

Changes in the connection networks of MEPs

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2023

Introduction

By its plastic nature, human connections change over time, especially when outside effects take place. However, in the case of policy makers, such changes will sooner or later have consequences to our life (As we live in the EU.)

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- How smaller networks inbetween MEPs look like, their size and their quantity.
- **Identifying key decision and policy makers.**
- **How events and occurrences shape the form and topology of the network.**

All of these are helpful in understanding the processes regarding proposals and how they evolve into enacted laws.

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- A more recent topic of interest might be the Russian-Ukrainian conflict and how it altered connections within the European Parliament.
- For now, we focused on gathering information on **the whole dataset at once**, and we will focus on the changes over time in future research

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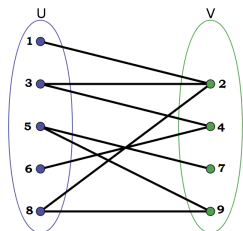
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A bipartite graph:



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Alternatively weighted projection could be used (where we reward secluded document matching and punish popular document matching)

Analysis of activity by country

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Country	Contributions
 Germany	5539
 France	4242
 Spain	3853
 Italy	3550
 Poland	2531
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 Lithuania	541
 Cyprus	502
 Latvia	426
 Estonia	423
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(They left the European Parliament in January 2020)

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Country	Contributions per million people
 Malta	1181.76
 Luxembourg	965.30
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More seats are given to smaller countries to boost their influence in the EP

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Country	Contributions per MEP
 Luxembourg	103.83
 Malta	102.33
 Slovenia	95.00
 Slovakia	92.38
 Cyprus	83.67
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 Poland	49.63
 Lithuania	49.18
 Italy	48.63
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So the **MEPs of smaller countries contribute more** on average

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EP Group	Ideology	MEPs (pre-Brexit)
European People's Party (EPP)	center-right, conservative	176 (182)
Socialists and Democrats (S&D)	social democrat, progressive	144 (154)
Renew Europe (RE)	liberal, pro-Europe	101 (108)
Greens-European Free Alliance (Greens/EFA)	green, regionalist, pro-Europe	73 (72)
European Conservatives and Reformists (ECR)	conservative	66 (62)
Identity and Democracy (ID)	nationalism, euroskeptic	62 (73)
European United Left/Nordic Green Left (GUE-NGL)	socialist, euroskeptic	37 (41)
Non-inscrits (NI)	various	46 (57)

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“Non-inscrits” is a French term for “non-aligned”

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There is also a tendency for larger EP groups to contribute more.

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 Marc Angel	S&D	169
 Olivier Chastel	RE	167
 Łukasz Kohut	S&D	166
 Michal Šimečka	RE	160
 Michal Wiezik	EPP	152
 Ramona Strugariu	RE	151
 Petras Auštrevičius	RE	151
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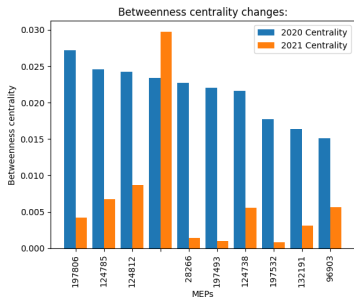
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They mostly come from the more left-wing EP Groups such as RE or S&D.

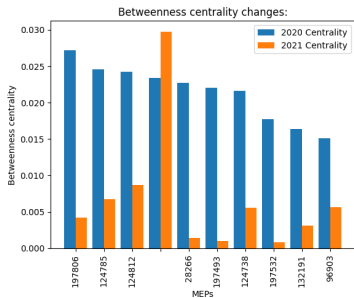
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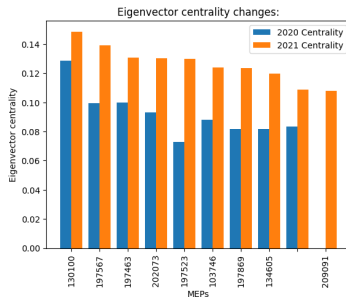


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Betweenness centrality 2020 as basis:



Eigenvector centrality 2021 as basis:



What's next?

We require additional data for multiple reasons:

- We need reference material for centrality numbers and their changes (e.g. for Spearman rank correlation test)
- Cutting at more relevant dates, for finer distinction.

Further consideration might be fruitful, namely, to use a weighted projection.

Thank you for your attention!