CHAPTER 3

Creating Articulatory Texture In Irish: Structure

3.0 Introduction

The purpose in this and the next chapter is to provide a Systemic-Functional description of the articulation of Irish that accounts for much of the complexity of Irish articulation in terms of two separate functions of syllable systems, distinguishing those that function structurally only from those that also function cohesively. In deploying the theoretical model, the description also provides one exemplar for Systemic-Functional descriptions of articulatory systems in general.

The description is organised in the following way. In this chapter, the general articulatory potential, independent of both phonological and lexicogrammatical position, is described first. Following this, articulatory potential *specific* to *phonological* position, *independent* of *lexicogrammatical* position is described; these are the core structural systems: those *in* the syllable. In the next chapter, articulatory potential specific to lexicogrammatical position is described; these are the peripheral cohesive systems: those *around* the syllable. Together, these core and peripheral systems compose the *articulatory texture* of Irish.

3.1 Decontextualised Articulatory Potential

The following table classifies Irish consonants according to paradigmatic phonological features.[1]

[1] All narrow phonetic descriptions are taken from the account of the Irish of Erris, County Mayo in Mhac an Fhailigh (1968/80). All phonological and orthographic representations of words are taken from the Foclóir Póca published by An Roinn Oideachais (1990). Compare also Breatnach (1947) for a description of the Irish of Ring, County Waterford, de Bhaldraithe (1945/75) for a description of the Irish of Cois Fhairrge, Co. Galway, de Búrca (1970) for a description of the Irish of Tourmakeady, Co. Mayo, and Ó Cuív (1944/75) for a description of the Irish of West Muskerry, Co. Cork. See also other references in the bibliography.

				orthography	palatalised	labiovelarised
labial	voiceless		stop	p	{p,}	{p}
			continuant	f/ph	{F,~}	{F}
	voiced	oral	stop	b	{b,}	{b}
			continuant	bh	{B,}	{BÚw}
		nasal	stop	m	{m,}	{m}
			continuant	mh	{B$,}	{B$Úw$}
coronal	voiceless		stop	t	{†,}	{†}
			continuant	s	{S}	{s}
	voiced	oral, median	stop	d	{∂,}	{∂}
			continuant	r/rr	{\,ÚΩ}	{\}
		oral, lateral	stop	l/ll	{‡,}	{‡}
			continuant	l	{l,}	{l}
		nasal	stop	n/nn	{fl,}	{fl}
			continuant	n	{n,Ú\$,}	{nÚ\$}
dorsal	voiceless		stop	c	{c}	{k}
			continuant	ch	{ç}	{x}
	voiced	oral	stop	g	{*f*}	{g}
			continuant	gh/dh	{jÚy}	{VÚw}
		nasal	stop	ng	{N,}	{N}
voiceless			continuant	h/th/sh	{h}	

Table 3.1 Irish Consonants[1] Categorised By Features[2]

[1] The distinction between the [oral] and [nasal] [labial, continuant] is disappearing, as is the distinction between [stop] and [continuant] coronal sonorants. For example, in the Cois Fharraige dialect of Galway, the distinction is only maintained for palatalised coronal nasals and laterals (Ó Siadhail 1988: 8).

[2] Articulatory feature systems that compose specific segments can be compared to the three dimensions — hue, saturation and brightness — that compose specific colours, or to the triplets of quarks that compose all hadrons (Pitt 1977: 305) in particle physics.

The table requires three clarifications. First, the glottal consonant is interpreted as the features [voiceless, continuant] only. This is consistent with the fact that Irish /h/ arises from the lenition of consonants articulated with oral cavity occlusion.[1]

Second, all consonants articulated in the oral cavity have two variants distinguished by secondary articulation: a palatalised form and a labiovelarisedÚneutral form. That is, generally, they are produced with the dorsum advanced either toward the palate with lips spread (palatalisation) or toward the velum with lips rounded (labiovelarisation). Throughout this description, palatalisation will be identified by the features [front-spread], represented by the symbol /y/, and labiovelarisation will be identified by the features [back-round], represented by the symbol /w/. The specific effects of these secondary features on consonantal articulation are summarised in the following table (adapted from Mhac an Fhailigh 1968/80: 24-47).

				front-spread	back-round
dorsal			k/g/N/x/ V	anterodorso-palatal (front)	posterodorso-velar (back)
labial			p/b/m/F/B/B$	exolabial (spread)	endolabial (round)
coronal	stop		†/∂/‡/fl	lamino-alveopalatal	lamino-dental
	continuant	voiceless	s	lamino-palato-alveolar	lamino-alveolar
		voiced	Vl/n	apico-alveolar	apico-postalveolar

Table 3.2 The Effect Of Secondary Articulation On Consonant Alignment[2]

The consonantal features [front-spread] and [back-round] will be interpreted later in this account as features of the consonant POSTURE system, and their function will be interpreted as potentially cohesive in the discussion of the syllable periphery. In the discussions that precede that account, it is important to keep in mind is that these secondary articulations extend for the duration of consonant clusters and affect the articulation of preceding and following vowels. As indicated in previous chapters,

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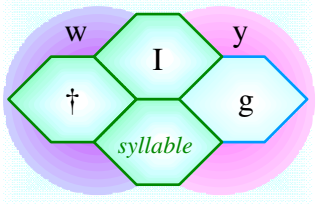
[1] Synchronically, /h/ arises from the lenition of /†/ and /s/ (see Chapter 4 or any grammar of Irish). Diachronically, /h/ arises from borrowings and the lenition of several consonants, including /F/ /k/ and /x/, as well as /†/ and /s/ (see, for example, Thurneysen (1980), O'Rahilly (1972) or Pedersen and Lewis (1961)). The Modern Irish prefixing of /h/ to vowel-initial words in certain grammatical contexts — see Chapter 4 — arose from the lenition of a word-final /s/ (Thurneysen 1980: 132).

[2] This description presumes the following organisation of passive articulator categories:

dental alveolar postalveolar palato-alveolar alveopalatal palatal velar.

consonant POSTURE features will be represented syntagmatically as charged fields around the syllable quantum, as shown below for tuig {†ig,} 'understand'.[1]



Third, of the consonants categorised as [coronal], those involving [apical] contact: r(r) {\}Ú{\,ÚΩ}, l {l}Ú{l,} and n {n}Ú{n,}, are interpreted as the [continuant] counterparts of those involving [laminal] contact: d {∂}Ú{∂,}, l(l) {‡}Ú{‡,} and n(n) {fl}Ú{fl,}, respectively, which are classified as [stop] consonants. The phonological motivation and phonetic plausibility of this interpretation can be stated as follows.

For the laterals and nasals, the phonological motivation concerns the contrasts that arise from initial consonant lenition (see Chapter 4). The common effect of lenition on stop consonants is their becoming continuants: {p}Ú{p,} become {F}Ú{F,}, {b}Ú{b,} become {BÚw}Ú{B,}, {k}Ú{c} become {x}Ú{ç}, {g}Ú{ƒ} become {VÚw}Ú{jÚy}. The effect of lenition on the laminals {‡}Ú{‡,} and {fl}Ú{fl,} is their becoming the apicals {l}Ú{l,} and {n}Ú{n,} respectively[2]. This yields the following contrasts:

unlenited	lenited
{p}Ú{p,}	{F}Ú{F,}
{b}Ú{b,}	{BÚw}Ú{B,}
{k}Ú{c}	{x}Ú{ç}
{g}Ú{ƒ}	{VÚw}Ú{jÚy}
{‡}Ú{‡,}	{l}Ú{l,}
{fl}Ú{fl,}	{n}Ú{n,}

The phonetic plausibility of this interpretation rests on the distinguishing factor of these [voiced coronal] consonants being, not the degree of *openness* of the articulatory

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[1] Compare Irish tuig, meaning 'understand', which is pronounced {†[ø]Èg,} in the absence of initial consonant mutation and {∂[ø]Èg,} when eclipsed, as it is when interrogative, with English twig and dig 'understand'.

[2] On the other hand, d [∂] was lenited to fricative dh [D] until the Middle Irish period after which it shifted alignment to merge with the dorso-domal continuant gh [V~ü]. At this time there was still a contrast between unlenited rr and lenited r (Thurneysen 1980: 76-7), and the merger of lenited d and lenited g may have been *facilitated* by an insufficient perceptual separation between the two coronal continuants: lenited r and lenited d. The similarity of [D] and [\] is demonstrated by data in the Australian National Database Of Spoken Language (ANDOSL) in which Vietnamese speakers of English frequently substitute a flap for [D], especially for the English word the.

channel, but the degree of *contact* between the articulators in the *primary articulation*. Because laminal consonants are articulated using the entire blade of the tongue, they entail greater surface area contact between the active and passive articulators than the [apical] consonants, which are articulated using only the tip of the tongue. However, as Ó Dochartaigh (1980:118-123) points out, the difference between the unlenited (laminals) and lenited (apical) forms in terms of *secondary articulation* is indeed the degree of *openness* of the articulatory channel:

> It would seem to be the case that, with the bilabial nasal, as soon as the lips close for the primary stricture, there do not appear to be many other auditorily perceptible adjustments of articulation which can be made behind the primary closure in order to provide the possibility of modifying the sound in a particular direction. Therefore it tends to be treated as though it were a simple oral stop and the only possible adjustment to represent a weakening is the opening of the primary stricture...[W]ith the other segments involved {/‡fl/}, since the primary articulator is the tongue, the types of weakenings found make use of the greater flexibility of this organ and the correspondingly greater possibilities for making distinctions based on various adjustments to the primary and secondary articulations which, however, do not go so far as to open the primary stricture as was the case with the lenition of /m/...
>
> To take the laterals and dental nasals first, the distinctions between the unlenited and lenited members of the series appear to have a number of phonetic bases. In terms of the primary articulations involved, the lenited segments in each case show a smaller area of primary contact between the articulators than is the case with the unlenited set. That is, unlenited {/‡/ and /fl/} show blade-dental articulations where /l/ and /n/ generally are tip-alveolar. Similarly with the palatalised series, {/‡,/ and /fl,/} are both true palatals with a large area of contact between the front of the tongue and the palate, whereas the lenited equivalents are tip-alveolar.
>
> A second distinction between the unlenited and lenited varieties, though one which is only found within the classical paradigm, is one of duration: the unlenited segments are generally longer than their lenited counterparts.
>
> Thirdly, and perhaps most interestingly, we find in the change from an unlenited to a lenited neutral, ie nonpalatalised segment, that the secondary articulation of velarisation shifts from one showing a relatively high back stricture to one where the tongue is in a more-or-less neutral vowel position behind the primary closure: that is, the secondary articulation becomes more open in the change to the lenited segment.
>
> ...[R]eduction in area of primary articulatory contact: I think that this type of change from unlenited to lenited is best viewed as representing a movement in the direction of dearticulation which has not been carried fully through diachronically, as to do so would have resulted in a falling together of too many initial segments in the language. Moreover, the fact that both the lateral and the nasal articulations involve a complete closure at one point in the articulatory mechanism, coupled with a stricture of open approximation at another point (opening at the side(s) of the tongue or at the velum), means that any sound change which involves the opening of the primary stricture will lead to a loss of the distinctive laterality or nasality (as opposed to nasalisation) of the segment.

The categorisation of r/rr {\}Ú{\,ÚΩ} as [continuant] has three motivations:

(1) The phonetic contrast between {∂Ú∂,} and {\}Ú{\,ÚΩ} is the same as that between {fl}Ú{fl,} and {n}Ú{n,}, and between {‡}Ú{‡,} and {l}Ú{l,}. That is, as Table 3.2 shows, each [stop] exponent is lamino-alveopalatal when palatalised (∂,/‡,/fl,) and lamino-dental when labiovelarised/neutral (∂/‡/fl), while each

[continuant] exponent is apico-alveolar when palatalised (\,/l,/n,) and apico-postalveolar when labiovelarised/neutral (Vl/n);

(2) The palatalised rhotic has a *fricative* variant {Ω};

(3) The [*continuant*] nasal has a rhotic variant {\$Ú\$,}.

A system network reflecting this categorisation of Irish consonants can be devised by modelling each set of disjunctive features as a system of choice, as in the figure below.

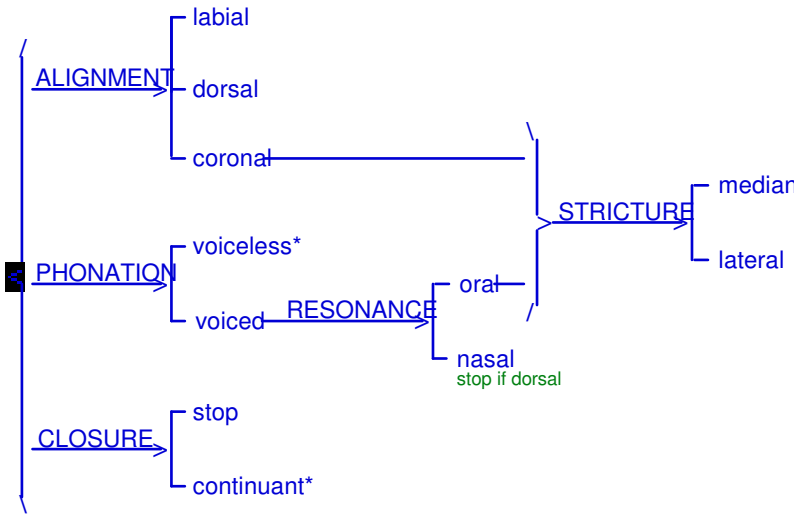


Figure 3.1 Decontextualised Consonant Potential Of Irish As System Network
(* can be co-selected in the absence of ALIGNMENT features)

In the above system network, the disjunctive set {labial, coronal, dorsal} has been interpreted as the set of features or states of the oral cavity system ALIGNMENT; the disjunctive set {stop, continuant} has been interpreted as the set of features or states of the oral cavity system CLOSURE; the disjunctive set {voiceless, voiced} has been interpreted as the set of features or states of the system PHONATION[1]; the disjunctive set {oral, nasal} has been interpreted as the set of features or states of the system RESONANCE; and the disjunctive set {median, lateral} has been interpreted as the set of features or states of the system STRICTURE.

Two clarifications are necessary. First, the ALIGNMENT feature [coronal] and the RESONANCE feature [oral] provide the two entry conditions for the STRICTURE system. That is, this more delicate system becomes available only if the conjunction of features [coronal] and [oral] is selected.

Second, the selection of the feature [nasal] in the RESONANCE system preselects the CLOSURE feature [stop] if the ALIGNMENT feature [dorsal] is co-selected. This prevents

[1] Or *SONANCE*.

the unwarranted generation of a consonant with the features [dorsal, nasal, continuant].

The vocalic potential of Irish is usually[1] analysed as:

(1) five short vowels: {/i/ /e/ /u/ /o/ /a/}, all of which are reduced to /´/ in [weak] syllables,

(2) five long vowels {/i:/ /e:/ /u:/ /o:/ /a:/}, and

(3) four diphthongs {/ay/ /aw/ /i´/ /u´/}.

However, because this phonemic classification considers neither the wider syntagmatic distribution nor the varying functions of vowels, the vocalic systems will be reinterpreted in the discussion of the syllable, below.

This preliminary discussion has described the generalised articulatory potential of Irish without reference to syntagmatic position. In the following sections, it will be shown how these systems vary with syntagmatic position. The structures and systems of syllables with free lexicogrammatical distribution will be discussed here, and those that are restricted in their distribution to specific lexicogrammatical domains — serving a cohesive function — will be discussed in the next chapter.

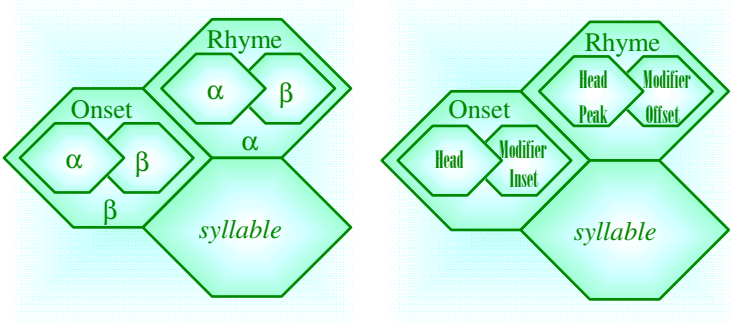
3.2 In The Syllable (Core)

This discussion of Irish syllables with free lexicogrammatical distribution looks firstly at the way such syllables are constrained structurally, and secondly at the systems of paradigmatic states allowable for each structural position. Violations of these conditions indicate that a syllable has restrictive lexicogrammatical distribution and thus a cohesive function.

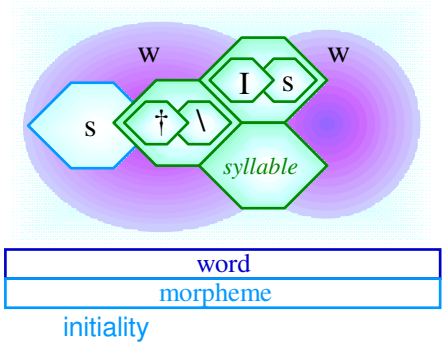
3.2.1 Structural Phases

Irish syllables with free lexicogrammatical distribution comprise a maximum of four phases. More specifically, such syllables consist of two textual phases, an Onset and a Rhyme, each of which is expandable to two interdependent positions: a dominant Head (α) followed by a dependent Modifier (β). A representation of these *core* elements of syllable structure appears below.

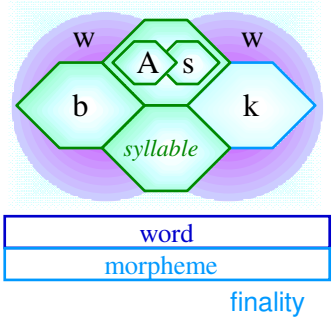
[1] See the aforementioned sources or other references in the bibliography.



Given this structural restriction, two general claims can be made. Firstly, it can be seen that the initial phase of three-consonant Onset is *peripheral* to this structure and, as such, marks a lexicogrammatical boundary: initiality. An instance of this is the initial /s/ of the syllable realising the word strus 'stress', as represented below[1].

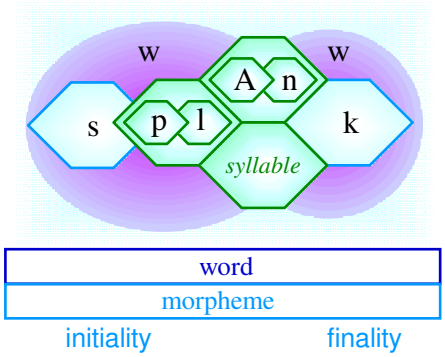


Secondly, in a Rhyme of more than two phases, those beyond the first two are peripheral to this structure and, as such, mark a lexicogrammatical boundary: finality. An instance of this is the final /k/ of the syllable realising the word basc 'bash', as represented below.

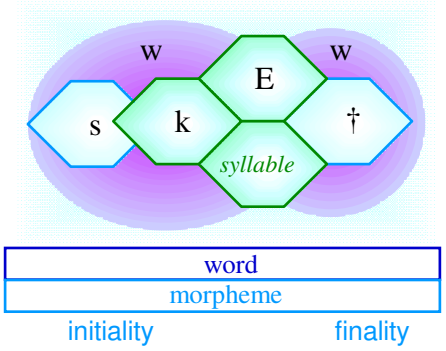


Syllables that include peripheral phases in both the Onset and Rhyme, like the syllable realising the word splanc 'spark', mark both lexicogrammatical initiality and finality. A representation of this appears below.

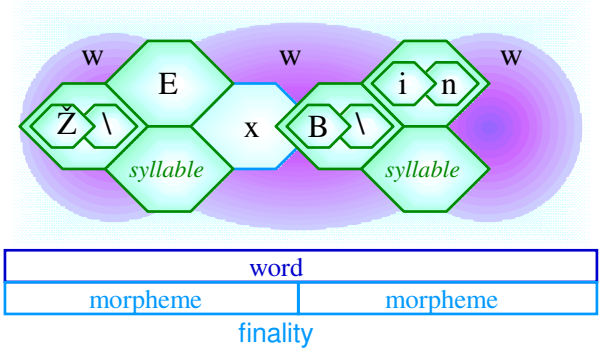
[1] The motivation for, and meaning of, the vowel symbols (and their absence) in the following diagrams will be elucidated in the discussion of the syllable Peak, below.



It is not the case, however, that all syllables with less than three Onset or Rhyme phases have free lexicogrammatical distribution, since there are also restrictions on the paradigmatic states of syllable phases. For example, in the syllable realising the word scot 'scot, reckoning', the initial and final consonants are analysed as peripheral, and thus cohesive, because it is at lexicogrammatical — morpheme or word — boundaries that syllables are opened by /s/ before [stop] Onsets or closed by /†/. This syllable is therefore represented as follows:

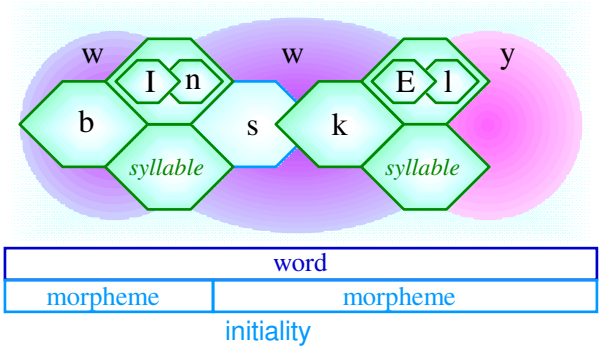


Similarly, in the syllables realising the word drochbhraon 'bad drop', the consonant /x/ is analysed as peripheral, and thus cohesive, marking a lexicogrammatical boundary. This instance is therefore represented as follows:

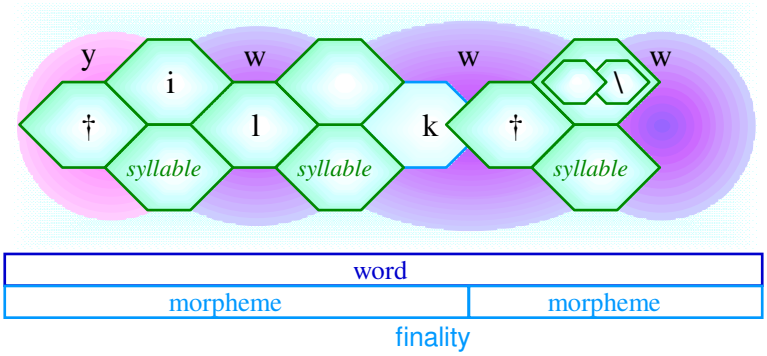


The analysis of such consonants as peripheral is motivated by a consideration of the constraints on the *paradigmatic potential* of each phase in the core syllable structure, and the following discussion will identify these systems of options. Before that, though, it should also be noted that within the lexicogrammatical domain of the word, demarcative consonants can distinguish

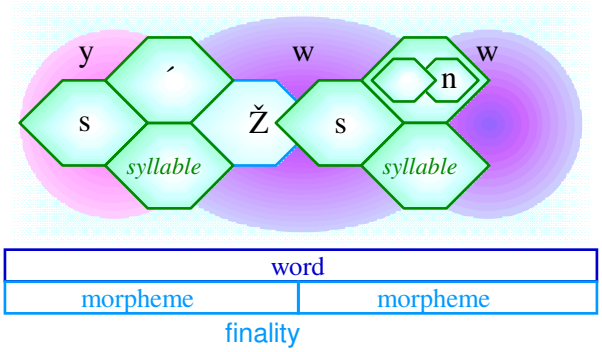
(1) lexical morphemes in a compound word, as for the word[1] bun+scoil 'primary school':



(2) lexical and grammatical items as for the word tíolac+tar 'bestow' + [present, middle[2]]:



and (3) grammatical items as for the word siad+san [3rd person, plural] + [emphatic].



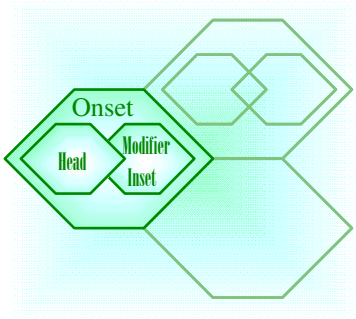
[1] In Irish, the consonant /s/ frequently occurs as a (proclitic) Outset but rarely as a(n enclitic) Coda and so probabilistically marks initiality rather than finality. See Chapter 4.

[2] Irish tense paradigms include forms termed 'autonomous' in grammars which are used in the absence of Agency (Irish has no [passive] VOICE paradigm). These forms can be analysed as expressing [middle] VOICE, on definitions such as that given by Halliday (1994: 169).

3.2.2 Systemic States

In this discussion of the systems of options available to specific phases in syllables with free lexicogrammatical distribution, those of the Onset will be described first, followed by those of the Rhyme.

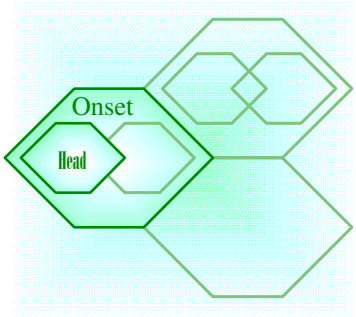
3.2.2.1 Systems At The Onset



The Onset in syllables with free lexicogrammatical distribution can comprise one or two phases. A single phase, or the first of two, constitutes the Head, a second constitutes the dependent Modifier. In complex Onsets, the Head corresponds to a subset of the options available for single phase Onsets — a subset which varies according to which of the Modifier states is selected. This discussion will identify, first, the full set of single phase Onsets, second, the full set of Modifier options, third, the constraints on Head^Modifier concatenation, and fourth, the options that extend for the entire Onset complex.

It should also be noted here that an "empty" Onset — that is: an Onset phase with no specified paradigmatic state — serves a demarcative function in that it signals lexicogrammatical initiality. However, since this function is lost unless such a syllable is preceded by a vowel or follows a pause, it will be examined in the discussion on loss of demarcative function during word morphogenesis, below.

3.2.2.1.1 Systems At The Onset Head



The full set of consonants that can occur as a single Onset in Irish syllables with free lexicogrammatical distribution is presented in the table below classified according to the features already specified above. It differs from the general inventory listed above only in the omission of the [dorsal nasal] consonant /N/[1].

				stop	continuant
labial	voiceless			p {p}Ú{p,}	f/ph {F}Ú{F,}
	voiced	oral		b {b}Ú{b,}	bh {BÚw}Ú{B,}
		nasal		m {m}Ú{m,}	mh {B$Úw$}Ú{B$,}
coronal	voiceless			t {†}Ú{†,}	s {sÚS}
	voiced	oral	median	d {∂}Ú{∂,}	r {\}
			lateral	l {‡}Ú{‡,}	l {l}Ú{l,}
		nasal		n {fl}Ú{fl,}	n {n}Ú{n,}
dorsal	voiceless			c {k}Ú{c}	ch {x}Ú{ç}
	voiced	oral		g {g}Ú{ƒ}	gh/dh {VÚw}Ú{jÚy}
voiceless					h/th/sh {h}

Table 3.3 Irish Onset Heads Categorised By Features

A system network representing the full potential of the Onset Head position, therefore, differs from the network of general consonantal potential only in the omission of the [dorsal nasal] consonant /N/. This constraint can be incorporated into a system network by changing the specification on the selection of the feature [nasal] from the

[1] /N/ *does* occur as an Onset, but only as the mutated (eclipsed) form of the /g/. (This is not to deny that, in some dialects, the transsyllabic sequence /ng/ — orthographic ng — can be instantiated as the Onset {N}). However, it will be argued below that initial consonant mutation has a *cohesive* function, in that it signals that a word is *internal* to a larger lexicogrammatical unit: a group or phrase.

preselection of *[stop] if [dorsal]* to the exclusion condition *unless [dorsal]*, as in the figure below.

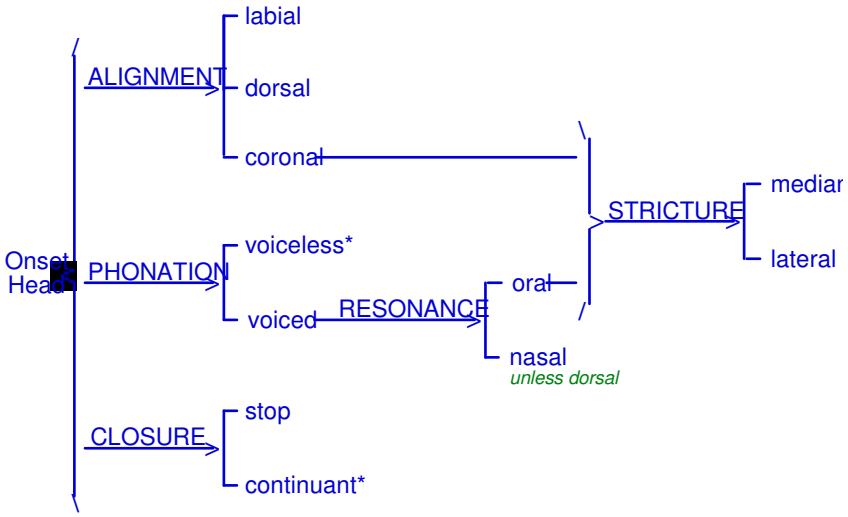


Figure 3.2 Onset Head Potential Of Irish As System Network
(* can be co-selected in the absence of ALIGNMENT features)

Although it is true that these Onset consonants can occur in any lexicogrammatical position, it is not true that all Onset consonants have the same status in the realisation of lexicogrammar. Specifically, the range of consonants that can occur in initial position in lexical words, in the absence of initial consonant mutation, is restricted to those in the following table.

				stop	continuant
labial	voiceless			p {p}Ú{p,}	f {F}Ú{F,}
	voiced	oral		b {b}Ú{b,}	
		nasal		m {m}Ú{m,}	
coronal	voiceless			t {†}Ú{†,}	s {sÚS}
	voiced	oral	median	d {∂}Ú{∂,}	r {\}
			lateral	l {‡}Ú{‡,}	
		nasal		n {fl}Ú{fl,}	
dorsal	voiceless			c {k}Ú{c}	
	voiced	oral		g {g}Ú{ƒ}	

Table 3.4 Irish Onset Heads Occurring Lexical-Initially (In The Absence Of Initial Consonant Mutation)[1]

Conversely, the complementary set of Onset consonants only occur in initial position in lexical words under the influence of initial consonant mutation. These are listed in the following table.

[1] Other consonants, notably /h/, occur in a limited number of borrowed words.

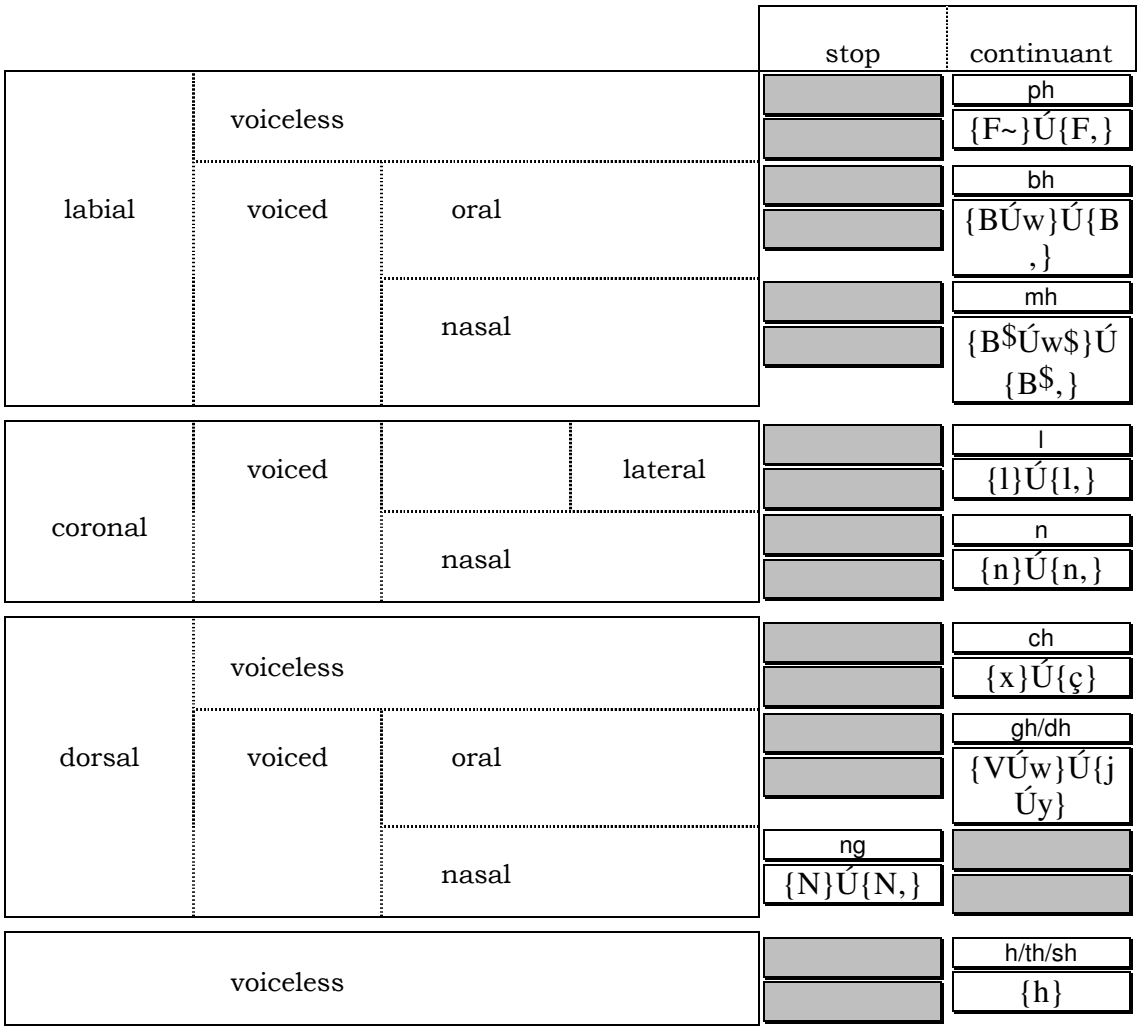
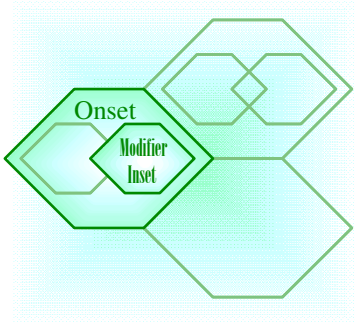


Table 3.5 Irish Onset Heads Signalling Lexicogrammatical Noninitiality[1]

The presence of the lone [stop] Onset {N}Ú{N,} can be explained as follows. All other Onsets in the table arise from lenition, whereas {N}Ú{N,} arises from eclipsis: specifically, the eclipsis of {g}Ú{*f*} (see the discussion of mutation in Chapter 4). All other eclipsis mutations result in Onsets that otherwise occur as unmutated [stop] Onsets: {{b}Ú{b,}, {∂}Ú{∂,}, {g}Ú{*f*}, {m}Ú{m,}, {fl}Ú{fl,}}. It will be argued below, in the discussion of peripheral syllable systems, that the *phonological* function of initial consonant mutation — and, therefore, of this subset of consonants — is to signal lexicogrammatical *noninitiality*.

[1] Note that, for the [voiceless labial continuant] Onset {F~}Ú{F,}, the distinction is maintained orthographically only: f occurs word-initially only in the absence of mutation, ph occurs word-initially only in the presence of mutation.

3.2.2.1.2 Systems At The Onset Modifier (Or Inset)



The full set of options available as Onset modifiers is set out in the table below.

				continuant
coronal	voiced	oral	median	r {\}Ú{\,}
			lateral	l {l}Ú{l,}
		nasal		n {\$}Ú{\$,}

Table 3.6 Irish Onset Modifiers Categorised By Features

A system network representing Onset Modifier potential appears below. The conjunction of the features [coronal], [continuant] and [voiced] is assumed, or *preselected*, as the entry condition for this system.

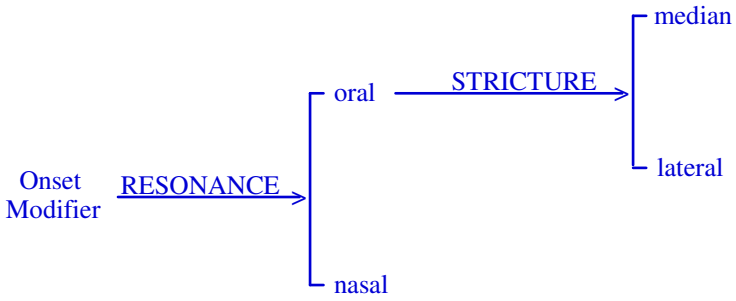


Figure 3.3 Irish Onset Modifier Potential As System Network

This system can be represented in a wider context as a subsystem of the system of general consonantal potential. This is depicted in the following diagram wherein the unavailability of systems and features is signalled by their being *italicised*.

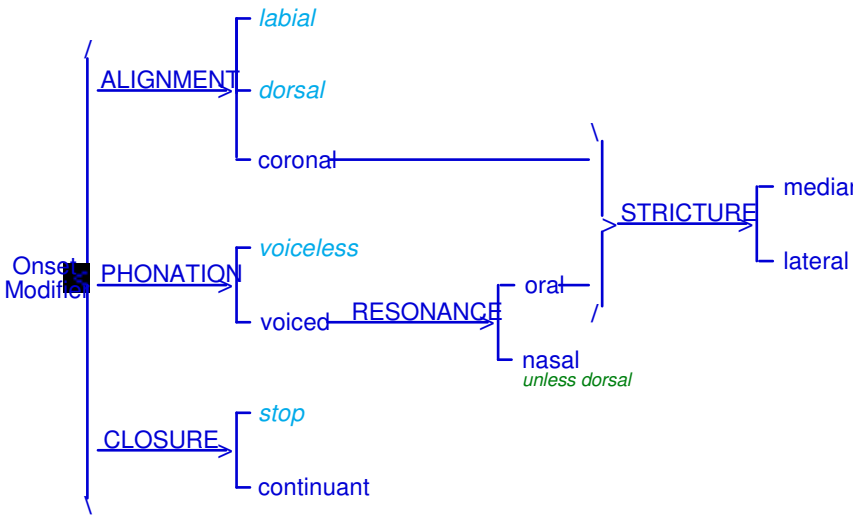
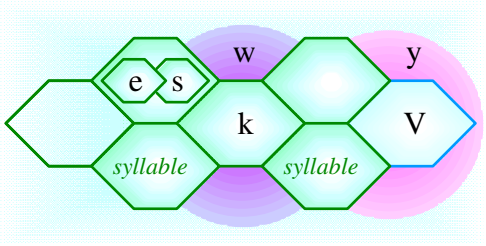


Figure 3.4 Irish Onset Modifier Potential As System Network

3.2.2.1.3 Constraints On Onset Modification

In this analysis, the complex Onsets {/sp/ s†/ /sk/ /sm/} are taken to be demarcative and will be examined in the discussion of peripheral syllable structure, below. This is because these Onsets only occur at lexicogrammatical boundaries. It should be noted that, word-medially, these consonant clusters are analysed here as Offset^Onset (see the discussion of the Offset below) when immediately preceded by a vowel, as depicted in the following representations of the word éascaigh 'make easy'.



Not all Onset Heads are subject to postmodification. Modification is generally not available to [coronal] Heads of the class *sonorant*: that is, nasals, laterals — whether [stop] or [continuant] — and the flap /ɾ/. In the case of the [oral] Modifiers, [median] /ɾ/ and [lateral] /l/, this is the extent of the constraints. The table below lists all the Onset Heads that can be postmodified by /ɾ/ and /l/.[1]

[1] The phonetic laminality of the [lateral] consonants in Onsets represented orthographically as sl (Mhac an Fhailigh 1968/80: 38-43) — as for slán {s‡a:n} 'health' — is allophonic: predictable as conditioned by (laminal) /s/.

		median postmodification		lateral postmodification	
		stop	continuant	stop	continuant
labial	voiceless	pr {p\}Ú{p,\,}	fr/phr {F\}Ú{F,\,}	pl {pl}Ú{p,l,}	fl/phl {Fl}Ú{F,l,}
	voiced	br {b\}Ú{b,\,}	bhr {B\}Ú{B,\,}	bl {bl}Ú{b,l,}	bhl {Bl}Ú{B,l,}
coronal	voiceless	tr {†\}Ú{†,\,}	sr {s\}Ú{S\}	tl {†l}Ú{†,l,}	sl {s‡}Ú{S‡,}
	voiced	dr {∂\}Ú{∂,\,}		dl {∂l}Ú{∂,l,}	
dorsal	voiceless	cr {k\}Ú{c\,}	chr {x\}Ú{ç\,}	cl {kl}Ú{cl,}	chl {xl}Ú{çl,}
	voiced	gr {g\}Ú{ɟ\,}	ghr/dhr {V\}Ú{j\,}	gl {gl}Ú{ɟl,}	ghl/dhl {Vl}Ú{jl,}
	voiceless		thr/shr {h\}		thl/shl {hl}

Table 3.7 Irish Complex Onsets With [oral] Postmodification[1]

There are, however, further constraints on the potential of the [nasal] Modifier. The table below lists all the Onset Heads that can be postmodified by [nasal continuant] /n/.[2]

[1] The orthographic (and historical phonological) Onset dl has become, word-internally, a simple [lateral stop] Onset, as evinced by the word codladh {ko‡´} 'sleep'.

[2] The phonetic laminality of the [nasal] consonants in Onsets represented orthographically as sn (Mhac an Fhailigh 1968/80: 38-43) — as for snasaigh {sflasi:} 'polish' (cf English snazzy 'stylish, well dressed') — is allophonic: predictable as conditioned by (laminal) /s/.

			stop	continuant
coronal	voiceless		tn {†\$}Ú{†,\$,}	sn {sfl}Ú{Sfl,}
dorsal	voiceless		cn {k\$}Ú{c\$,}	chn {x\$}Ú{ç\$,}
	voiced	oral	gn {g\$}Ú{ɟ\$,}	ghn/dhn {V\$}Ú{j\$,}
voiceless				thn/shn {hn}

Table 3.8 Irish Complex Onsets With [nasal] Postmodification[1]

The constraints on Onset modification can be summarised as:

(1) no modification is articulated on [nasal] or [lateral] or [coronal continuant] Heads. This excludes the set {/B$/ /fl/ /n/ /‡/ /l/ /ʌ/}.[2]

(2) [nasal] modification is further constrained by not being articulated on [labial] or [voiced coronal] Heads. This excludes the set {/p/ /F/ /b/ /B/ /∂/}.

A system network representing Onset Modifier potential and incorporating these constraints appears below. Again, the entry condition features for this system, [coronal], [continuant] and [voiced] are preselected.

[1] The Onset /mn/ occurs in mná, the plural of bean 'woman'. The Onset /∂n/ (and /Nn/) occurs as a mutated (eclipsed) form of /†n/ (and /gn/). Trans-syllabic /ngn/ can be realised as {N,\$,}, as in ingne {iN,\$,ë} 'nails, claws, talons'.

[2] The Onset Head mh /B$/ can be postmodified by {/n/ /l/ /ʌ/} word-internally, probabilistically (but not exclusively) at morpheme boundaries.

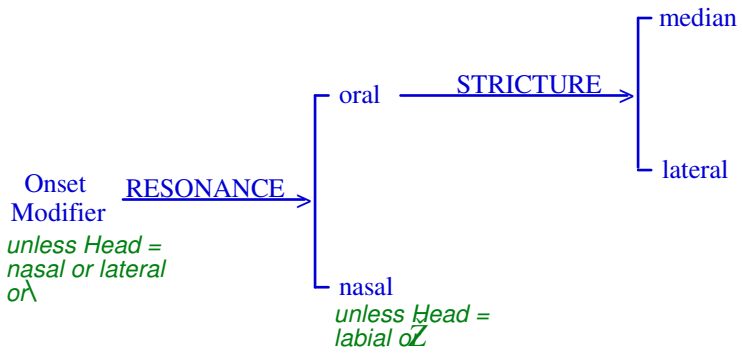


Figure 3.5 Constrained Irish Onset Modifier Potential As System Network

Again, this system can be represented in a wider context as a subsystem of the system of general articulatory potential. This is depicted in the following diagram wherein unavailable systems and features are again *italicised*.

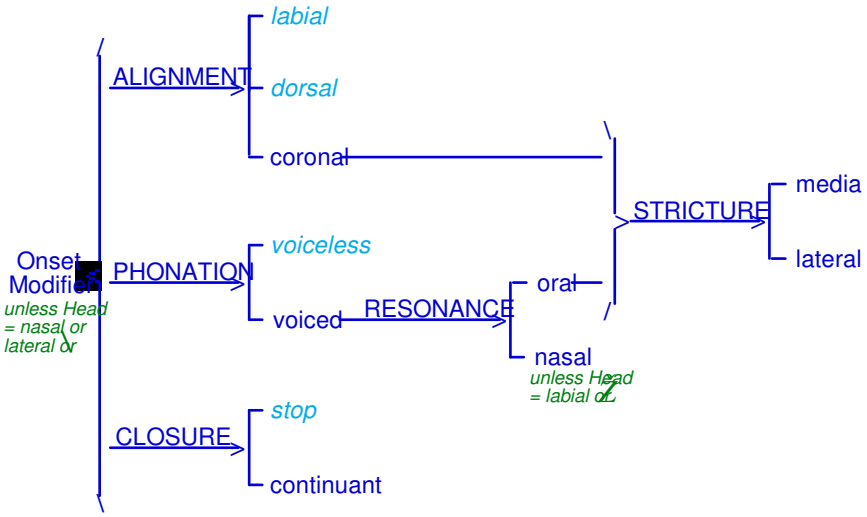
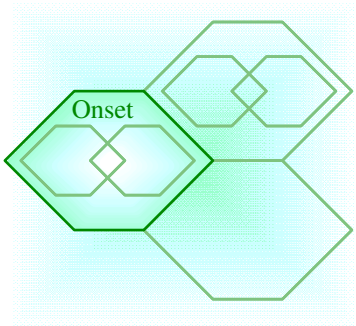
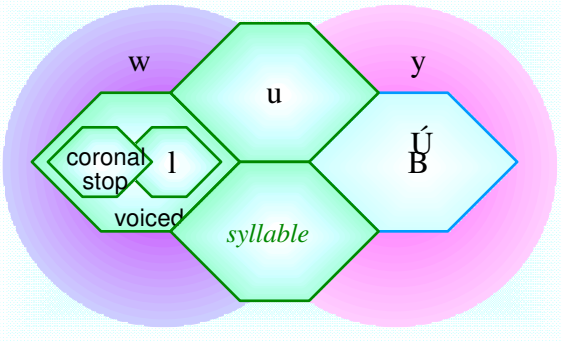


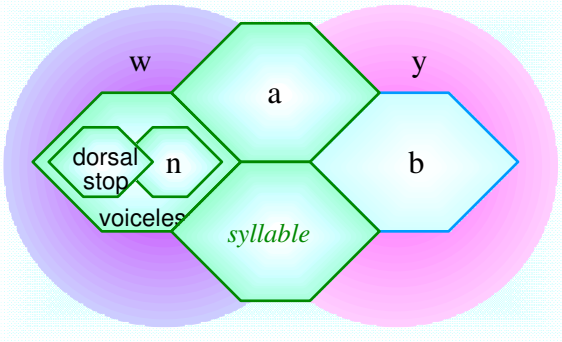
Figure 3.6 Constrained Irish Onset Modifier Potential As System Network

3.2.2.1.4 Systems At The Onset Complex: PHONATION

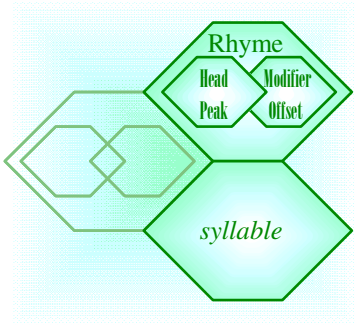


The default PHONATION of the Modifiers and of the next phase of the syllable, the Peak[1] of the Rhyme, is [voiced]. Even though these two default categories predispose the Onset Modifier to be realised as [voiced], the PHONATION feature of the Onset Head tends to hold for the entire Onset phase of the syllable. For example, although the Onset /∂l/, is [voiced], the Onset /kn/ is usually [voiceless] (Mhac an Fhailigh 1968/80: 24-6). This phenomenon can be represented by allocating the features of these system to the Onset phase — rather than either the Head or Modifier — as depicted for the words dlúimh 'dense cloud' and cnáib 'hemp', below.





3.2.2.2 Systems At The Rhyme



The Rhyme in syllables with free lexicogrammatical distribution can comprise one or two phases. A single phase, or the first of two, constitutes the Head, or Peak, a second phase constitutes the dependent Modifier, or Offset.[2] In complex Rhymes, the Peak can vary according to which of the Offset states is selected, and according to whether the syllable is salient or weak. This discussion will identify, first, the full set of options available at the Peak, and second, the full set of Offset options.

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[1] The term *Peak* is being used here to refer to the Head of the Rhyme.

[2] The term *Coda* is being used here to refer to the demarcative phase enclitic to the Rhyme.

3.2.2.2.1 Systems At The Rhyme Head (or Peak)