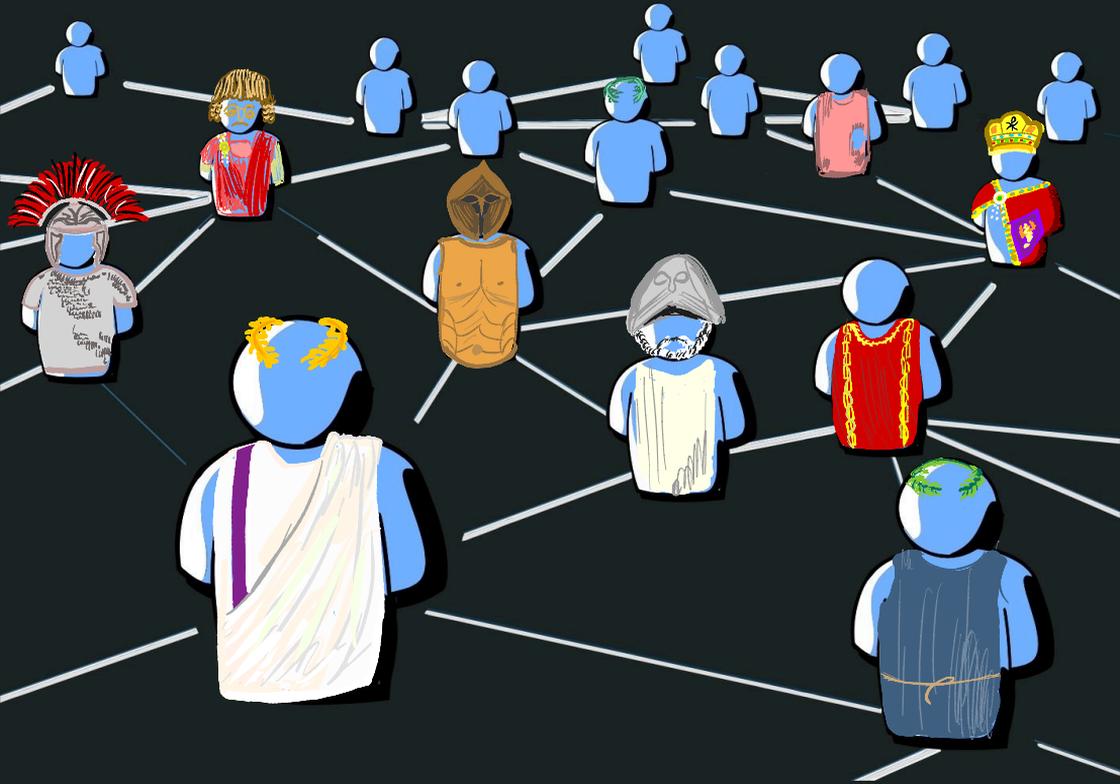




Journal of Historical Network Research

4 | 2020
special issue



THE TIES THAT BIND ANCIENT POLITICS AND NETWORK ANALYSIS

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Family or Faction?

The Political, Social and Familial Networks Discerned from Cicero's Letters during the Civil War between Caesar and Pompey

Journal of Historical Network Research 4
(2020) 114-155

Keywords

Roman republic; Cicero; aristocracy; civil war

Abstract

The civil war between Caesar and Pompey has been categorised as the downfall of the Roman Republic. It affected every Roman citizen and would ultimately shape the course of events that led to the creation of the principate. Although this struggle for power has been well documented, relatively few classicists have debated the affiliations and/or support that these two aspiring autocrats would have needed in order to secure victory. The aim of this paper is to highlight these lesser discussed affiliations by using social network analysis (SNA).

Introduction*

The civil war between Caesar and Pompey has inevitably been categorised as the downfall of the Roman Republic. It eventually affected every Roman citizen and would ultimately shape the course of events that led to the creation of the first principate. Although this struggle for power has been well documented, and argued from various political angles, relatively few classicists have debated the affiliations and/or support that these two aspiring autocrats would have needed in order to secure victory. The aim of this paper is to highlight these lesser discussed affiliations by using social network analysis (SNA) to scrutinise Cicero's letters in order to map the connections between Roman senators at the time of the civil war. This will endeavour to determine if SNA is a useful tool for identifying whether these senators chose familial connections or political factions when deciding to support either Pompey or Caesar.

As this study uses epistolary data to identify variable shifts in Cicero's social networks, his letters will first be contextualised by very briefly discussing Cicero's actions leading to the civil war of 49–47 BC and the nature of his existing correspondence. This will then be followed by the methodology used in this study and its results. Lastly, an analysis on the outcomes obtained from the network maps created, and an appraisal of the suitability of SNA on historical texts, will be discussed. As social network theory provides a common ground for investigating connectivity, straddling different research traditions and specialisations, as well as facilitating analysis of very large datasets of varying degrees of completeness, its use in this study is underpinned by the historical texts that it is analysing.¹ Therefore, before scrutiny of Cicero's letters can begin, they must first be discussed in a historical context.

1 Cicero and his letters

Cicero, who had been absent from political life for several years serving as governor of Cilicia, returned to Italy at the end of 50 BC. He had been kept abreast of the political developments in Rome by long letters written from his friends and fellow senators, Ap. Claudius Pulcher and M. Caelius Rufus in particular, and was thus as prepared as he could be when the civil war between Caesar and Pompey eventually broke out in mid 49 BC.² During the intervening

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1 KNAPPETT (2013), p. 68.

2 CCXLI (F VIII, 6), CCLXII (F II, 12), CCLX (F III, 10), CCLXIV (F III, 11), CCLXVII (F VIII, 11), CCLXX (F VIII, 13), CCLXXIV (F III, 12), CCLXXVIII (F VIII, 12) and CCLXXIX (F VIII, 14). All letters will be given their Shuckburgh Roman numeral identifiers and their Loeb Classical

months, Caesar, appreciating the moral value of Cicero's support, had attempted to gain it, and, failing in this, had tried to persuade him to remain neutral.³ Pompey, on the other hand, believed that Cicero would fully support him and Cicero, recalling that much of the unhappiness he experienced in the years following his consulship had developed from his relations with Pompey and Caesar, was now determined to act cautiously.⁴ His anxiety, and indecision, as to which was the best course to follow are expressed in his letters to Atticus⁵, his oldest and dearest friend, constant correspondent and the publisher of all his letters and treatises.

The 914 letters, from Cicero and his family and friends, that still exist today provide us with the best 'first-hand' account of the political and social life of one of antiquity's most venerable statesman. Furthermore, with letters written by Pompey, Caesar, M. Antonius, M. Porcius Cato and M. Junius Brutus, we can delve into the thoughts of these great late-republican men and postulate on their possible motives, as well as piece together a more accurate picture of the political turmoil of the period than by only reading biographies and histories that were written up to a century after the events. As we learn from the correspondence, it was customary for letters to be circulated between friends and acquaintances. There are many examples of Cicero discussing letters that several people have seen, or passing on a letter, or a section of it, to someone else.⁶ Thus, it is not surprising that after his death his freedman Tiro and Atticus, or one of his heirs, should publish a selection of Cicero's letters. Unfortunately, not all of the letters published have survived and the ones that have cast a light on the original editing process that must have taken place. For example, the fact that no letters from Atticus were included indicates a caution of publicising his political, as well as private, views in the years after Cicero's death. The same can be said for the lack of reciprocal letters from Cicero's family, especially those from his wife Terentia.

Library ones in parentheses [with 'F' indicating the collection of letters to his friends (*ad familiares*) and 'A' those to Atticus (*ad Atticum*)].

3 Plut. *Cic.* 36.8-38.

4 LINTOTT (2008), p. 16-19.

5 CCCII (A VIII, 10), CCCIII (A VIII, 11), CCCIV (A VIII, 12), CCCVI (A VIII, 13a), CCCXVII (A VIII, 20), CCCXIX (A VIII, 22), CCCXXVII (A VIII, 1), CCCXXXII (A IX, 5), CCCLXXV (A IX, 18) and CCCLXXVI (A IX, 19).

6 CCCXXVI (A VIII, 6), CCCXLII (A VIII, 11d), CCCLXI (A IX, 7), CCCLXIX (A IX, 13a) and CCCLXXI (A IX, 14) are just a few example of letters that contain sections of other letters or discussions of letters that were passed on and seen by various individuals, from both within Cicero's epistolary circle and beyond it.

Rediscovered during the Italian renaissance, Cicero's letters have since been translated, edited and reprinted numerous times.⁷ Therefore, if any scrutiny of Cicero's letters is undertaken, an understanding of the past permutations must be accounted for. It must be understood that they sometimes only represent one side of a conversation, such as his letters to Atticus, and that the letters published, as well as the copious that must have been omitted, would have been chosen by the original editor(s) for the narrative content that they included and to cast Cicero in the best possible light. In terms of the time period analysed in this project, 50-47 BC, it is, fortunately, when the most letters from Cicero's correspondents were included. Of particular note are letters from Pompey, Caesar and M. Antonius. However, as will be discussed in the analysis to follow, Cicero's political indecision also affected many of his friends and acquaintances. Choosing who to support, or deciding to remain neutral, was a contentious issue, one which occupied many a letter, and a reason for this study. Can using social network analysis on Cicero's correspondence during the civil war shed light on whether senators chose to support Caesar or Pompey because of either social, familial or political affiliations?

2 Methodology⁸

Because of the nature of this study, where the letters of a specific time period, in this case the civil war between Caesar and Pompey, were analysed, I decided to use Evelyn Shirley Shuckburgh's translations of Cicero's letters because, as the title suggests, the letters have been organised chronologically, rather than by recipient or topic as some other editors have done.⁹ This enabled easier access to the letters dated to the civil war and to also see the historical developments of the period in a chronological way as opposed to sifting through four or five different volumes simultaneously in order to logically follow the sequence of events as they unfolded.

7 See CICERO / WILLCOCK (1995), pp. 1-3 and 13-14 for details of how the letters have been edited and printed over time.

8 As the theory and practice of SNA has already been detailed in previous chapters, there is no need to revisit them here. However, for the reader's interest, the following examples of SNA on ancient networks were examined: ALEXANDER / DANOWSKI (1990); BRUGHMANS (2010); BRUGHMANS / COLLAR / COWARD (2016); COLLAR (2007); (2014); COLLAR / COWARD / BRUGHMANS / MILLS (2015); GRAHAM (2005); GRAHAM / RUFFINI (2007); HOLLERAN (2012); KNAPPETT (2011); (2013); MALKIN (2011); MALKIN / CONSTANTAKOPOULOU / PANAGOPOULOU (2009); RUFFINI (2008). These were used as guides of best practice and were all influential in the modelling of this project.

9 Shuckburgh's 'The Letters of Cicero: The Whole Extant Correspondence in Chronological Order, Volumes I-IV' (CICERO / SHUCKBURGH [1904]).

Although the civil war between Caesar and Pompey really started in early 49 BC and ended in mid 45 BC, upon reading the letters I decided to only focus on those from 50 to 47 BC. June 50 BC¹⁰, as Cicero is returning to Italy after his governorship, is the first reference that Cicero makes to the struggle between Pompey and Caesar and the rest of the year is fraught with anguish about the events in Rome and the possibility of civil war. By 47 BC, Pompey had been defeated in Pharsalus, and consequently murdered in Egypt. Cicero, meanwhile, is in Brundisium, after quickly leaving Pharsalus, awaiting orders from Caesar allowing him to return to Rome. By this time, the mention of the civil war ceases to be the main topic of the correspondence; instead it becomes more about continuing Cicero's social network of friendship, political connections and general business dealings. It is for this reason that the analysis of the letters ceases at the end of 47 BC¹¹ rather than continues to the definitive conclusion of the civil war in 45 BC. The volume of letters reaches its peak in 49 BC, when everyone is debating what actions to take and this is the period in which Cicero receives the most letters, from a wider pool of correspondents than just his regular friends and family. This abundance of letters drops sharply the following year, principally because Cicero has joined Pompey's camp, but it must also be assumed that the original, or subsequent, editor(s) were cautious in which letters to include during this period. Private thoughts, meant only for Cicero or politically like-minded individuals, could have had serious repercussions in the years, if not decades, after the civil war.

Having chosen the source material, and acknowledged their editorial and publishing history, the task was then to decide how best to scrutinise the letters in order to create the most accurate and accessible social networks possible. I decided that the best way to do this was to read the letters and record the following aspects in Excel spreadsheets for each year between 50 and 47 BC, inclusive, along with an extra spreadsheet that incorporates all those years into one:

- Who the letter was written to (*to* column)
- Who the letter was written from (*from* column)
- The date of the letter (*citation* column, along with letter number from Shuckburgh's edition)
- Persons of interests mentioned in each letter. This included all men of the equestrian and senatorial classes, along with all women of noble birth (*label* column; mentions column refers to how many times they were mentioned that year in any letter)

10 CCLXX (F VIII, 13).

11 CCCXLVIII (F XV, 21).

- Whether that person's affiliation to either Caesar or Pompey was mentioned (*Caesar/Pompey* column where C stands for Caesar and P for Pompey)
- Any descriptive words or phrases used by the writer as an identifier; such as 'brother', 'friend', 'praetor', 'enemy', etc. ... (*identifier* column)

	A	B	C	D	E	F	G	H
1	Id	Label	Mentions	Caesar/Pompey	To	From	Identifier	Citation
2	n0	Cicero	24	P	3	21		
3	n1	Pompey	14	P			staying at Pompey's Alban villa	CCLXX June, CCLXXII August, CCLXXV 11 August, CCLXXVIII September, CCLXXIX September, CCLXXX 1 October, CCLXXXIII 16 October, CCXCIII 9 December, CCXIV 11 December, CCXV December, CCXCVI December, CCXCVII December, CCXCIII 26 December, CCXCIX 27 December
4	n2	Caesar	12	C			rival	CCLXX June, CCLXXII August, CCLXXV 11 August, CCLXXX September, CCLXXX 1 October, CCLXXXI 15 October, CCLXXXIII 16 October, CCXCII 25 November, CCXCIII 9 December, CCXIV 11 December, CCXCVI December, CCXCVII December, CCXCIII 26 December, CCXCIX 27 December
5	n3	Atticus	12		12			CCLXXV 11 August, CCLXXX 1 October, CCLXXXI 15 October, CCLXXXIII 16 October, CCXCII 25 November, CCXCIII 9 December, CCXIV 11 December, CCXV December, CCXCVI December, CCXCVII December, CCXCIII 26 December, CCXCIX 27 December
6	n4	Dolebella	5	C			son in law, received a legacy from Livia	CCLXX June, CCLXXII August, CCLXXXI 15 October, CCXCIII 9 December, CCXCVIII 26 December
7	n5	Tullia	7					CCLXX June, CCLXXII August, CCLXXIV 3 August, CCLXXX 1 October, CCLXXXI 15 October, CCLXXXII 16 October, CCXCIII 9 December
8	n6	Curio	4	C			our friend, bribed by Caesar	CCLXX June, CCLXXII August, CCLXXIX September, CCXCVII December
9	n7	M. Caelius Rufus	4		1	3	doesn't know which side to take - it is the cause, not the men, that he dislikes (CCLXXIX September).	CCLXX June, CCLXXII August, CCLXXVIII September, CCLXXIX September
10	n8	M. Marcellus	1					CCLXX June
11	n9	Hortensius	4				grieving for - died in June, legacies left to pay	CCLXX June, CCLXXV 11 August, CCXCII 25 November, CCXCIII 9 December
12	n10	Gnaeus Sallustius	1		1		proquaestor in Syria	CCLXXI 18 July
13	n11	Bibulus	4	P				CCLXXI 18 July, CCLXXX 1 October, CCXCII 25 November, CCXCIII 9 December
14	n12	Marius	1				successor to Syria province	CCLXXI 18 July

Table 1: Example of spreadsheet used to tabulate information sourced from Cicero's letters (50 BC)

Having researched numerous different software packages available at the time, I decided to use Gephi for the analysis of Cicero's letters.¹² One of the advantages of using Gephi is that it allows the intuitive drawing and analysis of social networks without requiring specific technical expertise from its users. The case studies and reviews¹³ showed that the software could easily adapt to a variety of research interests, sources and types of social structures, be they ego-centric or full networks. Various visualisation tools such as concentric circles, circle segments and a network overlay function can be used with Gephi to represent a large variety of social structures.¹⁴ The software, however, also has its drawbacks. Gephi loses its advantages when there are too many actors and ties to visualise; it is only able to display networks of limited complexity. The larger

12 Other SNA software of possible interest to historians are Visone (www.visone.info) as well as Vistorian (www.vistorian.net).

13 For detailed instructions on how to use Gephi, see: <https://gephi.org/users/>. This site also contains detailed examples of networks and how to use Gephi's various tools to best advantage. Unfortunately, none relate to ancient networks.

14 DÜRING / STARK (2011), p. 446.

the network structures become, the harder it is to represent them within the boundaries of the network map and to position actors and their relations within it. Nevertheless, Gephi was the only SNA software that enabled the majority of the elements that I wanted to represent in the visualisations to be accessible in one program as opposed to using various software packages to represent different characteristics.

With that in mind, Cicero's letters provided their own problems. The main issue was not that of lack of information, or limited range in people mentioned, but that as Cicero's correspondents were, for the most part, on intimate terms with him, and each other, there is a definite assumed knowledge evident in the letters. This assumed knowledge is most prominent in the letters to Atticus. The names mentioned are often shortened versions of the person's official name, Sulpicius instead of Ser. Sulpicius Rufus for example. This posed a problem, many a times, when more than one person had the same name used by Cicero or his correspondents. Some of the most troublesome names, and often repeated, included: Sulpicius, used to reference either himself or his son; Balbus, in reference to Balbus Major or his nephew Balbus Minor; Marcellus, there were three cousins who were all consuls in consequent years from 51–49 BC referenced by that name, two of which had the exact same name, C. Claudius Marcellus, and a third whose name was M. Claudius Marcellus; and lastly Cassius, used to reference either C. Cassius or Q. Cassius Longinus. I made the mistake several times of thinking that it was the same person mentioned continuously, until a small identifier would clearly distinguish them as different people. They would either be in different places at the same time, held different offices, or in the case of Cicero's use of the name Sulpicius to reference Ser. Sulpicius Rufus and his son, of the same name. The latter supported Caesar and served in his army whilst his father remained an adamant neutralist. This obviously posed no challenges for Cicero and Atticus, along with the rest of his correspondents, as they saw each other frequently and their letters were merely a continuation of personal face-to-face discussions. In the case of this study however, it posed a significant problem in that I often had to return to previous letters in order to verify which person they were referring to and even had to start my spreadsheet for 50 BC from scratch again after I realised, whilst tabulating the one for 49 BC that the name Marcellus actually referred to three very different men.

It might perhaps be assumed that producing a visual image, or model, of a network would be a final and relatively straightforward step in social network analysis once decisions have been made about how to represent the source material as a network. And indeed, visualisations are easy to create in many different software packages, including Gephi. However, they are not an end in themselves, and both the rationale for and the style of visualisation must be carefully considered if the resulting image is to achieve its aim and not simply

end up as a so-called 'spaghetti monster'; a network so dense and complicated that it is extremely difficult to comprehend.¹⁵

In order to document the possible changes over time in political and social affiliations, I also tried, to the best of my, and the software's ability, to place key individuals in the same place for each network and for the networks to have similar characteristics. I achieved both by using the visualisation tool *Fruchterman Reingold* within Gephi. There were a variety of visualisation tools available for use, but I found that this was the best one for representing Cicero's network, as *Fruchterman Reingold* uses the weight assigned to each edge, or connection, and displays the information with weighted arrows of varying thickness and length; depending on the weight assigned to those connections. It also centralises the node with the most connections and radiates a network based on that node. This was a perfect way to represent an ego-centric network such as the one created from Cicero's correspondence. However some minor tweaking of the visualisations was needed in order to render them more accessible. Some names automatically overlapped and thus had to be separated in order to identify individuals. Moreover, with each major network created, key actors, such as Caesar, Pompey, Atticus and M. Caelius Rufus were placed in different locations within the various networks. Therefore, to ease readability and for quicker reference between visualisations, I decided to place each of these individuals in the same place in each network. This did not impact the results in any way as the weight of the connections was not altered, nor were the multiple connections between these actors changed.

Having identified the best visualisation tool from the software package, I decided that one of the main characteristics that I wanted to demonstrate in the networks was the individuals mentioned in the correspondence and their various political affiliations; either to Caesar (green nodes), Pompey (orange nodes), or neutralists, such as Ser. Sulpicius Rufus and Ap. Claudius Pulcher, and those unspecified by the source material (purple nodes). The colours were chosen completely arbitrarily and chosen for their immediate impact and differentiation. In terms of the edges that demonstrate a connection between nodes, I assigned a value for each mention (1 point), and a separate value (4 points) each time a letter was addressed to someone or written by someone other than Cicero. Using the visualisation tool *Fruchterman Reingold* allows these assigned values to represent in-degree and out-degree connections by creating directional arrows of varying thickness. The thickness of the arrows is directly proportional to the weight assigned to the connection between nodes, as mentioned above. The colour of the arrows represents the colour of the out-degree node. Where the connection between two nodes flows in both directions,

15 COLLAR / COWARD / BRUGHMANS / MILLS (2015), p. 4.

the colour of the arrow represents the node with the highest out-degree. Unfortunately, this is a slight flaw with Gephi, in that bi-directional connections can only be represented by one colour.

With the style of visual representation chosen, the results of the social network analysis can now be discussed with possible insights into whether senators were influenced by family or faction when deciding to support either Pompey or Caesar in their civil war.

3 Results

Social network analysis is not just about creating network maps from a source material. It is about using its methods, and the most appropriate tools available from social network software packages, to systematically scrutinise the network maps so as to possibly discern patterns of relatedness that were not previously identifiable.¹⁶

50 BC

50 BC, the year which sees the first mention of a crisis escalating between Pompey and Caesar, and talk of a possible move towards civil war, is significant in highlighting the various individuals with whom Cicero is in contact on a regular basis. As Fig. 1 demonstrates, over 60 people are referenced in the letters, either by Cicero himself or by M. Caelius Rufus, who sent him three letters that year. Several people are only mentioned once or twice, as the thinnest of the arrows indicate, but Ap. Claudius Pulcher, M. Porcius Cato, L. Cornelius Balbus Major and P. Cornelius Dolabella have a surprising number of mentions. The latter was Cicero's new son-in-law and supported Caesar. On the other hand, Ap. Claudius Pulcher was an acquaintance of Cicero's and, like him, ultimately decided to follow Pompey to Greece in 49 BC. As a previous consul and fellow lawyer, his thoughts and advice were much regarded by Cicero, who sent him two letters in 50 BC.¹⁷ M. Porcius Cato, a staunch supporter of Pompey's, also received a letter from Cicero in this year, but is also referred to as being 'disgracefully spiteful' towards him in a letter Cicero wrote to Atticus.¹⁸ L. Cornelius Balbus Major was a Roman equestrian who had been Caesar's *praefecti fabrum* during his campaigns in Spain and Gaul and who became his private secretary, as well as being one of Rome's chief financiers, during the civil war. Born in Gades, Spain, he was awarded Roman citizenship by Pompey in 71 BC

16 SCOTT (1991), p. 37.

17 CCLXXIV (F III, 12) and CCCLXXVI (F III, 13).

18 CCXCII (A VII, 2). For context relating to Cicero and Cato's relationship at this time, see ROLLINGER (2017).

and his personal friendships with Caesar and Pompey were instrumental in forming, and maintaining, the first triumvirate. In the correspondence of 50 BC, however, he is merely mentioned as one of Caesar’s financiers.¹⁹

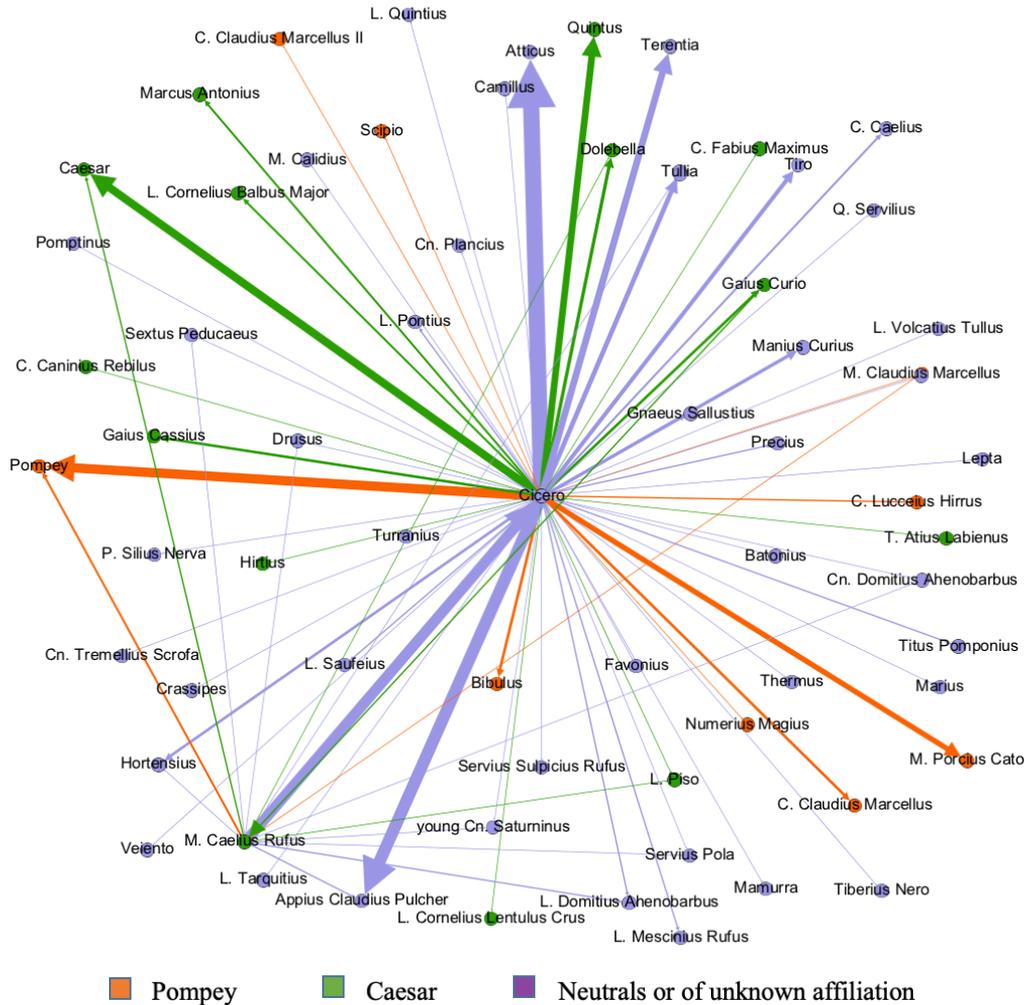


Fig. 1: Network map for 50 BC

In terms of political affiliations, the network map shows slightly more connections with Caesarians (Caesar has 13 supporters mentioned in 50 BC, as opposed to seven for Pompey), but the majority of individuals mentioned in the letters are either neutral or their affiliations are not discernible. Notable

19 CCXIII (A VIII, 3).

Caesarians include Dolabella, L. Cornelius Lentulus Crus, C. Curio, C. Cassius, M. Antonius and T. Labienus. The first four were all intimate friends of Cicero's, M. Antonius was Caesar's cousin and T. Labienus was his most trusted general during his conquest of Gaul. What is interesting to note from this is that Cicero retained close ties with his friends who supported Caesar, even though he, himself, advocated vehemently against civil war but if pressed, would support Pompey over Caesar.²⁰ This would indicate that in 50 BC, Cicero was more interested in keeping his network of friends than in forsaking them simply because they supported Caesar. Of known family connections, there are but a few in this year: the three cousins, the Claudii Marcelli, all supported Pompey, the affiliation of L. Domitius Ahenobarbus and his son, Cn. Domitius Ahenobarbus, are unknown and the letters unfortunately do not specify if L. Mescinius Rufus, M. Caelius Rufus and Ser. Sulpicius Rufus, are related in any way.

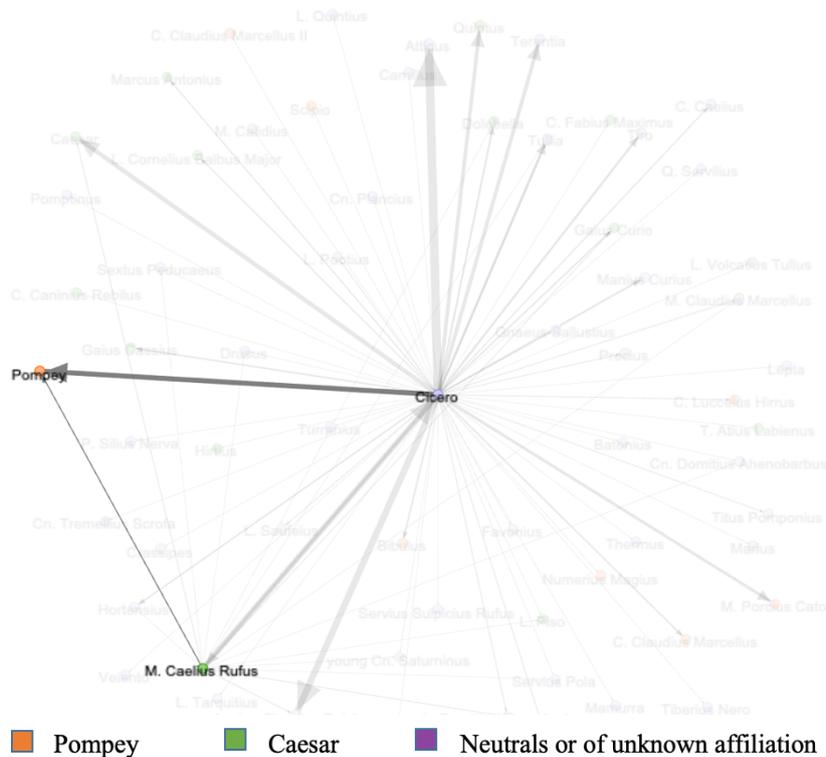


Fig. 2: Detail of 50 BC highlighting connections for Pompey

20 See note 5 above.

In 50 BC, Pompey's main connection is with Cicero, he is discussed by Cicero in 14 of the 24 letters dated from June to December. However, he is also mentioned by M. Caelius Rufus in two of his three letters to Cicero.²¹ As a consequence, his resulting network of connections is quite small, as Fig. 2 demonstrates.

As with Pompey's, Caesar's network of connections for 50 BC is rather limited (see fig. 3). His main link is to Cicero, who discusses him in 12 of the letters. Moreover, like Pompey, he is also mentioned by M. Caelius Rufus.²² The reason why Caesar's and Pompey's networks of connections are limited is primarily due to the nature of the source material that has survived. The only letters still in existence are those written by Cicero and M. Caelius Rufus; all others have either been lost or were never published to begin with.

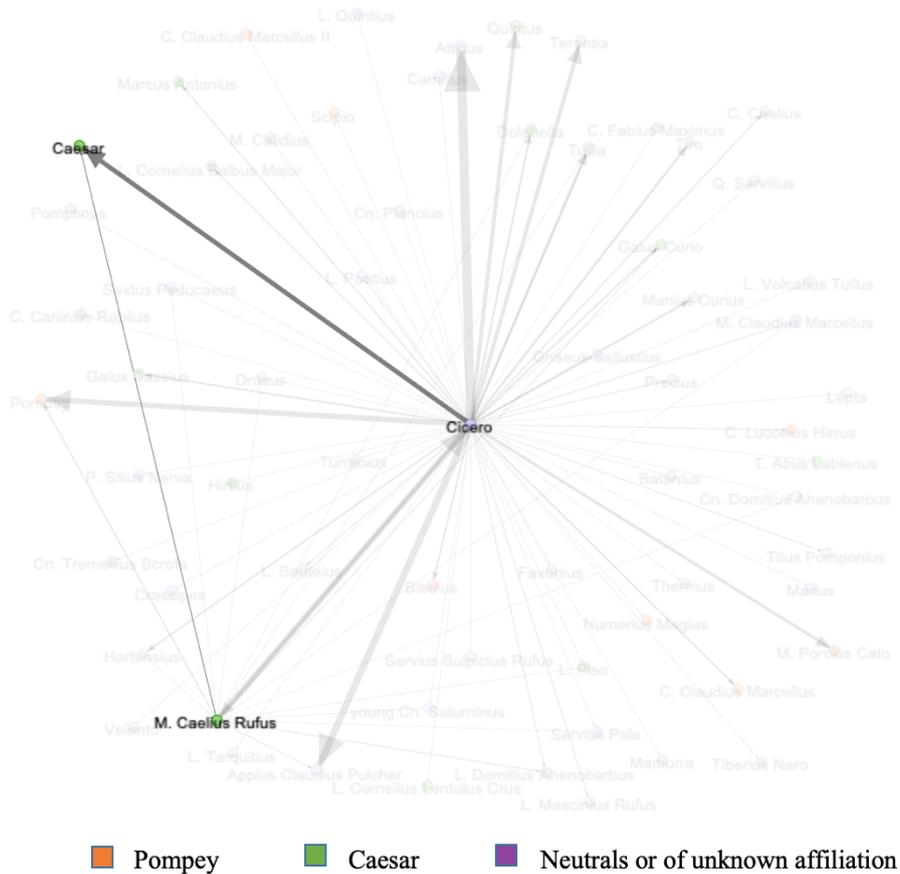


Fig. 3: Detail of 50 BC highlighting connections for Caesar

21 CCLXX (F VIII, 13) and CCLXXIX (F VIII, 14).

22 CCLXXIX (F VIII, 14).

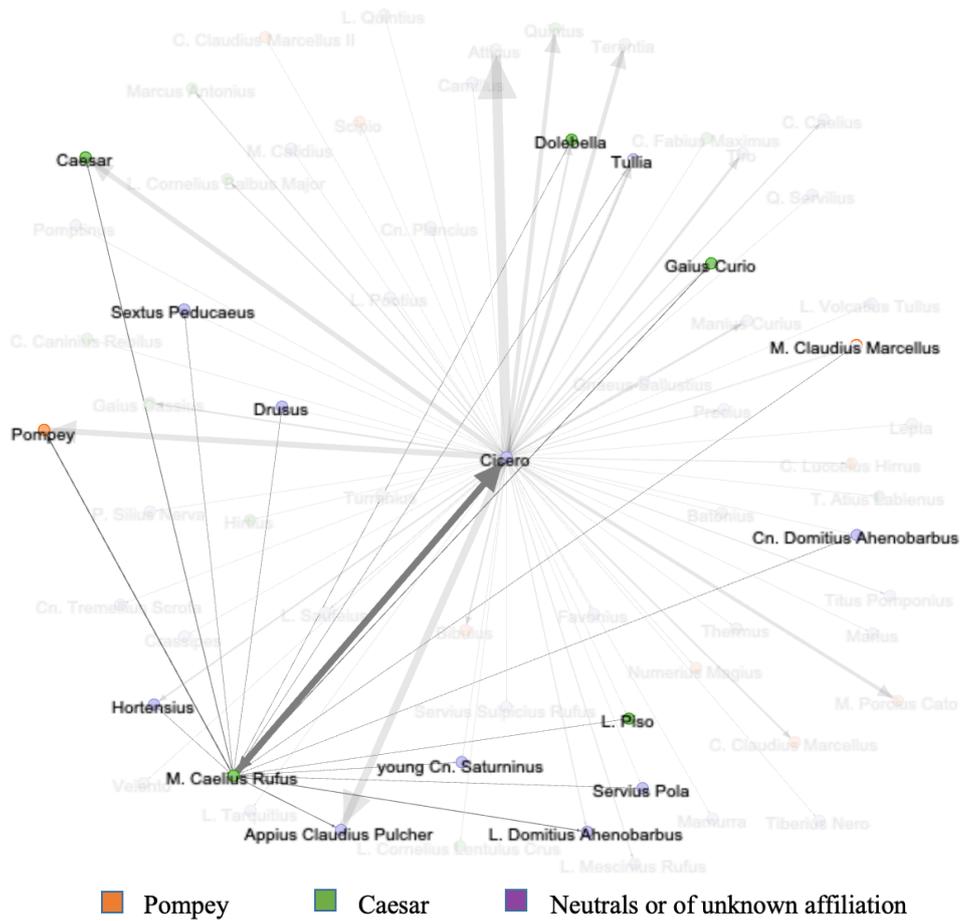


Fig. 4: Detail of 50 BC highlighting connections for M. Caelius Rufus

On the other hand, the network for M. Caelius Rufus is much more extensive (see fig. 4). The extent of his connections, as perceived by this analysis and visualisation, is undoubtedly aided by the three letters he wrote to Cicero in this year. From this, we can deduce that he was in contact with fellow Caesarians as well as neutral persons and/or unknowns. Moreover, his only connection to supporters of Pompey is a few mentions of Pompey himself, as well as one reference to M. Claudius Marcellus, in the letters to and from Cicero.²³ One significant point to highlight from M. Caelius Rufus' connections, which the network map has made discernible, are his links to Dolabella and Tullia, Cicero's

23 CCLXX (F VIII, 13).

daughter, and L. Domitius Ahenobarbus and his son. This shows that, similarly to Cicero, he was in contact with people that were related to each other, but not always of the same political affiliation as himself.

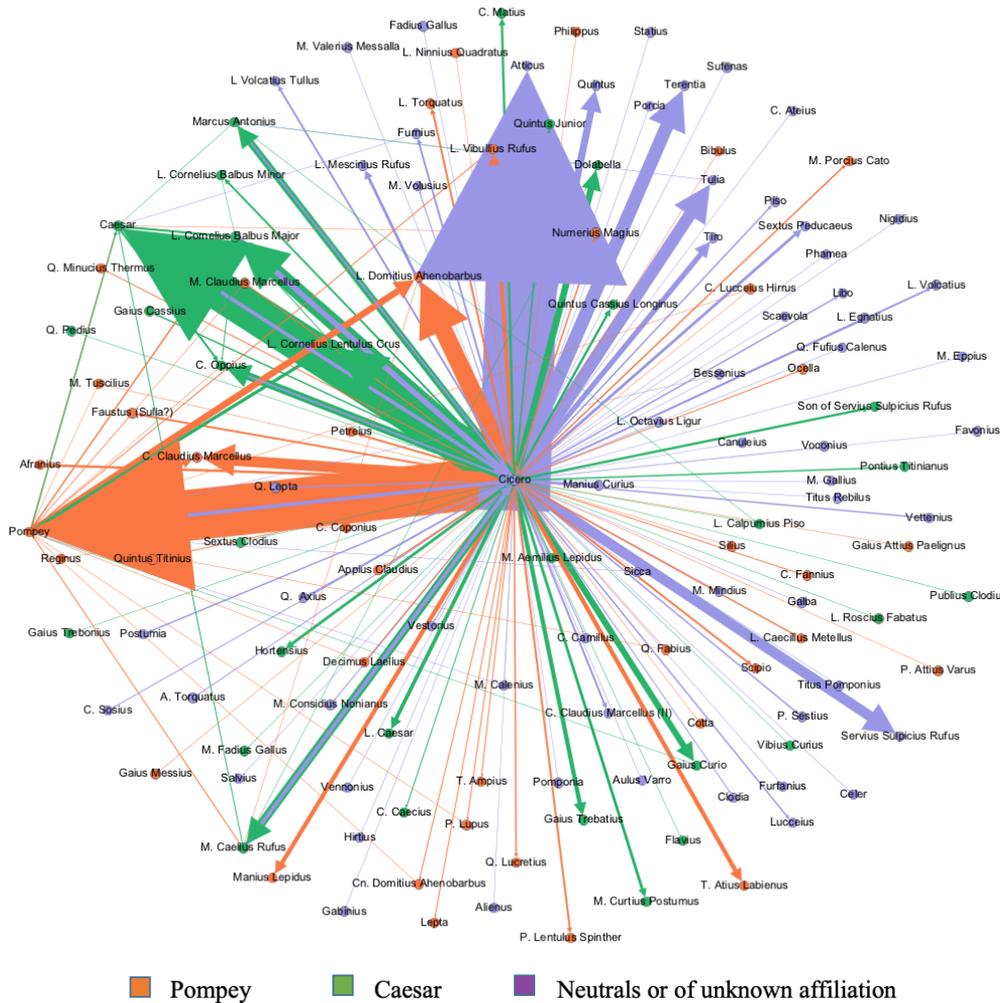


Fig. 5: Complete network map for 49 BC

49 BC

As 49 BC is marked by Caesar crossing the Rubicon in January and all of Rome panicked by the imminent threat of civil war, it is, understandably, a very tumultuous year in Cicero’s epistolary circle. Owing to the copious amounts of letters preserved from this year (75 were written to Atticus alone) the network map of connections for 49 BC is very dense (see fig. 5). In all, 130 people are mentioned, and this is where the limitations of the software program Gephi are most evident. The resulting network map is difficult to read and analyse. As a

consequence, I decided to create a more accessible network map removing any individual who was only mentioned once throughout the year.

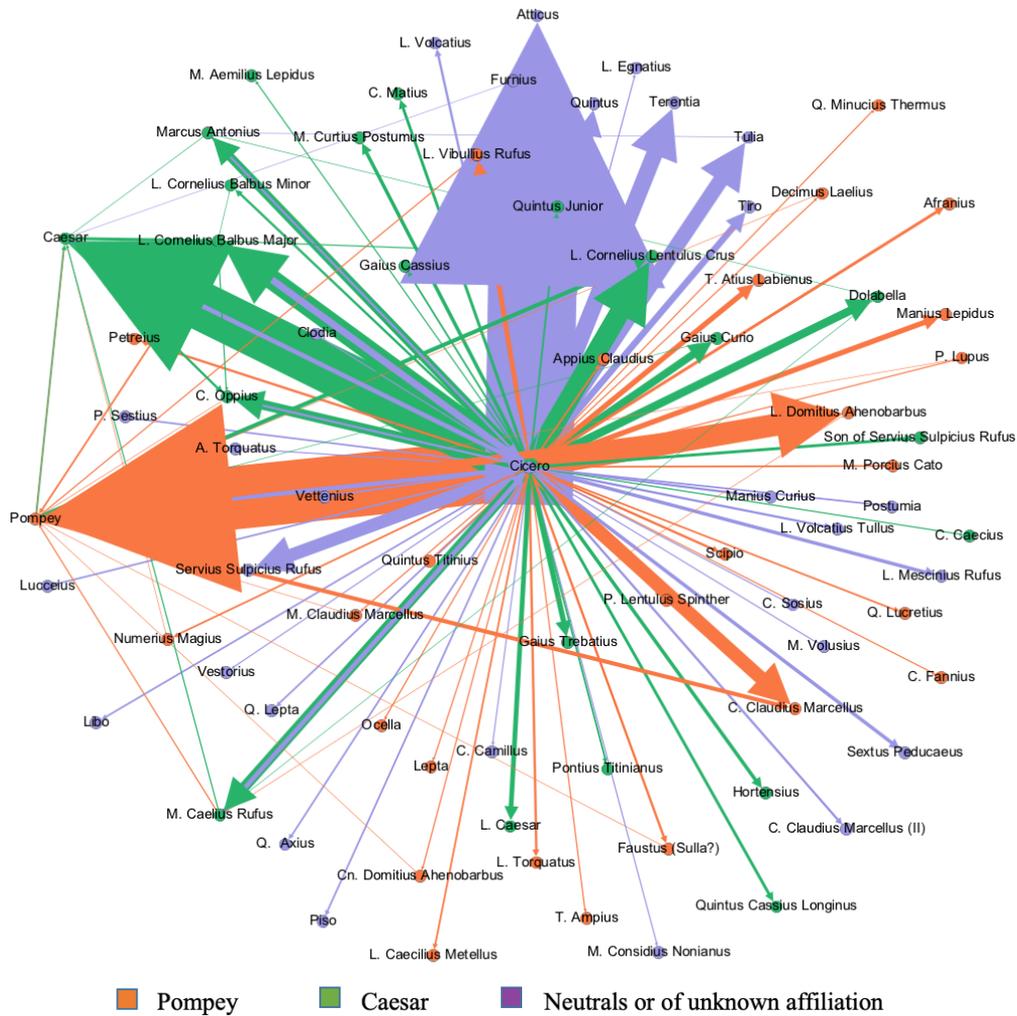


Fig. 6: Network map for 49 BC minus single mentions

The dismissal of single mentions did not affect the principal elements of this study’s analysis, but instead made it easier to discern patterns of relatedness from the less dense network that was created (see fig. 6). As can be seen, even with a less dense network, it is still difficult to identify certain nodes’ links due to the size of some weighted arrows: namely Atticus’, Caesar’s, and Pompey’s. This again, is another small downfall of using Gephi and appropriating weight to connections in general.

Familial connections are quite prominent in 49 BC. Supporting Caesar are: L. Cornelius Balbus Major and his nephew L. Cornelius Balbus Minor, his own two cousins, M. Antonius and L. Julius Caesar, Ser. Sulpicius Rufus' son, whilst he still remained neutral, and Cicero's son-in-law Dolabella. Cicero's nephew 'Quintus Junior' also supported Caesar, whilst his brother Quintus, who had served in Caesar's army in Gaul, was now staying neutral at Cicero's bequest. Pompey, on the other hand, had all three Claudii Marcelli and the letters for this year attest that L. Domitius Ahenobarbus and his son Cn. Domitius Ahenobarbus also supported Pompey.²⁴ It is not clear in the source material if Manius Lepidus and M. Aemilius Lepidus were related, however the network map of connections does clearly demonstrate that there was no set precedent for familial affiliations. For some families, all members clearly chose to side with the same man, whilst in others they were divided in their support, including in Cicero's own household.

One particularly interesting case is that of T. Atius Labienus. During the campaigns in Gaul, he had been instrumental in helping Caesar conquer the territory in the name of Rome, however, by the start of 49 BC Cicero rejoices in communicating to his correspondents that Labienus' defection to Pompey's cause can only precipitate Caesar's downfall.²⁵ What caused his defection is still a mystery to historians, as Caesar makes no reference to it in his *commentarii* and Cicero is similarly non forthcoming with details pertaining to the defection, although the latter's reason is simply that he does not know it himself. Some historians have hinted at rumours of gross misconduct by Labienus in regard to distribution of war booty and money taken from the enslavement of enemy captives, whilst others have suggested his brutality towards his soldiers and captives as reasons for Caesar either enforcing his defection or not trying to win him back.²⁶

Further political connections have not changed much from the previous year. What does change is the increase in political connections evident in 49 BC, but this is merely as a result of an increase in individuals mentioned in the letters. There are nearly equal numbers of people who supported Pompey as there are Caesarians, as well as those who remained neutral, or those whose affiliations could not be discerned. As both consuls in this year, L. Cornelius Lentulus Crus and M. Claudius Marcellus (I) were staunch Pompeians, there is understandably much discussion about them, as well as to them from Cicero. The former is mentioned 30 times and the latter 19. Both have a letter written to them by Pompey, addressed "To the Consuls".²⁷ Copious communication is exchanged in

24 CCCXLVIII (A VIII, 14) and CCCLVII (A IX, 13).

25 CCCIII (A VII, 11), CCCIV (A VII, 12) and CCCVI (A VII 13a).

26 BATSTONE / DAMON (2006), p. 163–164, TYRRELL (1970), p. 36; (1972) and LEACH (1978), p. 176).

27 CCCXXX (A VIII, 12A).

regards to plans and movements of people, mainly Pompey's supporters and their army, following Caesar's crossing of the Rubicon and Cicero is constantly updated and dissipating this information to his fellow correspondents. Moreover, these correspondents are not solely Pompeians, like Cicero, but many of them have sided with Caesar. Of notable importance are his son-in-law Dolabella, C. Curio, his close friend M. Caelius Rufus and Caesar's closest aides L. Cornelius Balbus Major and C. Oppius. These last two are of particularly significance in that Caesar had tasked them to act on his behalf in order to persuade Cicero to support his cause.²⁸ The fact that Caesar chose two equestrians for this important task raises certain questions. Did Caesar choose them because of their unquestionable fidelity, because of their undeniable reputation, because they had strong connections with both himself and Cicero or because he could not trust any senators with the task? An absorbing question, but unfortunately not one that social analysis, or the source material itself, can answer.

When Pompey's network of connections for 49 BC is analysed, it reveals an intriguing number of links to both his supporters and those of Caesar's, see Fig. 7. Of the latter, he has connections with Caesar's chief negotiators C. Oppius and L. Cornelius Balbus Major, as well as M. Caelius Rufus, C. Curio and Caesar himself. Of his most prominent supporters, he is linked to both of the Domitii Ahenobarbi and two of the Claudii Marcelli, Marcus and Cornelius, as well as to the consul for that year, L. Cornelius Lentulus Crus. These connections have all been ascertained through either the letters that Pompey wrote to, and received from, Cicero for that year, or letters written by Cicero to other correspondents where he expresses these connections between Pompey and these individuals.²⁹

Caesar's network, on the other hand, is smaller (see fig. 8). The only three connections that he does not have in common with Pompey are: his cousin M. Antonius and the senators Numerius Magius and Furnius, with the latter mentioned in the letters as a close friends of Caesar and Cicero's.³⁰ Numerius

28 BATSTONE / DAMON (2006), p. 189. There is a letter from Caesar to L. Cornelius Balbus Major and C. Oppius, CCCXLVI (A IX, 7C), expressing his leniency towards Pompey's supporters. Cicero also received three letters from Balbus, CCCXLV (A VIII, 15a), CCCLIII (A IX, 7b) and CCCLXIX (A IX, 13a) and one letter from C. Oppius and L. Cornelius Balbus Major together CCCL (A IX, 7a).

29 Pompey is mentioned 72 times in the letters of 49 BC. Most importantly, he receives two from Cicero, CCCXXVI (A VIII, 11b) and CCCXLII (A VIII, 11d). Some of Pompey's letters have also survived. He wrote two to Cicero, CCCXXI (A VIII, 11a) and CCCXXXIII (A VII, 11c), as well as three to L. Domitius Ahenobarbus, CCCXXIV (A VIII, 12b), CCCXXVIII (A VII, 12c) and CCCXXIX (A VII, 12d) and lastly one letter to the joint consuls CCCXXX (A VIII, 12a).

30 CCCLVI (AIX, 6a) and CCCLXV (A IX, 11a).

Magius had also been one of Pompey's *praefecti fabrum* who had been taken by Caesar, pardoned and sent back to negotiate with Pompey on Caesar's behalf.³¹



Fig. 7: Detail of 49 BC highlighting connections for Pompey

31 CCCXLVI (A IX, 7c).

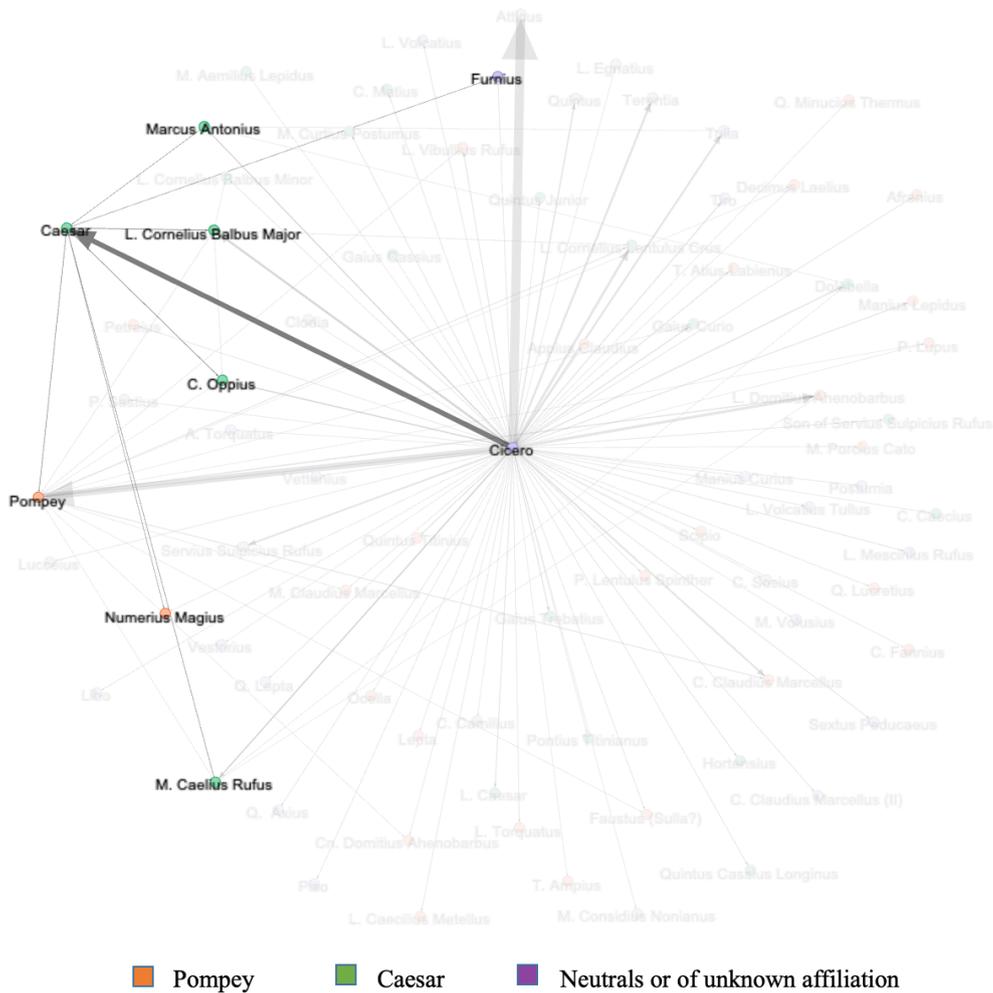


Fig. 8: Detail of 49 BC highlighting connections for Caesar

Compared to his network map for 50 BC, M. Caelius Rufus’ map of connections for this year is drastically smaller (see fig. 9). His only other connections, apart from those with Cicero, Pompey and Caesar, are with L. Domitius Ahenobarbus and Dolabella. This reduced network map is a result of a decrease in letters exchanged between himself and Cicero.³² Perhaps he was not as connected, or as important, as other individuals in Cicero’s epistolary circle.

32 Only three have survived. Two written to Cicero, CCCXLIII (F VII, 15) and CCCLXXXII (F VII, 16) and one written to Pompey CCCXCIII (F II, 16).

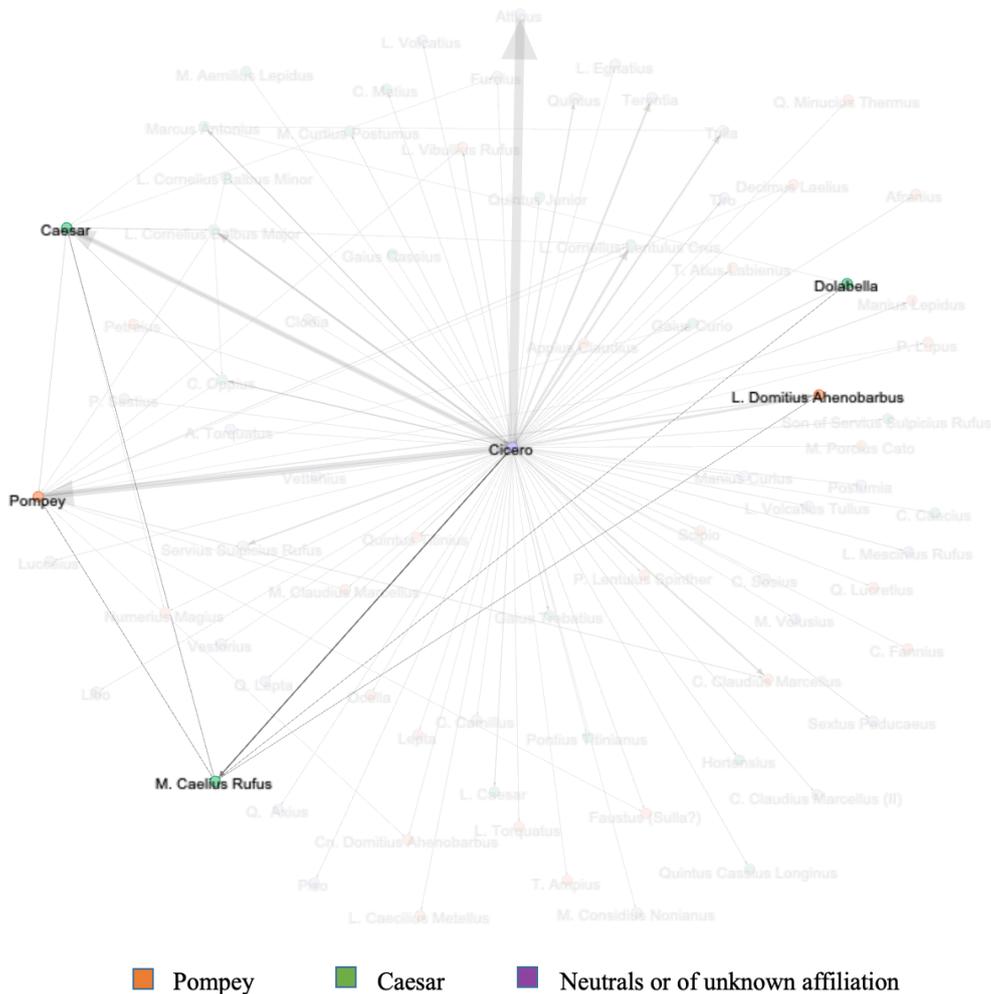


Fig. 9: Detail of 49 BC highlighting connections for M. Caelius Rufus

Some new people also emerge as having a significant amount of connections. The network map for L. Cornelius Balbus Major highlights his role as a negotiator between Caesar and other important individuals. His strong connection with Cicero, to whom he wrote four letters in 49 BC³³, is also evident in the fact that his network map clearly shows him acting as a bridge between Caesar and Cicero, as well as Caesar and the consul L. Cornelius Lentulus Crus, along with Pompey, C. Oppius and his own nephew, L. Cornelius Balbus Minor.

33 Three from him alone, CCCXLV (A VIII, 15a), CCCLIII (A IX, 7b) and CCCLXIX (A IX 13a), and one written in conjunction with C. Oppius CCCL (A IX, 7a).

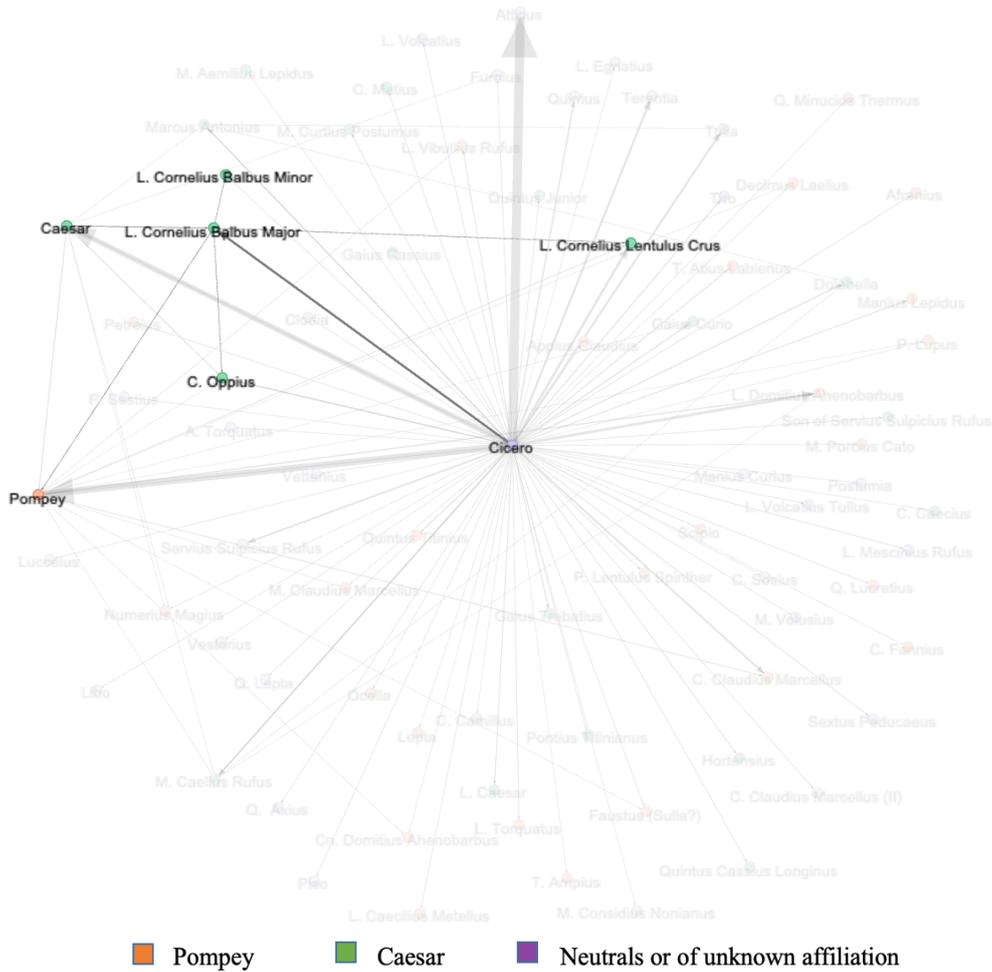


Fig. 10: Detail of 49 BC highlighting connections for L. Cornelius Balbus Major

M. Antonius' network map reveals some surprising connections, and the lack of some connections as well, see fig. 11. He is, understandably, connected to Caesar, but is missing a link to Caesar's negotiator L. Cornelius Balbus Major. Was this a conscientious effort on Caesar's part, lacking trust in his cousin, or was M. Antonius not yet politically significant enough to play a major role at the start of the civil war? He is, however, connected to another of Caesar's supporters, and Cicero's son-in-law, Dolabella, as well as his daughter, Tullia. This family link makes his connection to Cicero a strong one. A fact reinforced

by his writing one letter to Cicero in 49 BC, as well as intending to visit him for several days in May of that year.³⁴

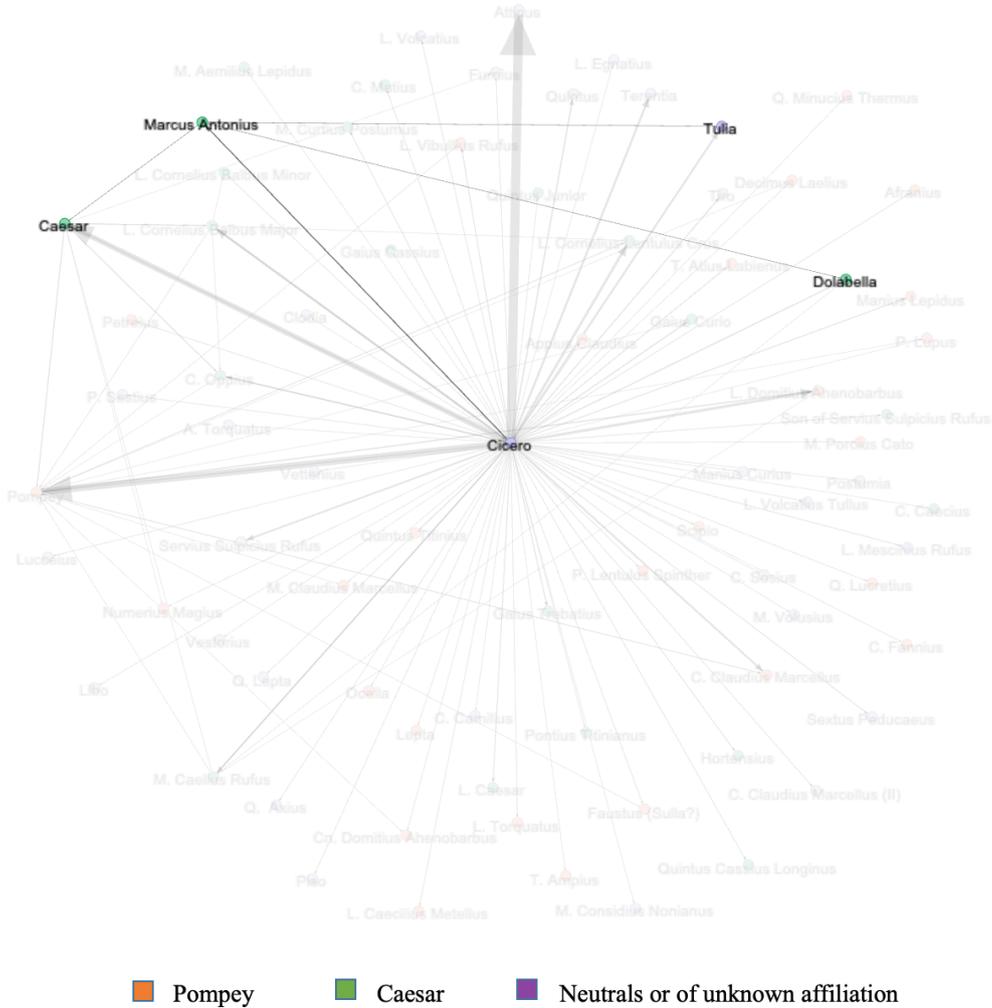


Fig. 11: Detail of 49 BC highlighting connections for M. Antonius

34 From letter CCCXC (A X, 8a). M. Antonius arrived in Cumae, where Cicero was staying, on May 4 but Cicero's letters to Atticus, CCCXCV (A X, 11), CCCXXCVI (A X, 12) and CCCXC VII (A X, 13), infer that he did not meet M. Antonius face-to-face.

48 BC

The network map for 48 BC is vastly different from that of the previous year. As can be seen in fig. 12, there are significantly less individuals in this year's network map when compared to that of 49 BC. As a consequence, there are significantly less overall connections and there are also fewer links between other people than Cicero. This is mostly due to the fact that Cicero spends the majority of the year in Pompey's camp.³⁵ The bulk of his communication with the outside world is limited to his immediate family, including his son in law Dolabella, and his trusted friends, Atticus and M. Caelius Rufus.³⁶

Cicero is still connected with the power players of 49 BC: C. Oppius, L. Cornelius Balbus Major and C. Curio, but due to his constant proximity to, and official support of, Pompey as well as Cicero now no longer trying to play peacemaker between Caesar and Pompey, all their mutual correspondences cease to exist. In terms of the network maps, Cicero's connection to these individuals continues due to his frequent mention of them in his letters to Atticus; Pompey in an ever-increasing negative light and Caesar as a fig. to be feared should he win.³⁷

Caesar's supporters far outweigh those of Pompey in this year's letters, 3:1 to be exact. The reason for this, of course, is that Cicero is in Pompey's camp and there are very few of Pompey's supporters outside to write to that are not already with him, which is a limitation presented by analysing the published letters of this period. It also appears that he is reluctant to discuss anything to do with camp conditions, his interactions with fellow supporters, or the civil war in general, lest his letters be intercepted, and his real thoughts made public. His frequent letters to Terentia, for example, read as overly polite and superficial when compared to the previous year when he was worried for her, and their children's, safety.³⁸

Family connections, as discerned from the existing letters, are virtually non-existent in 48 BC, especially when compared to the previous two years. This change in familial connections is particularly interesting and highlights that Cicero did not always write all his letters to the same people or discussed the same issues. Instead, he often chose his correspondents according to his

35 Plut. *Cic.* 38-9.

36 TEMPEST (2011), p. 165.

37 CCCCIX (A XI, 3), CCCCXI (A XI, 4), CCCCXVI (A XI, 6), CCCCXVIII (A XI, 7) and CCCXX (A XI, 8).

38 CCCCVIII (F XIV, 8), CCCCX (F XIV, 21), CCCCXIII (F XIV, 12), CCCCXV (F XIV, 19) and CCCCXVII (F XIV, 9).

immediate needs and discussed the current issues, events and people of interest with them.

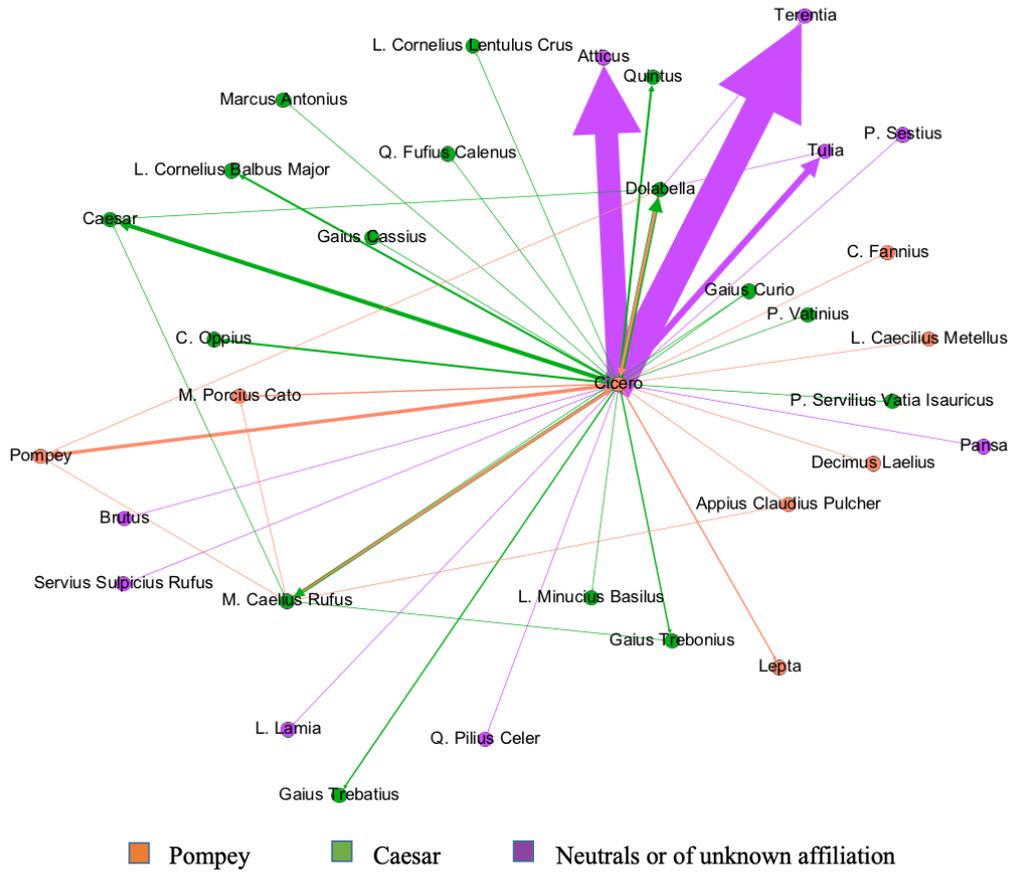


Fig. 12: Network map for 48 BC

For example, in 48 BC, L. Cornelius Balbus Minor is not mentioned. L. Domitius Ahenobarbus and his son and none of the three Claudii Marcelli are not mentioned either. This is a marked difference from the previous year, when all of these people played important roles in Cicero’s social network during the first few years of the civil war. The only family connections evident in 48 BC, apart from Cicero’s own, are Caesar and M. Antonius.³⁹ However, the big change this year is in Cicero’s family. Quintus, his brother, decided to support Caesar again,

39 Cicero’s letter, CCCCXVIII (A XI, 7), to Atticus discusses that M. Antonius sent him a letter and also forwarded him a letter from Caesar to M. Antonius.

after the battle of Pharsalus.⁴⁰ Although there is no mention of Quintus Junior in the letters this year, it can be assumed that he is still a Caesarian. This is a major development in Cicero’s social circle and appears to show that family obligations and/or connections did not play a role in deciding who to support. In this case, Quintus simply decided to back the winner, probably with his own career and future prospects in mind.

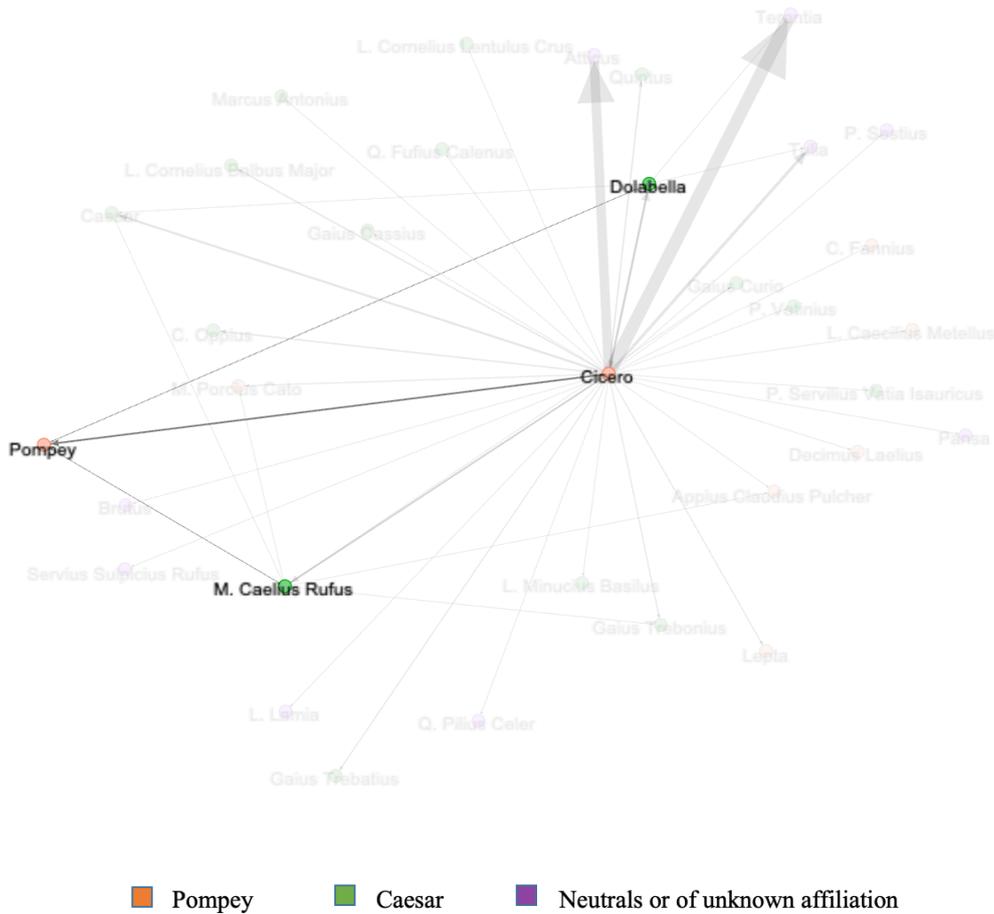


Fig. 13: Detail of 48 BC highlighting connections for Pompey

40 EVERITT (2001), p. 213).

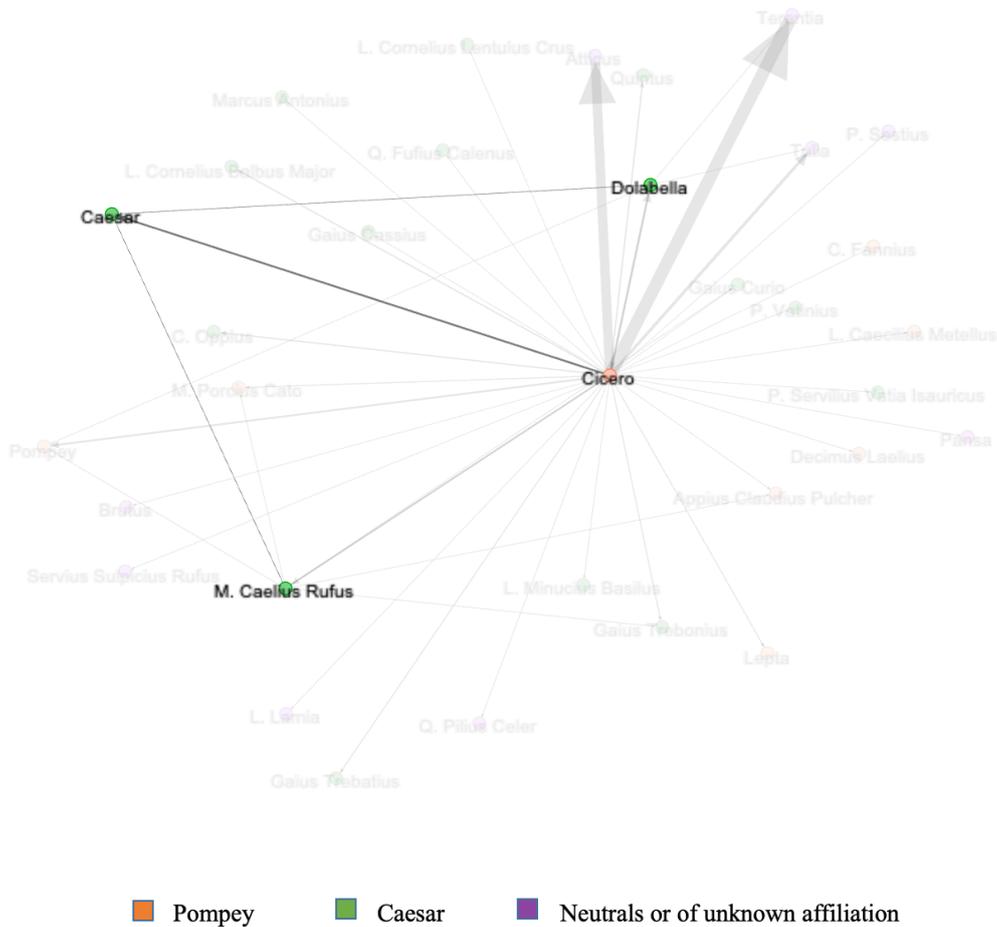


Fig. 14: Detail of 48 BC highlighting connections for Caesar

As previously mentioned, no letters that were written by Pompey and Caesar have survived from this period, and as a consequence, their resulting network connections are very limited (see fig.s 13 and 14). Their links to Dolabella and M. Caelius Rufus only exist because they are both mentioned in their respective letters to Cicero.⁴¹ This, again, is a major change from previous years, especially for Pompey. His individual network map for 49 BC, fig. 7, demonstrated his diversity in connections and affiliations at the start of the civil war, however, less than a year later, his multiple connections have dwindled down to only three. Could this be a visual representation of his diminishing power and

41 M. Caelius Rufus writes to Cicero in February or March, CCCCVI (F VIII, 17), and Dolabella writes to him in May or June CCCCVII (F IX, 9). No reciprocal letters from Cicero have survived.

subsequent loss at the battle of Pharsalus, or simply due to the fact that not many letters between Cicero and himself have survived from this period? The latter would seem to be the case, as Caesar’s rise in dominance in 48 BC does not seem to have greatly affected his individual network map for 48 BC when compared to the one from the previous year (fig. 8 above).

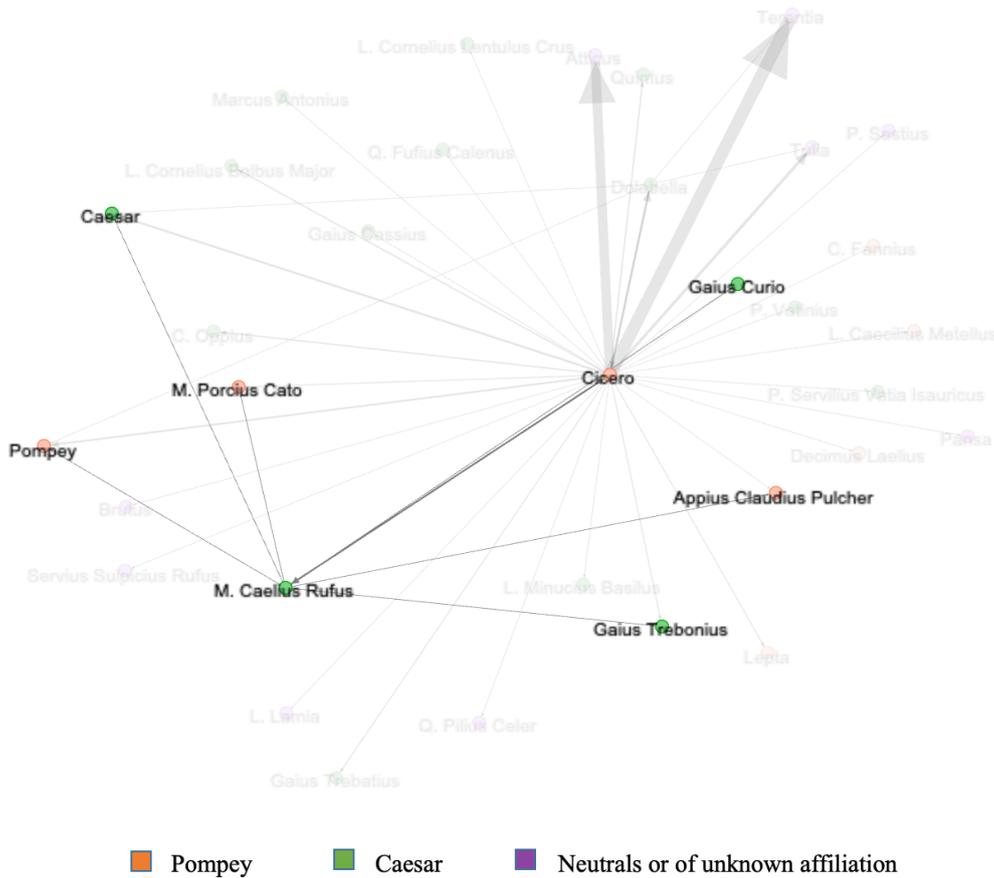


Fig. 15: Detail of 48 BC highlighting connections for M. Caelius Rufus

To the contrary, the network for M. Caelius Rufus (fig. 15) once more shows his indifference when choosing who to discuss in his correspondence.⁴² He mentioned both Caesarians and Pompeians in equal measure. Of particular note is his connection with C. Trebonius, his fellow praetor for 48 BC. Trebonius’ role

42 CCCCVI (F VIII, 17).

as the administrator of Caesar’s debt laws caused M. Caelius Rufus much anguish, both personal and political, and resulted in him renouncing his support for Caesar towards the middle of 48 BC, staging a minor rebellion and losing his life in the process.⁴³ Unfortunately, this change in allegiance in the middle of a year cannot be easily represented. It is one of the drawbacks of using Gephi. M. Caelius Rufus’ node remains green as he was still a Caesarian for the majority of 48 BC. This change in affiliation, though, is important to note. Unlike T. Attius Labienus’ unspecified reasons for abandoning Caesar in 49 BC, M. Caelius Rufus’ were perfectly clear; he was heavily in debt and Caesar’s debt relief program was not going to be enough to clear his finances.

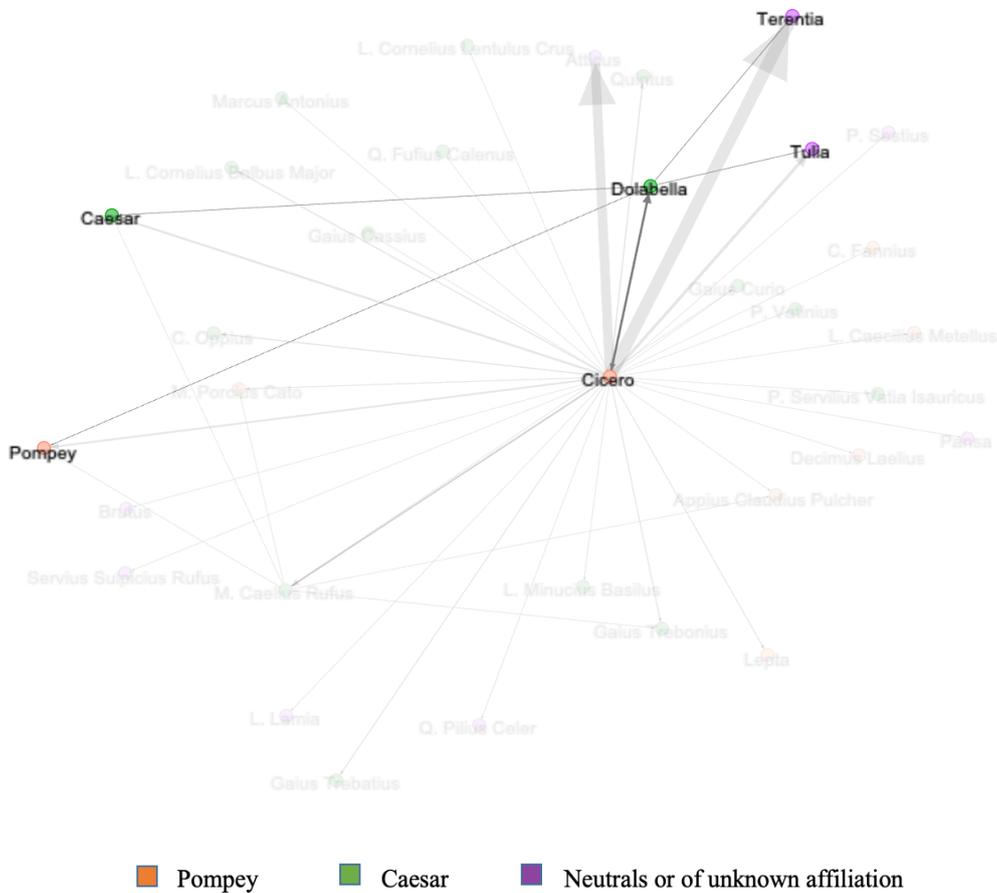


Fig. 16: Detail of 48 BC highlighting connections for Dolabella

43 Dio XLII 22-25.

Dolabella's connections are marginally more developed than of previous years (see fig. 16). This is due to his writing a letter to Cicero⁴⁴ and the fact that Cicero was concerned about his family's protection in Rome whilst he was away supporting Pompey, demonstrating the familial, as well as social connection, that these two shared. It also casts light on the fact that Cicero was not averse to turning these types of connections into political ones; asking favours of the opposing side in order to safeguard his own family.⁴⁵ Dolabella's connection to Caesar offered Cicero the slight relief that his daughter, son and wife would at least come to no physical harm under Dolabella's protection should Caesar win the civil war. This is the only time in the correspondence that a connection is used in this way. It highlights the possibility that other such requests could have been made but have not survived down to us.

47 BC

The network map for 47 BC sees a complete decline in correspondents writing to Cicero (see fig. 17) and it is clear from reading the latter's letters that his main focus for this year is the safety of his family. Whilst Atticus still remains his main addressee, receiving 17 of the 27 letters, there is a sharp increase of letters written to Terentia, eight for this year, along with one apiece written to C. Cassius and C. Trebonius.⁴⁶

Having been killed in Egypt in the latter stages of the previous year⁴⁷, Pompey is only mentioned once, in passing, and there are only a few of his supporters mentioned in 48 BC.⁴⁸ On the other hand, Caesar is mentioned frequently in this year's correspondence, as is Cicero's brother Quintus who had decided to shadow Caesar's movements in an effort to save his name and degrade Cicero's to Caesar in the process.⁴⁹ Understandably, his brother's attitude greatly concerns Cicero and occupies much of his correspondence to Atticus in this year. Of other family connections within the network, there only exists the ones between Caesar and M. Antonius and Ser. Sulpicius Rufus, who still remained neutral, and his son, who fought in Caesar's army. The degradation of Cicero's social network in 47 BC, coinciding with a complete

44 CCCCVII (F IX, 9).

45 Cicero's hinted bequest is replied to in his letter and Dolabella's role in procuring Cicero's pardon from Caesar is discussed in a letter from Cicero to Atticus CCCCVIII (A XI, 7).

46 Letters to Terentia are: CCCCXII (F, XIV, 16), CCCXXXI (F XIV, 11), CCCXXXIII (F XIV, 15), CCCXXXVI (F XIV, 10), CCCXXXVII (F XIV, 13), CCCXL (F XIV, 24), CCCXLI (F XIV, 23), CCCXLV (F XIV, 22) and CCCXLVII (F XIV, 20). Moreover, CCCXLVI (F XV, 15) is addressed to C. Cassius and CCCXLVIII (F XV, 21) is written to C. Trebonius.

47 Plut. *Pomp.* 79.

48 Q. Minunius Thermus, Cn. Sallustius and Decimus Laelius.

49 BUTLER (2002), p. 167.

decrease of talk about the civil war, and the now non-existent struggle between Caesar and Pompey, due to the latter's death, are the reasons why I decided to stop the analysis of Cicero's letters in this year, and why there are no significant personal networks to discuss, even though the civil war lasted for a few more years.

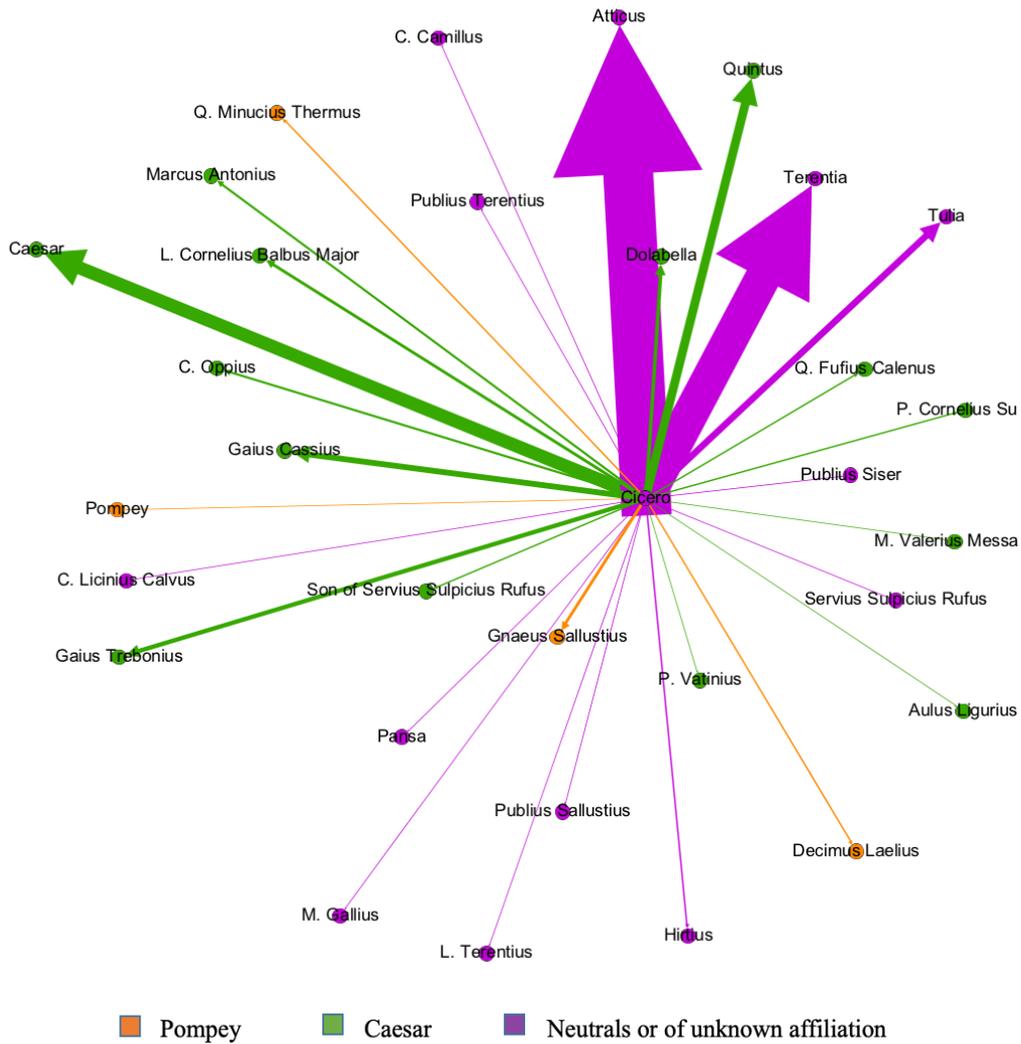


Fig. 17: Network map for 47 BC

50-47 BC

The accumulation of all the connections collated from the letters for the years 50 to 47 BC inclusive, creates a comprehensive network of all the various connections that existed between the individuals in Cicero's epistolary circle (see fig. 18). Although quite a dense visualisation, I have decided, unlike the network for 49 BC, to include each individual who was mentioned in the correspondence, even if they were only mentioned once throughout those four years. The reason for keeping every individual in this visualisation is that it provides an accurate and detailed network for all the connections that existed during the period of the civil war that this study is scrutinising. As a consequence, this entire network allows for some interesting insights.

As was seen in the visualisations of 48 and 47 BC, the amount of Pompeian connections in the networks radically declined after Caesar's victory at Pharsalus and the death of Pompey. This can be seen in this network map as there are more connections with Caesarians and neutralists, or those of unknown affiliation, than there are with Pompey's supporters. In fact, the latter only provide a few of the deeper connections, or bigger arrows, within the network, apart from Pompey and L. Domitius Ahenobarbus. The stronger links are reserved for the members of Cicero's family and his closest confidant, Atticus, as well as the main supporters of Caesar within his social circle: L. Cornelius Balbus Major, L. Cornelius Lentulus Crus, M. Antonius and Caesar himself. M. Caelius Rufus still appears as a Caesarian, and Quintus as a neutral, in this network map as, as previously discussed, one of the drawbacks of using Gephi is that it is not possible to change the colour of a node, or represent it as two colours, if the majority of information inputted into the software program means that one representation is stronger than the other. In this case, both had more connections as a Caesarian and neutralist, respectively, and so their nodes and connections still appear as green and purple.

In terms of family connections within the network, there are no changes when all the information is combined into one visualisation. The three Claudii Marcelli cousins still appear as Pompeians and the two families, the Domitii Ahenobarbi and Sulpicii Rufi, where the fathers were neutral and the sons supported Caesar, have not changed either. Cicero's family, however, is split. His wife, daughter and young son are neutral, but his nephew and son-in-law are Caesarian for the whole period, whilst his brother becomes one late into 48 BC, as previously mentioned. This shows that families did not follow a particular trend or pattern when choosing who to support. Some were unified, others divided and some, like Cicero's, had members who chose to change their affiliations for personal reasons.

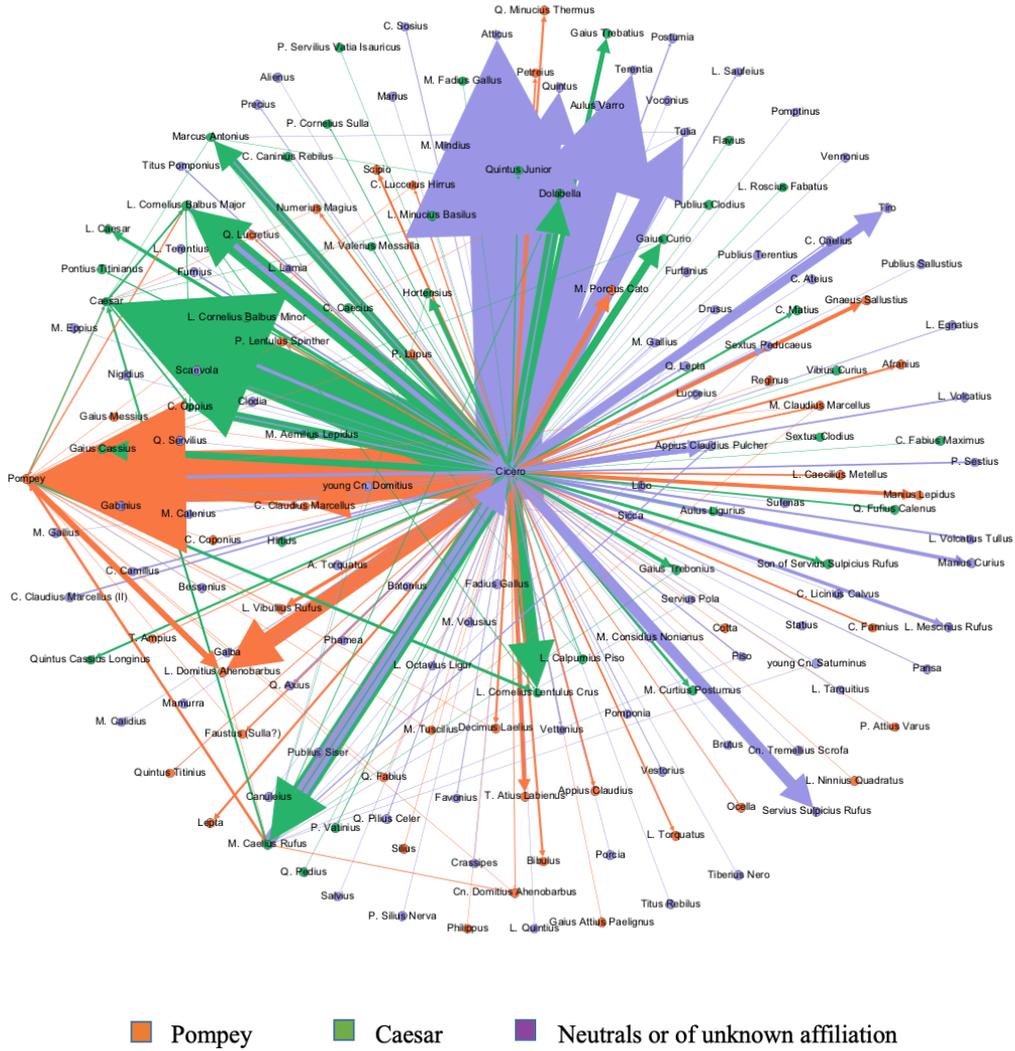


Fig. 18: Network map for 50-47 BC

When individual network maps are analysed, a wider range of connections appears. For example, Pompey’s connections for 50–47 BC is a significantly more diverse than that for singular years (see fig. 19). His connections not only include his supporters, but also cross over to a few neutralists and several Caesarians. An important aspect of this visualisation is that it demonstrates that Pompey was connected to three different family groups; the Claudii Marcelli and the Domitii Ahenobarbi, as well as Cicero’s own family.

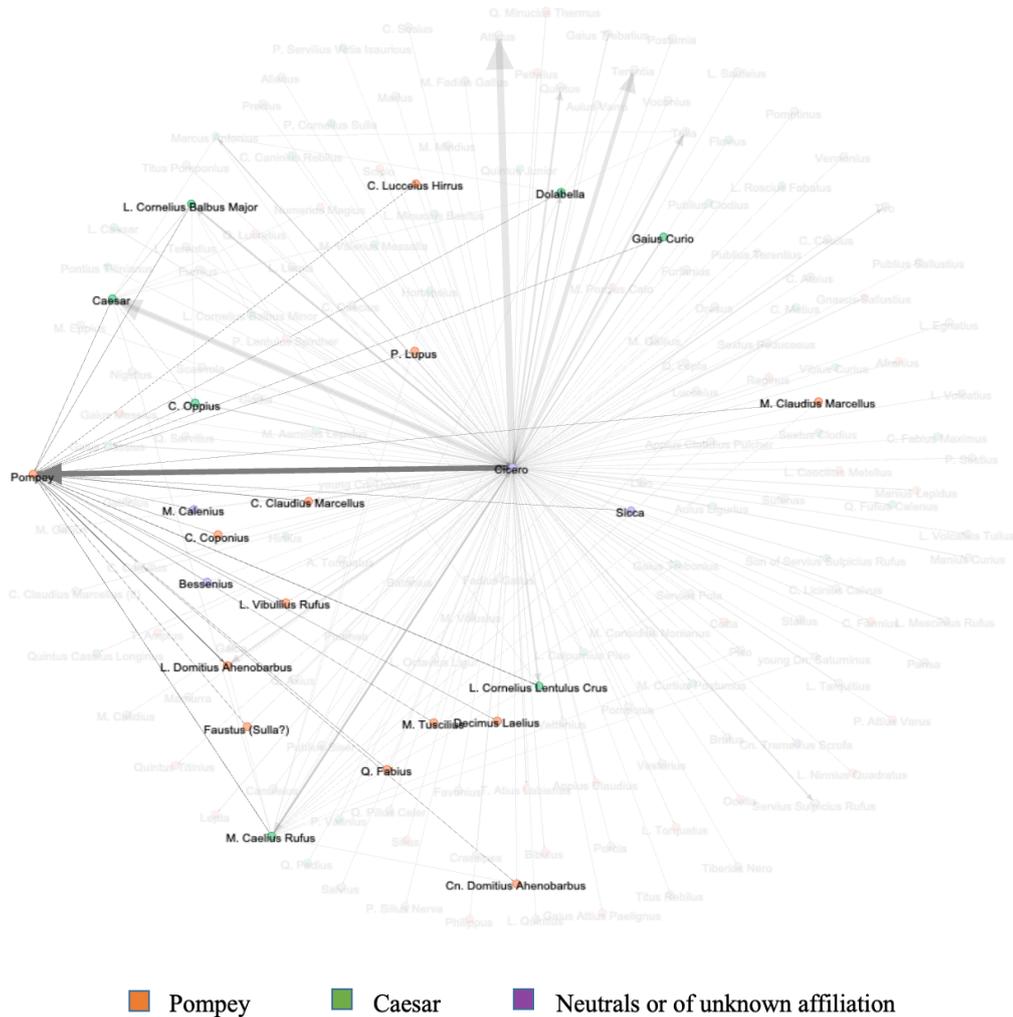


Fig. 19: Detail of 50-47 BC Highlighting connections for Pompey

The same, however, could not be said about Caesar’s network (see fig. 20). Even when all his connections are collated into one network map, the results, as discerned from the letters, are still limited and significantly less diverse than Pompey’s. Apart from his connections to Cicero, Pompey and his own supporters: Dolabella, M. Caelius Rufus (until his defection for monetary reasons to Pompey’s cause in late 48 BC), C. Oppius, M. Antonius and L. Cornelius Balbus Major, his only other connections are with lesser influential senators: Numerius Magius and Furnius. This lack of diversity in Caesar’s connections could, of course, be due to the fact that only a few of the letters between Cicero and himself from this period have survived, and that the ones that have are fairly brief. Caesar preferred to have his chief negotiator, L. Cornelius Balbus Major, mediate with Cicero instead of doing it himself.

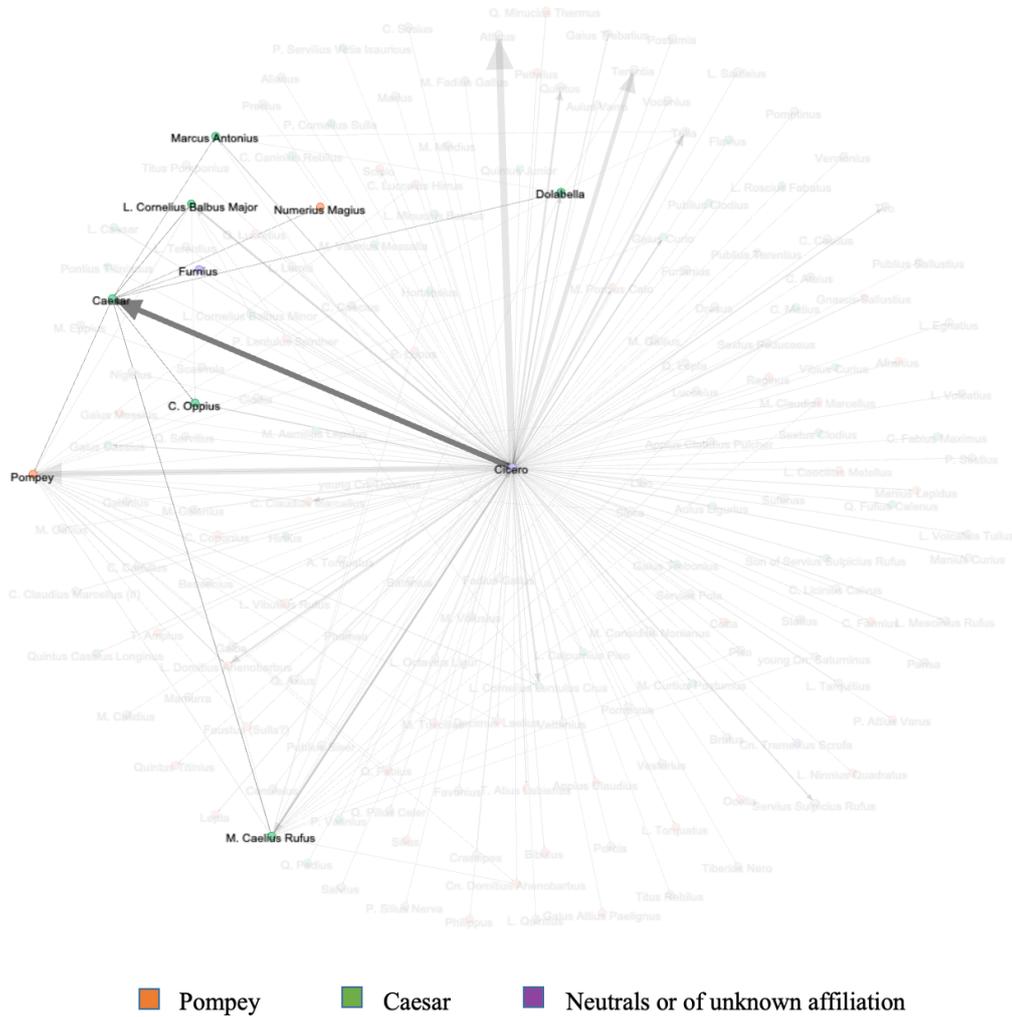


Fig. 20: Detail of 50-47 BC Highlighting connections for Caesar

Considering M. Caelius Rufus does not feature at all in the network map for 47 BC, his complete network map for 50 to 47 BC is extremely diverse and relatively dense (see fig. 21). He has connections with all parties, including neutrals, and is also connected to different family groups: Cicero’s, L. Domitius Ahenobarbus and his son, and M. Claudius Marcellus. This again shows that political affiliation played a very small role in his choice of correspondents or connections. The creation of these network maps has also made visible the various familial connections that M. Caelius Rufus fostered. These connections have become much more apparent than when read from the original source material and further highlight that many individuals in Cicero’s correspondence knew each other and were connected to various family groups within his epistolary circle.

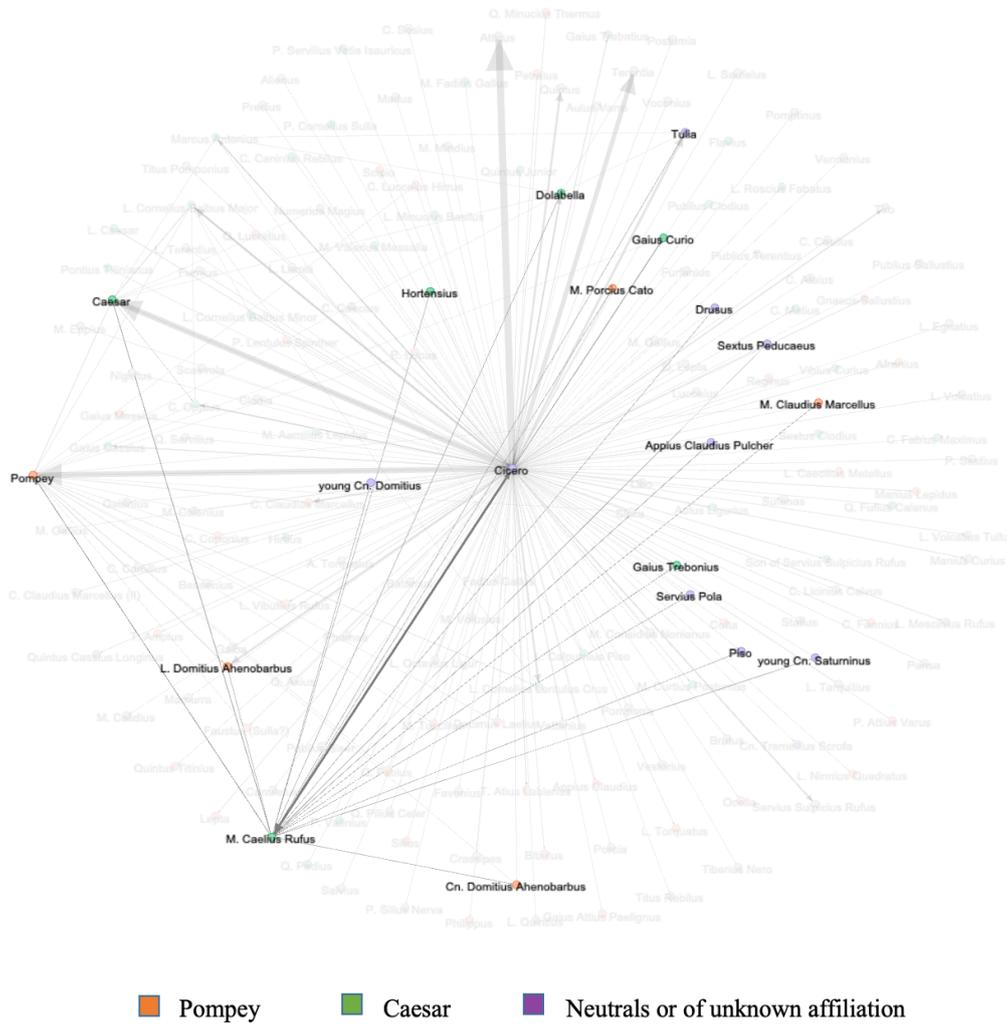


Fig. 21: Detail of 50-47 BC Highlighting connections for M. Caelius Rufus

4 Discussion

One of the main challenges of social network analysis using ancient sources is to bring the historical context back in after the formal analysis has been done.⁵⁰ Having detailed the networks discerned from Cicero’s letters, it is now crucial to discuss these findings within a broader context and to use the analyses in order to determine if the connections mentioned in Cicero’s correspondence can lead to new insights into the choices made by senators during the civil war

50 DÜRING / STARK (2011), p. 424.

between Caesar and Pompey. Concurrently, the suitability of applying SNA to this style of historical research will be assessed.

Social network analysis provides a way of visualising complex social networks and sometimes enables a number of valuable perceptions into their structure and functioning to be identified. In this study, SNA has proven to be a valuable tool in highlighting various traits of Cicero's epistolary circle that were not so easily discernible from the static texts themselves. Of particular note are the visualisations of familial connections that existed between individuals in Cicero's correspondence and the diversity of connections that some of these individuals also harboured.

At the same time, however, there are several limitations to using this form of research. The first is the limitation provided by the ancient sources themselves. As previously mentioned, to use social network analysis the way it is intended to be used, a systematic analysis of the primary sources needs to take place before the analysis tools can be applied. Another limitation is that although SNA can provide valuable insights, there are some fundamental questions about the operation of networks that social network analysis does not seem able to address. Both limitations are interlinked. If the source material is not scrutinised well enough to produce the information that will lead to the best visualisation of that network, then the network maps created will fail to address some, or all, of the researcher's needs, or they may lead to inaccurate interpretations of the source material. These limitations, and their implications, only truly came to light when analysing the network maps produced by Cicero's letters. The ego-centric networks created were perfect for analysing Cicero's own connections but were either not ideal for displaying the multiple connections between other individuals, or the questions posed of the source material and the input of this information into the software matrix was not carried out to its full potential. I made the same mistake of not fully taking the limitations of static historical data into account when tabulating the information for input into the software program. Statements from the created network maps could definitely be made about the connections between individuals in Cicero's social and epistolary circles, as discussed in the results above, but the various visualisations were not able to provide enough information, or detail, to conclusively state whether all these individuals made their choice to support either Pompey or Caesar as a result of social, political or familial affiliations.

On a political front, the network maps of Cicero's correspondence highlight significant characteristics. The lead up to the civil war and its outbreak, 50 to 49 BC, sees an almost equal representation in the networks of the two main political identities to support, Caesar or Pompey, as well as the many individuals who decided to remain neutral, or whose political affiliations were not able to be discerned from the letters. The last two years that this study analysed, 48 and 47 BC see a drastic decline in the number of Pompeians that Cicero remains

connected to. This, of course is due to Caesar's victory at Pharsalus and Pompey's subsequent death towards the end of 48 BC, as well as Cicero being in Pompey's camp with many of his frequent correspondents. Furthermore, what I tried to achieve by creating a network map that encapsulated all the years scrutinised (see fig. 19 above for the network map of 50–47 BC) was to show the total connections over time. This worked to some degree, as the sum of connections visualised is impressive, however it is difficult to discern political patterns over time from this network map. The ability to represent these connections in a linear format, according to a time scale would have been more effective. Theoretically, this appears to be the most effective way of visualising this network, but very few social networking software programs enable such maps to be created, and if they do, they also bring their own limitations in other departments.⁵¹

On the other hand, this encapsulating network map did allow for more detailed analysis of certain individuals within it (see figs. 19-21 above). Being able to visualise all of the connections for these individuals between 50 and 47 BC allowed for certain patterns to emerge. For example, it was easier to discern the variety of connections, both political and social, that Pompey and M. Caelius Rufus had as opposed to Caesar. This diversity of connections is not readily noticeable when reading the texts, but quite easy to see and analyse when represented visually. This is how SNA can aid historians in reconstructing the social networks of the past. By being able to visualise Pompey's individual network, as discerned from Cicero's letters, it can be concluded, from the existing letters, that he was in contact with a greater variety of individuals than Caesar, and also from all political affiliations. According to his network maps, Pompey was communicating, or connected to, not only his supporters and neutralists, but several Caesarians as well. The same can be said for M. Caelius Rufus; his various links show that he was not troubled by his connections' political affiliations either. Therefore, analysing the diversity of an individual's connections in a network map can lead to new insights; it can show us that for Cicero's epistolary circle, political affiliations played a minor role in the formation and/or continuation of social connections during the civil war.

The most significant political development in the first two years of the civil war was the defection of T. Atius Labienus from the Caesarian cause. Cicero makes great fuss over this in his letters⁵², but the defection is not so easily discernible in the network maps. Unless you were directly studying his

51 Since starting this research, *Gephi* has added a time scale functionality in its visualisations, but the process is rather complicated and ineffective if not all dates are known or imputed. *Vistorian* also enables a time input but does not have all the functionalities available in *Gephi*.

52 CCCIII (A VII, 11), CCCIV (A VII, 12) and CCCVI (A VII 13a).

affiliation, or were already aware of it, T. Atius Labienus' defection would probably go unnoticed. This is partly due to the nature of the source material itself, where Cicero has no personal contact with him, and also due to the nature of the software program used. If T. Atius Labienus had been the focus of this study, and therefore a focal actor in the networks created, then his changes in affiliation would have been more conspicuous. Instead, as a marginal actor who is only connected to Cicero through being mentioned in his letters, he appears as just another isolated node with a single, and much less noticeable, connectional arrow than some of the better-connected individuals in Cicero's epistolary circle. It might have been easier to detect such small changes if the network map for 49 BC had been broken down into months rather than for the full year. Similar inferences can be made of Quintus' and M. Caelius Rufus' defections in 48 BC. As discussed in the results above, their change of political affiliations mid-way through the year could not be visualised because of the limitations of the software. Again, maybe dividing 48 BC into months would have made this change more evident. Or maybe this is just a drawback of using SNA, or just Gephi, on a static historical text; the resulting network maps simply cannot visualise incremental changes over time unless different maps are created for each one of those changes. One thing they are able to show us, however, is the fuller picture of the civil war based on the statistical analysis of Cicero's letters, rather than just taking Cicero's viewpoint at face value. As a result, even though Cicero conveys great excitement of T. Atius Labienus joining Pompey's camp, according to the network maps created, this seems to have had little effect on the other individuals within Cicero's social circle, or the civil war at all, as he is never mentioned again beyond the first few months of 49 BC.⁵³

As discussed above, an aspect of the network maps which has been valuable relates to familial connections. It was much easier to detect and remember these connections visually than when just reading the letters, especially when there were more than two members in a family. The network maps also made it easier to distinguish and compare these family members' political affiliations. Being able to see on a network map that the three Claudii Marcelli cousins were all Pompeians and that the father and son relationships of the Domitii Ahenobarbi and Sulpicii Rufi were divided in their political affiliations, with both fathers remaining neutral whilst their sons supported Caesar, was of great benefit. Moreover, seeing Cicero's family divided in their political affiliations in a network map made it more memorable and its impact on the analysis more significant. Also knowing that Cicero used this variance in affiliation for personal reasons was easier to imagine from a visualisation than from the letters alone. Cicero's transformation of his familial connections into political ones in order to guarantee the safety of his wife, daughter and son is a particularly

53 The three letters above are dated January 19, 22 and 23, respectively.

interesting insight and poses the possibility that this could not have been an isolated incident. Many more senators, in similar positions to Cicero, could have manipulated their various familial and/or social connections during the civil war in order to safeguard their interests. This method of visualising familial connections could be immensely valuable for future scholars interested in this field. Unfortunately, due to the nature of the source material, the connections between other individuals with similar names could not be verified – for example, it is unclear from simply reading Cicero’s letters whether all individuals with the same nomen or cognomen were related. If that were definitely the case, then the familial connections of all Rufi; M. Caelius, Ser. Sulpicius and his son and L. Vibulius; as well as that of C. Cassius and Q. Cassius, to name a few, could also have been discussed. Perhaps, had the breadth of this investigation been expanded to include other primary sources than just Cicero’s letters, more familial links between individuals could have been identified and more patterns of relatedness could have been discovered. The additional use of Roman Republican prosopography for example, or an in-depth SNA of Caesar’s *commentarii* on the civil war, could have been used to verify, discover and expand on the familial connections mentioned in Cicero’s correspondence. However, as this study was a social network analysis of his letters alone, I did not want to dilute the purity of the information gathered from the correspondence by supplementing it with evidence from other sources. That could be a much bigger, and possibly very insightful, project for the future.

Regarding the social connections within the correspondence, it is highly improbable that Cicero wrote his letters with a conscious intention to create an impression that a certain type of social structure existed in Rome, depending on who he was writing to, or that they would be used as historical documentation for such.⁵⁴ However, our modern interpretation of his correspondence has sometimes caused them to be used in this way. And indeed, this study systematically scrutinised them to determine how a certain class of individuals made choices that affected the political and social environment in which they lived. Even though this study focused primarily on Senators and their affiliations, the results show that senators and equestrians, such as Atticus, L. Cornelius Balbus Major and C. Oppius, occupied almost identical social positions in Cicero’s network. These results cast doubts on the traditional view that a distinction existed between the two classes and lend support to the need for a less partisan approach to the structure of Roman Republican social order.⁵⁵

In terms of the social network analysis tools available from the centuries of theoretical development, this study shows that not all network maps follow a

54 ALEXANDER / DANOWSKI (1990), p. 329.

55 *Ibid.*, p. 313.

convention or template. Centrality, embeddedness and betweenness were not determining factors in the analysis of Cicero's correspondence. This is due to the fact that all individuals in his epistolary circle were embedded within the network maps and that the betweenness of nodes was not a measure that was being analysed by this study. Instead, the force of connections was studied by analysing the importance of each outdegree and indegree link. The thickness, direction and colour, which indicated political affiliation, were instead of pivotal importance. Furthermore, no individual, or groups, formed clusters, or closed triads, outside of the main network as the analysis of the source material indicated that they all were primarily linked to Cicero. There was only one person, L. Cornelius Balbus Major, who acted as a bridging link between Cicero and other individuals. His role as Caesar's negotiator enabled him to bridge the connections between Caesar and Cicero and C. Oppius and Caesar. It can therefore be stated that not all the theoretical elements of SNA need to be of use, or used, for the analysis of historical texts to still provide new comprehensions or reinterpretations of acknowledged facts.

In conclusion, creating maps of related connectedness from the social network analysis of Cicero's letters has resulted in some interesting insights. However, establishing whether all Senators were influenced by family or faction in their decision to support either Pompey or Caesar in their civil war has proven difficult. The source material, although very detailed in historical content of the period, was not able to provide enough information about the different types of connections, particularly political ones, between all individuals mentioned in the letters.⁵⁶ Through the study of the network maps, it was identified that particular individuals changed their affiliations for personal reasons, some families were divided in their support and also that familial connections could be used for political purposes. Moreover, SNA showed itself to be very useful in discerning familial and social connections, but not so practical in determining fluctuations of political affiliations over time. Maybe that is the limitation, or an area for future development, of using social network analysis on ancient sources; it simply cannot represent incremental changes within a large time frame. However, what this study has brought to light is that using SNA on historical texts, such as Cicero's letters, needs careful consideration. The source material chosen, and any social network analysis carried out on it, should focus on the more social aspects of connections or aim to link individuals through familial connections rather than political ones.

56 This, of course, is primarily due to the fact that the version of Cicero's letters that are now in print were edited and compiled from the outset.

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