

Italian sociology: A community of disconnected groups

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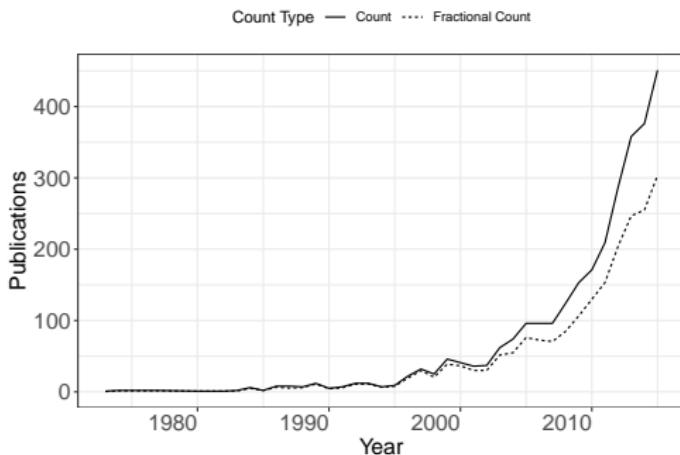
- Quantity vs. quality and the hegemony of quantitative research evaluation
- Funding, promotion and reputation circulation in 21st century
- Responsible [use of] metrics
 - Peer review vs. bibliometrics, informed peer review and contextualized scientometrics
- Goal displacement?!

- **Matteo effect**, winner takes all?
 - Highly prolific scientists attract higher collaborations from other scientists
 - Attaching preferably to a few **star scientists/leaders**?
- **Fragmentation** of ideas, sociology as a *interstitial science*!
 - Methodologists bridging the islands?
- [Sociological] **small world** of disconnected islands?
- Embeddedness and **organizational ambiguity** at work?
- **Core** of leaders and **periphery** of followers?
- **Sum up**: Some farther away, some closer to our quantitative focus

Data on all Italian sociologists

DZHW

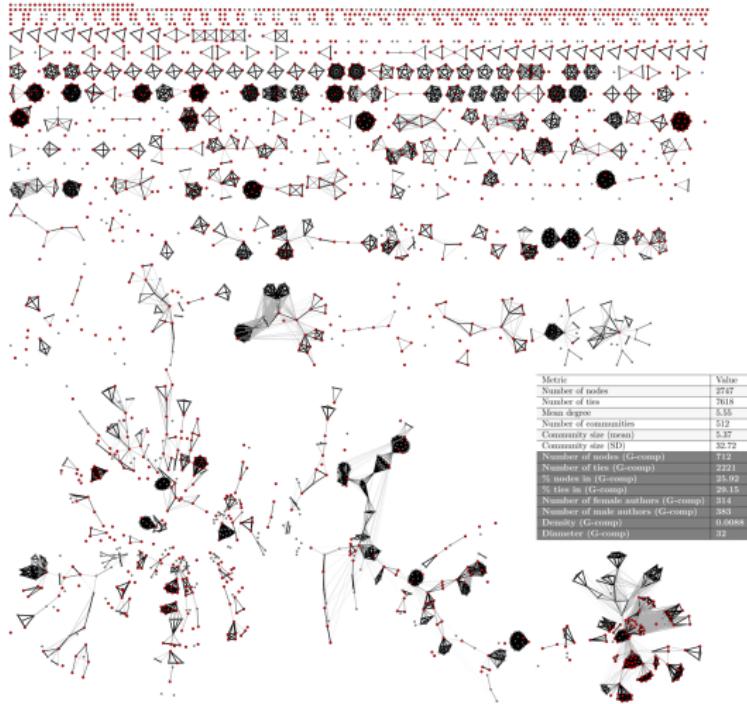
- 1,029 professors & 198 postdocs
- 3,168 papers, 1973-2016
- 55% Male, 45% Female
- Only 64% of 1,227 had at least 1 article
- It seems multiple author articles are rather recent



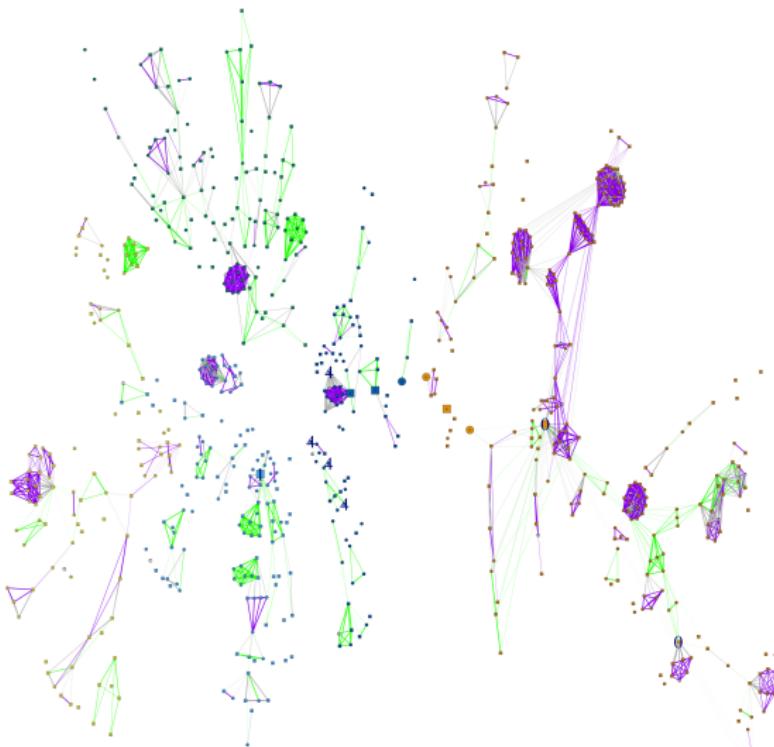
- ① A community that is between **humanities** scholars, who are predominantly qualitative, anti-bibliometric and “**hard**” scientists, who are quantitative with tendencies close to *big science*
- ② The **co-existence** of different epistemic communities makes sociologists an interesting case to examine contrasting forces towards internationalization
- ③ Research on scientists' productivity in Italy have looked mainly at the case of *hard sciences* stating that research in humanities and social sciences cannot be examined quantitatively

- Cross-fertilization between **computational sociology & science studies**
- API calls & web scrapping for data gathering
- Text analysis, structural topic models, VOS algorithm
- Network analysis, [temporal & Leiden, CPM: $\gamma = 2 \times 10^{-4}$] community detection and ERGM
- Code, data, analysis and report are all reproducible (hosted on Gitlab)

A community of disconnected groups



Giant connected component



Largest & most stable communities

Table 2: Gender composition and internationality of members of the communities detected from the giant component (Percentages are calculated by rows separately for gender and country)

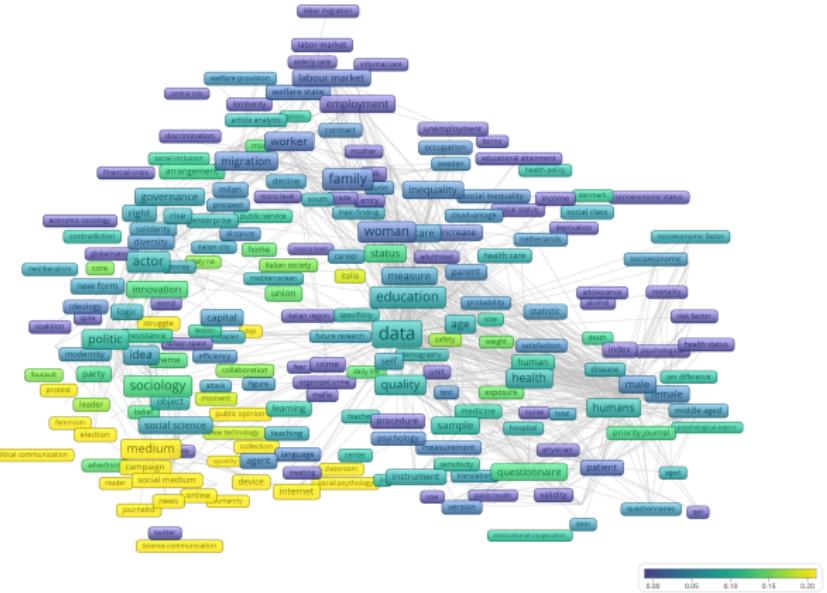
Community	# members	Gender			Country			
		Female	Male	Missing Gender	Europe	Italy	Other	Missing Country
0	254	43%	54%	3%	54%	29%	11%	5%
1	142	50%	49%	1%	36%	55%	6%	3%
2	122	38%	61%	1%	37%	56%	3%	4%
3	103	45%	54%	1%	41%	44%	5%	11%
4	91	47%	49%	3%	32%	57%	9%	2%

Table 3: Sectors composition of members of the communities detected from the giant component (Percentages are calculated by rows)

Community	# members	Scientific Disciplinary Sectors						
		postdoc	SPS/07	SPS/08	SPS/09	SPS/10	SPS/11	Missing Sector
0	254	2%	1%	5%	0	0%	0%	91%
1	142	2%	6%	3%	8%	1%	1%	78%
2	122	5%	10%	1%	7%	0	1%	76%
3	103	2%	4%	2%	12%	1%	0	80%
4	91	1%	7%	7%	0	1%	2%	82%

Community 0 (SPS/08)

- 65% foreigners
- Medium, science communication, social medium, internet, political communication & public opinion



Community 1 (SPS/09, SPS/07)

- 50% female, 49% male, 55% Italian
- Family, inequality, welfare provision, elderly care, health care, parent, medicine, financial crisis & governance



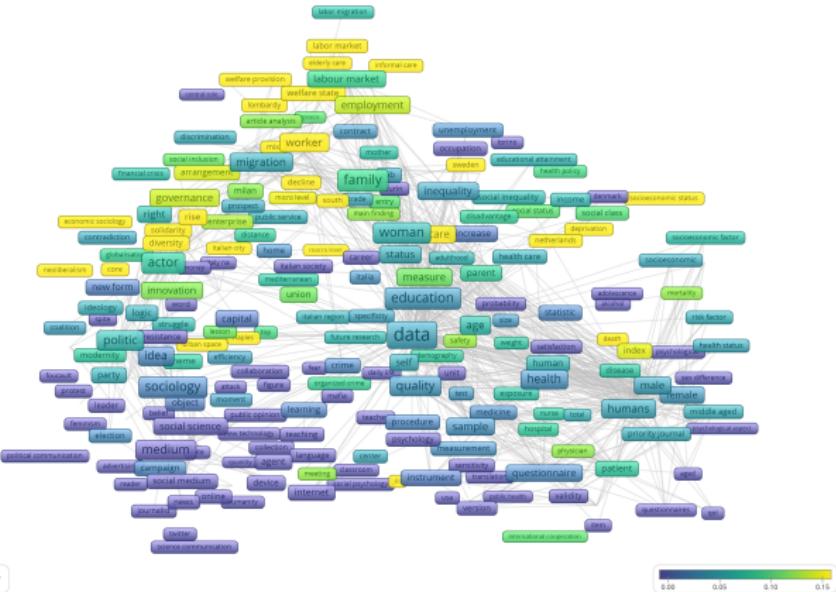
Community 2 (SPS/07, SPS/09)

- Highest gender difference (61% vs. 38%) & postdocs, 56% Italian
- Data, probability, weight, test, education, labour market, employment, unemployment



Community 3 (SPS/09)

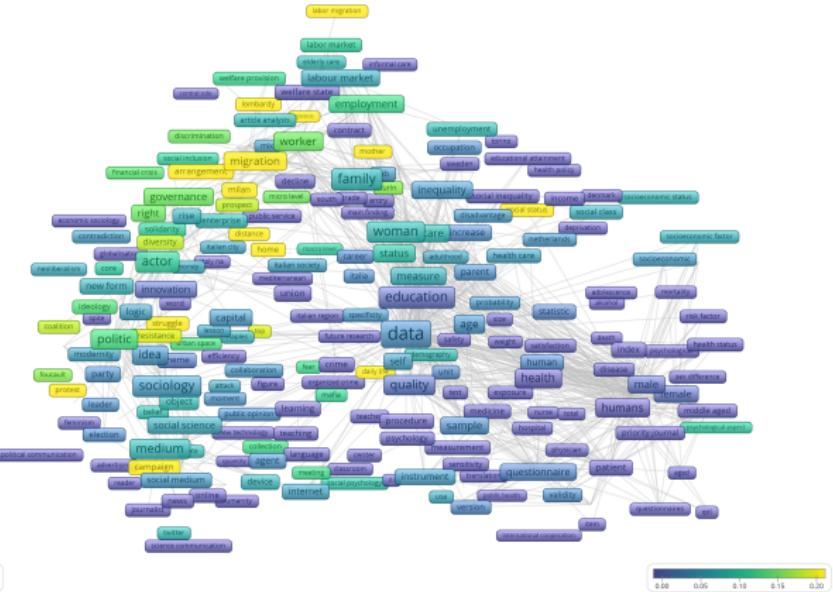
- 54% male
- Governance, employment, worker, welfare state, neoliberalism



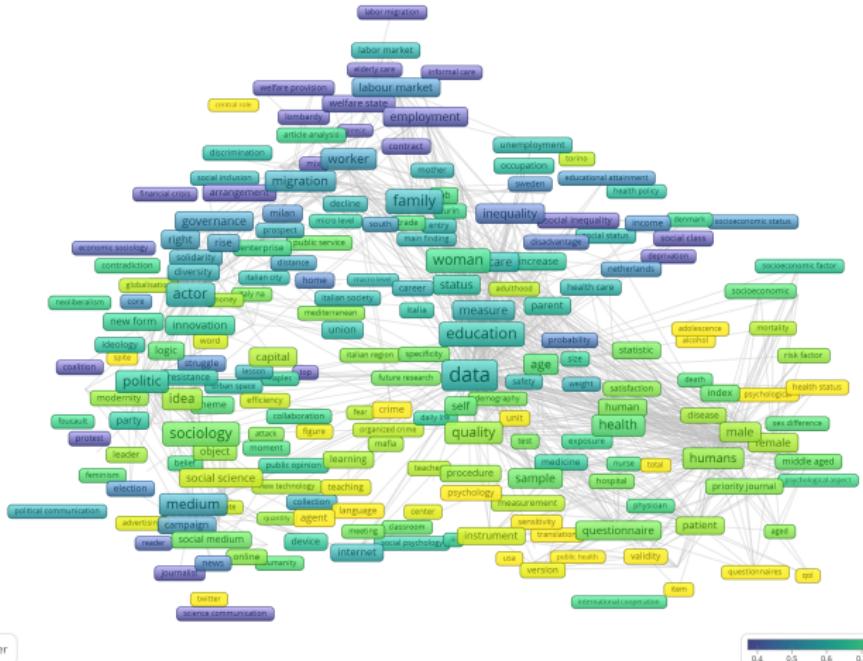
Community 4 (SPS/07, SPS/08, smallest comp)

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- 57% Italian, 4 of the 7 most prolific authors
- Migration, home, labor migration, daily life & social status



Non G-comp members



VOSviewer

ERGM (homophily, structural & community effects) DZHW

Table 7: ERGMs results explaining effect of author attributes and structural variables on coauthorship tie existence

		The Giant component of Italian sociologists and their coauthors			
		ERGM Models			
	(1)	(2)	(3)	(4)	
Ties	-4.549*** (0.022)	-4.354*** (0.050)	-10.033*** (0.411)	-10.080*** (0.786)	
Preferential attachment	15.095*** (4.421)				3.943** (1.874)
Homophily Females		0.002 (0.059)	0.051 (0.061)	0.067 (0.200)	
Homophily Males		0.281*** (0.049)	0.266*** (0.050)	0.229 (0.160)	
Community 0			7.017*** (0.409)	7.071*** (0.727)	
Community 1			7.067*** (0.412)	7.150*** (0.723)	
Community 2			7.231*** (0.413)	7.297*** (0.823)	
Community 3			7.420*** (0.414)	7.465*** (0.817)	
Community 4			7.557*** (0.415)	7.630*** (0.725)	
Europe		1.226*** (0.051)	1.100*** (0.054)	1.104*** (0.242)	
Italy		0.600*** (0.057)	0.743*** (0.061)	0.706*** (0.204)	
Other countries		1.546*** (0.170)	1.180*** (0.178)	1.205 (0.860)	
Homophily Total Pubs		0.060*** (0.002)	0.064*** (0.002)	0.066*** (0.018)	
Homophily First Pub		-0.092*** (0.006)	-0.094*** (0.007)	-0.094*** (0.019)	
Homophily Last Pub		-0.372*** (0.014)	-0.368*** (0.014)	-0.368*** (0.040)	
Akaike Inf. Crit.	25,237.220	22,732.670	16,479.220	16,353.120	
Bayesian Inf. Crit.	25,268.540	22,826.640	16,625.400	16,520.190	

Note:

*p<0.1; **p<0.05; ***p<0.01

- Looked at:
 - *Community* membership & evolution
 - *Substantive* similarity & research communities
 - ERGM with homophily, structural & community effects
- Found that:
 - High **disconnectedness** vs. mathematical simulations (512 Comp., 25.92% (29.15%) nodes (ties) in G-comp)
 - Relatively **high** rate of change in communities (even G-comp) members, compared to all sociology & other cases
 - **Male newcomers** are more likely to stay, join the core and continue in academia
 - 5 *largest* and *most stable* research communities in Italian sociology
 - Collaboration ties were mainly driven by the *research focus*
 - Other factors, such as *preferential attachment*, *gender* and *affiliation* homophily were also important
 - Gender fades away

- A quantitative look at academic work in 21st century
- Academics today are embedded in a dual context as if they were living a double life
- We were focused on the tension between “**publish or perish**” from one hand and **being part of the “scholarly community”** on the other
- Variety of **embeddedness scenarios** to see how sociologists reacted to this hyper-competitive academic landscape
- We found that the **quantitative evaluation** mantra in sociology is **not** inspiring a clear stream of behavior, mixture of ambiguous signals with disconnect from reward system causes sociologists to continue in an unknown state
- They are *not* yet as close to hard sciences to be competition driven, thus causing them to present humanities like behaviors (e.g. lack of care for citations)
- There are many criticisms of **quantitative evaluation** while not much alternatives are introduced
- I feel it is time to *give voice* to those under evaluation to tell us why they don't comply with the currently introduced motivations

- Success stories only!
- Positive collaboration only!
- Scopus indexed publications only!
- One mode projection of bipartite *paper-author* ties which causes artificially high cliquish behavior and could be better studied with bipartite modelling frameworks
- We couldn't account for motivations (more on this in next slides)

Thanks for your attention

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