

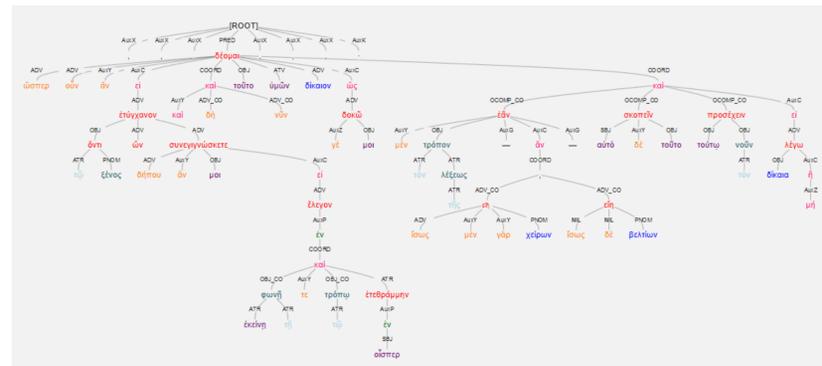
New Approaches to Old Problems

Applying New Technologies to Classical Language Learning

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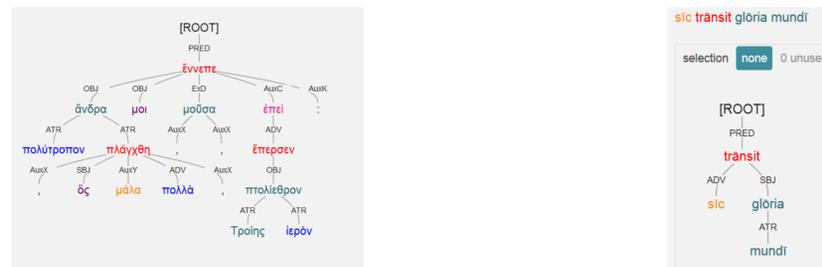
What is a Treebank?

- A treebank is a syntactic and morphological diagram of a sentence
- Treebanks are based on dependency: each word is linked to a work it grammatically depends upon



What can you do with Treebanks?

- Dozens of Classical texts have been treebanked
- These treebanks are used as data for statistical analyses
- We can study change over time, style, and grammar in a data-driven fashion
- We can improve the inclusion of examples in grammars
- We can foster collaborative new editions of texts



Designing a better Greek Class

- I also designed an Intermediate Greek course that uses treebanks.
- We can gather a lot of data by asking students to create treebanks and examining what they excel at and what they struggle with.

How do Treebanks affect students?

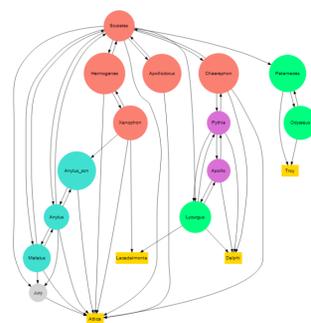
- Students can gain competence by treebanking sentences
- Treebanks demand understanding of syntax and morphology
- Treebanks provide examples of grammatical concepts in original texts

What do Treebanks tell us about students?

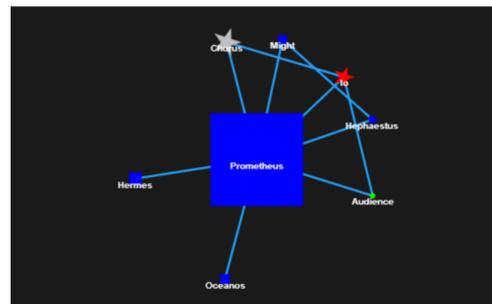
- Students consistently make the same errors when they treebank
- Computer parsers make the same errors
- Those errors indicate lack of comprehension
- We can tailor teaching to these demonstrable problem areas

What else can we do with Treebanks?

One emerging use for Treebanks is the creation of social networks for a text. These social networks reveal relationships within the text.



A Social Network for Plato's *Apology*



A Social Network for Aeschylus' *Prometheus Bound*

A better Classroom

- Treebanking lets more advanced students move ahead and less advanced students catch up
- Treebanking encourages collaboration and peer-review

Where do we go from here?

- I am the teaching assistant for an intermediate Greek class this fall
- We are going to use treebanking in class to build command of Greek
- We will encourage student collaboration and peer-review
- We will use a mix of traditional close reading and modern techniques