Six degrees of Cyrus: network approaches to teaching and studying Herodotus

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Social Network Analysis and graph visualizations have become very popular among digital historians as a means to identify patterns and illustrate arguments. As a result, graph-based approaches are increasingly taught to undergraduate and graduate students with other digital tools in general "digital humanities" classes. But it is less common to integrate network-analysis tools into courses that focus on specific historical content. This raises the question: are network-analysis methods better taught in the abstract, as one of a set of specialized digital tools to be applied by students in future research, or worked into content-specific history or historiography courses as a standard facet of historical research? Furthermore, to what extent can network approaches be introduced in a traditional history or historiography class to help undergraduate students understand a new body of material?

This presentation addresses both questions. We describe an undergraduate seminar designed for Ancient History, Classics, and Classical Archaeology majors, in which network analyses provide one way to explore the ethnographic chapters of Herodotus' *Histories,* alongside traditional historiographic approaches. This seminar was created in conjunction with the second phase of the Hestia project (http://hestia.open.ac.uk/), which in its first phase produced interactive visualizations of the *Histories* and applied spatial and social network approaches to the text. The second phase of the project focuses on the potential applications of these tools in the teaching of Herodotus on an undergraduate level; our seminar is one of its test-beds. The authors include the instructor (a member of the Hestia2 web-development team) and four of the undergraduate students enrolled in the seminar. In the first section of the presentation, we discuss the course design, the integration of the interactive interfaces produced by the Hestia project, and the digital tools and methods used for network analysis, spatial analysis, and annotation in the course. In the second section of the presentation, we address the success of the experiment from the perspective of the students. We review the usefulness of network-analysis methods both for student understanding of the primary source and for independent student inquiry culminating in a research paper.

Although the authors have different views of the usefulness and accessibility of the various digital tools we encountered, we generally agree on two points. We argue that despite the technical challenges raised by the introduction of complex and unfamiliar digital tools in conjunction with a complex and unfamiliar primary source, network analysis approaches offer significant opportunities to foster student learning through the active construction rather than the passive reception of knowledge. Using digital tools for the exploration of a specific primary source also allows students to see first-hand that there is still room for innovation in historical research. At the same time, we conclude that it is crucial for both students and instructor to recognize the limitations of network approaches. In the case of Herodotus, we must distinguish between what network analysis can tell us about the structure of the *Histories* (a lot) and what it can tell us about historical patterns (much less).