

## The (Dis)use of the Syllable in the Rhymes of Dafydd ap Gwilym<sup>1</sup>

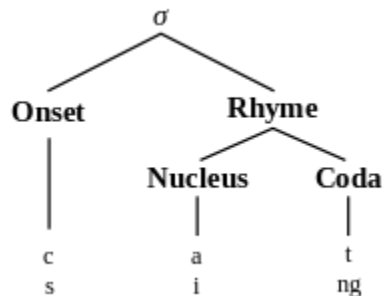
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### 1. Introduction

In many European poetic traditions, rhyme begins with the last (stressed) vowel of a line and continues to the end of the line:

- (1) He ask'd no further questions, and proceeded (Don Juan, Byron<sup>2</sup>)  
On to the house, but by a private way,  
So that the few who met him hardly heeded,  
So little they expected him that day;

In grammar, the word rhyme (rime) also refers to this part of a syllable: the vowel and any coda consonants<sup>3</sup>.



Syllable rimes and poetic rhymes are associated with each other, and syllables are often referenced when explaining where rhymes occur. For example, cynghanedd lusg is described as a rhyme where:

“...each line must end with a paroxytone (i.e. have a feminine ending), the unstressed final syllable bearing the main rhyme and the preceding stressed syllable rhyming with one of the earlier syllables in the same line, which may be stressed or post-stressed.”  
(Bruch et al., 2012)

An example of this is the line in (2), but the underlined segments don't make up what a linguist would define as a syllable in the second word of the rhyme – we would consider the <dd> an onset to the second syllable of *goddef*.

- (2) Ganed o'i fodd er goddef (Credo, line 25)

1 I am grateful to Donca Steriade for discussion of this work. All errors are my own. Unless otherwise mentioned, all Welsh poetry cited is by Dafydd ap Gwilym.  
2 Accessed from <http://www.gutenberg.org/files/21700/21700-h/21700-h.htm>, October, 2014.  
3 Image from <https://en.wikipedia.org/wiki/Syllable#Rime>

Syllables are controversial in linguistic theory, in part because native speakers don't have uniform judgments on them.

(3) a. ba.skēt    b. bas.kēt    c. bask.ēt

A proposed alternative is the interval (Steriade 2011) which is a timing unit consisting of a vowel and all consonants up to the next vowel. (Note this explains (2).)

Assuming that the segments that make up a poetic rhyme form some sort of phonological constituent in the minds of poets, we can look at poetic data for evidence of syllables versus intervals. For rhymes occurring at the end of a line, this does not make different predictions from a syllable (vowel to end, in either case) but in poetic traditions involving rhymes which end before the end of a word, we can test whether they end at a syllable boundary or an interval boundary.

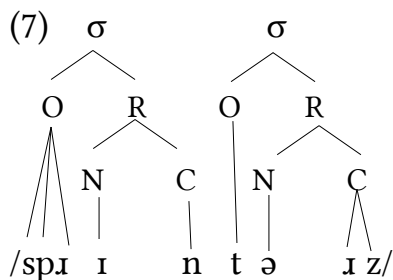
This paper looks at what cynghanedd lusg can tell us about syllables, intervals, and whether either one is a real constituent in speakers' knowledge of phonology.

## 2. Syllables in linguistic theory

The reality of syllables has been continually debated since the beginning of Generative Phonology. For those who believe in syllables, they are generally defined as formed by the following ordered principles, ignoring some exceptional cases:

- (4) A vowel should form the nucleus of a syllable.
- (5) As many consonants preceding the vowel as possible should form the onset.
  - The onset is seen in isolation at the beginnings of words, so for English, a maximal onset would have three consonants, such as in *spring*.
- (6) Whatever consonants can't be put into an onset should be made into a coda.

Taking the word *sprinters*, it would be divided into two syllables as follows:



However, there is no phonetic correlate to a syllable. There's nothing you can point at in a spectrogram of recorded speech to find a syllable boundary. Some linguists instead believe that syllables are the result of a combination of a number of

speaker intuitions about language.

- There is evidence for the existence of a timing unit that is smaller than a word. These are what we count to assign stress to words, and help form meters for poetry and songs.
- The division of consonants into onsets and codas comes from speakers' intuitions about phonotactics -- which consonants may appear together before or after a vowel.

While speakers' judgments about the division of consonant clusters into syllables are variable, there are some tendencies that have been noted:

- A stressed or long vowel will attract a consonant to its coda. (Redford & Randall (2005:30)) (e.g. *'met.ric*, but *Ma.'drid*)
- A sonority fall is more splittable than a sonority rise. (Treiman and Zukowski (1990:75)) (e.g. *fes.toon*, but *pa.trol*)
- Speakers avoid syllable structures that are not possible at word edges. (Treiman and Zukowski (1990:66)) (e.g. *pat.rol* or *pa.trol*, but never *patr.ol*)

Is there evidence for language-specific exceptions to syllabification?

- Irish had been described as preferring to syllabify an internal consonant into the coda of a preceding stressed syllable, rather than as onset to the following. (e.g. /kol.ə/ rather than /ko.lə/ for *codladh* 'sleep' (Ó Cúiv (1944), via Ní Chiosáin et al. (2012))
- In a series of experiments, Ní Chiosáin et al. (2012) found no evidence for exceptional syllable structures for Irish, although speakers did show a great deal of variation, similar in some ways to what has been shown for English.
- Vowel length and sonority played a role in speakers' tendencies.

### 3. Rhymes and rimes

The interval (Steriade 2011) is a proposed alternative to explain some timing phenomena which have previously been attributed to the syllable. A few words are divided into intervals below for examples:

(8) a. spr[int][ers]    b. [intr][ep][id]    c. c[atcphr][ase]    d. f[ilmscr][een]

Evidence from poetry is being used to show whether the interval can be thought of as a true constituent, despite the surprising-looking combinations as in (8c-d).

In addition to *cynghanedd lusg*, another poetic tradition with line-internal, word-internal rhyme is the skaldic poetry of Old Norse. These rhymes appear in even numbered lines, counter to the odd lines where *cynghanedd lusg* appears.

The examples in (9a-b) look very similar to *cynghanedd lusg*, with the first rhyme ending with the end of a word, and the second ending before a vowel. The examples in (9c-d) show how it differs from the Welsh, with the first rhymes also ending word-medially.

- (9) a. hann rekkir lið bannat (from *Háttatal*, by Sturluson)  
b. friðrofs konungr ofsa (via Ryan 2010:5)  
c. ungr stillir sá, milli  
d. Gandvíkr, jöfurr, landi

These examples show that there is an asymmetry in the location and size of the rhymes. The second rhyme in a line is the 'head' rhyme: it falls on a stressed, beat-carrying vowel and is comprised of all the consonants up to the following vowel. The first rhyme in the line is the 'tail' rhyme, which has some variability in where it may appear, and it must contain all the consonants of the 'head' rhyme, but may not make up an entire interval. (See the unanswered <v> of (9d).)

*Cynghanedd lusg* offers a more complicated distribution between 'head' and 'tail'. As in skaldic, the rightmost rhyme in a line is the stressed syllable in a predictable location, but here it's the left rhyme word that defines what segments will be contained in the rhyme: any unanswered consonants appear in the right.

- (10) a. Mi a wn blas o lasgoed (Merch Gyndyn, line 31)  
b. I waered yn grwm gwmpas, (Gwahodd Dyddgu, line 25)  
c. 'Nychlyd fardd, ni'th gâr harddffun, (Cyngor y Bieden, line 65)

#### 4. *Cynghanedd lusg* in the works of Dafydd ap Gwilym

To look at what these rhymes can tell us about the phonological constituents and the splittability of consonant clusters, I am looking at every example of *cynghanedd lusg* that appears in the works of Dafydd ap Gwilym.

##### 4.1 Getting the data

- Accessed the edited poems which appear on [dafyddapgwilym.net](http://dafyddapgwilym.net).
- Search for odd numbered lines ending in a polysyllabic word
- Search these for lines where the final consonants of a preceding word form a subset of the consonants following the stressed vowel of the final word.
- Look over these by hand to check whether vowels match, if they look like plausible *cynghanedd lusg* examples.
- This gives 311 examples.

- Possible problems:
  - I may be over- or under-counting examples, but I try to limit it to perfect rhyme, assuming Dafydd ap Gwilym is too skilled for imperfect rhyme?
  - For earlier poetry, Rowland (1990:333) mentions that “Irish” rhyme of imperfect matching of consonants occurs, but it's hard to say for certain because internal rhyme is optional, and “Irish” rhymes may happen accidentally.
  - I've erred on the side of strictness, but Rowlands (1976:xxviii) mentions orthographically mismatched vowels, which I will need to add to my data.
  - I would like to be able to compare different poets for more data – I welcome suggestions of poets with a large corpus that is available digitized.

#### 4.2 Preliminary observations

Whether this is evidence against syllables or not, the grouping of vowel and consonant in *cynghanedd lusk* shares some similarity to the results of experiments on syllabification in English.

##### 4.2.1 Stress

The first rhyme in *cynghanedd lusk* is word-final, so any consonants will naturally be grouped with the vowel they follow (as a syllable), and the second word always begins on a stressed vowel, which tends to attract consonants to it.

(11) Ond na rown bunt ar untu (Bargeinio, line 9)

This matches observations that speakers will be more likely to make the /t/ an onset in *pon.'toon*, but a coda in *'pont.iff*.

##### 4.2.2 Realization of consonants pre- and post-vocally

A cue for English speakers determining syllable boundaries is the length of the consonant. For example, in distinguishing between the phrases in (12), it was found that when the /s/ is part of a cluster with /n/ (12b), it is realized as longer than in (12a).

(12) a. 'help us nail'      b. 'help a snail'      (Redford & Randall 2005:30)

This difference in phonetic realization of the consonants in these rhymes could contribute to the often-mentioned preference for some degree of dissimilarity in Celtic rhymes. The difference in rhyming a stressed and unstressed syllable would add another dimension of dissimilarity. The difference in consonants would be especially salient in rhymes involving word-final rising sonority clusters, such as in (13).

(13) Heusor mewn secr yn cecru

(Ei Gysgod, line 27)

Such clusters are described as containing an epenthetic vowel in contemporary Welsh (Hannahs 2013:87). This means that not only might the length of the consonants vary between the two rhyming words, but one might contain an extra vowel that is not in the other. There are 20 examples of rhymes of this type in my corpus (and one pointed out in Conran (1995:329)), suggesting this type of rhyme is productive, and not a last resort of some kind.

#### 4.2.3 Single consonants vs. clusters

For the rhymes consisting of only a vowel and a single consonant, every example could be described as having an interval rather than a syllable that makes up the rhyme. This is the case for 204 of the 311 rhymes I have found. The behavior of consonant clusters forms stronger evidence to distinguish the two. Except for one example (14), all of the cluster rhymes contain only two consonants.

(14) Mawr yw braint siartr ei gartref,

(Morfudd yn Hen, line 11)

The example in (14) would be called an interval (it uses all the consonants up to the following vowel) rather than a syllable, which linguists would divide as *gar.tref*. In all, 217 of the 311 rhymes show an interval in the second word, meaning there are no unanswered consonants before the next vowel.

In the cases where there are between one and three additional consonants, I have begun by dividing them based on the change in sonority between the two consonants. Due to the asymmetry of speaker preferences in dividing syllables (that is, to split a sonority fall, as in *es.tate*, but to preserve a rise as in *pa.trol*) I was curious whether a similar asymmetry would be seen in the clusters which are rhymed wholly, or leaving unanswered consonants.

An example where a sonority fall is split would be the example in (15), which does correspond to where a linguist would place a syllable boundary:

(15) Ni chwsg bun gyda'i hunben

(Bargeinio, line 1)

An example where a sonority rise is split is the example in (16):

(16) Dodrefn cariad hyd adref

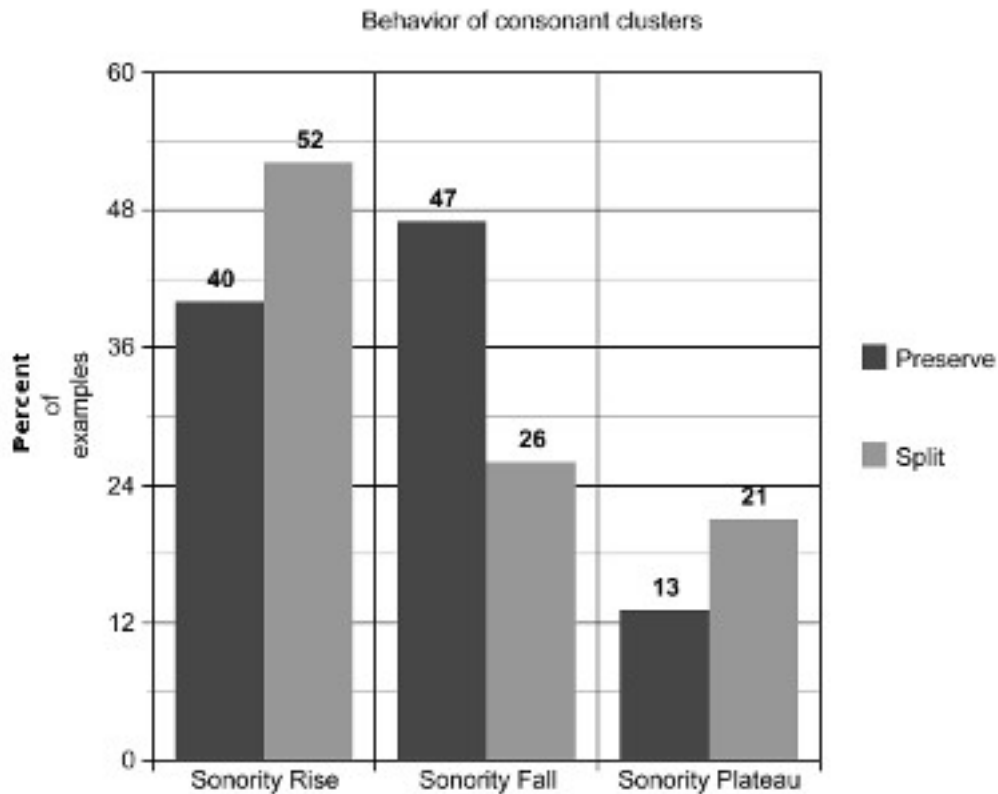
(Anrhegion Dafydd, Madog ac Iorwerth, 3)

An example where a sonority plateau is split:

(17) Dywaid i wen liw 'sblennydd

(Y Ceiliog Du, line 51)

In terms of percentages, the attested split (leaving unanswered consonants) verses preserved clusters (nothing is unanswered) is as in the chart below:



Comparing the percentages, we see that most of the consonant clusters which are split do so on a sonority rise, while the sonority falls tend to be preserved. This appears to go counter to observations about syllable division by English speakers. However, there are some possible explanations which I have not yet tested:

- These percentages tested as statistically significant, but that did not factor in how many more examples preserve clusters than split them.
- Due to the Welsh lexicon, it may be easier to find rhyming words with a sonority fall than a rise.

#### 4.2.4 Glides get left out

Another factor which may be due to the lexicon is the fact that glides do not get to participate (that I have seen) in cynghanedd lusk either as consonants or as vowels. We might expect them not to participate as consonants due to the lack of Welsh words ending in e.g., /-gw̥/ or /-g̊/, leaving us with unanswered /w/ in (18):

(18) A gofynag yn fagwyr

(Caer Rhag Cenfigen, 29)

However, glides also seem not to participate at the beginning of a rhyme as a vowel:

(19) Cyfaill cariad ac adar,

(Mis Mai a Mis Tachwedd, line 5)

In none of the 11 examples of this I have found is the glide answered in the rhyme.

## 5. Conclusions

The constituent that makes up the sequence of a vowel plus consonant(s) in the cynghanedd lusc in the poems of Dafydd ap Gwilym further complicates linguists' ideas of what syllables are, or whether they exist. Of the 311 rhyme examples in my corpus, only 50 end on what would be considered a syllable boundary in the second word.

Although it makes a convenient shorthand, it is clear that it is not a syllable which is being rhymed over in cynghanedd lusc, but some other kind of phonological constituent. 217 of the rhymes clearly rhyme on an interval, with no unanswered consonants, but this unit does not perfectly explain the data either, at first glance.

In continuing this project, I hope to add more examples to my corpus to get a better idea of how Welsh poets rhymed, and perhaps to compare their habits to each other. I also hope to be able to test the significance of particular rhyme patterns against the ease of finding an appropriate rhyming word, in order to rule out lexicon effects on rhyming practices.

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