**Introduction**

I investigate alignments between word boundaries and metrical structure in the Georgian national epic, *Vepkhist’q’aosani*.

There is a high degree of alignment between word boundaries and metrical boundaries within the hemistich (helping signal the overall metrical structure).

Alignment between word boundaries and rhythmic boundaries differs between the initial hemistich and the final hemistich (marking the ends of lines).

Disalignments between word boundaries and the rhyming domain occur more frequently toward the ends of stanzas.

**Background**

*Vepkhist’q’aosani* (usually translated as “The Knight in the Panther’s Skin”) was written by Shota Rustaveli in the 12th century, and is the national epic of Georgia.

The poem uses sixteen-syllable lines known as *shairi*.

Each *shairi* is divided evenly into two hemistichs by a caesura:

```
romelman shekmma simq’ari | dzalita mat dzierita
```

*Shairi* are arranged into quatrains (stanzas with four lines) in monorhyme (identical rhyme throughout the stanza).

Rustaveli uses two types of *shairi*: *maghali shairi* and *dabali shairi*.

*Maghali shairi*: each hemistich is divided into two measures with four syllables, and the stanza uses disyllabic rhyme.

*Dabali shairi*: each hemistich is divided into a five-syllable measure and a three-syllable measure, and the stanza uses trisyllabic rhyme.

Example of *maghali shairi*:

```
shairoba | p’irveladve || sibrdznisaa | erti dargi
saghmrtro saghmrtod | gasagoni || msmeneltatvis | didi margi
k’vla akatsa | eamebis || vintsa ismens | k’atsi vargi
grdzeli siq’va | mok’led itkims || shairia | amad k’argi
```

(Tuite, 1994; Rustaveli & Stevenson, 1977)

Example of *dabali shairi*:

```
khelita tsremlsa | uts’uravs || tvalta avlebda | sakhelsa
akhlos uzis da | uzakhs || mart sakheldebit | sakhelsa
etq’vis ver mitsnob | avtandils || shentvis gachrlisa | da khelsa
mas ara dia | sheesmis || ret’sa tvaldalpakhelsa
```

**Alignment (Word and Metrical Boundaries)**

In Rustaveli’s meter, a measure boundary almost always corresponds to a word boundary. Notice that in the example stanzas the measure boundary symbol “|” almost never occurs inside a word. This can be expressed by the constraint Align(Measure,W).

Although Align(Measure,W) is not a categorical requirement, Table 1 shows that this constraint is satisfied in the vast majority of lines:

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maghali-Corresponding</td>
<td>3018</td>
<td>45%</td>
</tr>
<tr>
<td>Dabali-Corresponding</td>
<td>3350</td>
<td>53%</td>
</tr>
<tr>
<td>Non-Corresponding</td>
<td>128</td>
<td>2%</td>
</tr>
</tbody>
</table>

The constraint Align(Foot,W) is less strictly followed, which is common in poetry. Slightly under half of dabali lines, 1515 in total, obey Align(Foot,W).

**Closure (Word Boundaries)**

In contrast, word boundaries often occur inside metrical units. In other words, Align(W,Measure) is not strongly active. There are thus multiple patterns for word sizes in a hemistich.

Table 2 shows the two most common patterns in maghali shairi. There is an interesting asymmetry: 4+2+2 is far more common in the second hemistich than in the first hemistich.

<table>
<thead>
<tr>
<th>Pattern</th>
<th>First Hemistich</th>
<th>Second Hemistich</th>
</tr>
</thead>
<tbody>
<tr>
<td>2+2+4</td>
<td>972</td>
<td>802</td>
</tr>
<tr>
<td>4+2+2</td>
<td>146</td>
<td>426</td>
</tr>
</tbody>
</table>

This asymmetry provides an additional way for Rustaveli to give the reader a sense of rhythmical closure at the end of a line.

**Closure (Rhyme)**

Turning to rhyme, a word boundary rarely occurs inside the rhyming domain, as in the penultimate line of the sample dabali stanza. This occurs in only 4% of lines.

These cases display a systematic asymmetry in their distribution. Table 3 shows that they are most common in the final line of a stanza and least common in the first line:

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Count</th>
<th>Pattern</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/2/2/2</td>
<td>4</td>
<td>3/3/12/3</td>
<td>18</td>
</tr>
<tr>
<td>2/2/12/2</td>
<td>6</td>
<td>3/3/3/2</td>
<td>21</td>
</tr>
<tr>
<td>2/2/12/2</td>
<td>17</td>
<td>3/3/3/3</td>
<td>24</td>
</tr>
<tr>
<td>2/2/11/2</td>
<td>21</td>
<td>3/3/12/3</td>
<td>38</td>
</tr>
</tbody>
</table>

This asymmetry provides an additional tool in Rustaveli’s kit for rhythmically signalling the ends of stanzas.

**Metrical Boundaries**

Metrical boundaries include (in decreasing order of strength):

- line, hemistich (||), measure (|), foot

Metrical boundaries are rarely written directly into a poetic text. Instead, frequent alignment between prosodic boundaries and metrical boundaries provides guidance to the reader or performer.

Poets often require metrical boundaries to correspond with prosodic boundaries, or vice versa (Hayes et al., 2012).

**Conclusion**

Rustaveli ensures that the vast majority of measures coincide with a word boundary, giving the reader a clearer sense of the meter.

Rustaveli uses patterns of disalignment between word boundaries and measures to provide closure at the end of *maghali* lines, and patterns of rhyme to provide closure at the end of stanzas.

New insights remain to be found through richer study of alignment between metrical structure and prosodic structure.

**References**

