Mapping Pliny's Social Network: A Case Study in Digital Prosopography

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Introduction

This proposed short paper examines the progress and some preliminary observations of a practical attempt to apply digital humanities methods to the letters of a second century Roman aristocrat Pliny the Younger. The preliminary results of this study are available at the Pliny Project site. Its aim is to present a case study of how an initial research idea can be expanded to connect with larger digital humanities work in a particular field.

These letters, written in the early second century CE, are a treasure trove of social and literary information about the Roman elite during the period in which Roman territorial control reached its apex. As one of the most extensive collections of letters from the ancient world, as well as one of the most thoroughly explored, they are a rich data set on which to draw. They are paralleled by only a handful of similar letter sets from the Roman world, such as the letters of Marcus Tulilus Cicero or the four century orator Libanius.

In a broader context, Classics has been a frequent and early adopter of digital humanities methods (see *Online Coins of the Roman Empire*, the literary comparative tool *Tesserae*, and the venerable *Perseus Digital Library*). The field has also produced some initial attempts to bridge various "people indices" into a standard prosopography (i.e. the Standards for Networking Ancient Prosopographies, hereafter SNAP). Pliny's correspondents have been integrated into such resources, but they are either often limited to major university research collections or so unwieldy as to make consultation difficult. Examples of this tension include the standard tool for the prosopography of the Roman Empire, the *Prosopographia Imperii Romani*, 2nd edition (de Gruyter: 1933-2015) (= *PIR²*), which has reached a massive eight parts with numerous fascicles. Only the index is widely available online. Likewise the most recent work on Pliny's names, Anthony Birley's *Onomasticon to the Younger Pliny (*Birley, 2012*)*, exists as a traditional monograph, albeit with a searchable PDF.

Such resources, though tremendously important to scholars specializing in the field, often constrain access for the broader academic community. Moreover, the rich information they provide is not structured in a way for easy search and access.

The research project on which this paper draws developed from a November 2015 – January 2016 affiliated fellowship at the American Academy in Rome, which gave me access to the prosopographic material in a single, well-organized location. Its primary objective was, and is, to create a comprehensive resource for Pliny's social network with an emphasis on the social class of his correspondents. My initial inquiries centered on compiling a list of Pliny's correspondents and attempting to identify them as best possible. The conventions of Roman naming, which resulted in many similar names within family groups, renders this difficult. The use of only a single name (compared to the somewhat standard use of two names) in one of the surviving manuscripts of the letters further complicates the task. Even if a family and identity of an individual is known, his or her social standing may not be clear. The Roman distinctions between a common citizen, the middling administrators of the equestrian class, and the upper rungs of the senatorial class were very sharp to them—so sharp they often saw no need to clarify who was of what class for posterity.

This made data modeling and cleaning a significant challenge, for which I employed exploratory tools such as SocNetV and more recently Cytoscape, for exploratory visualization. (Note: this issue of authorial ambiguity is not new to DH and letters. It has been frequently confronted by projects such as Stanford's *Mapping the Republic of Letters*). Some preliminary results are available through Pliny Project (see above), but they have been revealing both in terms of confirming known associations and providing new clarity into the possible editorial methods Pliny used in selecting his letters, which were curated for publication within his lifetime.

In order to construct a data set for such an analysis, I attempted to model a degree of closeness of connection by assigning a weight based on the number of times Pliny either mentioned someone in a letter or wrote to them to a reciprocal connection. This was saved in GraphML format to construct a diagram of centrality with shading of points to indicate the social class of Pliny's correspondents.

My talk will, in addition to discussing the above methodology in greater detail, center on two examples of preliminary results from this research, and then turn to future plans for the project. First, the set of social acquaintances that have often been associated with as what is informally called "Pliny Country"—near his home near modern-day Como, Italy—and the set associated with the city of Tifernum, both appear clearly in the social network map as a set of closer intimates, largely from the same equestrian class of which Pliny's family originated (the original formulation comes from the work of the eminent historian Ronald Syme, see Syme, 1991, for his collected works and the exploration of some of Pliny's connections of Tifernum in Champlin, 2001).

This gives preliminary confirmation that the methodology of simple weighting based on mentions as some approximation of closeness can be used in analyzing his social network.

A secondary observation is a series of correspondents to whom Pliny writes roughly two to three letters in the second to outer circle of his acquaintances. Some of these individuals are men who had held the consulship, the highest office to which a Roman not of the imperial family could aspire and all were of the senatorial class. Pliny rose to that same class from middling origins during his career, thanks to the patronage of his uncle and adoptive father. That there is a cluster of these letters with a remarkably similar number speaks to an editorial hand at work in their selection. While at this point identifying a motivation is primarily speculative, at the least we can say that it reveals a trend not previously identified and demonstrates an editorial concern for cultivating Pliny's prestige by association.

In addition to the specific application of this data to my own research, the longer term goals of this project are to provide this same dataset, edited and curated, to the broader scholarly community. I have currently published a simple database interface that allows users to search for Pliny's correspondents and note which letters are written to them. While this may seem on the surface a straightforward question, by integrating current scholarship and attempting to identify correspondents fully, it presents new and easier access for scholars, regardless of institutional affiliation.

Nevertheless, the initial search functions, which allow a name search and a tentative search by social class, are not sufficient to realize the goals of the project. My current development work is focused on transitioning the database to using Django's web applica-

tion functionality and object database modeling to allow for the relationships noted in my social network analysis to be available and searchable. This transition to a standard platform will also lead to a web application that can be cloned from a tool such as GitHub and used by DH scholars to build or innovate using my dataset. It also acknowledges the need to connect this new structuring of the prosopographic corpus for Pliny to the broader initiatives to create people indices by including links to *PIR²* search masks and SNAP.

Such an approach takes the traditional field of Plinian prosopography and attempts to open it to a wider scholarly audience. It also emphasizes the importance of exploratory visualization techniques in examining datasets for novel connections. This discussion will offer the audience an opportunity to consider how a project focusing on a specific area of research can connect with larger scholarly endeavors in DH.

Bibliography

Birley, A. (2012). *Onomasticon to the Younger Pliny.* de Gruyter.

Champlin, E. (2001) "Pliny's Other Country," in *Aspects of Friendship in the Greco-Roman World*, ed. Michael Peachin (Journal of Roman Archaeology), 121-128

Syme, R. (1991) *The Roman Papers*, vol. 2, Oxford, 694-698.