SOCIAL NETWORKS AND THE LANGUAGE OF GREEK TRAGEDY

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WHAT ARE THE PROBLEMS?

- How to bridge gap between distant reading and close reading? I’m not ready to completely give up reading in the face of a million books.

- How can statistical methods help readers get oriented to and explore a work (esp. if they aren’t specialists in statistics or in the literature)?

- How to support close reading and the construction of arguments about literature?
Social Network diagrams are an easily understandable way to visualize relationships between characters in literary works.

Perhaps linguistic data can be used as an overlay on these graphs to facilitate the exploration of linguistic features in literary texts.
In Greek Tragedy means that social networks fall into relatively few types.

- **Type I:** A central character occupies the stage and a sequence of characters appear in-turn to speak to that person.
- **Type II:** All the characters occupy the stage at essentially the same time and all speak to each other.
- **Type III:** Groups of characters appear on stage in turn and speak to each other with no central character remaining on stage throughout.
- **Type IV:** Textual difficulties or anomalies create unusual graph patterns.
TYPE I: SOCIAL NETWORK OF PROMETHEUS BOUND
TYPE II: SOCIAL NETWORK OF THE SUPPLIANTS
TYPE III: SOCIAL NETWORK OF SOPHOCLES’ AJAX
TYPE IV: SOCIAL NETWORK
OF SEVEN AGAINST THEBES
Because the graphs themselves aren’t very complicated, they provide a graspable hook for other information based on how we construct and label the nodes and the edges.

- Color/shape coding hopefully allow for potentially useful metadata and statistical information to be understood more easily.

- Explore Live Examples At http://daedalus.umkc.edu/VisualExplorer
1. We can identify distinctive differences in the ways that characters of different classes use verbs

2. We can see Cassandra’s subservient position in her language even though she is upper class

3. We can watch Clytemnestra’s language change across registers as she loses relative influence in the three plays
HOW KINGS, QUEENS AND GODS SPEAK

1. How Kings, Queens and Gods Speak

- Clytemnestra
- Agamemnon
- Apollo
- Athena

Legend:
- 1-s
- 2-s
- 3-s
- 1-p
- 2-p
- 3-p

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HOW MESSENGERS AND SERVANTS SPEAK

2. How Messengers, Hearlds, and Servants Speak

- Guard
- Herald
- Servant
- Nurse
- Priestess of Pythian Apollo

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CASSANDRA COMPARED TO CLYTEMNESTRA AND AGAMEMNON

3. Cassandra Compared to Clytemnestra and Agamemnon

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SHIFTS IN CLYTEMNESTRA’S LANGUAGE ACROSS THE ORESTEIA
OUT OF THE INFINITE VARIETY OF WHAT IS COMPUTABLE, WHAT ELSE TO INCLUDE?

- Sentence length arguably isn’t very useful in the current format
- Lots of candidate statistics
- Verb tense and person distribution can be more interesting
- Search Integration for characteristic vocabulary and linguistic information
- Can topics and themes in co-conversations be detected and used those as labels on the edges??
- Linguistic data is tantalizing but hard to incorporate
  - All words produces an unintelligible graph
  - Union of characteristic vocabulary (at least when calculated as TF*IDF score) for each speaker produces a small and not very interesting set (not surprising given definition of TF*IDF)
  - Hand-culled lists of ‘interesting’ words produce ‘interesting’ results (i.e. 10 most frequent nouns that aren’t on a stop-list) but it doesn’t scale.
POSSIBILITY OF A HAND CULLED LIST
Achilles and Hector Speak To.....
BIGGER WORKS LIKE THE ILIAD ARE MORE COMPLICATED
THE ODYSSEY IS EVEN MORE INTERESTING