Health, 2007).
  - The increased access to global markets creates also large chances for newcomers (downloads, music streaming, etc.).
  - It also clearly benefits consumers of culture – the variety is huge.

## Can digitisation replace face-to-face contact?

- Face-to-face interaction in the art and music worlds of New York City is essential nowadays (Currid, 2007a, 2007b, 2009). The value of physical proximity for the fashion industry is significant (Rantisi, 2002, Storper and Venables, 2004).
- Creative people require personal interaction in order to exchange their *intangible* ideas and to learn.
- Knowledge spillover within a creative discipline and benefits experienced from exchange with other people involved in other disciplines benefits probably persist.
- Be it visual artists, musicians, writers, film-makers, or even entrepreneurs, face-to-face contact and observation of other persons' behaviour or creative production (processes) might constitute important sources of productivity increases.
- Creative milieus influence the economic welfare and quality of life in urban agglomerations (Lloyd, 2006 and Florida, 2002).

Thank you for listening!



**Karol Jan Borowiecki**  
University of Southern Denmark  
kjb@sam.sdu.dk

## References

[Agglomeration Economies in Classical Music](#), **Papers in Regional Science**, 2014, forthcoming;

[Geographic Clustering and Productivity: An Instrumental Variable Approach for Classical Composers](#), **Journal of Urban Economics**, 2013, 73(1): 94-110;

[Historical Patterns Based on Automatically Extracted Data: the Case of Classical Composers](#), joint with John O'Hagan (TCD), **Historical Social Research** (Section 'Cliometrics'), 2012, 37(2): 298-314;

[Birth Location, Migration and Clustering of Important Composers: Historical Patterns](#), joint with John O'Hagan (TCD), **Historical Methods: A Journal of Quantitative and Interdisciplinary History**, 2010, 43(2): 81-90;

[Historical Origins of Cultural Supply in Italy](#), working paper;

[Peer Concentration and Longevity: Some Evidence on Agglomeration Diseconomies for Classical Composers](#), joint with Georgios Kavetsos (London School of Economics), working paper;

[How Are You, My Dearest Mozart? Well-being and Creativity of Three Famous Composers Based on their Letters](#), working paper.