

CHAPTER 4

Creating Articulatory Texture In Irish: Cohesion

4.0 Introduction

The purpose in this chapter is to complete the Systemic-Functional description of the articulation of Irish, begun in the previous chapter, 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 the previous chapter, the articulatory potential *specific to phonological position, independent of lexicogrammatical position* was described; these are the core structural systems: those *in* the syllable. In this 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.

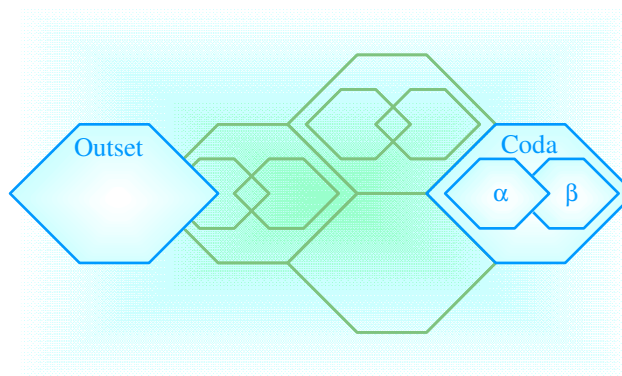
This description of Irish articulatory processes with restricted lexicogrammatical distribution is organised by distinguishing between the correlation of the articulatory field with the morpheme, the word, and the group/phrase. These three general interactions will each be examined in turn.

4.1 Syllable–Morpheme Correlation

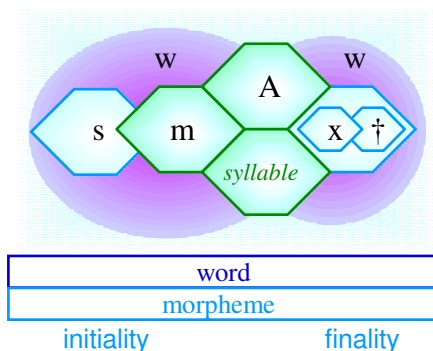
The principal phonological strategy used by Irish to track morphemes is boundary demarcation by particular consonants. This section looks firstly at the way syllables specific to morpheme boundaries are constrained structurally, secondly at the systems of paradigmatic states available for each boundary position, and thirdly at the effect of concatenating syllables on morpheme demarcation.

4.1.1 Syntagmatic Phases

Irish syllables restricted to morpheme boundaries comprise a maximum of three additional phases to those previously described as the syllable core. More specifically, such syllables consist of two peripheral Textual phases, one, the *Outset*, that is proclitic to the Onset and one, the *Coda*, that is enclitic to the Rhyme. The Coda potentially nests two interdependent positions: a dominant Head (α) followed by a dependent Modifier (β). A representation of these *peripheral* elements of syllable structure appears below.



The presence of a peripheral phase indicates that a syllable is situated at a morpheme boundary. The presence of an Outset indicates that a syllable is located morpheme-initially. The presence of a Coda indicates that a syllable is located morpheme-finally. An example of a syllable with all peripheral phases occupied is that realising the monomorphemic word *smacht* ‘control’.¹



It can be seen then that the phonological structure of words like *smachta smachtaí smachtaigh smachtín* and *smachtúil* suggests that they are² not monomorphemic.³ This will be examined in more detail below.

The following discussion identifies the systems of options available at each of these peripheral phases of syllable generation.

4.1.2 Systemic States

In this discussion of the systems of options available to peripheral phases in syllables restricted in lexicogrammatical distribution to morpheme boundaries, those of the

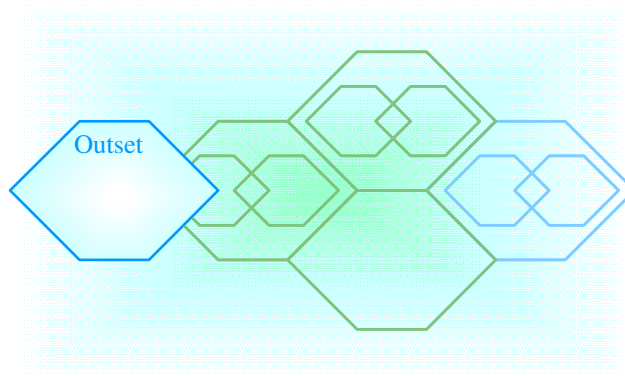
¹ Cf English *smack*, especially in the context of controlling children.

² Or, at least, have not *previously* been, since there are timelags in language evolution such that the morphemic status of a phonological string can be lost before the phonological marker of a morpheme boundary in the phonological string.

³ *smacht+a* ‘rule, control, discipline’ + [nongenitive plural], *smacht+aí* ‘control’ + [agentive] = ‘disciplinarian’, *smacht+aigh* ‘control, discipline, subdue’ + [verbal], *smacht+ín* ‘control’+ [diminutive]! = ‘cudgel’, *smacht+úil* ‘control’+ [adjectival] = ‘controlling, disciplinary, repressive’.

Outset will be described first, followed by those of the Coda. Both accounts also include an examination of the trajectory (co-occurrence) restrictions.

4.1.2.1 Systems At The Outset



The only consonant that can occur as an Outset in syllables restricted to morpheme-initial position is the [voiceless, coronal, continuant] /s/. It has two exponents, being instantiated as {s} before palatalised [labial] and all labiovelarised Onsets, and as {S} elsewhere. The Outset can be represented as a single selection in the system of general consonant potential. This is depicted in the following diagram wherein unavailable systems and features are *italicised*.

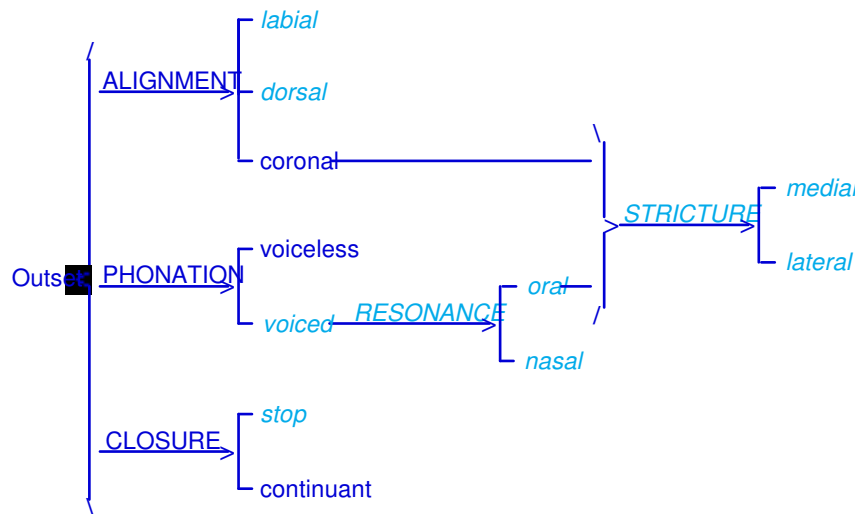


Figure 4.1 Irish Outset Potential As System Network Selection

This system can also be represented as a subsystem of the system of general articulatory potential. This is depicted in the following diagram wherein unavailable systems and features are *italicised*.

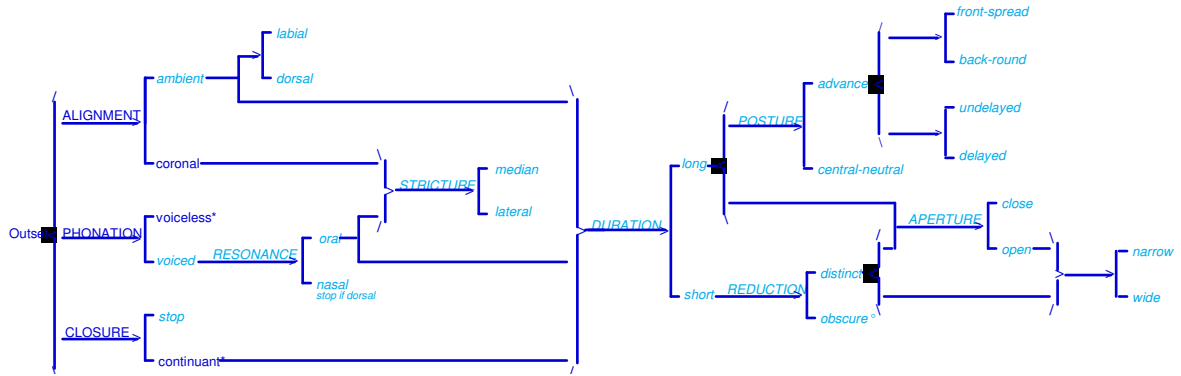
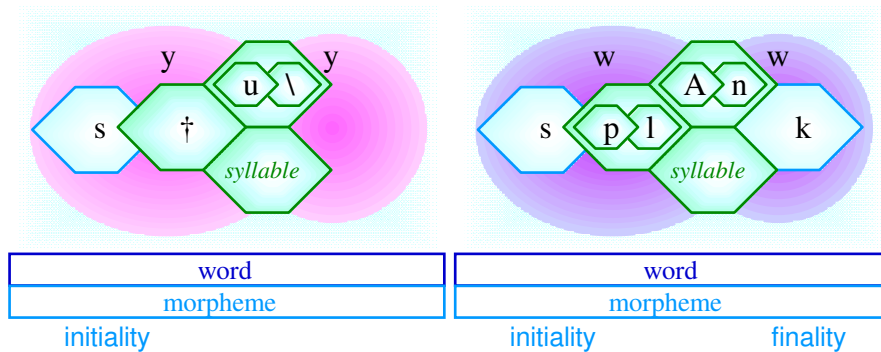
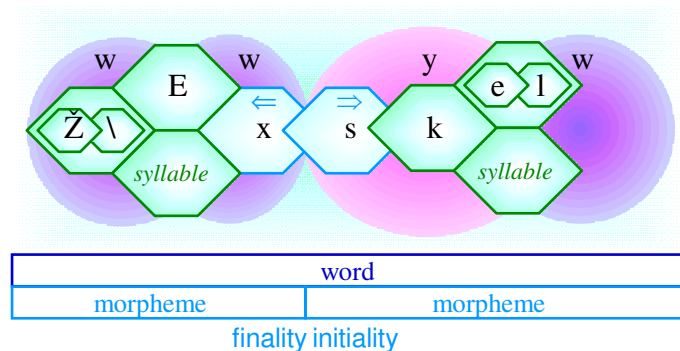


Figure 4.2 Irish Outset Potential As System Network Selection
 (* can be co-selected in the absence of ALIGNMENT features)
 (°preselected by the rhythmic feature [weak])

Outset /s/ is exemplified by the syllables realising the monomorphemic words *stiúir* ‘rudder’ and *spianc* ‘spark’:



and by the syllable realising the second morpheme of the word *drochscéal*¹ ‘piece of bad news (bad+story)’:



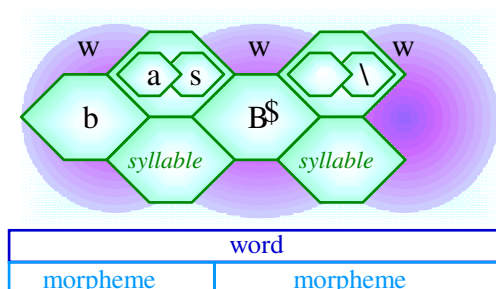
¹ As the representation shows, there is a postural boundary *within* the consonant cluster: /x/ is labiovelarised-neutral, but /s,k/ is palatalised. A posture boundary within a consonant cluster usually marks a word boundary (see the discussion below on syllable-word correlation), and indicates the compound status of this word which is, in turn, contradicted by its carrying tonic accent on the first syllable like simple lexical words.

There are concatenation constraints regarding premodification within the Onset of a syllable marking morpheme-initial position. Specifically,

(1) of the simple Onsets, only $\{/p/ /t/ /k/ /m/\}$ are premodified¹;

(2) of the complex Onsets, only $\{/pV /pl/ /tV /kV /kl/\}$ are premodified.

Violations of these conditions indicate that a lexicogrammatical boundary exists between an /s/ and a following Onset, thereby signalling /s/ belongs to the *preceding* syllable. Therefore, the phonological structure realising, for example, the word *básmhar* ‘mortal’ indicates that it is dimorphemic,² with a lexicogrammatical boundary between the consonants s /s/ and mh /B^{\$}/, and thus, that the /s/ is the Offset to the first syllable, and not the Onset of the second. This is represented below.



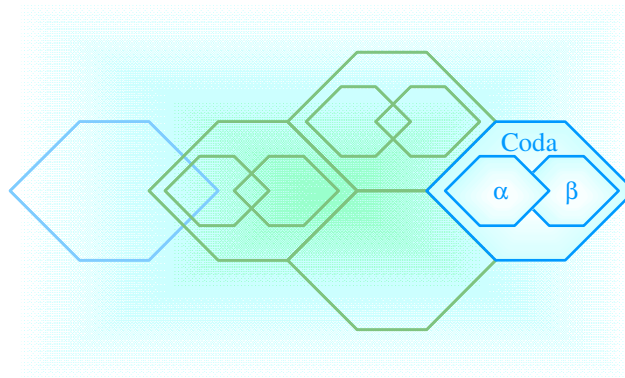
Other circumstances in which violations of concatenation constraints mark morpheme boundaries are outlined below in the discussion on demarcation and word morphogenesis, below.

The PHONATION of premodified Onsets is [voiceless] — including /sm/, which is {smâ} (Mhac an Fhailigh 1968/80: 25-6). This may contribute to the absence of complexes with [nasal] postmodification, given that $\{/s\dot{\uparrow}\$/ /sk\$/\}$ do not occur. The contrast of these complexes with $\{/s\dot{\uparrow}V /skV/\}$ would be largely neutralised, in the same manner as the contrast between $\{/sp/ /s\dot{\uparrow}/ /sk/\}$ and $\{/sb/ /s\partial/ /sg/\}$.

¹ /sF/ occurs in the loanwords *sfagnam* ‘sphagnum’, *sféar(úil)* ‘sphere(ical)’ and *sfioncs* ‘sphinx’.

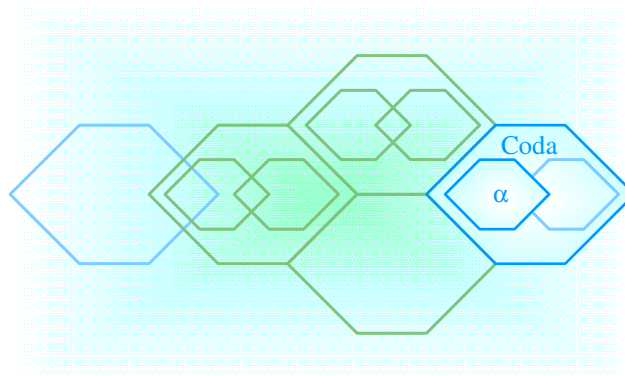
² This appears to be *bás* ‘death’ and *mar* ‘because’.

4.1.2.2 Systems At The Coda



The Coda is restricted to syllables in morpheme-final position and can comprise one or two phases. A single phase, or the first of two, constitutes the Head, a second constitutes the dependent Modifier. This discussion will identify the full set of single phase Codas, the constraints on Rhyme-Coda concatenation, and the Coda Modifier.

4.1.2.2.1 Systems At The Coda Head



The full set of consonants that can occur as a single Coda in Irish syllables in morpheme-final position is presented in the table below classified according to the features already specified above.

			stop	continuant
labial	voiceless	oral	p	f/ph
			{p}Ú{p,}	{F~}Ú{F,}
	voiced	oral	b	bh
			{b}Ú{b,}	{BÚw}Ú{B,}
nasal		m	mh	
		{m}Ú{m,}	{B\$Úw\$}Ú{B\$,}	
coronal	voiceless	oral	t	
			{t}Ú{t,}	
	voiced	median	d	
			{d}Ú{d,}	
		lateral	l	
			{l}Ú{l,}	
nasal		nn		
		{n}Ú{n,}		
dorsal	voiceless	oral	c	ch
			{k}Ú{c}	{x}Ú{ç}
	voiced	oral	g	gh/dh
			{g}Ú{f}	{w}Ú{y}
nasal		ng		
		{N}Ú{N,}		
voiceless				th
voiceless				{h}

Table 4.1 Irish Coda Consonants Categorized By Features

The set comprises all consonants except those identified as Rhyme Offsets: the [coronal, continuant] set {/s/ /N/ /l/ /n/}. A system network generating Irish Codas, therefore, differs from that representing general consonantal potential in disallowing the co-selection of — conjunction of — the ALIGNMENT feature [coronal] and the CLOSURE feature [continuant]. This network appears below.

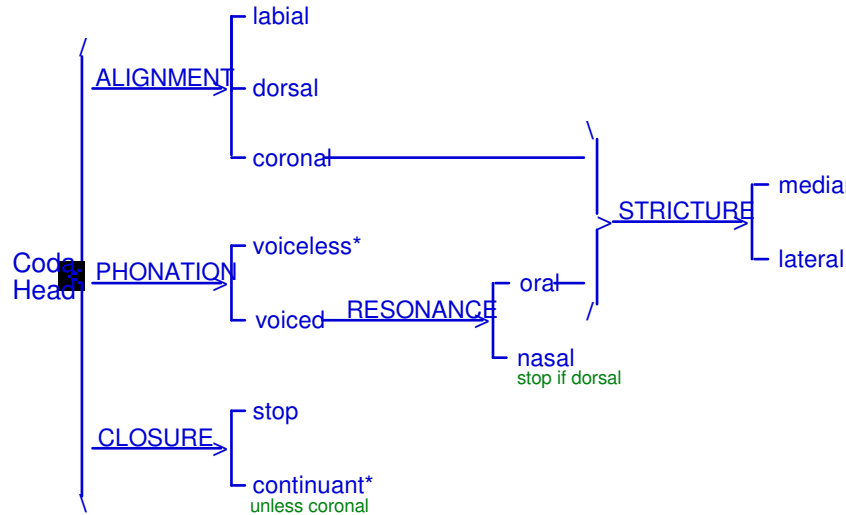


Figure 4.3 Irish Coda Head Potential As System Network
 (* can be co-selected in the absence of ALIGNMENT features)

In the wider context of general articulatory potential, this system can be represented below wherein unavailable systems and features are *italicised*.

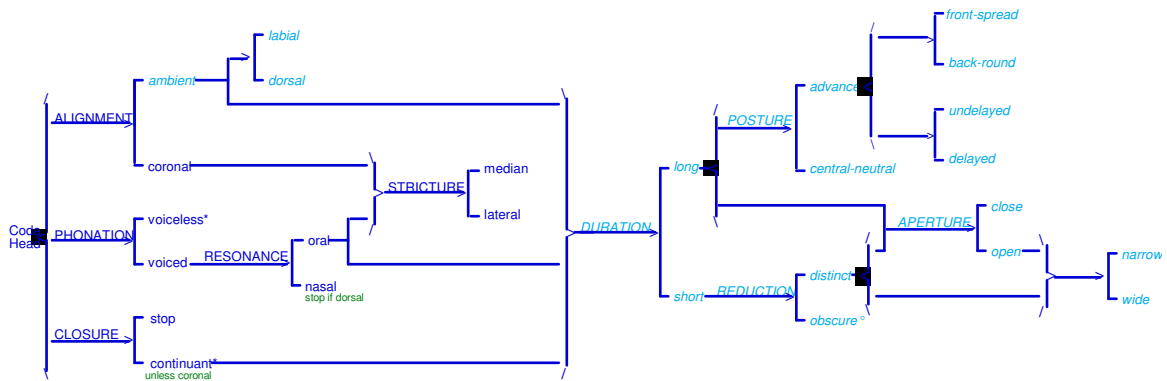
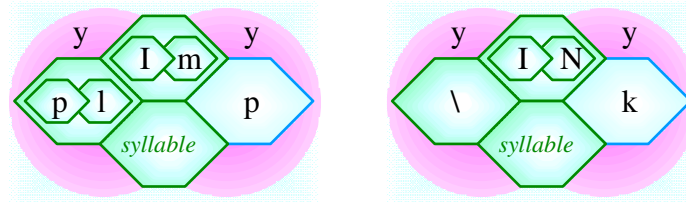


Figure 4.4 Irish Coda Head Potential As System Network
 (* can be co-selected in the absence of ALIGNMENT features)
 (°preselected by the rhythmic feature [weak])

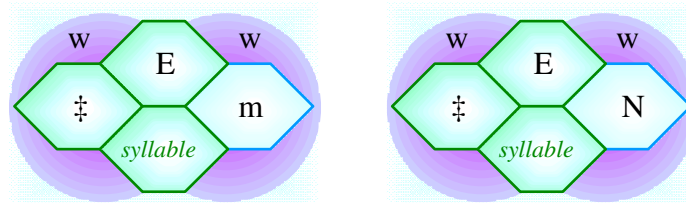
This system of potential is differentially constrained according to the structure and selections of the preceding Rhyme. The full system is available to simple Rhymes, those comprising a vowel only, though concatenations differ in terms of frequency and distribution, and thus probability. Palatalised /x/ is especially rare — or historically

unstable — as a Coda after *any* Rhyme, and an examination of nominal paradigms suggests that it tends become [voiced] with time.¹

There is, however, a point of clarification to be made about the [ambient, nasal, stop] Codas, /m/ and /N/. The [labial] and [dorsal] nasals are [nasal] Offsets — and thus within the Rhyme — when occurring before a homorganic consonant, but are Codas — because they mark morpheme-finality — otherwise. For example, in the words *plimp* ‘crash’ and *rinc* ‘dance’, each nasal is an Offset because the ALIGNMENT of each is predictable from the ALIGNMENT of the following consonant.



However, in the words *lom* ‘strip’ and *long* ‘ship’, the nasals are Codas because the ALIGNMENT of each is not predictable from the ALIGNMENT of a following consonant.



For complex Rhymes, the Coda system is differentially constrained according to the PHONATION of the Offset. The following table lists the options available to Coda Heads enclitic to Rhymes with [voiced] Offsets: {/N /l/ /n/}.

¹ Compare [nom, sg] / [gen, pl]) forms *bád* ‘boat’ and *bacach* ‘beggar’ with [nom, pl] / [gen, sg] forms *báid* and *baigh*.

			stop	continuant	
labial	voiceless		p		
			{p}Ú{p,}		
	voiced	oral		b	bh
				{b}Ú{b,}	{BÚw}Ú{B,}
		nasal		m	
				{m}Ú{m,}	
coronal	voiceless		t		
			{t}Ú{t,}		
	voiced		d		
			{ð}Ú{ð,}		
dorsal	voiceless		c		
			{k}Ú{c}		
	voiced		g		
			{g}Ú{f}		

Table 4.2 Irish Coda Consonants Occurring After [voiced] Offsets {/N /l/ /n/}

This inventory differs from the maximal Coda Head system by the omission of /h/ and all of the [continuant] set except /B/, and of the lingual sonorants {/ʃ/ /f/ /N/}. The following table lists words realised by syllables with the available Coda options.

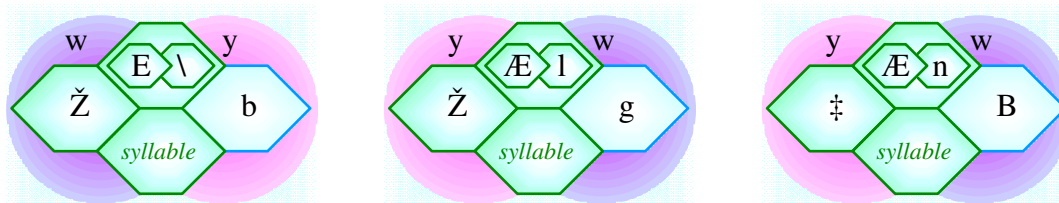
Coda	Offset		
	\	l	n
p	corp ‘body’	siolp ‘suck’	plimp ‘crash’
b	doirb ‘water beetle’	bolb ‘caterpillar’	binb ‘venom’
B	dearbh ‘certain’	dealbh ‘statue’	leanbh ‘child’
m	gorm ‘blue’	colm ‘dove’	ainm ‘name’
†	ceart ‘right’	ceilt ‘concealment’	ceant ‘auction’
ð	ceird ‘trade’	gild ‘guild’	
n TM	cearn ‘corner’		
k	dearc ‘look’	pulc ‘stuff’	rinc ‘dance’
g	dearg ‘red’	dealg ‘thorn’	

Table 4.3 Codas Enclitic To Rhymes With [voiced] Offsets

The Offset^Coda sequence /fl/ is exceptional, occurring only in a handful of words, such as *cairn* ‘cairn’ and *dorn* ‘fist’. The Offset^Coda sequence /l̪/ is exceptional, occurring — perhaps only — in the loanword *gild* ‘guild’.¹ The Offset^Coda sequence /nb/ is also *exceptional*, occurring — perhaps *only* — in the word *binb* {b,in,̊b,} which is not only glossed as ‘venom’ but is clearly cognate² with it.

A more probable evolutionary pathway of the sequence /nb/ is toward /m/, just as /ng/ tends to move toward /N/, and /n̪/ toward /fl/ or /n/; hence the absence of /ng/ and /n̪/ from the inventory. In these clusters, the feature [nasal] has shifted from the Offset to the Coda, and therefore in function from mere syllable closure to explicit demarcation of morpheme closure. This distinction was illustrated above where, for the words *plimp* and *rinc* the feature [nasal] is an Offset state, but for *lom* and *long*, the feature [nasal] is a Coda state.

Where one of these [voiced, coronal] Offsets is followed by a [voiced, ambient] Coda, a brief {´} is heard between them.³ This corresponds to the phenomenon identified in English by Catford (1985) as an *open transition*. The motivation for distinguishing these open transitions from syllable Peaks is phonological. They differ from syllable Peaks in that the surrounding consonants never differ in terms of POSTURE features. The POSTURE of the second consonant is *predictable* from the POSTURE of the first. This encourages the interpretation of such ensembles as consonant clusters, as depicted below for *doirb* ‘water beetle’, *dealg* ‘thorn’ and *leanbh* ‘child’.



The range of Codas enclitic to the [voiceless] Offset /s/ is further reduced, as demonstrated by the list of available options in the following table.

¹ This gap in the system might be taken as suggestive of the proximity of the phonological categories [lateral] and [median] for voiced coronals in Irish.

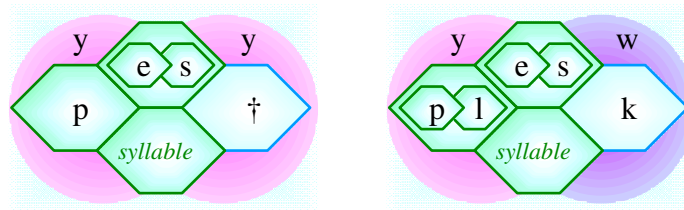
² Historical note: given the eradication of snakes from Ireland by a certain Romanised British Celt in the 5th century AD — presumably with papal approval — the question arises as to whether the word *binb* has been borrowed since or survived from earlier more serpentine days. The degree of sound change suggests the latter, but compare *nibh* {n,iB,}, glossed as ‘poison’ and clearly also cognate with ‘venom’, which has undergone even more sound change (either initial syllable loss and final consonant lenition, or final syllable loss and metathesis).

³ This also occurs between Offsets and Onsets, at least within a word. In this case, the [voiceless, ambient] Onset /x/ is included the list of affected sequences. The word *dorcha* {ˈdO\ˈx´} ‘dark(ness)’ illustrates this.

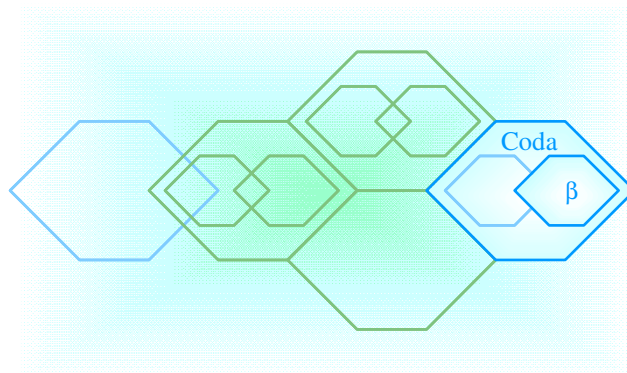
		stop
		$\{ \dagger \} \acute{U} \{ \dagger, \}$
coronal	voiceless	$\{ k \} \acute{U} \{ c \}$
dorsal		

Table 4.4 Irish Coda Consonants Occurring After [voiceless] Offsets

Here, Coda potential is restricted to the lingual¹ consonants that satisfy the conjunction of the features [voiceless] and [stop]. Instances can be found in the words péist² ‘reptile, monster, worm’ and pléasc ‘explosion’, as represented below.



4.1.2.2.2 The Coda Modifier



Unlike English³, the Coda Modifier in Irish is exceptional in that there is only one: the [voiceless, coronal, stop] /†/, and there is only one Coda Head that is modified by it, the [voiceless, dorsal, continuant] /x/. Furthermore, this cluster is always labiovelarised, never palatalised. The Coda Modifier can be represented as a single

¹ The absence of [labial] /p/ can be attributed to its replacement by /k/ in the Goidelic branch of Celtic. The re-emergence /p/ is attributed to historical devoicing of /b/ and the importation of — especially (church) Latin (and Greek) — loanwords (Thurneysen 1980: 126-40, Pedersen 1974: 16-56).

² Cf English pest (< Latin pestis), beast (< Latin bestia).

³ See the Appendix.

selection in the system of general consonant potential. This is depicted in the following diagram wherein unavailable systems and features are *italicised*.

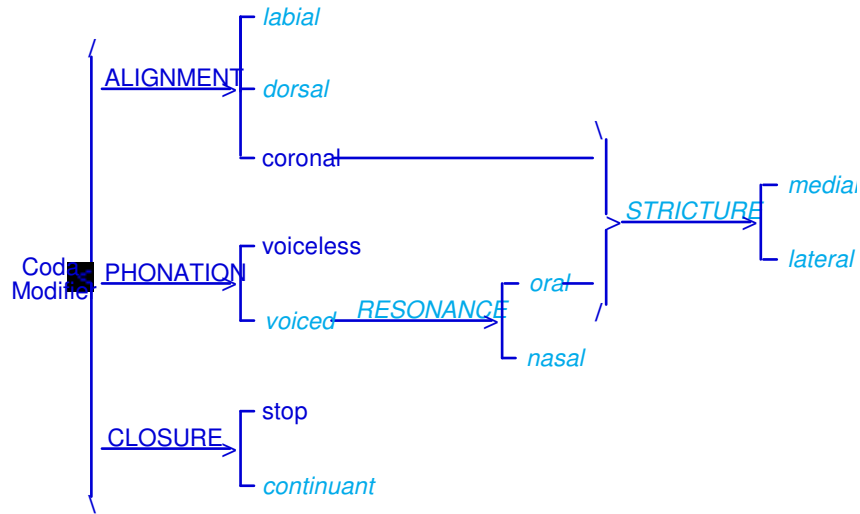


Figure 4.5 Irish Coda Modifier Potential As System Network Selection

This system can also be represented as a subsystem of the system of general articulatory potential. This is depicted in the following diagram wherein unavailable systems and features are *italicised*.

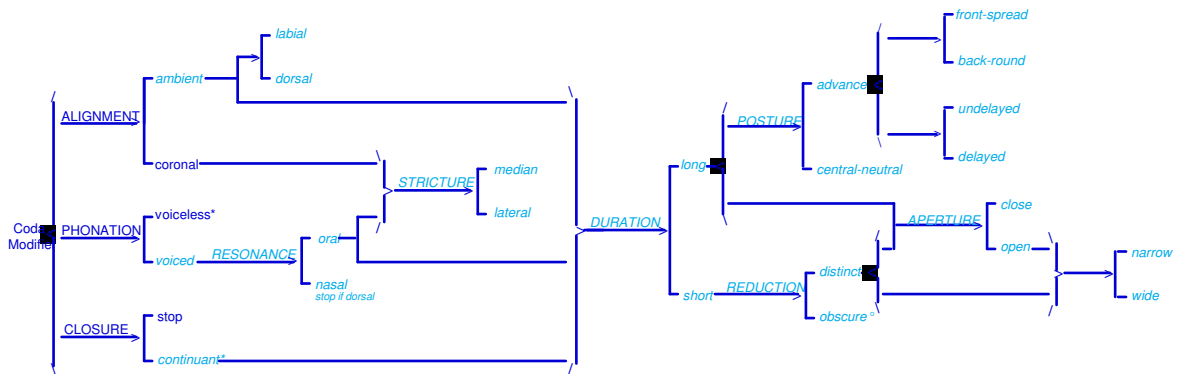


Figure 4.6 Irish Coda Modifier Potential As System Network Selection

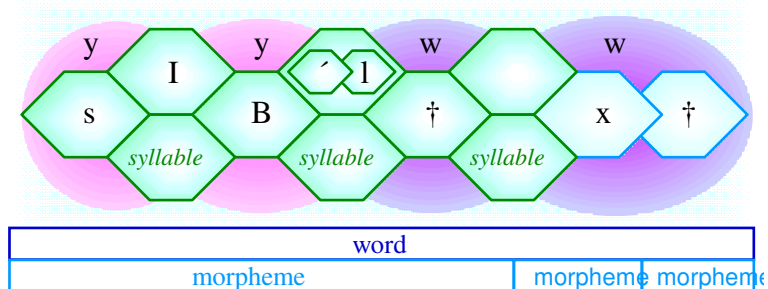
(* can be co-selected in the absence of ALIGNMENT features)

(°preselected by the rhythmic feature [weak])

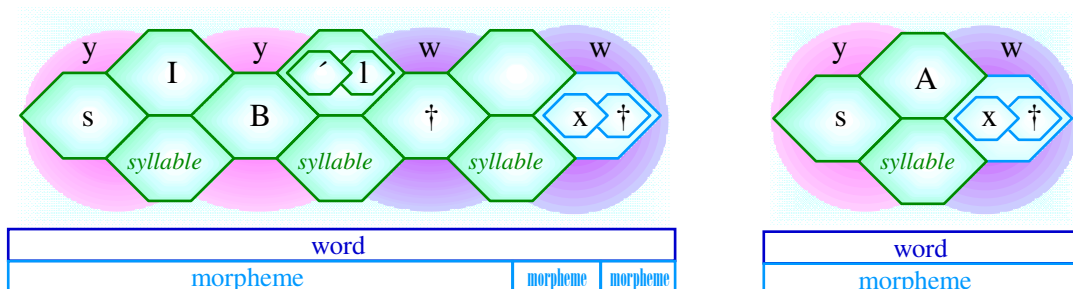
Though exceptional in terms of the syntagmatic strategies of Irish, the sequence /xʈ/ occurs in the realisation of a very productive nominalising morpheme -((e)a)cht, as seen in the word sibhialtacht ‘civilisation, civility’ (compare sibhialta ‘civil, polite’).¹

This suffix can be seen as cognate with English -icity which can be interpreted as a dimorphemic suffix complex consisting of [adjectival-nominal] -ic and [nominal] -ity. The Irish parallel is explicit in lexical items like sibhialta ‘civil, polite’, sibhialtach ‘civilian’ (adjective and noun), sibhialtacht ‘civilisation, civility’ (see below).

One representational strategy might be to allocate separate Coda phases to consonants realising separate morphemes. If this were to be adopted here, the word sibhialtacht ‘civilisation, civility’ would be represented as:

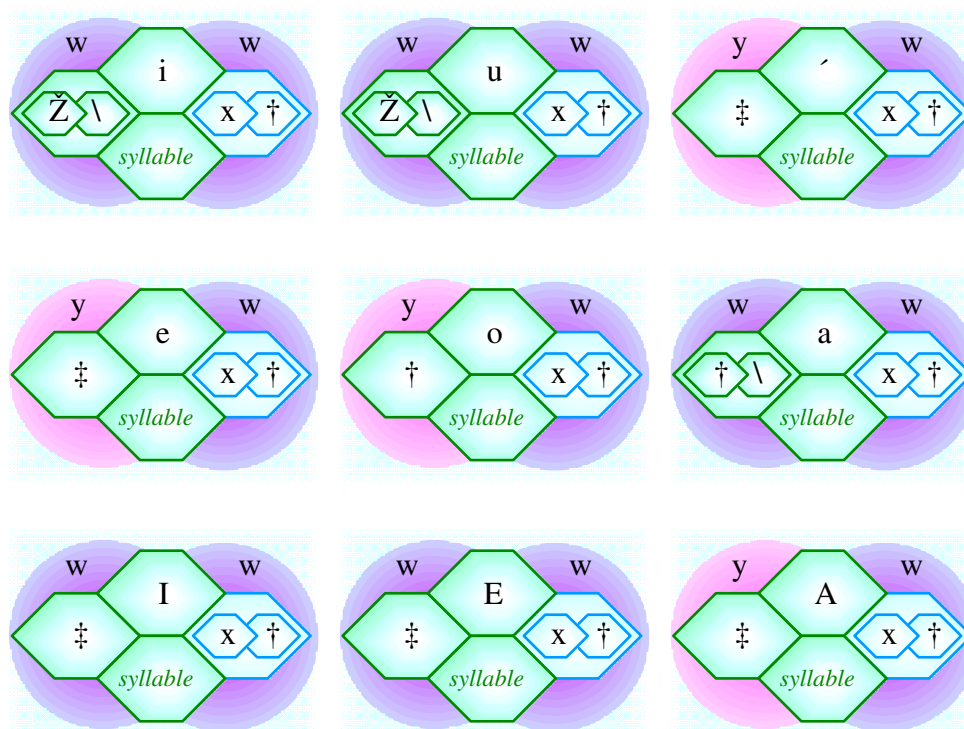


However, because some lexical items, like múinteoireacht ‘teach(er)ing’ (múinteoir ‘teacher’), lack the “t-less” form (*múinteoireach), and because there are monomorphemic words like seacht ‘seven’ with the same structural sequence, the practice here will be to apply Occam’s razor and represent all forms as nested within a single phase, as follows:



There are concatenation constraints on the occurrence of the complex Coda in that it only postmodifies simple Rhymes. Examples include draíocht ‘druidic art, magic, enchantment’, drúcht ‘dewdrop’, liacht ‘medicine’, léacht ‘lecture’, teocht ‘warmth’, trácht ‘instep’, lucht ‘capacity’, locht ‘fault’, and leacht ‘grave-mound’, and these are represented below.

¹ The sequence /xʈ/ also occurs in the realisation of words like seacht ‘seven’ where historical /pʈ/ has become /kʈ/ in the Goidelic branch of Celtic.



This constraint might suggest that the sequence /x†/ would be better interpreted as Offset^Coda. However, because /x/ only closes syllables at lexicogrammatical boundaries, its function is cohesive and the sequence is Coda (Head^Modifier).

4.1.3 Cohesion And Word Morphogenesis

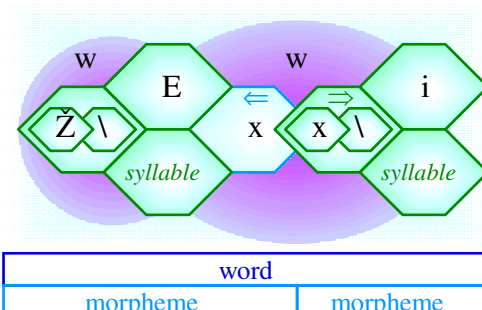
This section examines the maintenance and loss of cohesion that occurs in the process of concatenating syllables in the process of word-building or *morphogenesis*. The first discussion is concerned with constraints on syllable concatenation that hold within morphemes, and how their violation demarcates morpheme boundaries. The second discussion focuses on the *incongruent* instantiation of syllable phases that can cause the loss of morpheme demarcation.

4.1.3.1 Syllable Concatenation Constraints

There are constraints on the concatenation of syllable types within lexicogrammatical domains, and, like all phonological phenomena, these are held to operate on a probabilistic basis. The final paradigmatic state of a syllable constrains choice in the following system, or at least sets up the *expectation* of a specific range of states for the following syllable Onset. A violation of these expectations is suggestive that a morpheme boundary is to be found between the two syllable Peaks and, therefore, that each syllable correlates with a distinct morpheme. This does not mean, of course, that morpheme boundaries are *only* to be found at constraint violations. Furthermore, because language is an evolutionary lineage in which there are timelags

in word evolution — in both phonological erosion and demorphologisation — the morphemes that are demarcated may be ancestral.

Most generally, because there are no morpheme-internal geminate consonants, any geminate sequence guarantees a morpheme boundary between the two consonants. The compound *droch-chroí* ‘weak heart, evil disposition, ill-will’ exemplifies this.¹



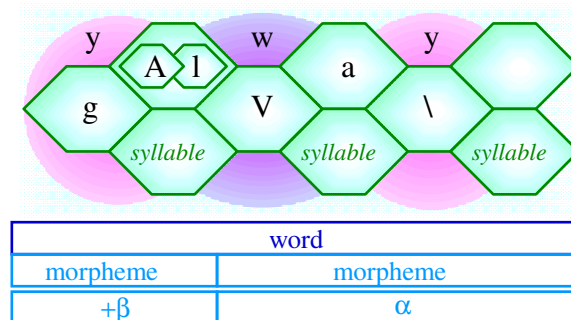
Syllable concatenation constraints within the domain of the morpheme can be examined in more detail by considering the constraints on Rhyme[^]Onset concatenation. This entails detailing constraints that operate according to whether the Rhyme is simple or complex, and if complex, according to the Offset selected. These will be discussed in turn.

Considering first Peak[^]Onset concatenation, after simple Rhymes — those *without* an Offset — the most likely set of Onset states to follow a Peak is either the set of Offsets {/s/ /N/ /l/ /n/} or Coda Heads {/p/ /b/ /F/ /B/ /m/ /B\$/ /ɾ/ /ɔ/ /ɟ/ /fl/ /k/ /g/ /N/ /x/ /V/ /h/}. Since this constitutes the entire consonant inventory, there are no constraints on Onsets after simple Rhymes and no demarcation of morpheme boundaries.

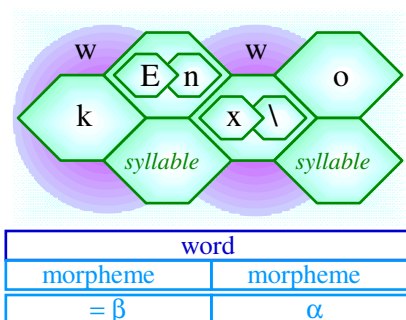
Considering Offset[^]Onset concatenation, syllables with complex Rhymes with a [voiced: oral] Offset {/N/ /l/}, the most likely set of Onset states are the set of possible Coda Heads {/p/ /b/ /B/ /m/ /ɾ/ /ɔ/ /k/ /g/}. Therefore, if the following Onset is from the set {/F/ /B\$/ /ɟ/ /fl/ /s/ /N/ /l/ /n/ /N/ /x/ /V/ /h/}, the probability is high that a morpheme boundary falls between the two Peaks. One such case is the word² *gealgháire* ‘radiant smile, pleasant laugh’ where the morpheme boundary falls between *geal* ‘bright’ and *gháire* (from *gáire*) ‘smile, laugh’.

¹ Geminates in *compounds* are often simplified to a single consonant, thereby prioritising the integrity of the word rather than the morpheme.

² This, like other compounds, is distinguishable from nominal groups through word ordering, since in the latter, the Modifier/Epithet (eg *geal* ‘bright’) follows the Head/Entity (eg *gáire* ‘smile, laugh’).



Considering Offset^Onset concatenation, syllables with complex Rhymes with a [voiced: nasal] Offset {/n/}, the most likely set of Onset states are the set of possible Coda Heads {/p/ /B/ /m/ /ʔ/ /k/}. Therefore, if the following Onset is from the set {/b/ /F/ /B\$/ /ð/ /ʒ/ /fl/ /s/ /N /l/ /n/ /g/ /N/ /x/ /V/ /h/}, the probability is high that a morpheme boundary falls between the two Peaks. The word *conchró* {konx\o:} 'kennel' (from *con* the [genitive] of *cú* 'hound' and *cró* '(small) outhouse') exemplifies this.



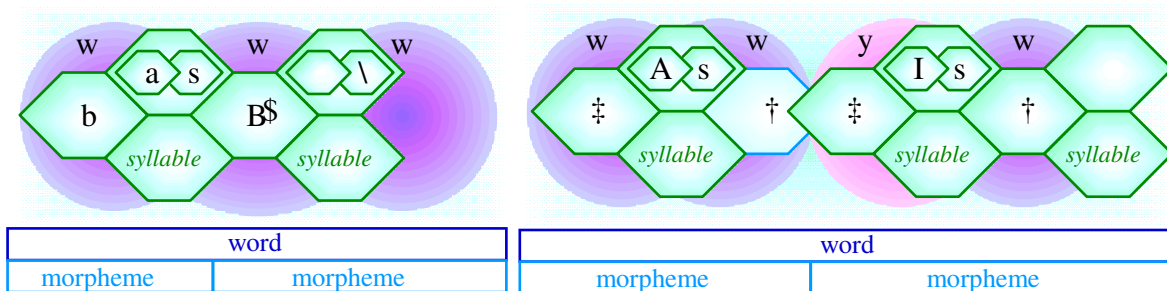
This example also illustrates a further morpheme-internal constraint for [nasal] Offsets, namely that the ALIGNMENT feature of the Offset typically assimilates to that of the following Onset. Because the Offset /n/ is instantiated as [coronal] rather than as the [dorsal] ALIGNMENT of the following /x/, the non-assimilation signals the morpheme boundary between the two consonants.

It is also worth noting that, in these two previous examples, the Onsets following the [voiced] Offsets were from the “lenited” set {/F/ (ph) /B/ /B\$/ /l/ /n/ /x/ /V/ /h/}, which were identified above as signalling lexicogrammatical noninitiality. Therefore, such Offset^Onset configurations express *both* (1) a morpheme boundary between the two syllables and (2) that the two syllables express the same (higher level) lexicogrammatical quantum (word).

After complex Rhymes with the [voiceless] Offset /s/, the most likely Onsets states are the set of possible Coda Heads: the lingual [voiceless, stop] pair {/ʔ/ /k/}, the set of Onset consonants that follow Outset /s/: the simple Onsets {/p/ /ʔ/ /k/ /m/} and complex Onsets {/pV /p/ /ʔV /kV /k/}, and the set of Inset consonants that follow

Onset /s/: the consonant set {/n/ /l/ /N}.¹ Therefore, if the following Onset is from the set {/b/ /F/ /B/ /B\$/ /†l/ /ç/ /s/ /g/ /N/ /x/ /V/ /h/}, the probability is that a morpheme boundary falls between the two Peaks.

This is exemplified by the abovementioned básmhar ‘mortal’ — where the morpheme boundary falls between bás ‘death’ and mhar (from mar) ‘because’ — and the word lastliosta ‘manifest’ where, even without knowing the morphology of the word, it can be said that there is likely to be a morpheme boundary between last and liosta because of the constraint against the sequence /s†‡/ and because of the POSTURE field boundary between /†/ and /‡/ (see the discussion of syllable-word interaction below).²



It seems reasonable to attribute the evolution of these types of constraints to the systems of the vocal tract. This can be explained as follows.

Two syllables that express a single morpheme are always instantiated together. They have a probability of 1 of co-occurring. This means that such sequences will be subject to any pressure exerted by the vocal tract on it *every time* they are instantiated. The “pressure” referred to here is what Ladefoged (1982: 241-2) calls *economy of articulation*. This is the principle whereby easy articulations are preferred to difficult ones on condition that they provide *sufficient perceptual separation* for the intended message to be interpreted relatively unambiguously.³ Homorganic consonant

¹ The explanation of why this should be so relates to the likely origins of consonantal positions other than the Onset Head. All non-Onset Head consonants — the Outset, the Inset, the Offset and the Coda — can be hypothesised as *ultimately* being historical Onsets whose Rhymes have been lost phylogenetically as a result of such processes as stress relocation, as happened in Irish after the Goidelic-Brythonic split (Thurneysen (1980: 55). For example, Offsets and Codas can arise from the loss of an unstressed vowel in the stress pattern strong^weak, so that the syllables {pala} and {paka} become {pal} and {pak}, respectively. Similarly, Insets can arise from the loss of an unstressed vowel in the stress pattern weak^strong, so that the syllables {pala} becomes {pla}. This exemplifies how a process of simplification in one linguistic field, in this case rhythm, can initiate a cascading of increased complexity in another, in this case articulation. This field interaction may relate to the very abstract notion of symmetry. Edelman (1992: 203):

[I]f one considers a field and if one wants to achieve [global] invariance under a change of local symmetry, things must be arranged so that another field will act to compensate exactly for any local changes introduced by the first operation.

² The compound status of the word is indicated by its having two stressed syllables.

³ The vocal tract, like all physical systems, inclines towards the lowest available energy states.

sequences, for example, are generally easier than heterorganic ones because less energy is generally required to articulate them.

If two syllables that express a single morpheme are subject to economy of articulation *every* time they are instantiated, the same is less true of two syllables that express different morphemes. Syllables that express different morphemes have a probability of co-occurrence of less than 1; how much less than 1 depends on language typology.

To explain, in an *isolating* language, where lexical and grammatical items may occur regularly as *free* morphemes, the probability of co-occurrence of syllables realising different morphemes is considerably reduced, especially where variable word-ordering is permitted. However, in an *agglutinating* language, where lexical and grammatical items are more often *bound* morphemes, there is a higher probability of syllables realising different morphemes co-occurring due to there usually being fairly rigid constraints on the sequence of these bound morphemes in the instantiation of words.

This increased probability of co-occurrence, in agglutinating languages, of syllables realising distinct morphemes is reflected in the variability of the phonological forms — allomorphs — realising a given morpheme.¹ The origin of this variability can be attributed to the high frequency with which such consonant sequences are subjected to the physical inertia of the vocal tract.

It is clear that it is the vocal tract, and not some other linguistic system, exerting the pressure for change because the types of changes that *do* occur are natural — in the sense that they phonetically predictable as in the direction of simpler, lower energy articulation.

The phonological function of feature substitutions — such as that entailed in the assimilation of nasals — in agglutinating languages is *cohesive* since it expresses the morphological integrity of the word. In the discussion of initial consonant mutation, it will be argued that the phonological function of the feature substitutions entailed by lenition, eclipsis et cetera is also *cohesive*, but not of morphemes within the word, but of words within the group and phrase.

This section has described the demarcation of morpheme boundaries through the violation of the constraints on syllable concatenation that hold within the domain of the morpheme. The next section will examine how the efficacy of the phonological tracking of morphemes can be varied in the morphogenesis of words.

4.1.3.2 Incongruence: Loss Of Morpheme Demarcation

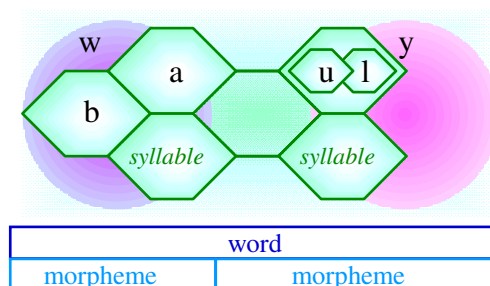
The categorisation of phonological positions has been determined here, as outlined in Chapters 1 and 2, on the basis of a correlation of phonological patterns with

¹ The term *morphophonology* is not used in Systemic-Functional linguistics, because it confuses two levels of analysis, lexicogrammar and phonology, that the theory finds useful to distinguish.

lexicogrammatical ones. Such a correlation permits phonology to be viewed from either perspective: from lexicogrammar or from phonology. It will be seen below that the two perspectives don't always yield the same analysis.

One way to approach this parallax is to look to analogous phenomena on the content plane. Tensions that arise in the lexicogrammatical realisation of discourse-semantic categories can be understood in terms of *metaphor*. For example, at the most simple level, actions can be realised as nouns, and objects can be realised as verbs. Such *metaphorical* realisations are opposed to the more *congruent* realisations of process as verb, and object as noun.¹ In the following discussions, the more general term *incongruence* will be used for the *expression* plane analogue of *content* plane *metaphor*. The point of view will be from the higher stratum, as it is with *metaphor* in Systemic-Functional theory (Halliday 1994: 342). The type of incongruent instantiation discussed below is that where the incongruent instantiation of consonants results in the loss of cohesive function: loss of morpheme demarcation.

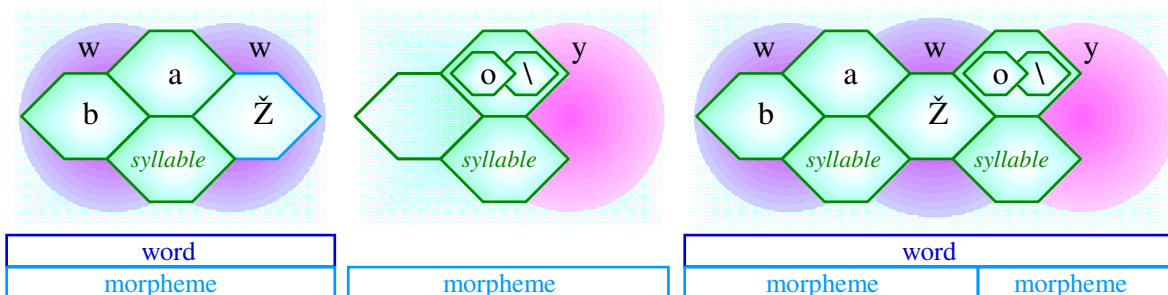
The generalisation can be made that a syllable with an 'empty' Onset position — no selected paradigmatic features — signals lexicogrammatical initiality. However, this function is only explicitly maintained when such a syllable immediately follows an unclosed syllable (or a silence). This can be illustrated by the word báúil 'sympathetic', where a morpheme boundary is signalled between bá 'sympathy' and the grammatical suffix -úil 'like'².



More commonly though, such demarcation will be lost. A common scenario in which phonological demarcation of morphemes is lost, or obscured, within the word is where a morpheme-final Coda is followed by a morpheme-initial vowel. This can be illustrated by the word bádoir 'boatperson', from the lexical morpheme bád 'boat' and the Agentive grammatical suffix -(e)oir.

¹ See, for example, Halliday (1994: Chapter 10), or Martin (1992).

² Probably from the conjunction (a)mhail 'like, as'.



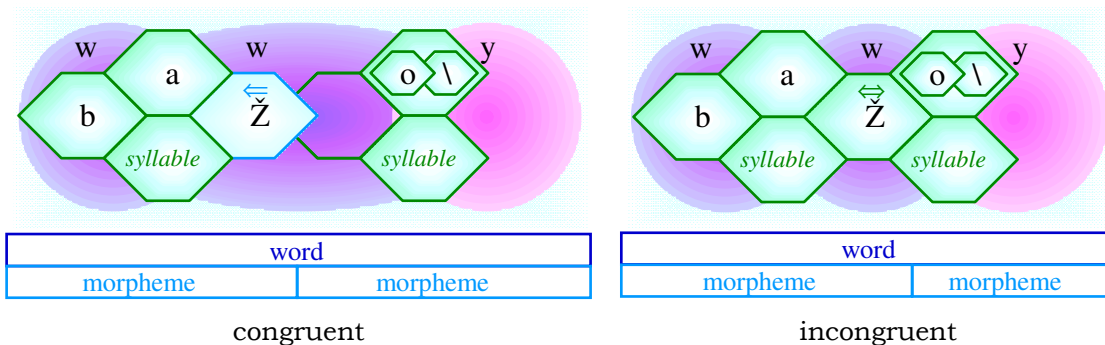
Here the notion of phoricity can be reintroduced. In previous chapters, phonogenetic fields were described as vectorfields in which each point is characterised by a vector quantity that possesses both magnitude and direction. The magnitude of the articulatory field is measured by waves of moraicity; direction¹ was modelled in terms of phoricity, and all boundary positions were said to be potentially phoric, either inclining forward to the next syllabic peak (cataphoric) or backward to the previous syllabic peak (anaphoric), or in both directions (ambiphoric), as in the case of a single intervocalic consonant.

The phoricity of a boundary position correlates with the location of syllable boundaries, since cataphoric states are properties of Onsets — including Insets and Outsets — while anaphoric states are properties of Rhyme boundaries: Offsets and Codas. The marking of a syllable phase as cataphoric indicates that the syllable boundary occurs *before* the first such phase, while the marking of a phase of the syllable as anaphoric indicates that the syllable boundary occurs *after* the last such phase.

In the above instance, the phoricity of the consonant /ð/ varies. For the word *bád* it refers *anaphorically* to the preceding vowel, but for the word *bádoir*, as the sole intervocalic consonant, /ð/ is *ambiphoric*, referring simultaneously to both the preceding and following vowels, even though it correlates with the same morpheme in both instances.

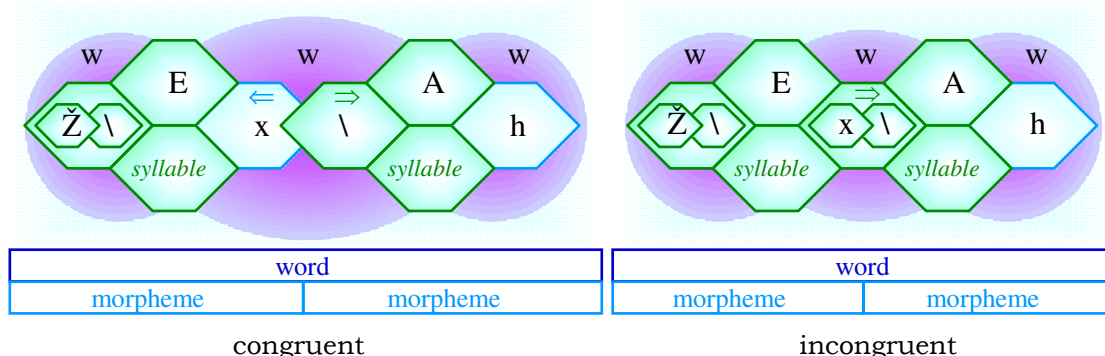
The notion of congruence can be illustrated by representing *both* perspectives — lexicogrammatical and phonological — of the morphogenesis of the word *bádoir*. Here a consonant (/ð/) that is a Coda, from the perspective of lexicogrammar, is incongruently instantiated as an ambiphoric Onset from a phonological perspective. The direction of phoricity is represented by an arrow in the relevant phase.

¹ Again, direction in the articulatory field arises from the fact that the articulatory field is polarised in one direction, along the time axis, and is therefore asymmetric in time. The biological basis of this is that the vocal tract functions asymmetrically in time, because speech is a process that primarily exploits *egressive* airstreams. The consequence of this is that initiating and terminating a syllable are not equal articulatory events.

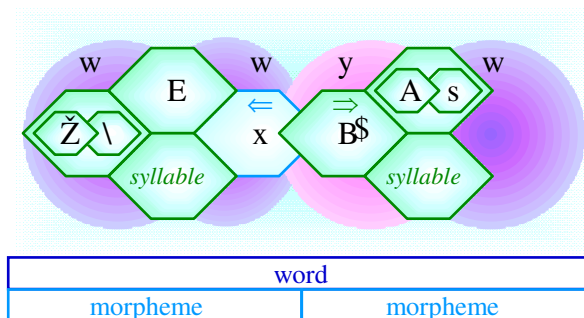


In the incongruent representation, the elimination of the empty Onset phase of the second syllable spins the consonant (/ð/) from the anaphoric orientation of Codas to include the cataphoric orientation of Onsets, and in losing its unambiguous Coda status, the consonant loses also its demarcative function.

A second scenario in which phonological demarcation of morphemes is obscured within the word is where a Coda of a syllable realising one morpheme and an Onset of a syllable realising a following morpheme together form a potential Onset complex. This can be illustrated by the morphogenesis of the word drochrath ‘misfortune’, from droch- ‘bad’ and rath ‘prosperity’, where the phoricity of the Coda /x/ reverses from anaphoric to cataphoric.

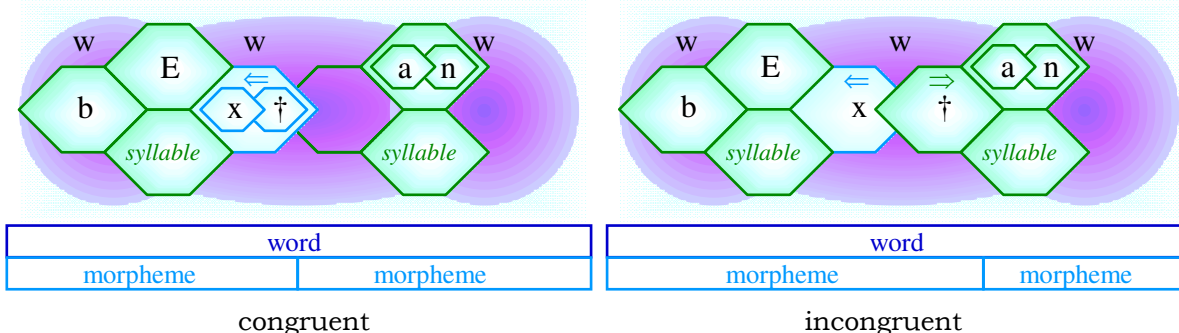


However, if the resulting consonant complex does not conform to an existing Onset complex, demarcation is effected through the *congruent* instantiation Coda as Coda and Onset as Onset. This can be illustrated by the morphogenesis of the word drochmheas ‘contempt’, from droch- ‘bad’ and meas ‘esteem’.



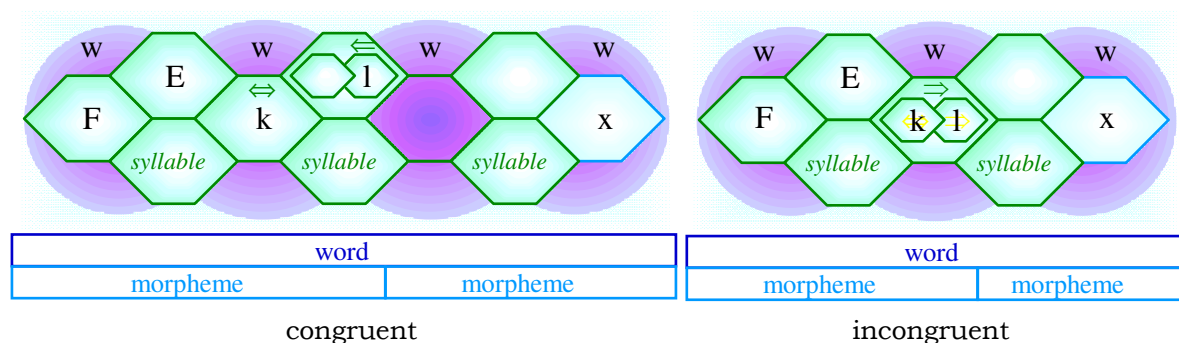
In cases where the (final) syllable realising the first morpheme includes a Coda complex, demarcation is *retained* by the Coda Head. This can be illustrated by the

morphogenesis of the word *bochtán* ‘poor person’ comprising the lexical morpheme *bocht* and the nominalising morpheme *-án*¹.



In this instance, only the Coda Modifier (/†/) spins — from anaphoric to the cataphoric orientation of Onsets — thus losing demarcative function, but the Coda Head (/x/) remains as an indirect indication of a morphological boundary. It is indirect in that it indicates that a morpheme boundary exists between the two syllabic peaks, but it does not indicate the exact position.

A third scenario in which phonological demarcation of morphemes is obscured within the word is where the Offset of a syllable realising one morpheme is instantiated as the Inset of a vowel-initial syllable realising a following morpheme. This can be illustrated by the morphogenesis of the word *foclach* ‘wordy’, comprising the lexical morpheme *focal* ‘word’ and the adjectival suffix *-(e)ach*.

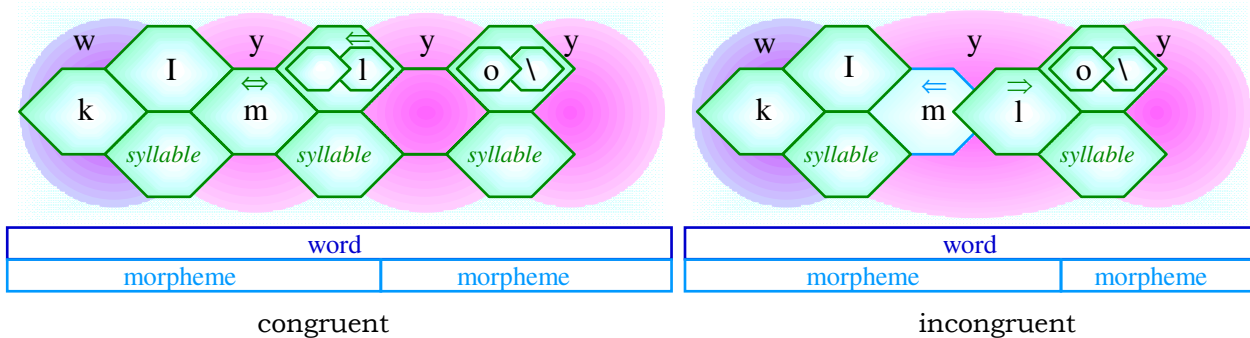


In the incongruent representation, the Peak /Ø/ of the complex Rhyme /Øl/ — unspecified for both APERTURE and POSTURE features — is lost (syncope), and the orientation of the Offset /l/ is reversed from anaphoric to cataphoric so that the Offset becomes an Inset. With the loss of the empty Onset phase, morpheme initiality is no longer signalled.

This last process can, however, also create morpheme demarcation when the consonants conjoined by vowel loss do not conform to an existing Onset complex. This

¹ This suffix, perhaps an allomorph of *aon* ‘one’, is also found in *bogán* ‘soft ground, shell-less egg’ from *bog* ‘soft part etc’. The first gloss suggests the source of the name of the Bogán river (and shire) in New South Wales. The second gloss is transferred in Ireland to refer to a soft, weak person and in Scotland to refer to an effeminate. The word *bogan* had currency in the late 1980s in Australia — aided by a television comedy — as a teenage pejorative similar in meaning to *dweeb*, *dork*, *dag*, *nerd* etc.

can be illustrated by the morphogenesis of the word *cuilleoir* ‘wiper’, comprising the lexical morpheme *cuil* ‘wipe’ and the Agent suffix *-(e)oir*.



Again, the Peak /Ø/ of the complex Rhyme /Øl/ — unspecified for both APERTURE and POSTURE features — is lost. However, in this instance, the orientations of the Onset /m/ and the Offset /l/ are both reversed so that the former is instantiated as a Coda and the latter as an Onset. Demarcation of a morphological boundary is thus indirectly effected through the instantiation of an Onset (/m/) as a Coda. Again, it is indirect in that it indicates that a morpheme boundary exists between the two syllabic peaks, but it does not indicate the exact position.

4.2 Syllable–Word Correlation

The secondary articulation of Irish consonant clusters assists in the tracking of words. This section looks firstly at the syntagmatic extension and the concatenative function of POSTURE fields, secondly at the phonetic effects their paradigmatic states have on both consonants and vowels, and thirdly at the function of POSTURE fields when words abut.

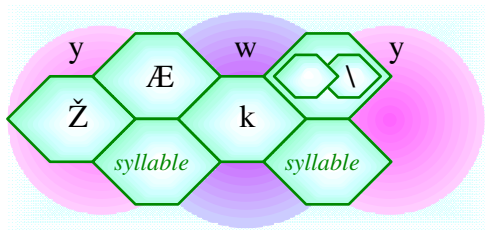
4.2.1 The Concatenative Function Of Posture Fields

All consonants in a consonant cluster within Irish words are either palatalised or labiovelarised.¹ That is, generally, they are produced with the dorsum advanced either toward the palate with lips spread or toward the velum with lips rounded. Consonantal palatalisation and labiovelarisation are interpreted here as the features [front-spread] (y) and [back-round] (w), respectively, which together constitute two options of the consonant POSTURE system.

Consonant POSTURE affects entire consonant clusters, and as such, extends across syllable boundaries. This is recalled by the word *deacair* {*∂*,akʌ,Ú∂,okʌ,}² ‘hard(ship), difficult(y)’, represented below.

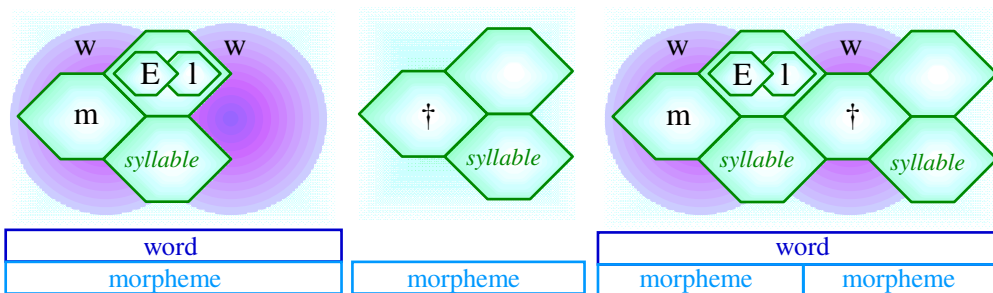
¹ With the potential exception of compound nouns, as already suggested. See further in the text.

² Mhac an Fhailigh (1968/80: 137).

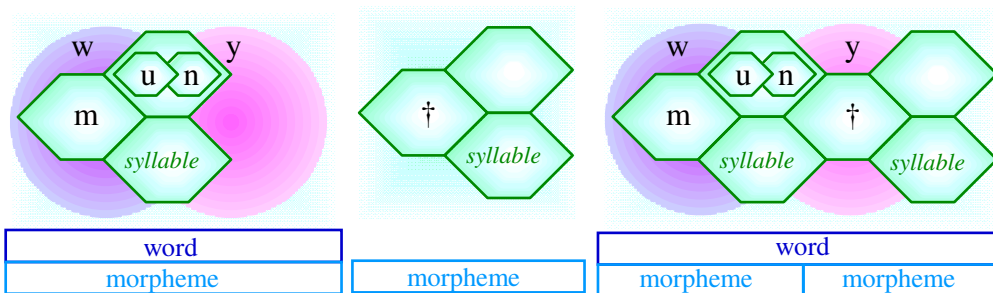


A POSTURE field acts as a bond between adjacent syllables, and it does this within the *lexicogrammatical* domain of the word. Consonant POSTURE therefore has an *concatenative* cohesive function since it contributes to the unity of a lexicogrammatical domain by indicating that syllables bound by a POSTURE field correlate with the same word.¹

In polymorphemic words, consonant POSTURE couples together morphemes within that domain just as mortar binds bricks together in a wall. This is demonstrated, below, by the dimorphemic word *molta* {mol†'} 'praised, recommended, proposed', which consists of the verb root *mol* 'praise, recommend, propose' and the adjectival suffix *ta-te*.



In the above example, the [back-round] state of the final POSTURE field of the syllable realising the verb root *mol* extends into the syllable realising the suffix *ta-te*, so that it is instantiated as {†'}.² The representation suggests that the suffix does not correlate with any POSTURE field when decontextualised, and this can be demonstrated by the word *múinte* 'taught, polite'.

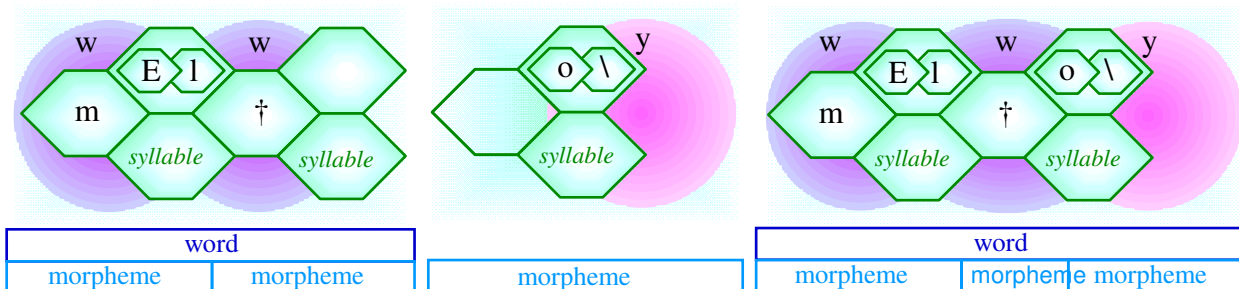


¹ But see below.

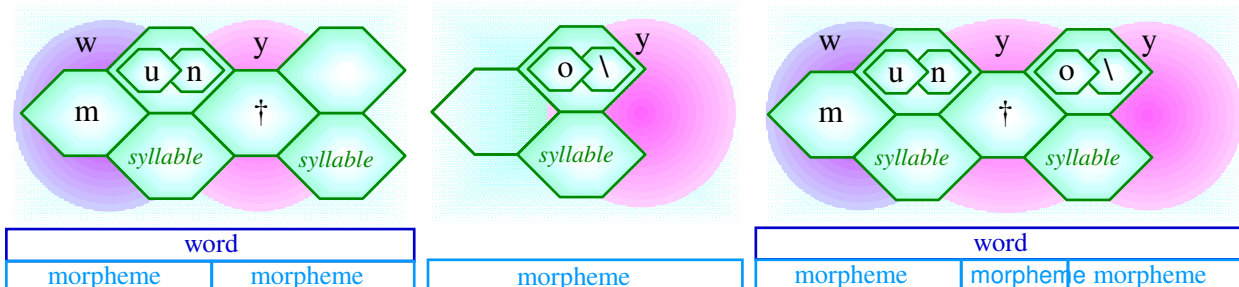
² The effects of consonant POSTURE on the phonetic instantiation of consonants and vowels will be outlined below.

In this example, the [front-spread] state of the final POSTURE field of the syllable realising the verb root *múin* ‘teach’ extends into the syllable realising the adjectival suffix *ta~te*, so that it is instantiated as {†TM,ë}.

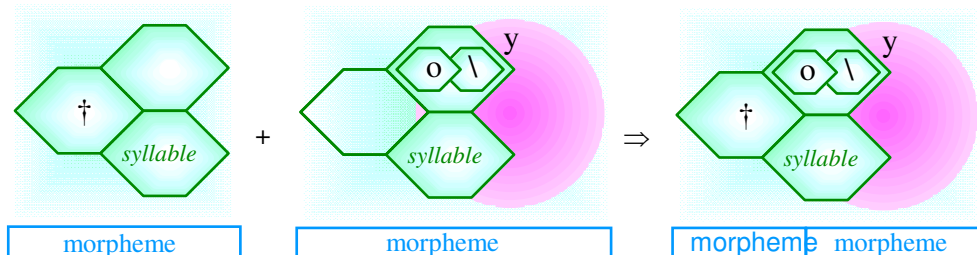
The same phenomenon can be seen in trimorphic *moltóir* {mol†o:\,} ‘proposer, nominator, adjudicator, umpire’, consisting of the verb root *mol*, the adjectival suffix *ta~te* and the Agentive suffix (e)oir.



In this example, the [back-round] state of the final POSTURE field of the syllable realising the verb root *mol* extends into the syllable realising the suffixes *ta~te* and (e)oir, so that it is instantiated, in narrow transcription, as {†o:\,}. This can be compared to trimorphic *múinteoir* {mu:n,†,o:\,} ‘teacher’ where the [front-spread] state of the final POSTURE field of the syllable realising the verb root *múin* extends into the syllable realising the suffixes *ta~te* and (e)oir, so that it is instantiated, in narrow transcription, as {†,eo:\,}.



These final two examples also demonstrate how, during morphogenesis, empty unspecified phases in the syllable of one morpheme take on the states of corresponding phases in a syllable expressing a second morpheme. Where two syllables are complementary — as in the case of the Adjectival and Agentive suffixes, *ta~te* and (e)oir, respectively — fusion occurs, as the following representation illustrates.



4.2.2 The Phonetic Exponence Of POSTURE Field States

The paradigmatic state of a POSTURE field, [front-spread] or [back-round], is principally expressed by its phonetic effects on the articulation of consonants, but it also affects the articulation of vowels and the transitions between consonants and vowels. These effects will be examined in turn.

The effects the features [front-spread] and [back-round] on consonantal articulation are summarised in the following table (adapted from Mhac an Fhailigh 1968/80: 24-47).

		front-spread	back-round
ambient	labial [p/b/m/F/B/B\$]	exolabial (spread)	endolabial (round)
	dorsal [k/g/N/x/V]	palatal (front)	velar (back)
coronal	stop [t/θ/ʃ/fl]	alveopalatal	dental
	voiceless [s]	palato-alveolar	alveolar
	continuant t	voiced [V/n]	alveolar

Table 4.5 Interaction Of Consonant ALIGNMENT¹ And POSTURE

The table shows that, for [ambient] consonants, the effects of POSTURE are congruous and transparent: [labial] consonants are exolabial (spread) in a [front-spread] field, and endolabial (round) in a [back-round] field; while [dorsal] consonants are palatal (front) in a [front-spread] field, and velar (back) in a [back-round] field.

For [coronal] consonants, however, the effects of POSTURE on consonantal articulation vary according to CLOSURE and, if [continuant], according to PHONATION. For the [stop] consonants, where occlusion is effected by the bulk of the lamina (tongue blade), articulation is alveopalatal in a [front-spread] field, and dental in a [back-round] field. For the [voiceless, continuant] consonant, where occlusion is also effected by the bulk of the lamina, articulation is palato-alveolar in a [front-spread] field, and alveolar in a [back-round] field. This suggests that, in the case of consonants articulated by the bulk of the lamina, [back-round] simply means *not* [front-spread], since they are neither [round] nor [back], and are actually articulated more forward in the oral cavity than consonants in [front-spread] fields.

¹ This description presumes the following organisation of passive articulator categories:

dental alveolar postalveolar palato-alveolar alveopalatal palatal velar.

For the [voiced, continuant] consonants, on the other hand, where occlusion is effected only by the apex, articulation is alveolar in a [front-spread] field, and postalveolar in a [back-round] field. Here the POSTURE opposition is congruous inasmuch as the [front-spread] variant is articulated more forward in the oral cavity than the [back-round] variant.

The effects of cohesive POSTURE fields on vocalic articulation varies according to DURATION — since only [long] Peaks are specified for POSTURE features — and, if [short], according to REDUCTION. The variation of [long] Peaks is summarised in the following table (adapted from Mhac an Fhailigh 1968/80: 8-23, 45-7).

		POSTURAL ENVIRONMENT				
		y>y	y>w	w>y	w>w	
close	front-spread	í	íó	uí/oí/aí/aoí	uíó/aíó/ao	
		{i:}	{i:´}	{øÈ:}	{øÈ:´}	
	back-round	iúi	iú	úi	ú	
		{Èu9:È}	{Èu9:}	{u9:È}	{u:}	
	central-neutral	iai	ia	uai	ua	
		{ië}	{i´}	{uë}	{u´}	
open	front-spread	undelaye d	éi	éa	aei	ae
			{e:}	{e:´}	{øe2:}	{øe2:´}
		delayed	eidhi	eighea	oigh/aigh	adha
			{â9i}	{â9È´}	{â2i}	{â2È´}
	back-round	undelaye d	eoi	eo	ói	ó
			{eo9:È}	{eo9:}	{o:È}	{o:}
		delayed	eabhai	eabha	abhai/obhai	ogha/abha
			{â9øÈ}	{â9ø}	{â2øÈ}	{â2ø}
	central-neutral	eái	eá	ái	á	
		{ea:È}	{ea:}	{A:È}	{A:}	

Table 4.6 Irish Vowels Occurring As [long] Peaks¹

The table shows how the vowels of [long] Peaks, and the transitions to and from them, vary according to surrounding POSTURE states. Transitional glides can arise between [back-round] consonants and [front-spread] vowels, and between [front-spread] consonants and [back-round] or [central-neutral] vowels.

¹ Cf Tables 3.9 and 3.10.

Between a [front-spread] consonant and a [back-round] or [central-neutral] Peak, a (close) glide of the quality of {È} intrudes before a [close, back-round] Peak, and an (open) glide of the quality of {e} intrudes before an [open, undelayed] Peak.

Between a [back-round] or [central-neutral] Peak and a [front-spread] consonant, a (close) glide of the quality of {È} intrudes, except in the case of the [close, central-neutral] Peak.

Between a [back-round] consonant and a [front-spread] Peak, the table shows that a (close) glide of the quality of {ø} intrudes, except in the case of the [open, delayed] Peak. However, its realisation is more finely determined by preceding consonant ALIGNMENT, as summarised in the table below, (adapted from Mhac an Fhailigh 1968/80: 8-23, 45-7).

			stop	continuant		
labial	voiceless			p	f/ph	
				{p ^ø }	{F ^ø }	
	voiced	oral			b	bh
					{b ^ø }	{B ^ø }
		nasal			m	mh
					{m ^ø }	{B\$ ^ø }
coronal	voiceless			t		
				{t ^ˈ }		
	voiced	oral	median	d		
				{d ^ˈ }		
		lateral			l/l	
					{l ^ˈ }	
		nasal			n/nn	
					{fl ^ˈ }	
dorsal	voiceless			c	ch	
				{k ^P }	{x ^P }	
	voiced	oral			g	gh/dh
					{g ^P }	{V ^P }
		nasal			ng	
					{N ^P }	

Table 4.7 Interaction Of Consonant ALIGNMENT And [back-round] POSTURE

After [labial] consonants, the offglide {ø} is closer than half-close, rounded, and forward of fully back, which reflects the fact that, for [labial] ALIGNMENT, [back-round] is instantiated through *lip-rounding*.

After [dorsal] consonants, the glide {P} is forward of fully back, about half-close, with very slight lip-rounding, before a [close] Peak, or slightly more open before an [open] Peak. This reflects the fact that, for [dorsal] ALIGNMENT, [back-round] is instantiated through *raising of the dorsum*.

After [coronal, stop] consonants, the glide {'} is central, ranging from more open than half-close to half-open, with neutral lip position. This reflects the fact that these consonants are articulated by the bulk of the lamina for which the instantiation of [back-round] involves neither lip-rounding nor dorsum raising.

Finally, as also shown in the table above, between a [front-spread] Peak and a [back-round] consonant, a glide of the quality of {'} intrudes.

To illustrate how the phonetic exponents of [long] Peaks vary under the influence of cohesive POSTURE fields, first consider a map of the oral space in which vowels are articulated, such as that modelled in the figure below.

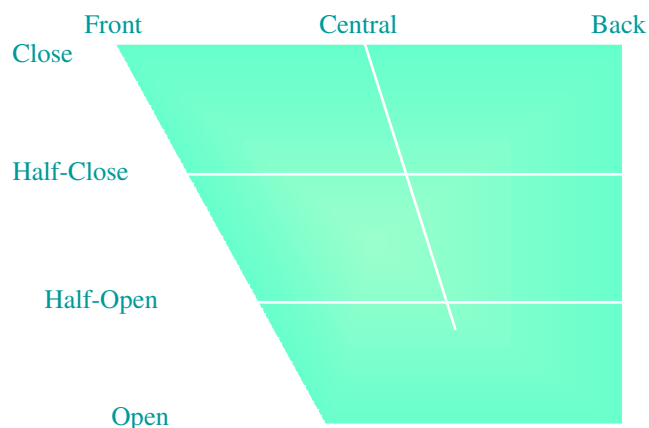


Figure 4.7 The Vowelscape

One way to model this vowelscape is as two POSTURE triangles, one for each APERTURE category, as in the following diagram.

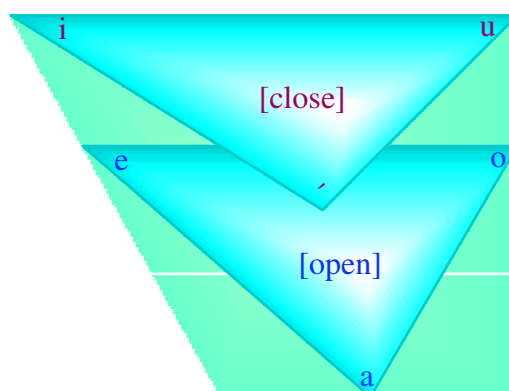


Figure 4.8 The Vowelscape As Posture–Aperture Topology¹

This model is topological in the sense that it represents regions of the vowelscape in terms of two (APERTURE) tripolar (POSTURE) clines of *interrelatedness*. Furthermore, describing the vowelscape in terms of APERTURE and POSTURE models vocalising as *behaviour* — as the way the body explores vowel space: three muscular postures at two degrees of vocal tract aperture — rather than as an *unweighted* abstract space.²

The variation of Irish [long] Peaks due to cohesive POSTURE fields can be modelled in terms of context-specific deformation of this vowel topology. This deformation is illustrated by the following diagrams, in which the two POSTURE triangles can be seen to deform according to context.

¹ Lemke (forthcoming):

A topology, in mathematical terms, is a set of criteria for establishing degrees of nearness or proximity among members of some category. It turns a ‘collection’ or set of objects into a *space* defined by the relations of those objects. Objects which are more alike by the criteria are represented in this space as being closer together; those which are less alike are further apart. There can be multiple criteria, which may be more or less independent of one another, so that two texts, for instance, may be closer together in one dimension (say horizontal distance), but further apart in another (vertical distance).

² An analogue in biology is the description of animal shell shapes in terms of the three variables or dimensions (flare, verm and spire) of phenotypic space (Dawkins 1996: 180-203) that correspond to the animal’s behavioural options in building them.

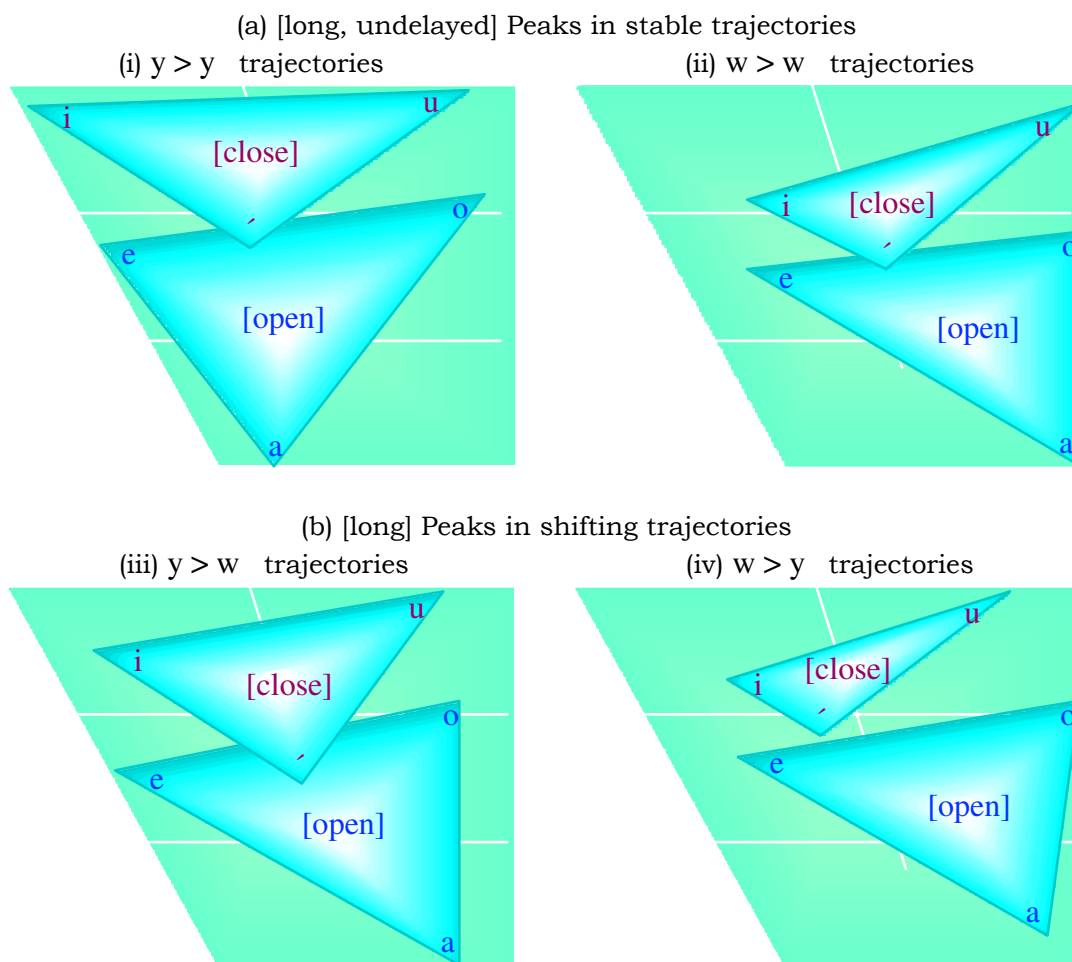


Figure 4.9 Irish [long] Peak Topology As Contextual Deformation

These diagrams illustrate that there is a general warping of the two POSTURE triangles toward the POSTURE states of the cohesive POSTURE fields, being contorted frontward under the influence of [front-spread] POSTURE, and backward under the influence of [back-round] POSTURE.

The effect of cohesive POSTURE fields on [short] Peaks is comparatively more pronounced, not least because — unlike [long] Peaks — [short] Peaks are *unspecified* for POSTURE features. The variation is summarised in the following table (adapted from Mhac an Fhailigh 1968/80: 8-23, 45-7).

			POSTURAL ENVIRONMENT			
			y>y	y>w	w>y	w>w
distinct	close (I)		i	io/iu	ui	u
			{È}	{ÈÚø}	{øÈÚøÈ}	{ø}
	open (Æ)	narrow (E)	ei	ea	oi	o
			{e}	{e2Úo9}	{øe2Úo9È}	{o}
		wide (A)	eai	ea	ai	a
			{æ}	{æÚaÚA}	{æÚA}	{A}
obscure (Ø)		i	ea	ai	a	
		{ë}	{'ð}	{'ð}	{'}	

Table 4.8 Irish Vowels Occurring As [short] Peaks

Since Irish [short] Peaks are not specified for vocalic POSTURE features, it is inappropriate to represent their vowelscape as a topology of two POSTURE triangles. Because the POSTURE states of Irish [short] Peaks are specified by the cohesive POSTURE fields surrounding the consonants around them, it is more appropriate to represent their vowelscape as a topology defined in terms of the two consonant POSTURE states, [front-spread] and [back-round], as shown below.

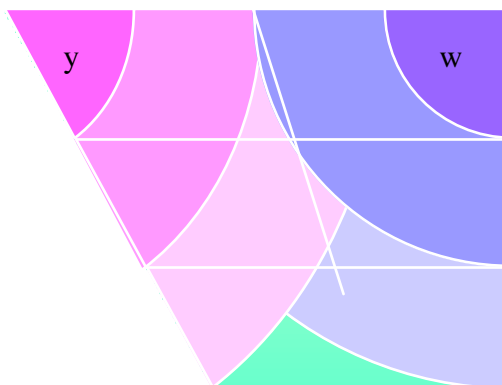


Figure 4.10 The Vowelscape As Bipolar POSTURE Topology

The phonetic variation of Irish [short] Peaks due to cohesive POSTURE fields can now be represented as a context-specific positions in this vowel topology. This is illustrated by the following diagrams in which the [short] Peaks for a given POSTURE environment are indicated by the defining APERTURE state — symbolised by I/E/A — for [distinct] Peaks, and by the symbol Ø for [obscure] Peaks.

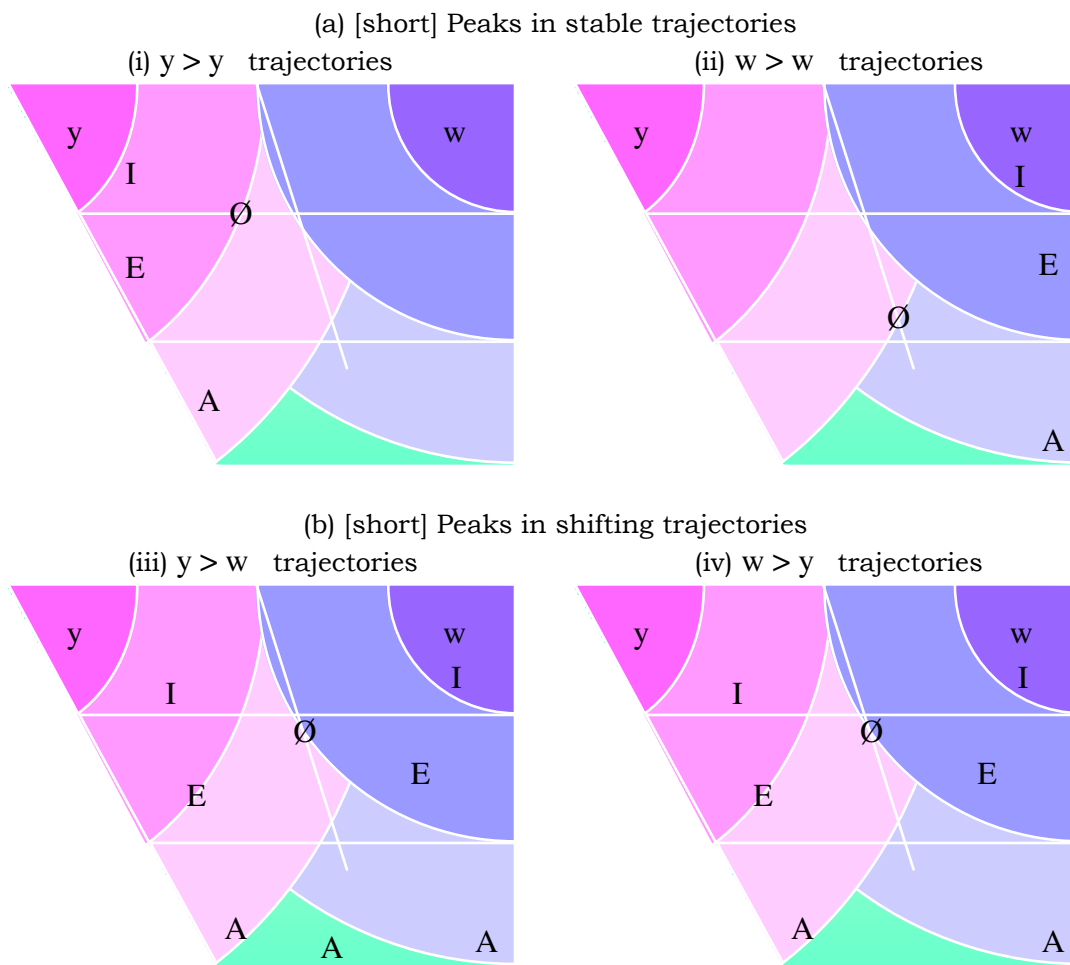
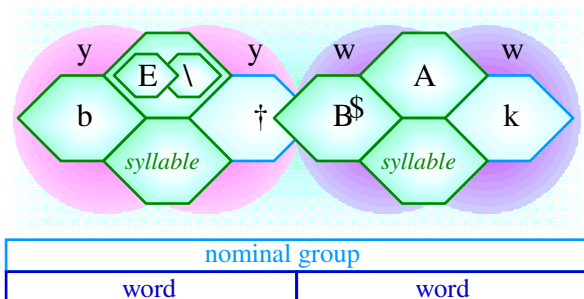


Figure 4.11 Irish [short] Peak Topology

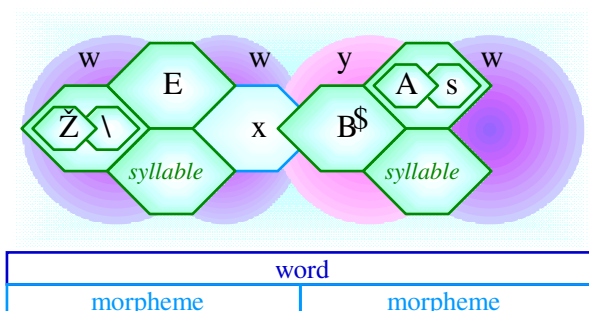
These diagrams illustrate that, for the stable POSTURE trajectories $y > y$ and $w > w$, [short] Peaks are generally warped toward the [front-spread] and [back-round] regions, respectively, whereas for the shifting trajectories $y > w$ and $w > y$, [short] Peaks vary freely between the two POSTURE regions.

4.2.3 Word-Boundary POSTURE¹

Concatenative POSTURE fields can contribute to the demarcation of word boundaries. Generally, this occurs when opposite POSTURE field states are juxtaposed at word boundaries. This circumstance is illustrated by *beirt mhac* ‘two sons’.



The same process can also demarcate the lexical elements in compound words, as illustrated by the word *drochmheas* ‘contempt’, from *droch-* ‘bad’ and *meas* ‘esteem’.



Conversely, this demarcative function is lost when the same POSTURE field states are juxtaposed at word boundaries, as illustrated by *triúr mac* ‘three sons’.

¹ Cohesive processes, like all linguistic processes, do not act in isolation. Other word-boundary demarcation strategies effected through articulation — as opposed to rhythm and intonation — include:

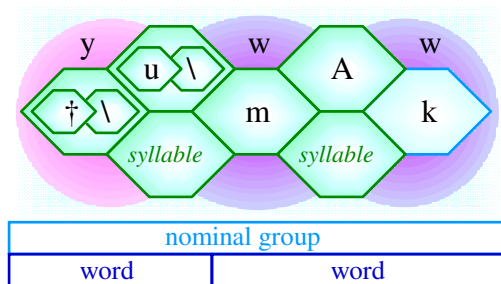
(a) word-final palatalised /V/ is fricated (Mhac an Fhailigh 1968/80: 44).

(b) word-final palatalised /V/ is frictionless (ibid: 34-5).

(c) word-final /h/ is comparatively weak after [short: open] Peaks, and although /h/ is said not to display palatalised and labiovelarised qualities (ibid: 24, 36), after [short: close] Peaks word-final /h/ is fricated to {ç} when in a [front-spread] field, as in *bith* {bĒç} ‘existence’, and to {F} when in a [back-round] field as in *sruth* {s\øFÚS\øF} ‘stream’ (ibid: 36). (Word-final /h/ has been lost after [long] Peaks).

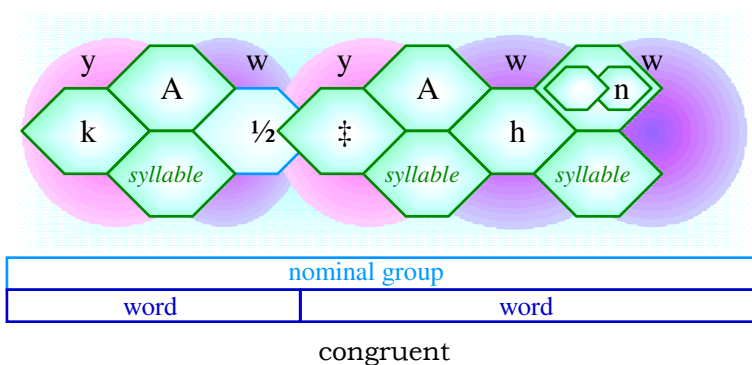
(d) labiovelarised /B/ is more fricated word-initially and word-finally than word-medially (ibid: 32-3).

(e) [voiceless, stop] consonants are aspirated as Onsets of [salient] syllables — which are word-initial for lexical words in the unmarked case — and as word-final Codas, except where a following word-initial Onset has the same ALIGNMENT and POSTURE, in which case the Coda is unexploded and thus unaspirated (ibid: 26-7).

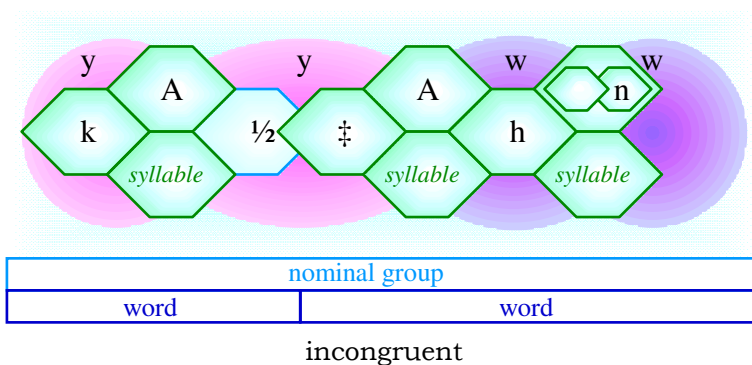


Demarcation by POSTURE field states is also lost in circumstances where the final state realising one word assimilates to — is *incongruently instantiated* as — the initial state realising a following word. There is a general tendency for word-final [coronal] consonants to anticipate the following word-initial CLOSURE and POSTURE — and thus also ALIGNMENT (see above). This is especially true of word-final [lateral] and [nasal] consonants (Mhac an Fhailigh 1968/80: 49-50).

This can be illustrated by the nominal group ceann leathan ‘head wide’, which can be congruently represented as:



but which is incongruently instantiated in “connected speech” as:



In this case, the assimilation — despite eroding word demarcation — is acting cohesively in that it concatenates two words within a higher lexicogrammatical unit, the group (the word “writ large”) or phrase (the clause “writ small”). In the next section, a better known phenomenon of Irish phonology, initial consonant mutation, will be interpreted in the same light.