Finite Complementation in Early English Medical Writing: A Case Study of Syntactic Constructions in Competition

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Object infinitive constructions: the most frequent type of non-finite complement clauses, in which the object infinitive occurs as the complement of the verb.

1a) Peter helped to do the washing up
1b) Peter helped us to do the washing up

2a) Peter helped do the washing up
2b) Peter helped us do the washing up
Introduction (ii)

- Historical overview:
  - Old English: both constructions were felt to be perfectly synonymous, even though the bare infinitive is observed to be the preferred form (Van der Gaaf 1904; Mitchell 1985; Visser 1963).
  - Middle English: in late Middle English, bare infinitive is found to decrease drastically. According to Fischer, this can be explained from a twofold perspective (1997):
    1. The on-going diffusion of to as an infinitive marker after the disappearance of the nominal case.
    2. The substitution of that-clauses by infinitival complements.
  - Early Modern English: progressive diffusion of bare infinitive, thus coexisting with to-infinitive with the same verb typology. In this period, bare infinitive is also found to occur with a higher number of matrix verbs.
  - Present-day English: bare infinitive is more widely used in both British and American English, spoken English in particular.
Introduction (iii)

Zero/To variation - Still a gap from a scholarly perspective because the phenomenon has been mostly discussed in:
1. Old English and Middle English.
2. Particularly in registers such as fiction, poetry and correspondence.

The present paper investigates the construction makes to vs. makes ø in late Middle English and early modern English scientific prose with the following objectives:

- To analyze the distribution of marked and unmarked infinitives in scientific prose in the period 1350-1700.
- To classify the phenomenon across the different text-types.
- To evaluate the contribution of the following factors in the choice of one particular construction:
  - The presence of intervening elements between the matrix verb and the object infinitive.
  - The size of the object phrase.
  - The inflection of the matrix verb.
Methodology (i)

- **Source**: *The Corpus of Early English Medical Writing*:
  - MEMT: *Middle English Medical Texts* (1350-1700).
  - EMEMT: *Early Modern English Medical Texts* (1500-1700).

- The study is based on the 3 main parts of the corpus, i.e. theoretical treatises, surgical and anatomical treatises and recipes.
Methodology (ii)

• 565 instances of the object-controlling verb MAKE.
  
  o MEMT: 217.
  o EMEMT: 348.

• Manual disambiguation was needed in order to weed out those instances in which make was not controlling an object infinitive:
  
  o (1) first of all and before he make any far procedynge, to defyne the thing, of the which he pourposeth to entreat (1547, Langton, Uery Brefe Treatise, f. 5r)
## Methodology (iii)

<table>
<thead>
<tr>
<th></th>
<th>Specialized Texts</th>
<th>Surgical Texts</th>
<th>Remedies</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMT</td>
<td>88,349</td>
<td>137,794</td>
<td>219,395</td>
<td>445,538</td>
</tr>
<tr>
<td>EMEMT</td>
<td>762,667</td>
<td>298,352</td>
<td>339,068</td>
<td>1,400,087</td>
</tr>
<tr>
<td>EMEMT1 1500-1549</td>
<td>59,602</td>
<td>21,910</td>
<td>46,814</td>
<td>128,326</td>
</tr>
<tr>
<td>EMEMT2 1550-1599</td>
<td>162,313</td>
<td>102,919</td>
<td>92,405</td>
<td>357,637</td>
</tr>
<tr>
<td>EMEMT3 1600-1649</td>
<td>228,135</td>
<td>50,771</td>
<td>71,047</td>
<td>349,953</td>
</tr>
<tr>
<td>EMEMT4 1650-1700</td>
<td>312,617</td>
<td>122,752</td>
<td>128,802</td>
<td>564,171</td>
</tr>
</tbody>
</table>
Analysis: Chronology (i)

- Chronology

![Graph showing chronology over time with specific data points for Make and Cause categories.]
Analysis: Genre variation (i)
Analysis: Genre variation (ii)

Bar chart showing genre variation in different time periods and genres:
- **Remedies**:
  - 1500-1549: 7.01
  - 1550-1599: 5.03
  - 1600-1649: 5.31
  - 1650-1700: 2.33
- **Specialized texts**:
  - 1500-1549: 3.07
  - 1550-1599: 4.51
  - 1600-1649: 2.33
  - 1650-1700: 0.35
- **Surgical texts**:
  - 1500-1549: 2.85
  - 1550-1599: 5.31
  - 1600-1649: 6.23
  - 1650-1700: 1.14
Factors (i)

• There are three main factors that have been found to contribute to the choice of bare or to-infinitive:
  
  o The presence of intervening elements between the matrix verb and the object infinitive.

  o The size of the object clause.

  o The morphology of the matrix verb:
    • Finite forms (make, makes, made).
    • Non-finite forms (to make, making).
Factors (ii)

• The presence of intervening elements between the matrix verb and the object infinitive.

• Lind’s analysis of help to/help ø (1983):
  
  • Whenever a noun phrase is inserted between the matrix verb and the object infinitive, ZERO was preferred over TO infinitive (63.3% and 36.9%, respectively).

  • However, it is not known how many of those NPs were actually pronominals. It results impossible to detect the influence that a proper noun or a pronominal may have on the phenomenon.
Factors (iii)

• Make to/Make $\emptyset$: typology of intervening elements:

<table>
<thead>
<tr>
<th>MEMT</th>
<th>Zero</th>
<th>To</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun phrase</td>
<td>25</td>
<td>76</td>
<td>101</td>
</tr>
<tr>
<td>Pronominal</td>
<td>31</td>
<td>51</td>
<td>82</td>
</tr>
<tr>
<td>Adverbial</td>
<td>0</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>No interv. element</td>
<td>8</td>
<td>13</td>
<td>21</td>
</tr>
</tbody>
</table>

Values in the table represent counts or percentages.
Factors (iv)

- Make to/Make $\emptyset$: typology of intervening elements:

<table>
<thead>
<tr>
<th>EMEMT</th>
<th>Zero</th>
<th>To</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun phrase</td>
<td>78</td>
<td>105</td>
<td>183</td>
</tr>
<tr>
<td>Pronominal</td>
<td>102</td>
<td>20</td>
<td>122</td>
</tr>
<tr>
<td>Adverbial</td>
<td>7</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>No interv. element</td>
<td>4</td>
<td>20</td>
<td>24</td>
</tr>
</tbody>
</table>
Factors ($\nu$)

- The size of the object phrase:
  - The choice of the marked and unmarked infinitive with the verb *make* has often been interpreted in terms of metrical needs, the unmarked form being often used in verse and poetic prose (Visser 1973: 2261).
  - In addition, Rohdenburg (1996) stated that object phrases followed by marked infinitives contained twice as many words as those associated with unmarked infinitives.
## Factors ($vi$)

<table>
<thead>
<tr>
<th></th>
<th>Instances</th>
<th>Average number of words</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEMT</strong></td>
<td>zero to</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>153</td>
</tr>
<tr>
<td><strong>EMEMT</strong></td>
<td>zero to</td>
<td>191</td>
</tr>
<tr>
<td></td>
<td></td>
<td>157</td>
</tr>
</tbody>
</table>
Factors (vii)

- The morphology of the matrix verb.

<table>
<thead>
<tr>
<th></th>
<th>MEMT</th>
<th></th>
<th></th>
<th>EMEMT</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Zero</td>
<td>To</td>
<td>Total</td>
<td>Zero</td>
<td>To</td>
<td>Total</td>
</tr>
<tr>
<td>To make</td>
<td>12</td>
<td>69</td>
<td>8</td>
<td>40</td>
<td>20</td>
<td>39</td>
</tr>
<tr>
<td>Making</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>100</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Make</td>
<td>40</td>
<td>34,48</td>
<td>76</td>
<td>65,51</td>
<td>116</td>
<td>88</td>
</tr>
<tr>
<td>Makes</td>
<td>9</td>
<td>14,06</td>
<td>55</td>
<td>85,93</td>
<td>64</td>
<td>39</td>
</tr>
<tr>
<td>Made</td>
<td>3</td>
<td>21,42</td>
<td>11</td>
<td>78,57</td>
<td>14</td>
<td>21</td>
</tr>
</tbody>
</table>
Conclusions (i)

• The early modern period marks off a transitional stage in the development of *make* in combination with an object infinitive clause, as the marked form is observed to decline towards the mid-sixteenth century, coinciding with a significant diffusion of zero.

• Genre variation:
  
  o **MEMT**: an outstanding use of *to* across the different text-types.

  o **EMEMT**: *Zero* is preferred over *to* in *Specialized* and *Surgical Texts*, while *Remedies* show a higher distribution of the marked infinitive.
Conclusions (ii)

• When an intervening element occurs:
  
  • MEMT:
    o To is preferred with all the typology of intervening elements.
  
  • EMEMT:
    o An intervening pronominal favours the choice of the zero alternative.
    o An intervening adverbial, in turn, seems to trigger the use of the marked infinitive.
    o When there is no intervening element, the to infinitive is overwhelmingly preferred over that of zero.
Conclusions (iii)

• Concerning the size of the object phrase, the results reveal that the greater the complexity of the phrase, the more likely the to-infinitive occurs.

• Morphological differences are not relevant in the choice of the infinitive, with the only exception of to make, which favours the use of the bare infinitive in order to avoid euphony. In addition, in EModE, the to alternative is preferred when make is inflected (makes).
Thank you

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