Lexical structure in *The Battle of Maldon*

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The poem known as *The Battle of Maldon* tells in circumstantial detail the story of one of the many English defeats at the hands of the Northmen during the long and ill-starred reign of Aethelred. Though the poem is not without its moments of clumsiness, and bathos — lines 5 and 6 and line 325 spring to mind, as do the awkward jingles of lines 271, 282, and 299[1] — the episode it describes has all the power of classic tragedy as it moves from the fatal self-confidence of Byrhtnoth to his death, the breaking of the English ranks in the following confusion, and the final unforgettable enunciation of the heroic values by Byrhtwold, the old and hardened warrior steadfast in the face of the inevitable.

But what, finally, is the poem about? If the battle is its topos, what is its purpose? It does not seem appropriate as a memorial piece for Byrhtnoth: there is no encomium on the fallen leader, though undoubtedly his followers hold him in high esteem. If it is a celebration of heroism and the heroic values it is a deeply ironical one — generosity and honour seem to lead to collective and individual disaster. There is no sign here of the give and take that is so affecting in the story of Cynewulf and Cyneheard; here a society is confronted with treachery within and savagery without and crumbles before them. Again, the poem is not a Christian one in the sense that as a whole it dramatizes a religious message: it is not overtly an exemplum. Although the contrast is drawn between Byrhtnoth in prayer for his soul (ll. 173–80) and the *hæþene scealcas* (l. 181), the English never claim to be fighting for christendom, but for their king and their land.

In this paper I will attempt to illuminate the meaning of the poem by exploring its lexical structure: by seeing whether there are patterns in the use of vocabulary that may reveal structural patterns in the poem, and how these patterns, if patterns there are, contribute to its meaning.

The Battle of Maldon, in the mutilated state in which it has come to us, consists of 325 lines containing rather more than 600 lexical items (depending on how they are counted). Many of them occur once only, while the singular pronoun *he*, and its parts, occurs more than 100 times. Each lexical item has, in a trivial sense, its own unique distribution, for language is linear, words occur one at a time, and no two words can occupy the same position. When one looks at the context,

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however, whether it is the line or the passage, one may well find patterns of distribution shared by numbers of words, or, perhaps more likely, a range of similarities of distribution pattern from identity, when the presence of one word in a context implies the presence of another, to total dissimilarity, where one word is never found in the same context as some other. The first question, then, is 'are there such patterns, and if there are, what do they tell us about the poem?'

One must begin by deciding what is meant by a context: even the most common word is a relatively rare event, and if one is seeking words that tend to co-occur one must seek them in large enough sections of text for them to have an opportunity of doing so, without employing so coarse a mesh that the results one is looking for slip through. For the present study the poem was divided into 33 parts, each, except the first (ll. 1–9) and the last (ll. 320–325), consisting of ten lines. The occurrences of each lexical item in the text could then be represented by a string of 33 numbers, showing how many times the word occurred in each division of the poem. This string of numbers is the word's pattern of occurrence, which may then be compared with the patterns of occurrence of other words.

The 33 divisions of the text can give rise, at the most, to 33 mutually independent kinds of pattern: if all the lexical items used were equally common, and if there were no thematic and semantic ordering in the poem, each pattern would be equally prominent. To the extent that neither of these conditions is true, the dominant patterns will reflect the interaction of the most common items with the major structural elements.

The techniques used for reducing the data to its dominant patterns are known as factor analysis — a fairly comprehensible account of the method may be found in Gould and White (1974).[2] Suffice it to say that one begins with, in the present case, 600 or so words, each represented by 33 numbers, some of these strings of numbers the same or similar, some markedly different. These strings are reduced to 33 'factors', each a string of 33 numbers showing the extent to which each passage is reflected in the factor. Thus the factors classify the passages: passages that have similar numerical values for one factor are alike in terms of whatever it may be that the factor is measuring. To find out what that is, one calculates a 'factor score' for each word, which shows the extent to which the individual pattern of that word coincides with the pattern of the factor.

For this poem the six most important factors were as below:

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[2]Peter Gould and Rodney White, *Mental Maps* (Harmondsworth, 1974).

Lines	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
1–9	0.631	-0.213	0.262	-0.046	-0.383	-0.003
10–19	0.720	-0.211	-0.022	-0.277	-0.011	0.173
20–29	0.758	0.003	-0.090	-0.096	0.109	-0.006
30–39	0.312	0.390	0.527	-0.064	0.200	-0.091
40–49	0.424	0.135	0.526	-0.291	0.226	-0.092
50–59	0.320	0.510	0.380	-0.249	0.181	-0.037
60–69	0.576	-0.116	0.307	0.093	0.194	0.012
70–79	0.539	-0.127	0.028	0.313	-0.130	-0.417
80–89	0.563	-0.304	0.200	0.340	-0.048	0.341
90–99	0.213	0.021	0.411	-0.070	-0.307	0.249
100–09	0.527	-0.166	0.077	0.289	0.173	-0.272
110–19	0.505	0.052	-0.304	-0.204	0.156	-0.179
120–29	0.560	0.059	-0.123	0.054	0.174	-0.256
130–39	0.735	-0.276	0.127	-0.020	-0.239	-0.087
140–49	0.740	-0.184	-0.159	-0.012	-0.228	-0.198
150–59	0.582	-0.026	0.044	0.157	-0.385	-0.272
160–69	0.673	-0.233	0.103	-0.282	-0.172	0.108
170–79	0.419	0.572	0.020	0.097	-0.154	0.102
180–89	0.702	-0.194	-0.071	0.080	0.040	0.219
190–99	0.791	-0.130	-0.112	-0.181	0.055	-0.030
200–09	0.365	-0.105	0.158	0.558	0.144	0.351
210–19	0.392	0.536	-0.133	0.206	0.025	-0.083
220–29	0.663	0.433	-0.200	0.046	-0.070	0.112
230–39	0.428	0.236	0.346	0.060	0.052	-0.047
240–49	0.632	0.372	-0.256	-0.121	-0.101	-0.008
250–59	0.389	0.408	-0.240	-0.028	-0.130	0.353
260–69	0.648	-0.136	-0.145	0.084	0.205	0.336
270–79	0.760	-0.145	-0.238	-0.197	-0.017	-0.037
280–89	0.595	-0.168	-0.080	-0.301	0.223	0.096
290–99	0.541	0.026	-0.252	-0.029	0.265	0.095
300–09	0.493	-0.032	-0.076	0.316	0.430	-0.133
310–19	0.263	0.622	-0.122	0.191	-0.251	0.018
320–25	0.634	-0.053	0.032	0.070	-0.088	-0.134

They are most important in the sense that the sum of the squares of the elements of factor 1 is greater than that for factor 2, and so on, and this is a measure of what proportion of the patterned information each factor represents. The sum of squares for the first factor is almost half as great as that for all the other 32 factors put

together, for the first four it is as great as for the other 29, and so on. This is why only a small number of factors need be discussed.

The pattern of factor 1 may seen at first glance to reveal little, but on closer examination it proves to be the structural key to the poem. All its values are positive, which means that the most salient point about the 33 passages is their sharing of a common vocabulary, but there are notable points of weakness in this agreement. The lowest values are for lines 90–99 and 310–19, and for the lines between these the lowest value is found in 200–09. Perhaps the first factor reflects a configuration like that below,
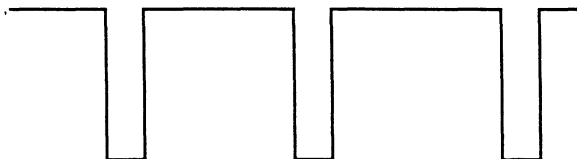

where the dips would correspond to the passages named, and the blocks they separate to lines 1–89, 100–99, 210–09 and 320–25 respectively. Calculation of the correlation between this pattern and the first factor shows that the similarity is not illusory, and further investigation shows a strong negative correlation between this pattern and factor 4: in other words, factor 4 is like the pattern turned the other way up. The closest approximation to the pattern, found by adding the six factors together in the proportions $0.630F_1 - 0.162F_2 - 0.052F_3 - 0.564F_4 + 0.310F_5 - 0.399F_6$, has the highly significant correlation of 0.643 with the illustration.

To find out what the factor means one looks at the words whose distributions embody the pattern in question. It turns out that this factor is one for which the most common words score most highly. The dips have relatively few occurrences of the most common words, the blocks relatively many. In other words, this pattern represents information density: each dip is a point of high information content followed by a passage where the consequences of that information are explored at length.

The first dip is lines 91–99 — Byrhtnoth's invitation to his enemies and their crossing of the water — which marks the end of the shouting and the beginning of the fighting. The second is lines 202–08, introducing the latter phase of the battle when death and treachery have extinguished the chance of victory and the loyal remnant realizes that only honour can be saved. The third dip is lines 309–19, the speech of Byrhtwold, preparing his comrades for the death which is now imminent.

If the first dominant pattern of the poem is of these long passages connected by short information-rich transitions, one might expect a second dominant pattern to contrast the long passages one with another. For example, one might find a contrast

between alternate passages, with the bridging sections taking on an intermediate value, thus:
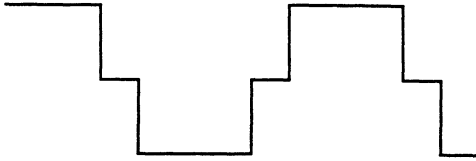

This pattern is also highly correlatable with the factors given (r = 0.505), being most strongly represented in the second, fifth, and sixth factors, and in terms of vocabulary is marked by the concentration of relational processes and verbs suggesting passivity in the section from 100 to 201. Forms of *beon* and *weorþan* are heavily represented, as are *forlætan* (and *lætan* itself), *feallan*, *fleogan*, and the preposition *of*. All of these mark a passage where the emphasis is on stasis, retreat, and deprivation when the situation calls for their opposites.

The third factor shows mostly positive values for passages early in the poem and mostly negative ones for the later passages, and correlates significantly with a pattern of progressive decline from the beginning of the poem to the end:
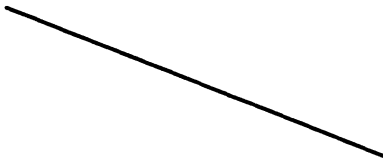

Particularly associated with this pattern is the opposition between the plural pronouns *we* and *hi* of the earlier sections and the singulars *ic* and *he* that are prominent at the end. Cohesion progressively gives way to fragmentation as the hapless forces of Essex are cut down one by one. Again one may note in the latter part of the poem the domination of non-material processes, both relational and verbal (*sprecan*, *mælan*, *word* all carry negative loadings for this factor). In fact the four-way division of processes which I have proposed elsewhere[3] is very relevant here,

[3] A. I. Jones, 'Poetry in motion: describing Australian poetry 1890–1900', *Semiotics, Ideology, Language*, Sydney Studies in Society and Culture, 3 (Sydney, 1986), pp. 165–87.

sum	cogito
patior	facio
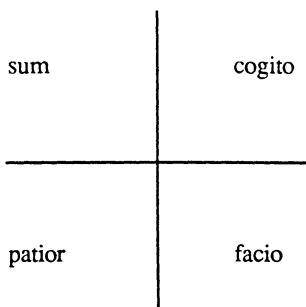
the two quadrants on the left characterizing the central section of the poem as defined by the second dominant pattern, whereas the lower quadrants are characteristic of the earlier part of the poem and the upper ones of its latter part. The poem may indeed be taken to be a trajectory through such a semantic space:
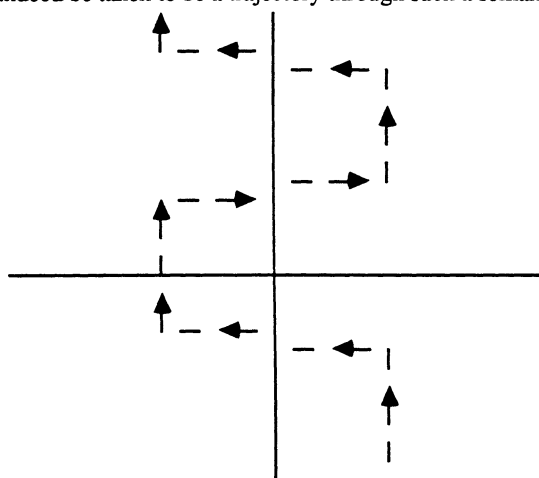
Each of the bridging passages will be seen to mark a crossing of the vertical axis.

It is appropriate here to consider the physical structure of the poem. As is well known, some indeterminate number of lines are missing both at the beginning and at the end: the diagram above suggests that what we have is part of an originally symmetrical structure with a central episode flanked by two matching wings. The centre of the poem — the point at which the trajectory sketched above crosses the horizontal axis — would then fall midway between lines 100 and 201, and significantly enough it is in line 151 that Byrhtnoth receives his death wound. To complete the poem at the beginning, according to this proposal, it will be necessary to assume that ten lines have been lost from the initial block, which originally would have matched the length of its later counterpart, that these were preceded by a dip of

eleven lines matching the Byrhtwold dip, and that these again were preceded by some indeterminate number of introductory lines.

Suppose it is assumed that one leaf has been lost at the beginning of the poem. The poem as it stands filled six leaves, so each leaf must have contained an average of just over 54 lines. This would make the introductory section 33 lines long. Assuming then that the concluding section was the same length, this would mean that just 27 lines have been lost at the end — exactly enough to fill the recto of the eighth leaf. Could this be a coincidence? It seems easier to assume that this was how the poem was planned — and the plan of the poem co-operates with the lexis to dramatize the failure of the levies of Essex. One would expect a battle in the heroic mode to progress from *beot* through action to either the relaxed celebration of victory or collapse and death, but all the energy here comes before the battle is joined, and the boasts when there is little left to boast about. As so often at this time, the English are out of step with events, recalling the rueful words of the chronicle for the year 1010:

> Þonne sceolde fyrd ut eft ongean þæt hi up woldon, þonne ferde seo fyrd ham, and þonne hi wæron be easton, þonne heold man fyrde be westan, and þonne hi wæron be suðan, þonne wæs ure fyrd be norðan.[4]
> When the fyrd should have come out again to oppose their incursions it went home, and when they were in the east the fyrd was summoned in the west, and when they were in the south then our fyrd was in the north.

With this steady march to destruction goes a progressive diminution in the frequency of the definite article *se* and its forms, which may be taken as an index of a steadily increasing formality of language. Heroic dignity is at last intact, but there will be no-one left to see it.

The death of Byrhtnoth is, literally, at the centre of the poem, but Byrhtnoth is more than the ealdorman of Essex. He is an emblematic figure whose prominence at the centre of the poem is balanced by the prominence of the *folc* both at the beginning and at the end. The poem is not the elegy of one man, but of a country whose traditions, however noble, gave no answers. Such is the message of its lexical structure.

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[4]John Earle and Charles Plummer, *Two of the Saxon Chronicles Parallel*, I (Oxford, 1892), 140.