Revealing hidden patterns in the meter of Homer’s *Iliad*

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**Introduction**

In his 1942 paper, “The localization of metrical wordtypes,”\(^1\) O’Neill showed that words of most shapes fall in only a small number of the metricaly allowable positions in the Greek hexameter. He called these restrictions the line’s “inner metric.”

O’Neill used only 1000 lines of each work and made his counts by hand. We use digital texts provided by Martin Mueller to corroborate O’Neill’s statistics and to extend the dataset to include the entire Iliad.

The figure below compares O’Neill’s distribution for words of two syllables, broken down, calculated for the first 1000 lines of the Iliad, with ours for the entire poem.

![Distribution of Words Shaped ---](image)

**Sub-type Nuclei and a “None of the Above” Sub-type**

Each of the sub-types identified above contained at least one fully-localized form, i.e. a word which only ever occurred at one sedes. These can be thought of as nuclei for the sub-types.

Using the “maximum” method for dist instead of “manhattan” generated an eighth sub-type, which contained no fully-localized nucleus and whose distribution looked much like O’Neill’s overall distribution for the word type:

![Compare the PCA graphs at right: in the 8-class division (bottom row), the new “none of the above” sub-type comes to fill in the ambiguous middle. This model allows some words, here about 40% of all forms, to show no preference as to sedes even while others are highly localized.](image)

**Further Work**

Having identified these patterns of localization behavior, our next goal is to attempt to explain them. We are currently testing the influence of initial and final consonant clusters, word order, and formulaic phrases on localization class.

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6.529 ἔν Τροίης ἐλατταντις εὐνομίμος θεαμάς
13.327 Τροίης ἐν κείσει ἐν νεότητας
13.367 ἐν Τροίης ἔξις ἀρχαῖς αἰέναι καθαρῆς γένους
14.505 ἔν Τροίης σὺν εἰσῆλθε προσφέρει καθάρια θεαμάς
16.100 ἢ θαν’ ἄλλοι Τροίης ἔρχοντος καθάριοι λόγοιν

[We] having driven the well-greased Achaeans out of Troy
May that man never make his way home from Troy, but here become sport for dogs To drive off the sons of the Achaeans out of Troy against their will Whenever we sons of the Achaeans should go with our ships out of Troy

In the examples at left, note the similarities in sound and sense among localized examples of the word Τροίης (“of/from Troy”) not shared by its single occurrence at the non-preferred sedes.