

THE RULE OF THE “EXCEPTIONS” IN *CYNGHANEDD* POETRY

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1. *Consonant Correspondence in Cynganedd Poetry*

In traditional and modern Welsh *cynganedd* poetry, consonants correspond in complex patterns of alliteration from one part of the line to another. For example, in the following line the consonants in the first half-line correspond consecutively with the consonants in the second half-line:

bradwyr a droes brwydra drwg
br d r dr´ s | br dr dr´ g
(Rowlands 1976:xxix)

(For further information on the rules of *cynganedd*, see Loth 1900, Morris Jones 1925, Parry-Williams 1936, Evans 1951, Roberts 1973, and Rowlands 1976.)

These correspondences are based solely upon the phonetics. Welsh has no equivalent to the English “sight rhyme” (e.g. *love/move*).

2. *The Exceptions*

Given the oral nature of Welsh *cynganedd* poetry, a group of “exceptions” is quite baffling, for a sound in one half-line is treated in the other half-line as though it were not uttered at all. In technical terms, it is “unanswered.” While under certain rules sounds may indeed be precluded from the correspondence patterns depending upon the type of pattern and the position within the line, this group defies all of the rules. To make the group even more intriguing, some of these sounds are even “prescribed” — accepted as exceptions by the bardic grammarians.

In his *Poems of the Cywyddwyr: A Selection of Cywyddau c. 1375-1525*, Eurys Rowlands collects a corpus representing some of the most precise *cynganedd* poetry. In his corpus, Rowlands (1976:xxxiv-xxxvi) notes the exceptions outlined in table 1.

Sound	Environment	Comments
<i>n</i> [n]	beginning of line beginning of half line middle of series	prescribed, extensive prescribed, extensive occasional
<i>m</i> [m]	beginning of line	occasional
<i>r</i> [r]	beginning of line middle of series	extensive occasional
<i>h</i> [h]	throughout	prescribed, not normally answered in correspondences, but occasionally counted when emphasized
<i>f</i> [v]		only two examples in corpus, but it was not normally answered in earlier <i>cynghanedd</i> poetry

Thus, for example, such lines as the following occur in the corpus, in which the *n* in the first half line is not answered in the second:

ni bu eto o'r bytwn
n b 't̃ | r) b 't̃n
(Rowlands 1976:xxiv)

From the viewpoint of traditional phonetics and phonology, this group does not appear to have any phonetic justification. The sounds involved include two of the three nasals, one of the two liquids, the voiceless glottal fricative (the aspirate), and the voiced labial fricative. In terms of phonetic features inherent to phonetic/phonemic segments (or letters), there is no single feature that can classify the group as a “natural class” — a group of segments sharing a common feature and operating in a unique and uniform manner. Indeed, the only feature they bear in common is [+consonantal], although ironically this is the very group

that is not treated as consonantal in the poetry.

3. *The Dynamics of Welsh Consonants*

From the viewpoint of dynamic phonetics and phonology, on the other hand, the group does appear to constitute a natural class — not of segments or letters (as there is no such thing in the dynamic framework), but of relative aspirate intensity.

Briefly, the dynamic approach does not recognize the letters on the page or the letters of the Internal Phonetic Alphabet as sounds. Rather, speech sound is a continuum produced by a series of constraints: Air passing through the larynx is constrained to various degrees by the vocal cords, producing the sound of phonation. This sound is further constrained by the position of the tongue, height of the jaw, and protrusion of the lips to form the vocalic basis of the syllable. The syllabic vowel is constrained by the articulators to various degrees to produce the consonantal obstructions. These obstructions (defined by “position” — their place and configuration) are constrained by prosodic features such as aspiration, nasality, etc. to affect the manner in which the obstruction is realized.

As has been demonstrated before (see, for example, Griffen 1985: chapters 5 and 7), the difference between the perceived consonants of Welsh is not based upon segmentable features, but upon the dynamic feature of “aspiration” which occurs “over” the others (prosodically). This aspiration has been isolated as a high-to-low frequency energy ratio in the acoustic phonetic evidence. As it were, the aspiration associated with the position in the syllable (not inherent to any particular segment or type of segment) is the determining factor.

It is this ratio of high-to-low frequency energy that lies at the root of the fortis-lenis scale. The higher the dominant frequency emission (the more obstructive or consonant-like) the more fortis is the articulation; the lower the dominant frequency emission (the less obstructive, more vowel-like) the more lenis is the articulation. For Welsh, the fortis-lenis scale can be represented as in table 2, maintaining the traditional consonant terminology.

Table 2: Welsh Fortis-Lenis Scale				
	Degree of Aspiration (series)			
Position of Obstruction (orders)	Susurratae 1 aspirate	Mediae 2 aspirate	Aspiratae 3 aspirate	Spirants 4 aspirate
	Obstruents			
labial	<i>f</i> [v]	<i>b</i> [b]	<i>p</i> [p ^h]	<i>ff/ph</i> [f]
dental	<i>dd</i> [ð]	<i>d</i> [d]	<i>t</i> [t ^h]	<i>th</i> [θ]
velar	-	<i>g</i> [g]	<i>c</i> [k ^h]	<i>ch</i> [χ]
	Liquids			
lateral	<i>l</i> [l]			<i>ll</i> [l̥]/[lh]
trill	<i>r</i> [r]			<i>rh</i> [rh]
	Nasals			
labial		<i>m</i> [m]		<i>mh</i> [mh]
dental		<i>n</i> [n]		<i>nh</i> [nh]
velar		<i>ng</i> [ŋ]		<i>nhg</i> [ŋh]
	Aspirate			
laryngeal	←----- <i>h</i> [h] -----→			

4. Analysis of the “Exceptions”

A comparison of table 1 and table 2 reveals a rather striking pattern. In each case, the exceptional consonantal obstruction is relatively weak in the context of the possibilities open to the aspirate constraint in the corresponding order — the homorganic position of obstruction. Here the concept of relativity is particularly crucial, for in phonology it is not the absolute value of a feature that determines its function, but rather the relative value within the system (see, for example, Jakobson and Waugh 1979:13-19).

4.a The Nasal. One of the most common exceptions in the poetry is the dental nasal *n* [n], with the labial nasal *m* [m] following suit to a much lesser degree (most likely by analogy with the dental). These are the only nasals that would appear in initial position of the phonological word. The velar nasal *ng* [ŋ] occurs in nasal mutation (historically eclipsis) with a proclitic, which is by definition part of the phonological word occupying the initial position (and thereby denying this position to the velar nasal).

In the case of the exceptional nasals, the only other homorganic possibilities would be the aspirated nasals realized in nasal mutation — *nh* [nh] and *mh* [mh]. While the unaspirated nasals pattern in the mutation system with the mediae both phonetically and in the mutation system (as the soft mutation of *m* [m] is *f* [v]), the aspirated nasals pattern in intensity of aspiration with the spirants, for they are nasal fricatives.

Relatively, then, the difference between the unaspirated nasals and aspirated nasals is significantly greater than the difference between immediately “adjacent” homorganic members of the fortis-lenis scale. In their respective orders, the unaspirated nasals are thus extremely weak constraints within the perspective of phonological relativity.

The question is: Could this relative weakness be enough to classify these unaspirated nasals as nonobstructional? If so, then they might well not be considered poetically as full consonants and would not be expected to participate in the alliterative patterns. For this to be the case, the other members of the group of “exceptions” must exhibit the same relative weakness within the Welsh fortis-lenis system.

4.b The Trill Liquid. As continuous obstructions with very little effect on the vowels they constrain, liquids are inherently weak obstructions, often classified as both consonantal and vocalic. As such, both the *r* [r] and the *l* [l] are not only within the range of the *surratae*, but rather clearly at the “bottom” (the most vowel-like, least obstructional) of this series.

In contrast, the other members of the liquid orders are once again on the level of the spirants, for they are indeed voiceless trill and lateral fricatives. Once again, the relative difference between the unaspirated liquids and the aspirated liquids spans several degrees of aspirate constraint. Moreover, the unaspirated, “normal” liquids are inherently vocalic and likely to be classified as nonobstructions for alliterative purposes, anyway.

The reason why the trill liquid is excepted while the lateral liquid is not probably lies in the degree to which the *r* [r] may be seen as differing from the *rh* [rh] relative to the degree to which the *l* [l] differs from the *ll* [ʎ]/[lh]. As noted for example by Harms, “Retroflex consonants are treated as flat (as opposed to ‘plain’ consonants). In many languages /r/ also produces flattening (noticeable in the effect upon surrounding vowels or its relationship to the semivowel /w/, so that it would seem plausible to contrast *r* : *l* in terms of flatness (or perhaps graveness)” (1968: 32).

The importance of this relative difference in “gravity” is treated in more detail with reference to the labial (section 4.d). At this point, it is appropriate simply to point out that [r] is less obstructive than [l] and more likely not to be classified as a consonant for purposes of alliteration.

4.c The Aspirate h [h]. The fact that the aspirate *h* [h] is not normally answered in *cynghanedd* correspondences unless it is emphasized fits into the pattern with greatest regularity, attesting to its prescribed status. Without emphasis, the breathiness produced in the glottis is quite frequently insufficient to constrain or obstruct the vibrations of the vocal cords. What is produced, then, is not a consonantal obstruction at all, but simply a breathy vocalic articulation. As such, it does not even qualify as a *susurrata*.

On the other hand, the emphasized aspiration of a clearly articulated *h* [h] consists of phonetic “white noise” — the high frequency emission that is most characteristic of the spirants with the fourth degree of prosodic aspirate constraint. While the unemphasized *h* [h] is not even consonantal, the emphasized *h* [h] as full glottal frication patterns with the most obstructive constraints. The relative degree of difference between the two is thus greater than any other relative difference in the system.

Given the restrictions upon certain consonants in particular environments, table 2 reveals that all of the applicable exceptions noted thus far maintain the weaker realization of aspiration between homorganic pairs separated by more than one degree of aspirate prosody. They are therefore relatively very weak for their series. Furthermore, there are no other pairs outside the patterns that are separated by so great a degree of aspiration. Indeed, all the rest are separated by only one degree — there are no more “gaps” in the system.

4.d *The Labial Susurrata*. This leaves the labial susurrata *f* [v]. In order for this obstruction to support the hypothesis just stated, it would have to differ from its corresponding homorganic obstruction by more than one degree of aspiration. Yet, in table 2 it apparently differs from *b* [b] (and secondarily from *m* [m]) by only one degree.

Just as the nasals and liquids are actually somewhat less obstructive than the other members of their respective series, however, the labial is likewise weaker than the dental, and this relative weakness is directly related with the fortis-lenis scale and the relationship between consonants and vowels.

The most fundamental acoustic difference between the consonants and vowels is that the vowels are marked by distinctive low-frequency emissions, while the consonants are marked by high-frequency emissions that obscure the low frequency emissions. As one goes “up” the fortis-lenis scale, the emissions gradual reflect the dominance of the high frequencies over the low.

The susurratae are characterized by the lowest frequency emissions that may still identify them as obstruent obstructions — relatively, it is a small step from susurrata to vowel. Thus, the velar susurrata [ɣ] disappeared entirely in the history of Welsh. This is to say that the obstruction at the velar position was so weak relative to other obstructions that it simply became vocalized — “absorbed” into the vowel it constrained — and ceased being pronounced.

As Morris Jones (1913: 177-81) points out, the susurratae *f* [v] and *dd* [ð] have likewise weakened to the point that they can be confused. However, the rate of disappearance of the labial *f* [v] is considerably greater than that of the dental *dd* [ð]. The reason why the [ɣ] disappeared and the *f* [v] is more in danger than the *dd* [ð] lies in the feature of gravity — obstructions articulated at the labial and velar positions of articulation are relatively more grave than those articulated at the dental position. In acoustic terms, what this means is that the labial and velar positions are marked by a greater degree of low frequency emission dominating the spectrum. In relative dynamic terms, they are less obstructive, more vowel-like, and further “down” the fortis-lenis scale relative to the dental.

According to the phonetic aspects of labial *versus* dental susurratae, bolstered by the historical patterns of change reflecting these phonetic aspects, the difference between the susurrata *f* [v] and the media *b* [b] can be considered as greater than one degree of aspirate prosody, relative to the difference between the corresponding dental susurrata *dd* [ð] and the media *d* [d]. As it is the relative difference that determines the perceived weakness of the obstruction, the *f* [v] can now be seen to pattern quite consistently with the other “exceptions.”

5. Conclusion: *The Rule of the “Exceptions”*

Thus, the rule of the “exceptions” states: If the most weakly articulated obstruction of an order differs from the next more fortis obstruction by more than one degree along the fortis-lenis scale, then the former obstruction may not be viewed as obstructive enough to count as a consonant in *cynghanedd* poetry.

While this rule of the “exceptions” may appear to be abstract, it is really quite evident from the context of dynamic constraint: All of the “exceptions” are the relatively weakest articulations of sustained voiced obstructions. The fact that they are voiced is not a factor inherent to the obstructions themselves, but rather a consequence of their failure to suppress the natural voicing of the constrained vowel. The fact that they are sustained while not suppressing voicing allows the vocalic formants to be realized for the entire duration of the obstruction. Thus, these weakly articulated obstructions can be described as dynamically the most vowel-like, least consonantal obstructions, and their potential exclusion from the consonantal alliteration patterns is very reasonable indeed.

Of course, there will be a great deal of variation in this rule, depending upon the dialect of the poet, the traditions being adhered to, the emphasis with which the obstruction is articulated, etc., many of which in the older poetry will be irrecoverable. Nonetheless, the rule of the “exceptions” expresses the basic tendency and demonstrates the phonetic regularity of the Welsh *cynghanedd* poetry.

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