

(Re)modeling the Narrative: Communication Networks, Petitionary Texts, and the 13th Century Prosopography

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Background

Establishing a narrative that maintains a high level of confidence using only historical documents is problematic in several ways. Texts as historical objects or artifacts are:

- restricted in what they reveal rhetorically
 - fixed in nature, particularly in terms of the amount of new information they can produce as source material
 - limited if only viewed through a lens that seeks to establish a narrative constructed around a centralized power
- It is through the establishment of a multi-layered network that concurrently maintains the necessity to account for the strength of weak ties, that allows historical documents to reveal data within a communication structure, arguably leading to the formation of a collective narrative or prosopography.

Key Terms

- **Prosopography:** a collective narrative of a group of actors with common attributes within a larger historical network
- **Closeness Centrality:** the average distance from a given starting node to all other nodes
- **Modularity:** "a measure of the structure of the network, specifically the extent to which nodes exhibit clustering where there is greater density within the clusters and less density between them" where randomization produces greater integrity in the modularity score (Luke, 2015).
- **Eigenvector Centrality:** measures the influence of a node in a network; "likely to be identified as central with other measures" (Luke, 2015).
- **Local Clustering Coefficients [LCC]:** measures the extent to which a node's neighbors are neighbors of one another. This is also of value to the community narrative, particularly as each node in a network has its own LCC

Purpose and Objectives

Using communication research and a historical social network analysis perspective, the aim of this project is to:

- create a prosopography built from the communication networks established through petitionary texts written between 1272 and 1307 and addressed to or mentioning King Edward I
- analyze the data set created from the archivist descriptions of each petition in the online collection maintained by the National Archives (TNA).
- recognize the existence of power relationships and the inherent draw to focus on dominant individuals/places while resisting these forces
- understand the risk of establishing a reductive biographical sketch rather than a usable prosopography
- use Edward I as a focal point only as far as gathering and limiting the scope of data while returning to the desire to examine a shift in the 13th century communication structure
- connect the correlation between network modularity and the factoid-based prosopography

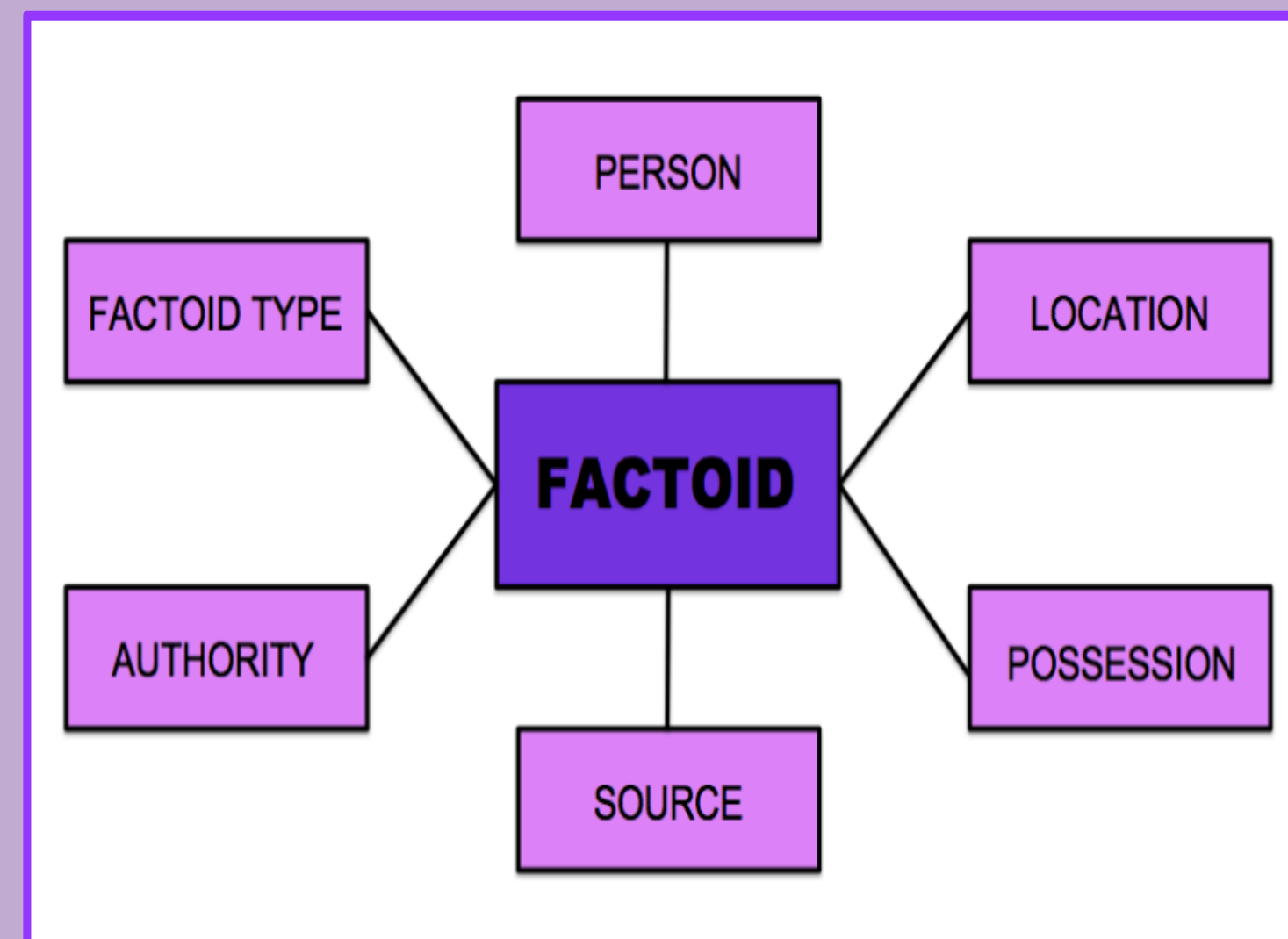
Research Question:

How can social network analysis, particularly modularity scores, contribute to the understanding of historical narratives?

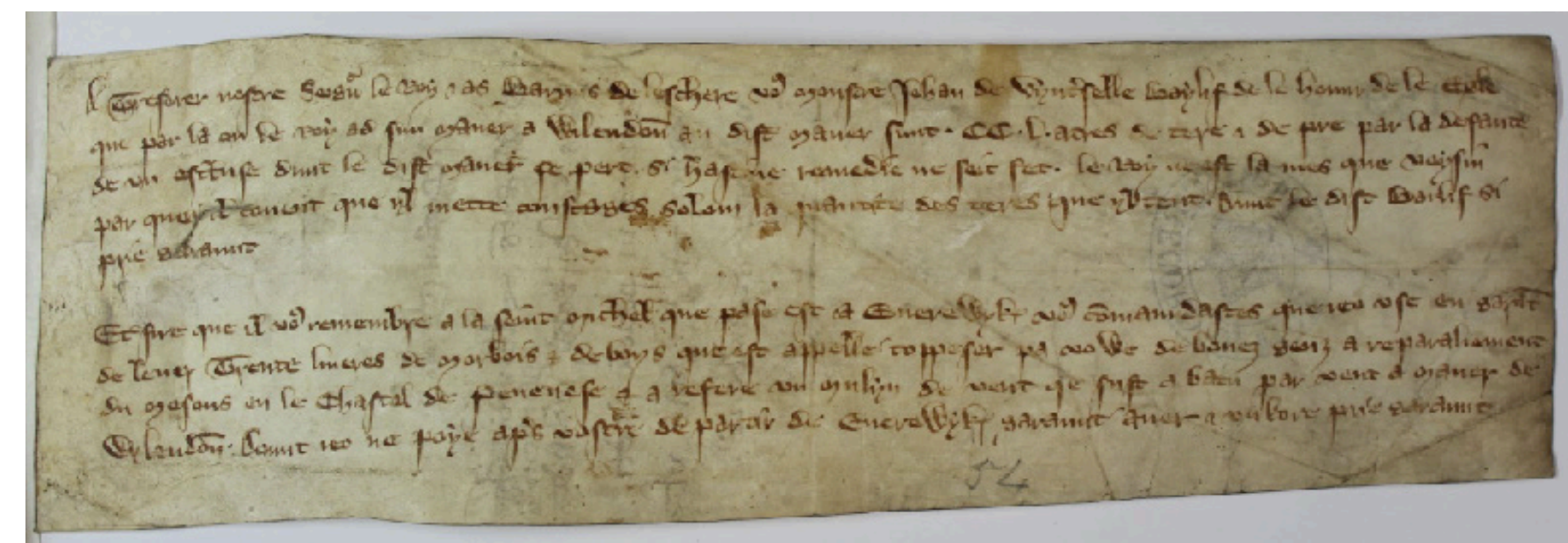
Methodological Approach

Factoid-Based Prosopography

"The 'Factoid' is a central idea and represents the spot in a primary source where something is said about one or more persons. In other words, it links people to the information about them via spots in primary sources that assert that information" (Pasin & Bradley, 2015).

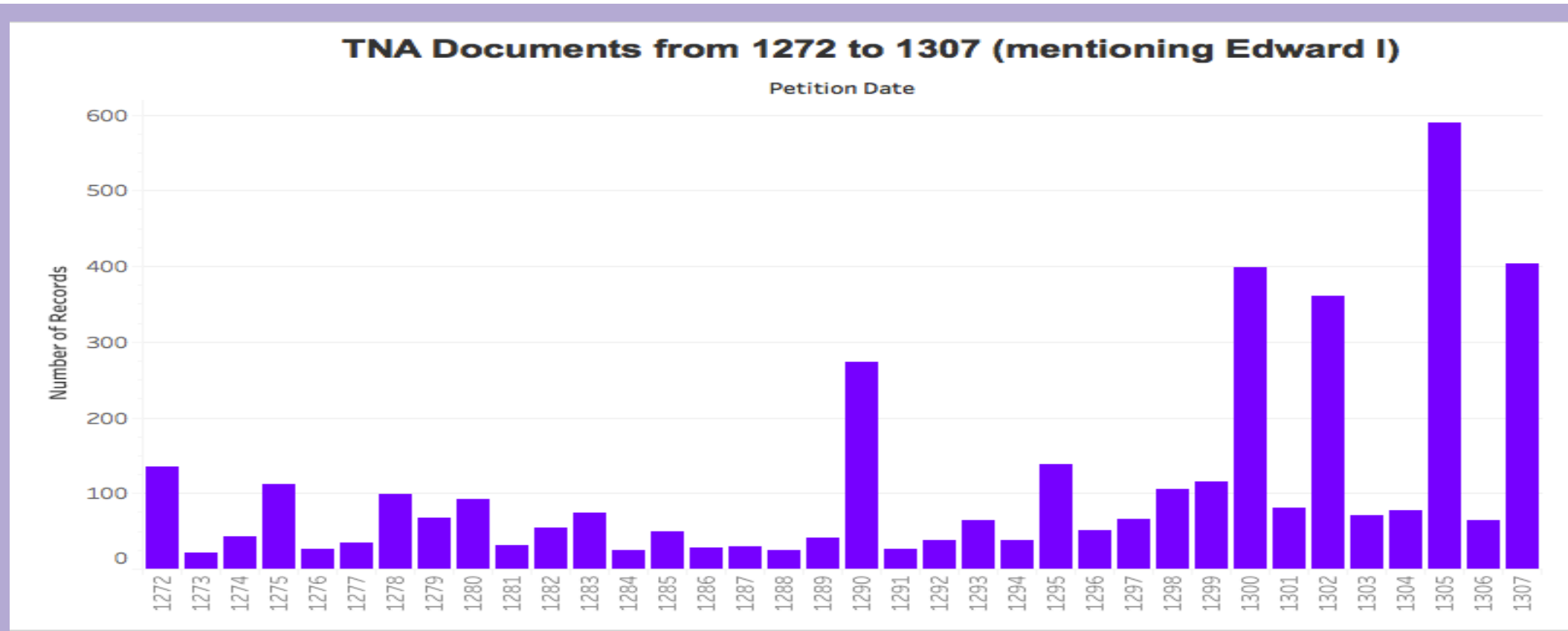


Research Process



Petition dated 1302 from TNA, SC8

Temporal Representation: A sample of petitions (3,155) were gathered and arranged chronologically based on number



Spatial Representation: Data was cleaned using Open Refine and then place names were loaded into a geolocation Application Platform Interface [API]. The API then searched, identified, and converted the place names into latitudinal and longitudinal coordinates. The coordinates were imported into the geocoding program, GPS Visualizer, which then converted the coordinates into a live map (Google Maps). Google Maps could then be overlaid with a map of 13th century Europe using Map Warper software



Structural Representation: Names and places are uploaded into network analysis software producing network visualization variations with 980 nodes and 4,485 edges to determine modularity [Modularity levels are indicated by color].



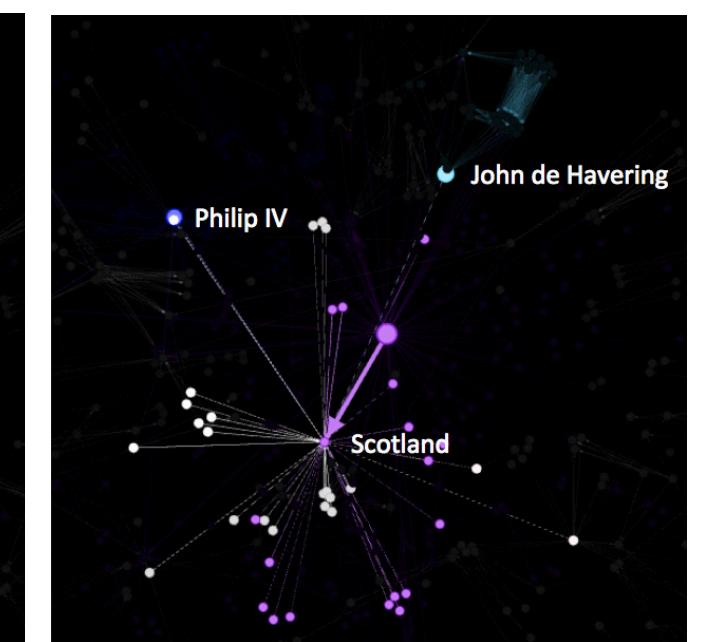
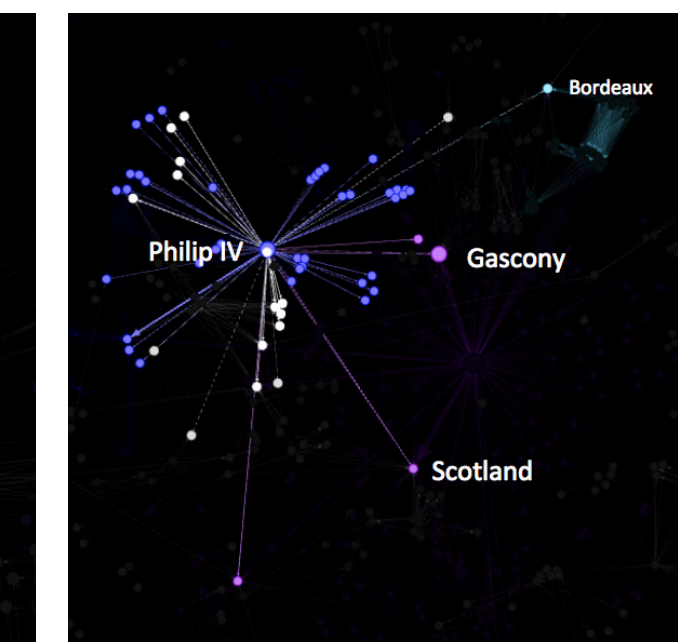
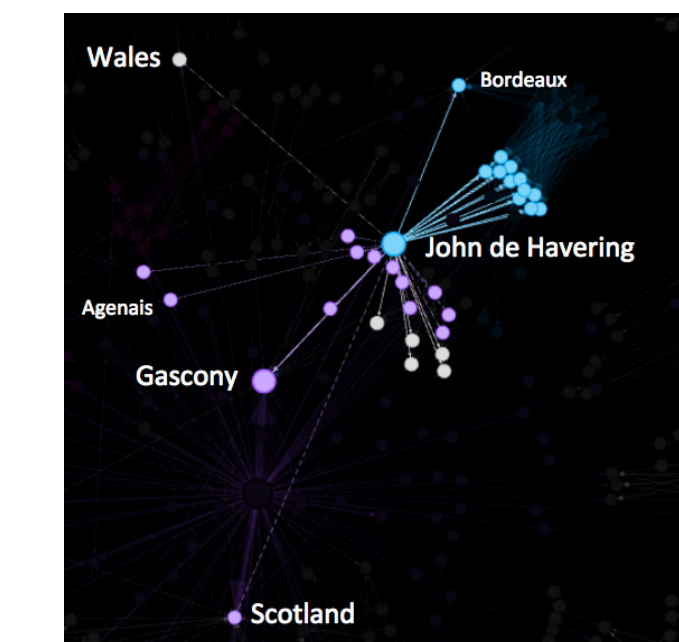
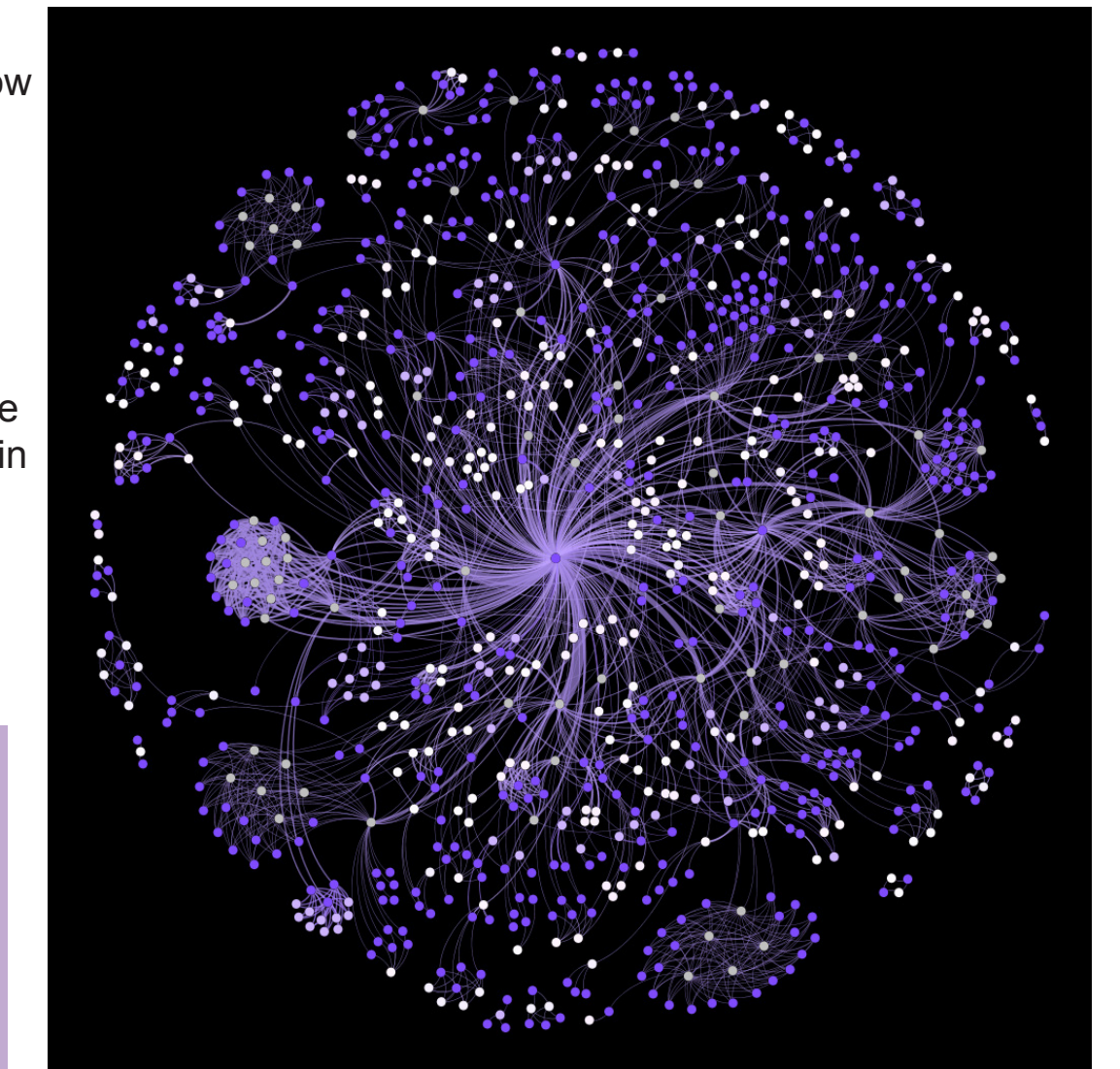
Edward I (1239-1307)

Findings

Graphing historical data is also useful in visualizing the LCC. In the case of John de Havering, visualizations show that he is connected to a strong cluster of nodes, revealing an LCC that reflects Granovetter's "strength in weak ties."

In other words, though de Havering is not necessarily a recognizable name in 13th century history, visualizations show that his place within the community is integral to the larger narrative, particularly in his connections to places in Western Europe (Wales, Scotland, and France). In a randomized report with a 1.0 resolution and graph density of 0.002, Eigenvector Centrality (top 6 weights) was:

- Edward I: 55.61%
- Philip IV: 8.57%
- London: 7.24%
- Berwick-Upon-Tweed: 5.71%
- Eleanor de Castile: 5.61%
- John de Havering: 4.08%



Factoid-based prosopography (versus a more centralized prosopography) seemingly yields the best results when the modularity is between 3% and 6%. In a randomized report with a 1.0 resolution and graph density of 0.002, overall modularity was 0.720 with 49 recognized communities. Individual modularity (top 6 weights) was:

- Edward I: 20.35%
- Philip IV: 10.07%
- London: 9.26%
- Berwick-Upon-Tweed: 8.75%
- Eleanor de Castile: 8.14%
- John de Havering: 3.97%

Conclusions

- Analyzing smaller data sets within a larger network demonstrates a technique useful for historical prosopographers
- Developing focused narratives using factoid-based prosopographies in order to build a larger collective narrative moves focus away from centralized power where relatively unknown individuals come to the forefront
- Social Network Analysis applied to historical communication networks not only allows the research to draw connections between texts and modern communication networks, but it also serves as an applicable model in the analysis of narratives
- Preliminary analyses within the community structure of TNA SC8 petitionary texts using data analysis and visualizations provides an efficient way to begin the prosopographical structure
- Social Network Analysis on communities and, in the case of the petition project, historical documents leads to initial understanding and holistic interpretations where further analysis can help shape a cooperative voice among historical texts in ways that could provide better insight into the community as a whole

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