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DNA of Ancient Epic: Dynamic Systems for Homeric Poetry

<u>Keywords/AMA</u>: networks, transdisciplinary AI, Greek, text-mining, dynamic systems, NLP, causal inference, autocatalytic networks

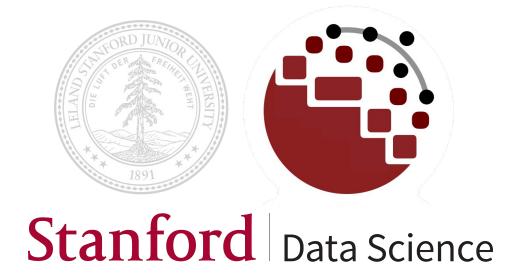
Overview

- The *Iliad* and the *Odyssey* were orally composed in the early second millennium BCE and written down c. 500 BCE. Homeric texts are highly structured in meter, form, and narrative.
- A *dynamic network* is a network whose structure and components change over time. Dynamic Network Analysis (DNA), in contrast to traditional computational humanities methods, allows for the modeling of emergent phenomena, interactive and embodied learning among agents, and latent structures.
- In terms of Homeric poetry, DNA provides a method to explore otherwise unobservable relationships between textual components, to model interactions between both characters and ancient contributors, and to excavate tradition from text.

More about Annie

- B.A. in Classical Languages, B.S. in Computer Science
- Also a Digital Humanities fellow at CESTA
- Loves yoga, reading mystery novels, and teaching my dog cool new tricks



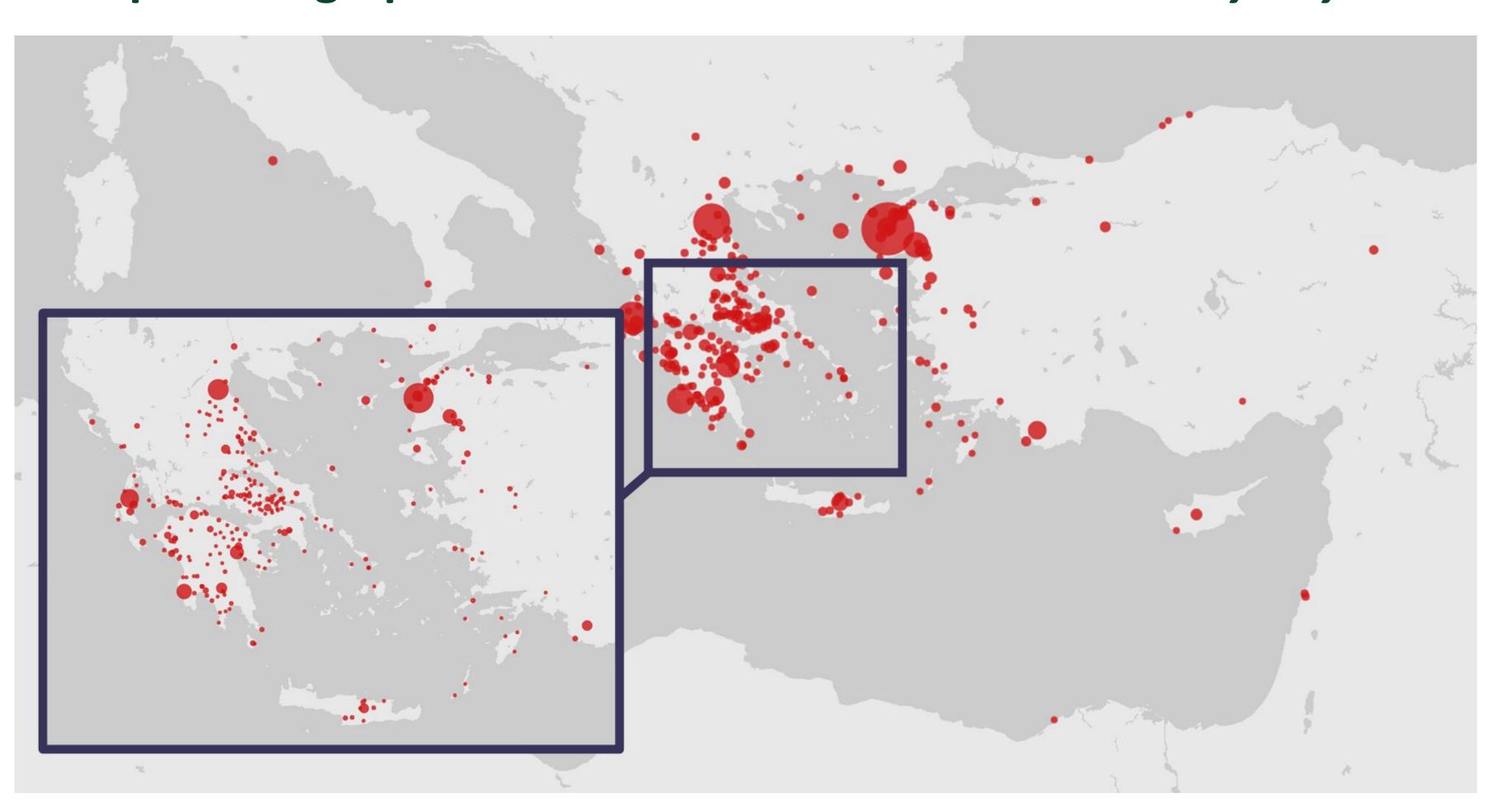








Map of Geographic References in the *lliad* and the *Odyssey*



Constructing Dynamic Systems from Text

τῷ δ' ἤδη δύο μὲν γενεαὶ μερόπων ἀνθρώπων ἐφθίαθ', οἵ οἱ πρόσθεν ἄμα τράφεν ἠδ' ἐγένοντο ἐν Πύλῳ ἠγαθέῃ, μετὰ δὲ τριτάτοισιν ἄνασσεν ὅ σφιν ἐὺ φρονέων ἀγορήσατο καὶ μετέειπεν ὧ πόποι ἦ μέγα πένθος Ἁχαίΐδα γαῖαν ἱκάνει

