

Poetic Structures, TEI, Network Analysis, and Step-wise Distance: An “Anti-Social” Networking Experiment with Robert Southey’s *Thalaba the Destroyer* (1801)

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Franco Moretti has drawn networks that intersect characters and show their movement through imagined spaces in Shakespeare’s plays. Working with TEI’s structural markup, I propose to construct networks of similar interest to literary analysis, but “antisocial” in the sense of removing characters to study the place referentiality of annotated epic poetry of the eighteenth and nineteenth centuries. Poems and plays are not frequently discussed in the digital humanities, which has favored computational analysis of digitized prose texts in mass numbers. Similarly network analysis work on literary texts has tended to prioritize human interactions or the interactions of fictional characters when deployed up-close to analyze particular texts.

The computational approach with which I am experimenting would not so privilege human subjects, even as clouds of interactive particles. Instead I am experimenting with an “anti-social” network analysis of literary texts that would bring out the backgrounds and contexts that give shape to characters—or the force-fields which move and direct their actions. Character-driven literary studies can be reductive, losing track of referential and comparative contextual patternings. Network analyses may productively be used in “anti-social” ways, if we draw them to bring forward the patterns of place and concept that surround the familiar elements of character.

The narrative poetry and annotated epics of the eighteenth and nineteenth centuries rendered places in especially complicated ways: William Wordsworth’s “spots of time” from *The Prelude* serves as a well-known reference point for a widespread phenomenon in the epic “long poems” of that era—with their characteristic intersections of historical, natural, and mythical domains as fields of knowledge and encyclopedic referentiality. The hybrid or composite constructions of poetry with prose appendages was especially marked by the late 18th century in the elaborate scientific-poems of Erasmus Darwin and the historical-cultural-mythopoetic syntheses of Robert Southey. It’s not easy to follow the multiplying reference points of such poems from levels of analogy to annotations, where comparisons of places and times proliferate. Gerard Genette has theorized the paratext as transactional with readers, a boundary of exchange, and as such in the complicated long poems of the early nineteenth century—with their complex formal verse patterns bordering on prose discourses of authority—the paratext interface is especially challenging to the processing powers of an unassisted human reader. We may stand to learn much about these background aspects of text and paratext with the assistance of network analysis tools. In long poems that elaborate upon cultural context through place and time references and analogies in both main text and paratext, we can examine where analogies are formed and what analogies are returned to—which locations are referenced in what contexts, by—effectively—networking them together in one or more visualizations.

I have begun with TEI XML structural and contextual markup, to collect place references and their positioning within main text line groups and within paratext notes. By extracting this data systematically using XSLT, I work with Cytoscape’s impressive tools for network visualization and statistical analysis to produce network graphs and tables of statistical information that may indicate meaningful patterns of related-ness. My project

investigates the following questions:

- a) How can we study the way poets like Robert Southey layered and cross-referenced places by analogy with each other, particularly when they produced long poems (elaborately constructed long verse texts in multiple Books and Cantos with scholarly prose annotations) like *Thalaba the Destroyer*?
- b) How are place references of various kinds, geographical and cosmic, related by formal structural elements in a poem, within and across related stanzas and footnotes?
- c) How can the TEI's structural and contextual markup be productively deployed to demarcate edge relationships in a network of correlated concepts like place references?
- d) In correlating concepts of place in a long scholarly epic, like Southey's and others, what patterns can we see in networking geographical with mythical places—that is, place connections that cannot be literally mapped with latitude and longitude coordinates but that nevertheless help to construct an imagined topography for readers of poetry?
- e) Can we apply the statistical measurement tools of network analysis: stepwise distance between nodes, between-ness centrality, eigenvector centrality, for example, to understand how geographic and mythic places are linked conceptually, not just geographically?
- f) What meaningful conclusions can be drawn, and what potential problems are there in applying network statistics to studying how concepts like place are patterned formally in poetry?

I have launched an “anti-social” networking study of poetry by experimenting with Southey's *Thalaba the Destroyer* (1801), a long epical poem with especially prolific annotations and complex place-time referentiality. I have been working on this project intermittently over the past year, and have produced network graphs and discussions at various stages: To view the work in progress, begin here:

<http://digitalromanticist.wordpress.com/2013/08/23/spectacular-intersections-of-place-in-southeys-thalaba-the-destroyer/> (oriented as an introduction to network analysis for scholars in my field of British Romanticism). More recent visualization experiments with “closeness” and “distance” measures in network analysis are posted here:

<http://digitalromanticist.wordpress.com/2014/04/09/new-developments-in-the-thalaba-antisocial-network-analysis/>

At this stage, the TEI markup generating the graphs and discussions linked here require systematic retooling and expansion, which I will produce in time for the TEI conference. For this talk, I will expand my preliminary network-analysis to map the patterns of Southey's complex juxtapositions of mythical and historic places. In my next stage of work (beyond the scope of this conference talk), I hope to compare Southey's patterning of settings with that of two other poets positioned closely to Southey in the application of travel literature to poetry: Erasmus Darwin and Samuel Taylor Coleridge, working with texts that most strongly indicate the interrelationship of these three poets: Erasmus Darwin's *The Loves of Plants* (1789), and Coleridge's rather shorter exotic cultural texts, *The Rime of the Ancient Mariner* and “*Kubla Khan*,” written—as Tim Fulford has convincingly demonstrated—from the basis of Southey's researches and mythical place development for *Thalaba the Destroyer*. Studying a small cluster of texts together may in

turn serve as a prelude to longer studies of poetic form, and should help demonstrate how network graphs can extend our studies of poetic genres and their interplay of historical and mythical settings. My work might have broader implications in studies of any texts with extensive analogic references to places and times—as, for example, Melville’s novels and voyage and travel texts that cross cultures and involve complex comparative referencing.