# **Homework 9**, due April 16 at the beginning of class

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- You may work in pairs on this assignment and submit a joint write-up.
- Please <u>hand me a hardcopy of Parts I-II</u> at the beginning of class on Wednesday.
- Please <u>also submit Part II via the Digital Dropbox</u> before class, along with the extra credit exercise if you choose to do it.

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**Part I: Movement, constituency, and V2 word order** *(5 points).*

(1)      For each of the following sentences:
- Rewrite the sentence with its 'basic' SVO word order reconstructed.
- On the typed version of the sentence presented here (not your rewritten version!)…
  - i.    put brackets around the constituent that has moved to the very beginning of the sentence, and draw an arrow from the position it started from to its final position. (Use your rewritten version for reference.)
  - ii.    If you think the verb/auxiliary has moved as well, draw an arrow from its original position to its final position.

    a)  Old English:  (draw brackets and arrows on the first line only)

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þær   wearþ se  cyning Bagsecg  ofslægen
there was   the king   Bagsecg  slain
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       'There the king Bagsecg was slain.'

    b)  Too long have you watched my sister .

    c)  All his life has he looked away .

    d)  Towelie I love […but Cartman I can't stand].  (do brackets/arrows for the first clause only)

    e)  How many pizzas should Chris order ?

(2)      Which of the sentences above has/have V2 word order? _____

(3)      V2, or verb second, means that (circle one):

    a)  The auxiliary (or the main verb if there is no auxiliary) moves to a position before the subject, so that it always ends up being the second **word** in the sentence.

    b)  The auxiliary (or the main verb if there is no auxiliary) moves to a position before the subject, so that it always ends up being the second **constituent** in the sentence.

    Briefly explain your answer (1-2 sentences). Include at least one specific example.

**Part II: Displaying quantitative information visually** *(5 points).* Infinitives marked with *to* go all the way back to Old English. In Middle English, it was fairly common for infinitives to be marked with *for* as well (so-called ***for*-marked infinitives**). Here are some examples:

1) [he] went...into Naples **for to** conqwere it (Capgrave's Chronicle, 1420-1500,112.2473)

2) the beastlich mon...secheth **for to** fallen in this put
   the beastly   man   tries   for to fall   in this pit
   'The beastly man tries to fall into this pit.' (Ancrene Riwle, 1225-1230, 1,II.48.447)

Example (1) is probably a **purpose infinitive**, meaning that it indicates the reason or purpose behind this person's going to Naples. Example (2) is not a purpose infinitive; it just tells us what the beastly man tried to do, not why he tried.

*For to* infinitives survive in some dialects of present-day English, including Irish English, Scottish English, Ozark English, Ottawa Valley English, and Tyneside English. You may recognize them from folksongs as well (I'm going to Louisiana / my Susanna **for to** see; Swing low sweet chariot / coming **for to** carry me home; etc..).

I used the Penn-Helsinki Parsed Corpora of Middle English and Early Modern English (www.ling.upenn.edu/hist-corpora) to investigate two questions:

(i)      What was the frequency of *for*-marking in infinitives throughout Middle English (1150-1500) and Early Modern English (1500-1710)?
(ii)     What portion of *for*-marked infinitives were purpose infinitives in each period?

Here are my raw results:

| Period | Total infinitives | *For*-marked infinitives | *For*-marked purpose infinitives |
|---|---|---|---|
| 1150-1250 | 2353 | 384 | 272 |
| 1250-1350 | 1200 | 317 | 133 |
| 1350-1420 | 5250 | 1312 | 553 |
| 1420-1500 | 2234 | 357 | 164 |
| 1500-1570 | 7671 | 255 | 49 |
| 1570-1640 | 9780 | 172 | 21 |
| 1640-1710 | 9296 | 176 | 7 |

- **Use spreadsheet software to draw a graph that answers questions (i)-(ii) above.** Remember that the table here shows raw data only, so you'll need to start by calculating frequencies. Experiment with different types of graphs, axis arrangements, etc., until you've settled on a format that you think does the best job of showing what happened with *for-to* infinitives in the history of English. Perhaps you'll decide that the information is best presented in two separate graphs. Make sure your final version is clearly labeled and easy to interpret.

- Write a short paragraph that provides an answer to questions (i)-(ii) above based on the evidence we have here. Insert your graph above or below your text.

- Now consider the following additional data from the first time period (Early Middle English, 1150-1250). When I compared texts from the East and West Midlands, I found the following distribution:

| Region | Total infinitives | *For*-marked infinitives | *For*-marked purpose infinitives |
|---|---|---|---|
| East Midlands | 1335 | 140 | 125 |
| West Midlands | 1006 | 244 | 147 |

**Write a sentence or two summarizing the difference(s) between these two dialects** of Early Modern English. Use $\chi^2$ test(s) where appropriate to establish whether the difference between the two dialects is statistically significant. Include the $\chi^2$ value and the $p$ value in your written summary.

**Extra credit** *(up to 2 points).* Create your own **chi-square calculator** for a 2x2 contingency table using Excel or a comparable program. Use the values from the exercise we did together in class on 4/2 to create and test your calculator.

There are a few different ways you can do this. The functions you'll most likely need are CHIDIST and CHITEST. Use the Help menu to read about how they work, and then experiment with them.

Your final chi-square calculator should be:

- user-friendly (it should be clear to the user where to enter their observed data)
- adaptable to any range of values I might enter into the 2x2 table (in other words, make sure to use references to *cells* where appropriate, rather than entering specific values associated with a particular observation).

Here's a screen shot showing what your interface might look like. (It doesn't have to look just like this, though.) The user enters their observed data into cells B3-C4 and everything else is calculated automatically.

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | observed | | | | | expected | | | |
| 2 | | X1 | X2 | Total | | | | X1 | X2 | Total |
| 3 | Y1 | 100 | 150 | 250 | | Y1 | 100.10 | 149.90 | 250 |
| 4 | Y2 | 109 | 163 | 272 | | Y2 | 108.90 | 163.10 | 272 |
| 5 | Total | 209 | 313 | 522 | | | 209 | 313 | 522 |
| 6 | | | | | | | | | |
| 7 | | chi-square | 0.00 | | | | | | |
| 8 | | probability | 0.98633 | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | | |