The Measure of Middle Dutch: Rhythm and Prosody Reconstruction for Middle Dutch Literature, a Data-Driven Approach

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It is generally agreed that medieval literature was primarily intended to be read aloud (instead of being read silently). The aural qualities of medieval texts have nevertheless remained difficult to reconstruct in scholarship and continue to be elusive. In Middle Dutch philology too, it remains a controversial issue as to what extent poets made consistent use of rhythmic and prosodic patterns to stylize their texts. The vast majority of Middle Dutch rhymed texts attests to the use of what is called the 'accentual' or 'strong-stress meter'. This meter is characterized by a fixed number of stressed syllables (beats) in each verse line. The number of unstressed syllables that is inserted between them, on the other hand, is highly variable (Zonneveld 2000).

Since there is no clear relation between the position of syllables and the stress they receive, the assignment of stress in verse lines is often a matter of a researcher's individual, potentially biased opinion. Unsurprisingly, this approach has led to numerous discussions about the rhythmic qualities of Middle Dutch literary texts. In this poster, I present a computational, data-driven approach, which attempts to reconstruct and study the rhythm and prosody of Middle Dutch texts in a bottom-up fashion. By giving greater weight to the actual texts, this research can be argued to have a more reliable and solid starting point than intuitive, expert-based claims or constraint-governed templates.

The methodology of this research draws its inspiration from computational and corpus linguistics. The many rhyme pairs in Middle Dutch texts contain valuable information about prosodic properties of words. By definition, in the acoustically corresponding part of verse-final rhyme words, the accent is always on the first identical vowel (Geurts 1904; Kestemont 2012). This characteristic allows us to determine that the words in the following rhyme pairs display the following stress patterns:

teh**a**nt : verst**a**nt	→	× /
m**a**kede : wr**a**kede	→	/ × ×
hist**o**rie : gl**o**rie	→	× / × and / ×

(The notation used above takes the symbol '×' to indicate an unstressed syllable. A slash '/' is used to denote a syllable that receives stress.)

As a result, rhymes provide us with a privileged insight into the stress patterns of historic words. They allow us to effortlessly construct a large inventory of words for which the stress pattern can be

derived automatically. Subsequently, these prosodic patterns of rhyme words can be projected onto their duplicates that occur outside rhyme position. By doing so, we are able to re-create the verse lines of our corpus with words that have already been fully annotated for word stress. This annotated data can be used as input data for Machine Learning algorithms, which can be trained to automatically infer the stress patterns in new texts that were not part of the initial training corpus. Thus, we will be able to model the prosodic style of texts as a sequence of stressed and unstressed syllables.

References

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