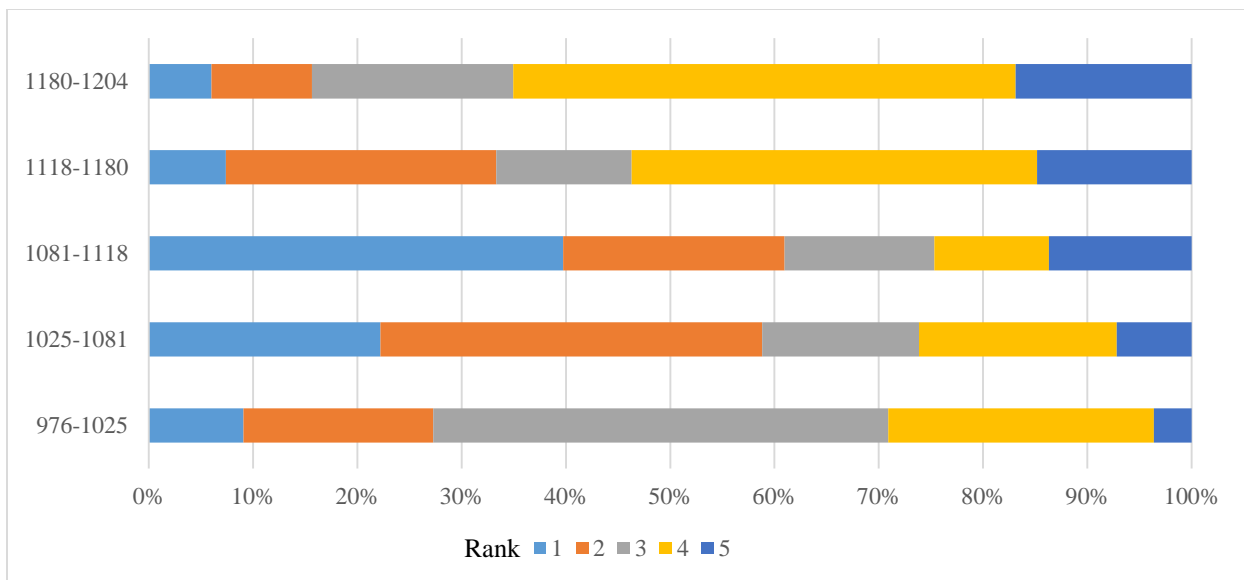


Interval	976-1025	1025-1081	1081-1118	1118-1180	1180-1204
Number of Families	55	153	146	54	83
Mean Rank	2.96	2.52	2.38	3.28	3.60
Std. Deviation of Rank	0.97	1.23	1.44	1.21	1.06

**Fig. 3.1.1. Kazhdan's data on East Roman families, descriptive statistics.** The number of elite families between 1025-1118 increased while their mean rank decreased, suggesting a period of increased mobility.

Rank	976-1025	1025-1081	1081-1118	1118-1180	1180-1204
5	2	11	20	8	14
4	14	29	16	21	40
3	24	23	21	7	16
2	10	56	31	14	8
1	5	34	58	4	5
Total	55	153	146	54	83

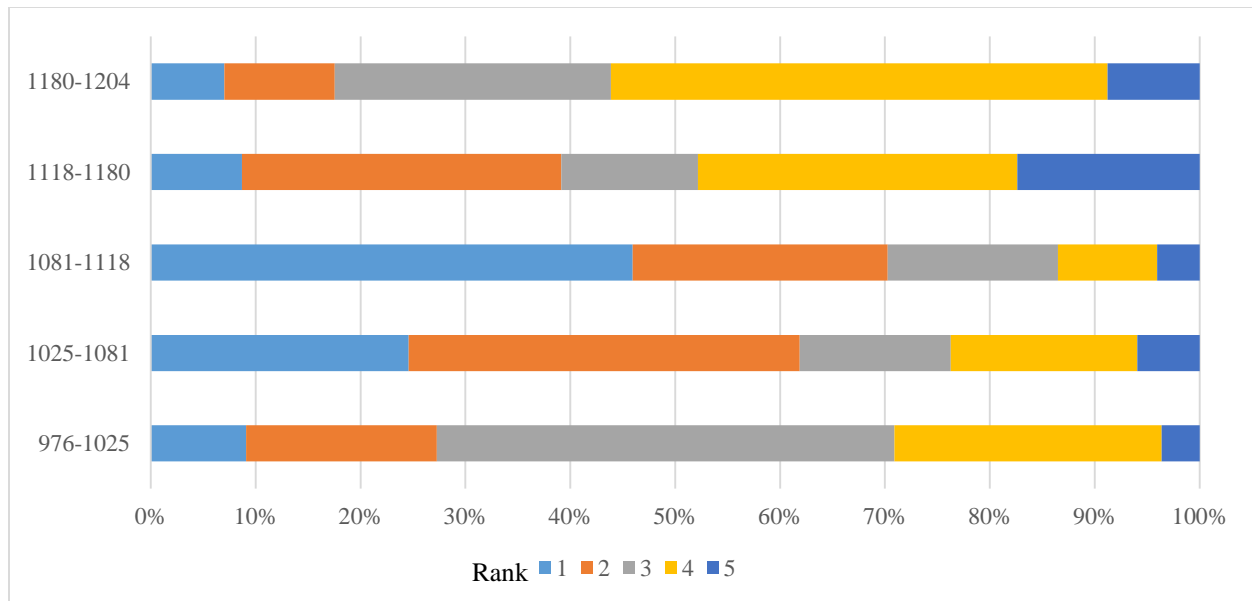
**Fig. 3.1.2. Kazhdan's data, number of families per rank per interval.** The distribution of families between ranks shifted over the eleventh and twelfth centuries, revealing the changing structure of elite society.



**Fig. 3.1.3. Percentage distribution of family ranks per interval.** The middle-centered distribution (ranks 2-4) of elite society in the first interval gives way to a bottom-centered distribution (ranks 1-2) during 1025-1118, which transforms into a top-centered one (ranks 4-5) 1118-1204.

Interval	976-1025	1025-1081	1081-1118	1118-1180	1180-1204
New families in interval	N/A	118	74	23	57
New families' average rank	2.96	2.43	2.01	3.17	3.40
Overall active families	55	153	146	54	83
New / total families	1	0.77	0.51	0.43	0.69
Families from this interval that disappeared in the next	20	81	115	28	N/A
The average rank from which families disappeared	2.65	2.33	2.04	3	N/A
Disappeared / total families	0.36	0.53	0.79	0.52	N/A

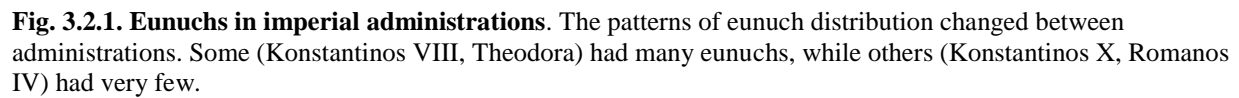
**Fig. 3.1.4. Emerging and disappearing families per interval.** The greatest increase in the number of known families was in 1025-1081, when 77 percent of families were new. The greatest decrease in the number of families was in 1081-1118, after which 79 percent of known families disappeared.

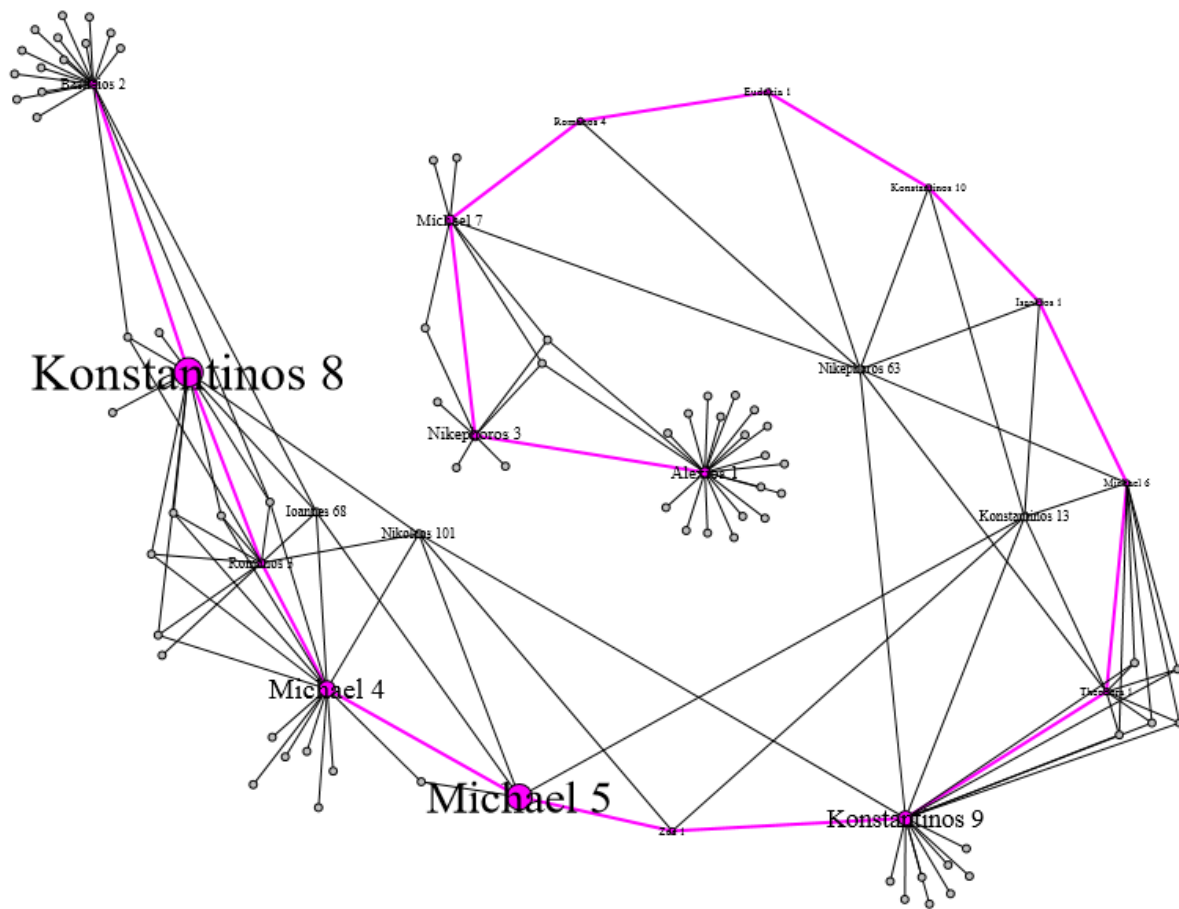


**Fig. 3.1.5. Ranks attained by new families per interval.** New families entered into the middle of the hierarchy (ranks 2-4) in 976-1025, and its bottom (ranks 1-2) in 1025-1118. In the twelfth century, new families entered into top positions (ranks 4-5).

Interval	976-1025	1025-1081	1081-1118	1118-1180	1180-1204	Total
976-1025		0.18	0.08	-0.00	-0.04	0.40
1025-1081	0.18		0.15	0.03	-0.09	0.48
1081-1118	0.08	0.15		0.30	0.03	0.61
1118-1180	-0.00	0.03	0.30		0.30	0.62
1180-1204	-0.04	-0.09	0.03	0.30		0.51

**Fig. 3.1.6. Correlation (r) matrix of family ranks between intervals.** The strongest connections are between 1118-1180 and both 1081-1118 and 1180-1204. Other correlations are weak, and those between non adjacent intervals are non-existent. This reveals the inherent social mobility in elite society.





**Fig. 3.2.2. Eunuchs in imperial administrations, emperor node size represents amenability to eunuchs. Some emperors (Konstantinos VIII, Konstantinos IX) introduced more eunuchs to court per year than others (Romanos III, Michael VI).**

Emperor	Eunuchs first appearing	Relevant eunuchs first appearing	Regnal years	Eunuchs / regnal years	Relevant eunuchs / regnal years
Basil II	9	9	49	0.18	0.18
Konstantinos VIII	7	7	3	2.33	2.33
Romanos III	1	1	6	0.16	0.16
Michael IV	7	7	7	1	1
Michael V	1	1	0.5	2	2
Zoe	0	0	0.5	0	0
Konstantinos IX	9	11 <sup>1</sup>	13	0.69	0.84
Theodora	0	0	1.5	0	0
Michael VI	0	0	1	0	0
Isaakios I	0	0	2	0	0
Konstantinos X	0	0	7.5	0	0
Eudokia	0	0	1	0	0
Romanos IV	0	0	4	0	0
Michael VII	5	2 <sup>2</sup>	7	0.71	0.28
Nikephoros III	3	1 <sup>3</sup>	3	1	0.33
Alexios I	17	13 <sup>4</sup>	37	0.45	0.35

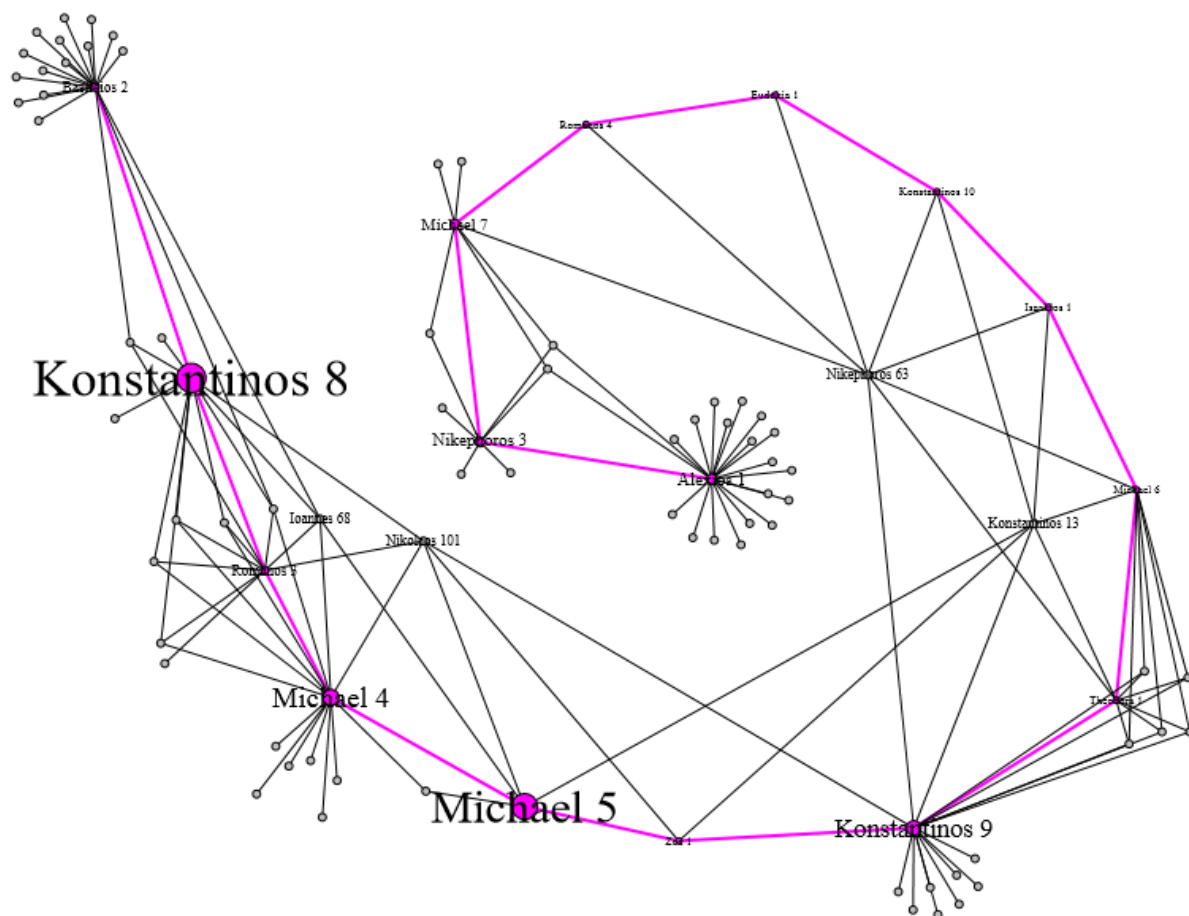
**Fig. 3.2.3. Eunuchs in imperial administrations.** The data underlying *fig. 3.2.2*. The early-mid eleventh century administrations involved many more eunuchs than the century's second half.

<sup>1</sup> Added two who are described as Zoe's eunuchs and received positions during Konstantinos IX's reign.

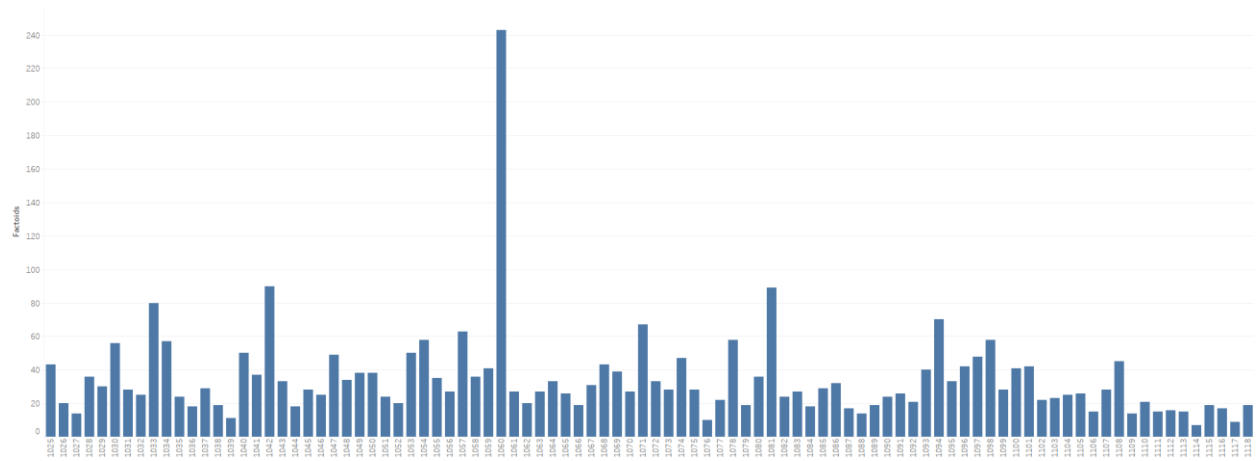
<sup>2</sup> Removed two who are paidegogoi and are referenced anecdotally and another who was Alexios Komnenos' guardian much before he became emperor.

<sup>3</sup> Removed two who are vague references to Eudokia's servant and a manuscript miniature.

<sup>4</sup> Removed four eunuchs that are mentioned in Kale Pakouriane's will (two in her household and two priests).



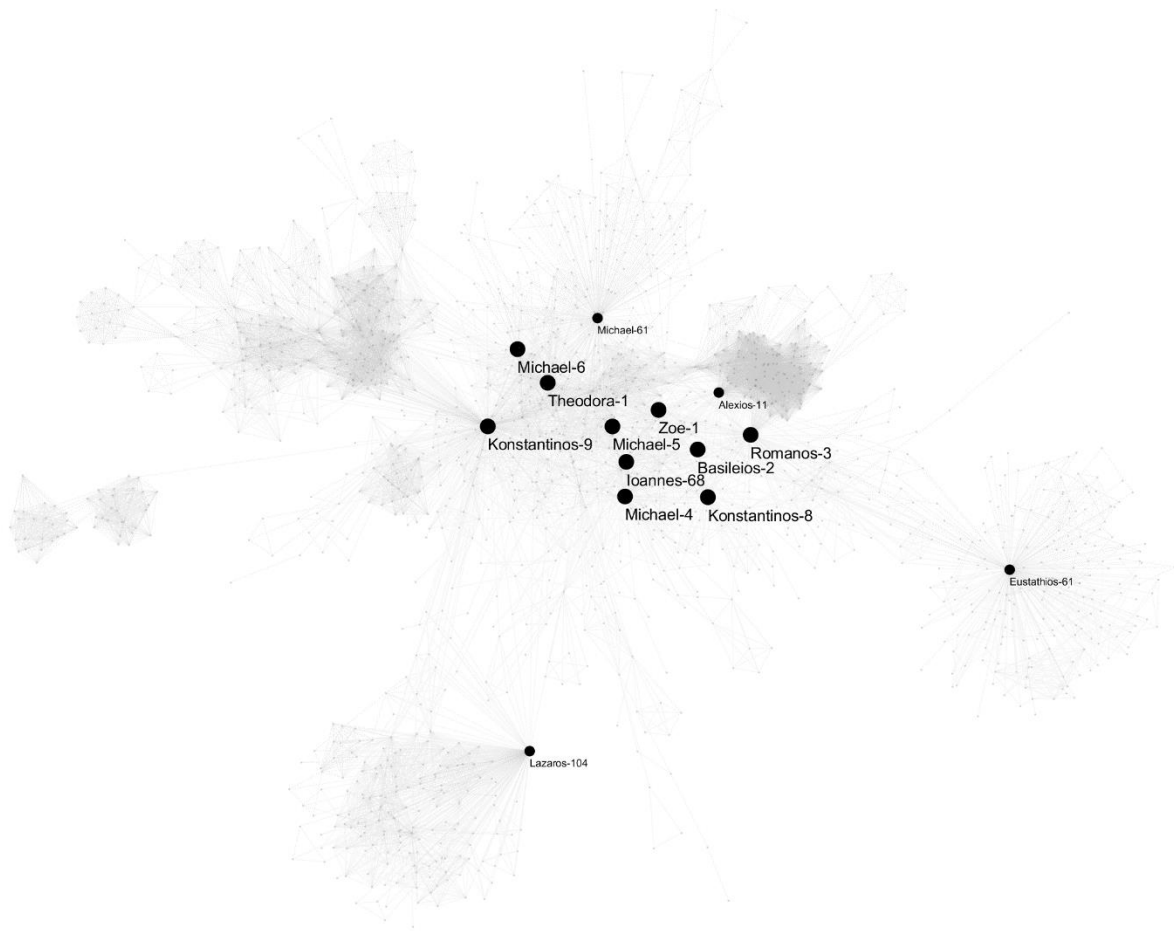
**Fig. 3.2.4. Eunuchs in imperial administrations, eunuch node size represent highest office attained.** The early-mid eleventh century eunuchs reached higher positions than those under Basil II or Alexios I.



**Fig. 3.3.1. Distribution of Narrative Factoids per year in the PBW, 1025-1118.** Relatively standard distribution, with the exception of 1060 (to which Psellos' undated texts were ascribed).

Interval	1025-1057	1058-1080	1081-1118
Years	33	23	38
Number of Nodes	1522	1258	1687
Number of Edges	13026	9140	22572
Network Diameter	10	7	9
Network Radius	5	4	5
Network Centralization	0.196	0.426	0.453
Characteristic Path Length	3.39	2.999	3.006
Average Number of Neighbors	17.117	14.531	26.7
Average Neighbors/Year	0.519	0.632	0.703
Network Density	0.011	0.012	0.016

**Fig. 3.3.2. Network statistics per interval.** The number of edges and neighbors and the increasing density reveals the increased connectivity in society.



**Fig. 3.3.3. Connections based on Narrative Factoids, 1025-1057.** High connectivity in the center, but several groups are only distantly and/or weakly connected to the center.

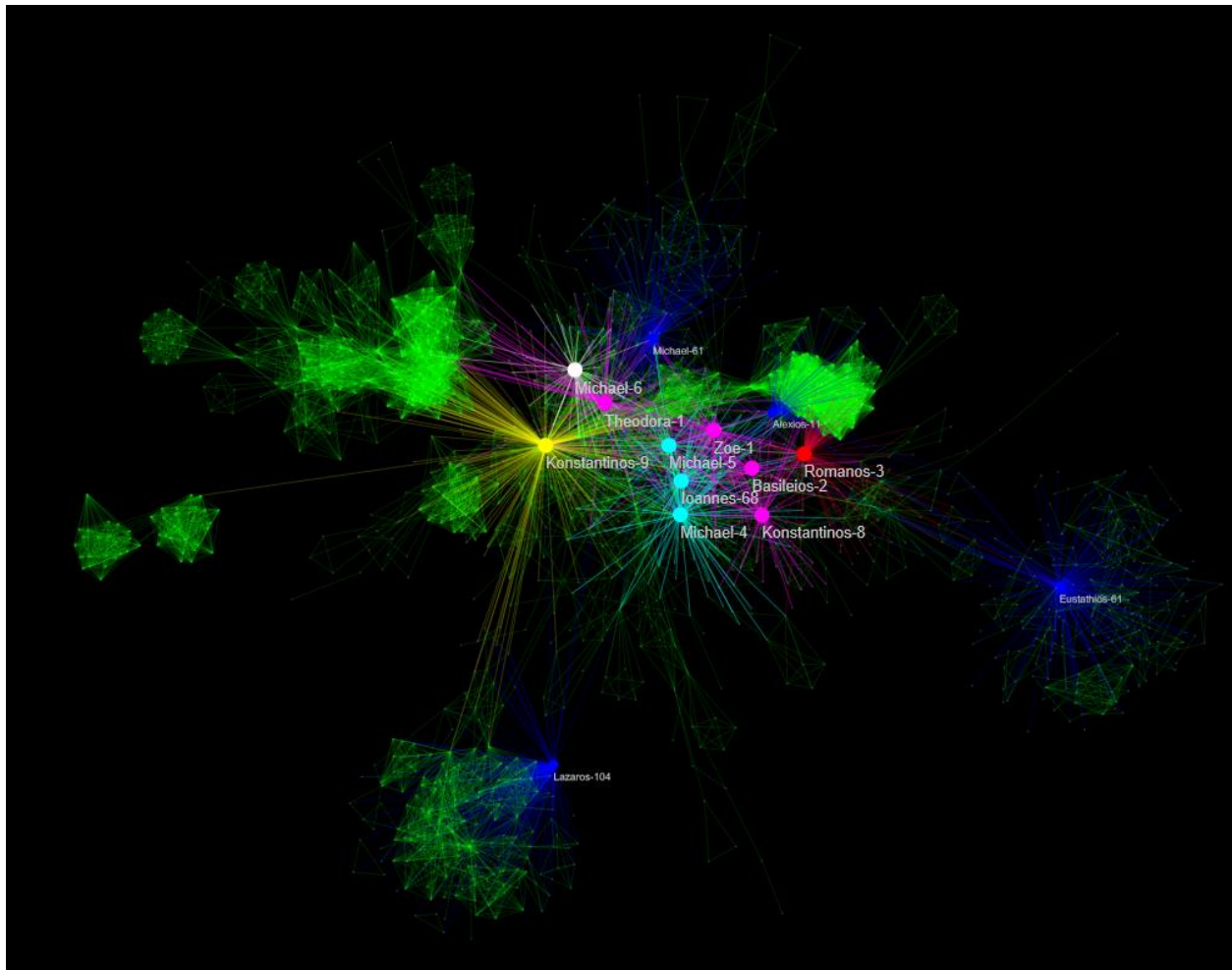




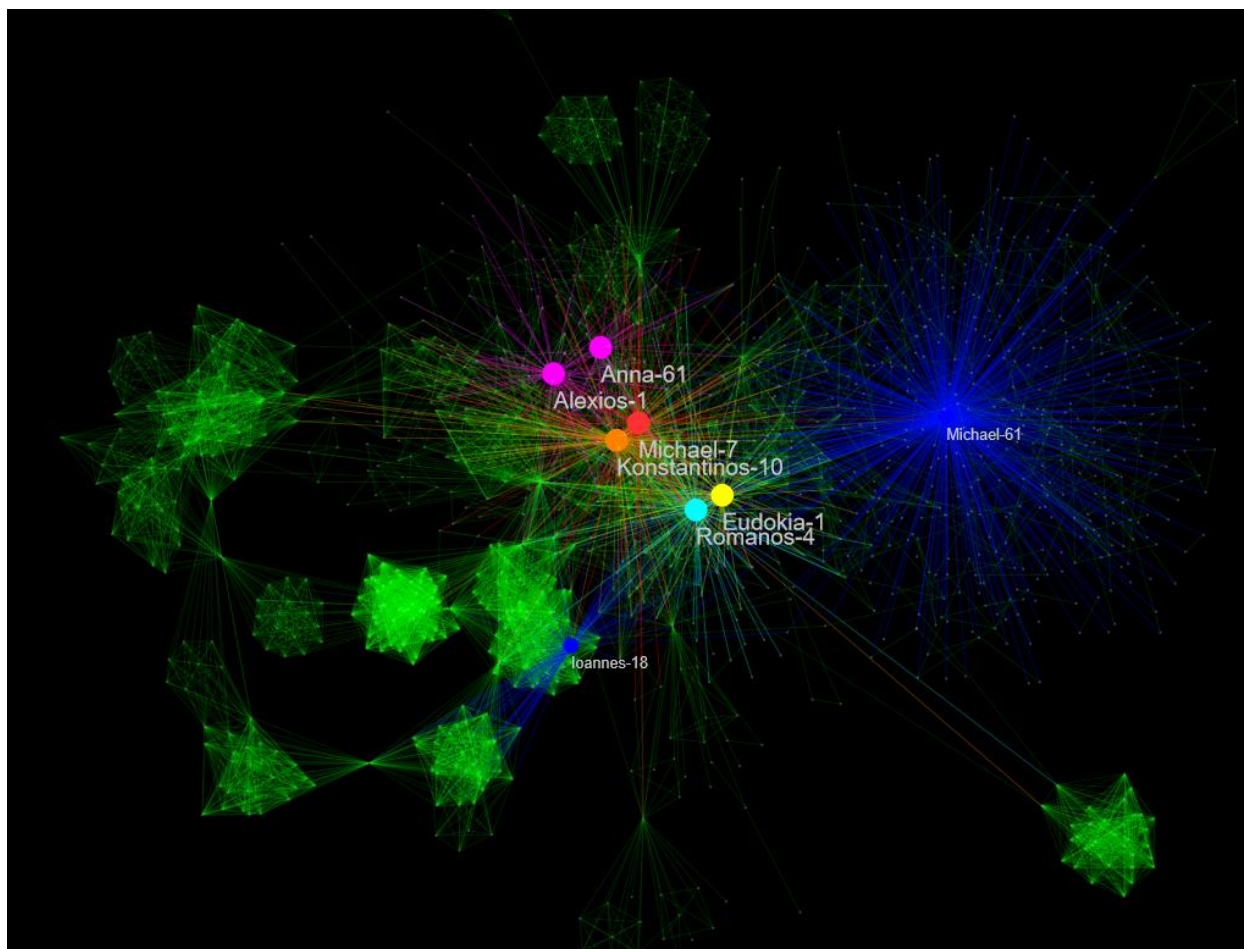
**Fig. 3.3.4. Connections based on Narrative Factoids, 1058-1080.** Increasing connectivity within groups; less single outlier nodes. Michael 61's (Psellos) network dominates the graph.



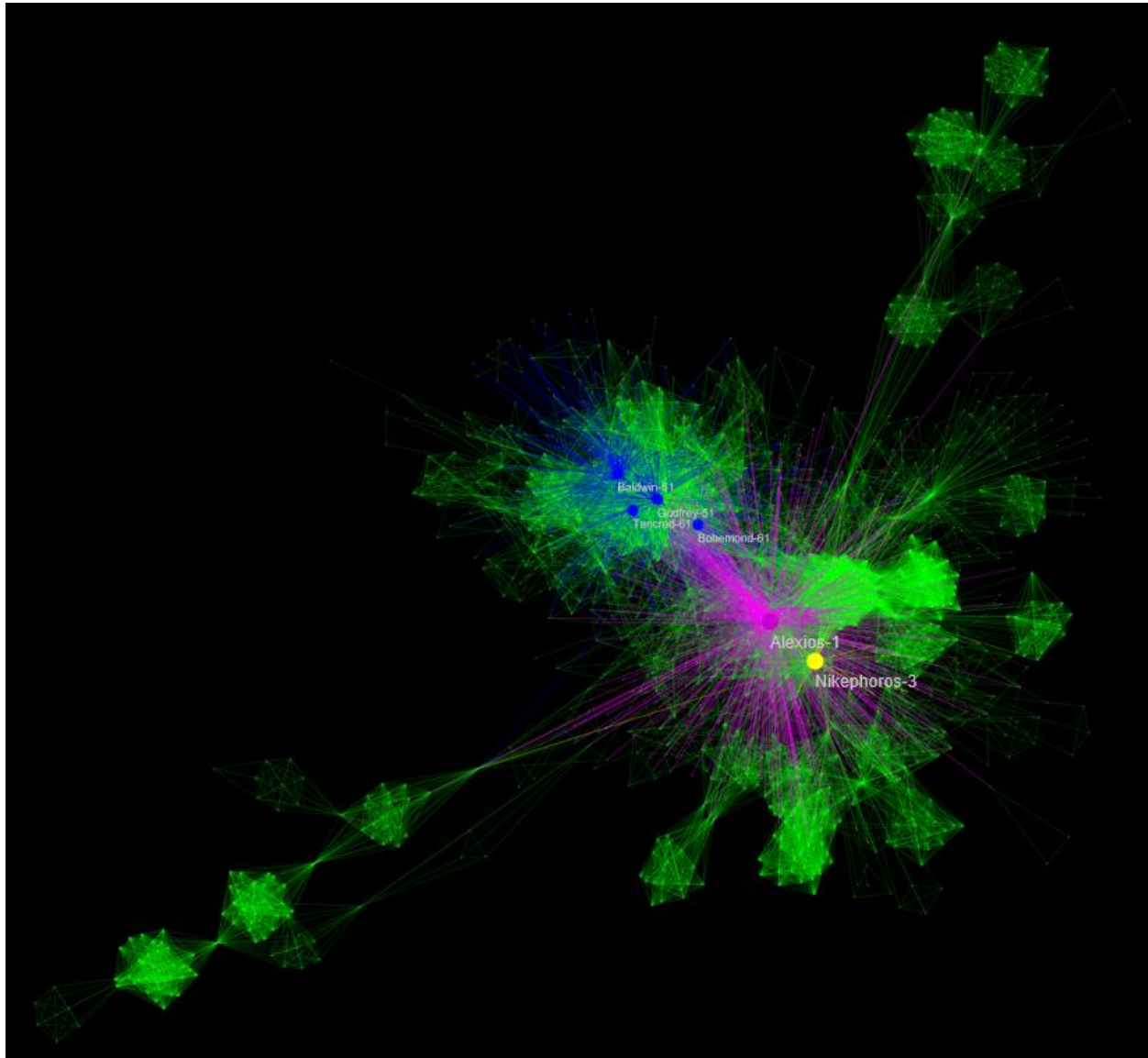
**Fig. 3.3.5. Connections based on Narrative Factoids, 1081-1118.** Highest connectivity in the center. Alexios I is in the graph's center. Few outlier nodes.



**Fig. 3.3.3 (dark version). Connections based on Narrative Factoids, 1025-1057.** High connectivity in the center, but several groups are only distantly and/or weakly connected to the center.



**Fig. 3.3.4 (dark version). Connections based on Narrative Factoids, 1058-1080.** Increasing connectivity within groups; less single outlier nodes. Michael 61's (Psellos) network dominates the graph.

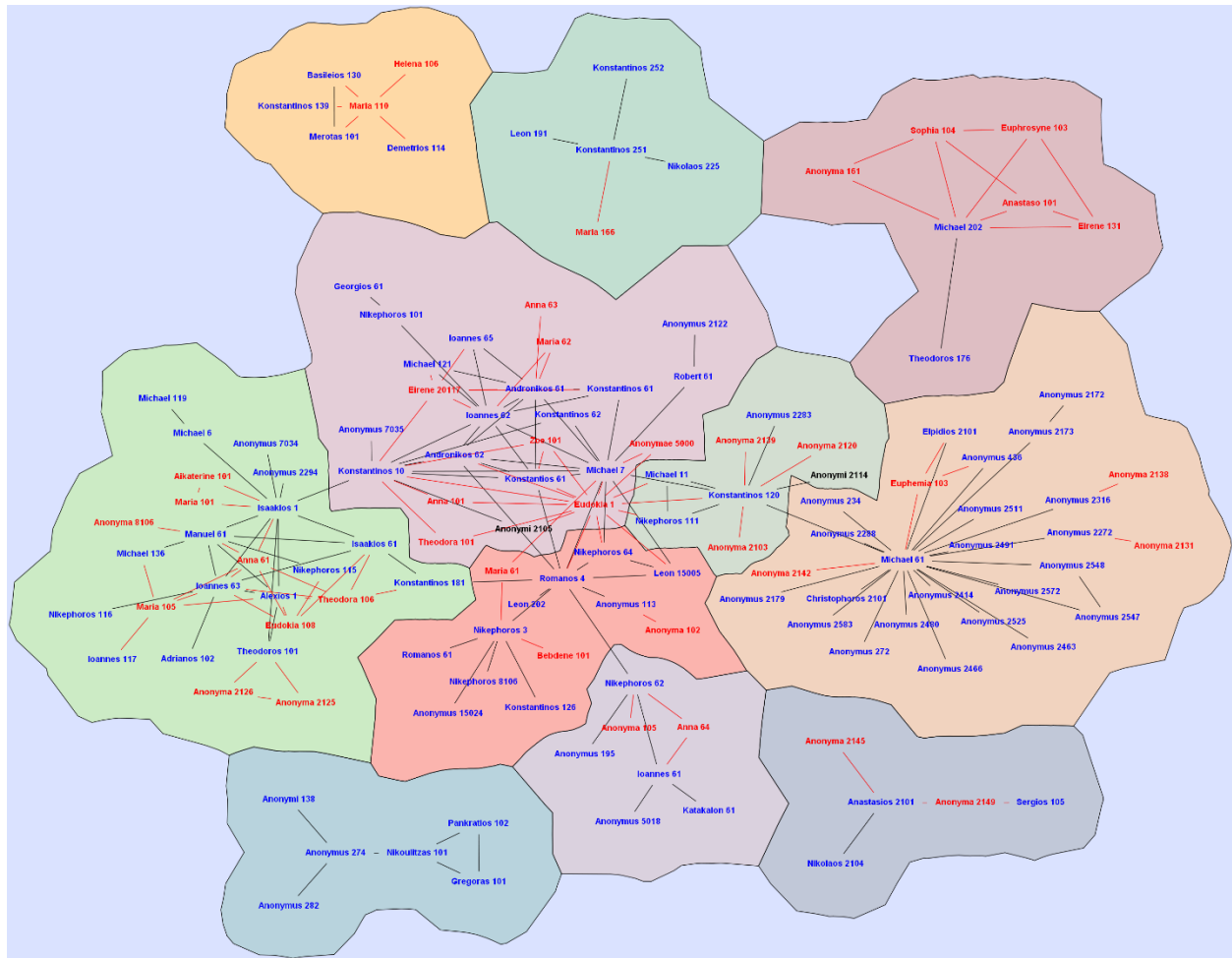


**Fig. 3.3.5. Connections based on Narrative Factoids, 1081-1118.** Highest connectivity in the center. Alexios I is in the graph's center. Few outlier nodes.

Criterion	Total	Men	Women	Eunuchs
Raw data	11427	10312 (90.2%)	956 (8.4%)	104 (0.9%)
No vague dating	4941	4503 (91.1%)	327 (6.6%)	75 (1.5%)
No documentary evidence and foreigners	4579	4181 (91.3%)	289 (6.3%)	75 (1.6%)
No small isolated subgraphs	699	461 (66.0%)	218 (31.2%)	5 (0.7%)

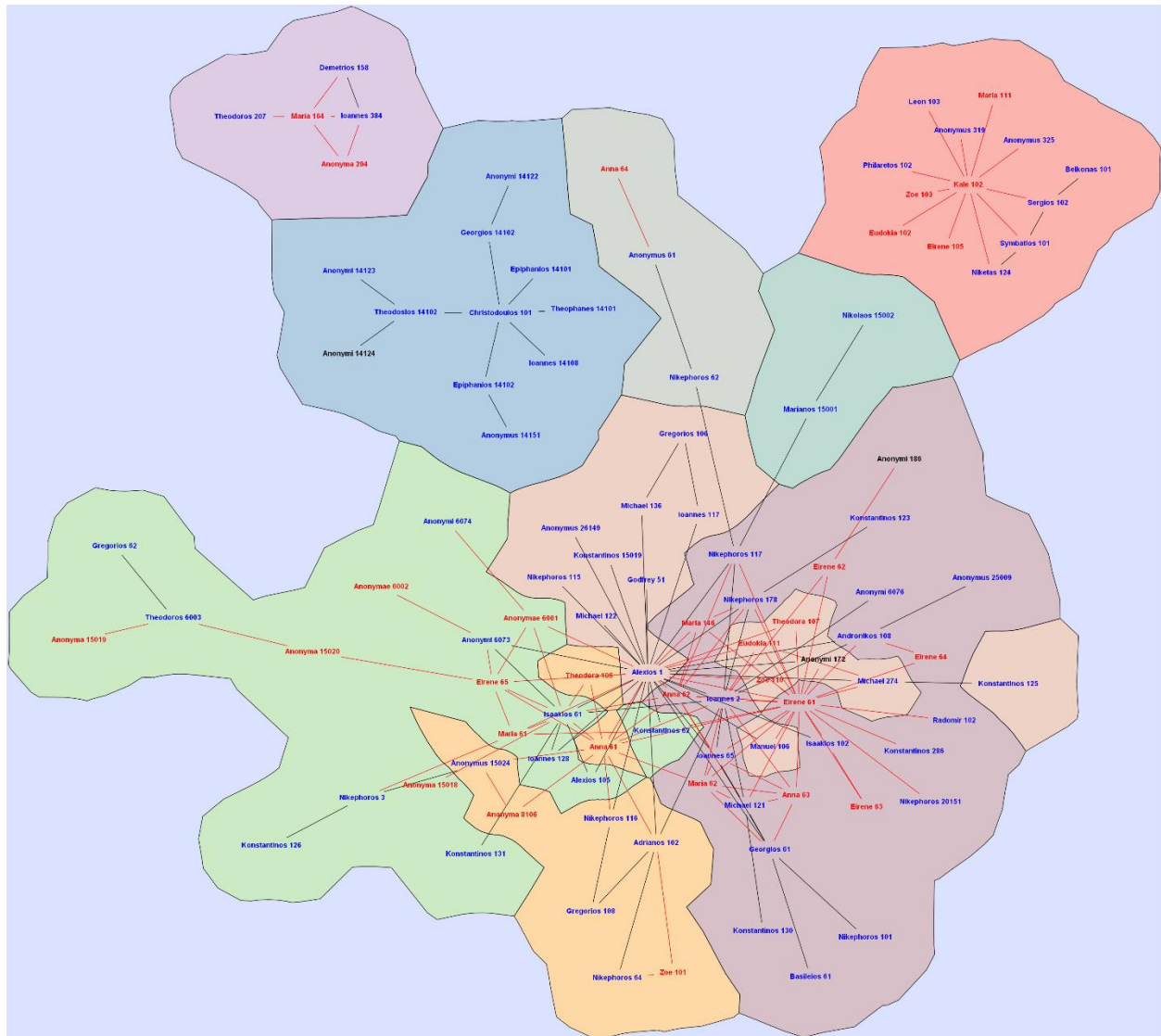
**Fig. 3.4.1. East Roman kin networks: cumulatively narrowing selective criteria.** Women become a substantial part of known individuals only when focusing on kin groups.





**Fig. 3.4.5. Kin networks, 1056-1080.** Increasing connectivity in the center, and fewer subgraphs. Michael 61's (Psellos) kin network is extensive.





**Fig. 3.4.6. Kin networks, 1081-1118.** All but three kin networks in the period are connected to the center. Alexios I and a few other nodes (Eirene 61, Anna 61, and Isaakios 61) are well-connected to other individuals.