

### 4.3 Syllable–Group/Phrase Correlation

The softening and eclipsing of initial consonants (according to complicated and uncertain rules) cause the words to dissolve and change their shapes like objects in a mist; more than with most languages, the student has to speak and think in unit-sentences rather than unit-words, as it were single indivisible spasms of feeling or imagination...<sup>1</sup>

In Irish, the initial consonants of words are changed in specific lexicogrammatical contexts. Originally such changes were phonologically predictable, but subsequent syllable loss in the history of the language has removed the conditioning phonological environments in many cases. Modern Irish has two<sup>2</sup> mutation processes: *eclipsis*, or *nasalisation*, and *lenition*, or *aspiration*. Most generally, eclipsis entails the nasalisation of voiced stops and the voicing of voiceless stops, while lenition entails the frication of stops. This is, however, an oversimplified characterisation and the complex details of mutation will be properly expounded below.

By way of preliminary illustration, the third person plural possessive adjective eclipses a following word-initial consonant, the third person singular masculine possessive adjective lenites a following word-initial consonant, and the third person singular feminine possessive adjective has no effect<sup>3</sup> on a following word-initial consonant. So considering the effect of mutation on the word cat {ka†} ‘cat’, for example, ‘their cat’ is a gcat {´ ga†}, ‘his cat’ is a chat {´ xa†}, while ‘her cat’ is a cat {´ ka†}.

In this section, the initial consonant mutations of Irish will be interpreted as functioning cohesively, inasmuch as both processes signal that two or more adjacent words occur within the same functional unit — comprising a group or phrase — within a clause. In the following discussion, the effects of the two mutation processes on the paradigmatic states of the syllable Onset phase will be described first. The mutations will then be modelled syntagmatically, and the cohesive function of the process illustrated. The discussion concludes by interpreting the related phenomena of *h-provection* and *t-provection*<sup>4</sup> as similarly cohesive in function.

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<sup>1</sup> Ussher, quoted in Keane and Phipps (1993: 4).

<sup>2</sup> A third mutational process, gemination, declined in the Old Irish period (Thurneysen 1980: 150), and can be largely ignored for present purposes.

<sup>3</sup> Though it does prefix {h} to a following vowel-initial word (see further in the text).

<sup>4</sup> Mhac An Fhailigh (1968/80: 176-7).

### 4.3.1 Paradigm: The Deformation Of Onset States

The antiquity of the mutation of word-initial syllable Onsets is evinced by its being common to all Insular Celtic languages. Eclipsis and lenition arose in the Goidelic strain as both regular and predictable allophonic variation. The regularity and predictability that guaranteed allophonic status to the mutants was subsequently lost when:

- (1) widespread syllable loss — associated with the fixing of word accent on initial syllables — removed many of the conditioning environments for mutation, and
- (2) mutant and radical forms underwent historical change that disguised the regularity of the original process.

Furthermore, when syllable loss entailed morpheme loss, the mutant consonant became the sole phonological expression of that content, so that consonant mutation acquired a lexicogrammatical — as well as phonological — function.

#### 4.3.1.1 Eclipsis

This section first describes the effect of eclipsis on the articulatory paradigm of Modern Irish, and then briefly outlines the historical phonological processes that have established eclipsis in the language.

##### 4.3.1.1.1 Synchrony

The effect of eclipsis on word-initial syllable Onsets can be illustrated by the instances, below, where the elicitation form is contrasted with the eclipsed form that is induced by the [3rd, plural] possessive adjective a {´}.<sup>1</sup>

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<sup>1</sup> A reconstructed earlier form of this eclipser was nasal-final \*eso:m (Pedersen and Lewis 1961: 216).

	Radical: 'x'	Eclipsed: 'their x'
'apathy'	fuacht {Fu'x†}	a bhfuacht {'Bu'x†}
'children'	páistí {pA:S†,i:}	a bpáistí {'bA:S†,i:}
'house'	teach {†,ax}	a dteach {'∂,ax}
'cat'	cat {kA†}	a gcat {'gA†}
'boat'	bád {bA:∂}	a mbád {'mA:∂}
'door'	doras {∂o\`s}	a ndoras {'flo\`s}
'business'	gnó {g\`\$o:}	a ngnó {'N\`\$o:}
'father'	athair {Ah\`}	a nathair {'nAh\`}

**Table 4.9 Instances Of Eclipsis**

The Onset states that are changed by eclipsis and the associated mutant forms are accordingly summarised in the table below.

			Radical	Eclipsed
voiceless □ voiced: oral	labial	continuant	f	bhf
			{F~}Ú{F,}	{BÚw}Ú{B,}
			p	bp
	{p}Ú{p,}		{b}Ú{b,}	
	coronal		t	dt
	{†}Ú{†,}		{∂}Ú{∂,}	
dorsal	c	gc		
{k}Ú{c}	{g}Ú{f}			
voiced: oral □ nasal	labial	stop	b	mb
	{b}Ú{b,}		{m}Ú{m,}	
	coronal: median		d	nd
	{∂}Ú{∂,}		{fl}Ú{fl,}	
	dorsal		g	ng
	{g}Ú{f}		{N}Ú{N,}	
				n
			∅	{n}Ú{n,}

**Table 4.10 Eclipsis As RESONANCE Enhancement:  
[voiceless] □ [voiced: oral]  
[oral] □ [nasal]**

The general process of eclipsis is one of increasing articulatory resonance: [voiceless] Onsets become [voiced] with [oral] RESONANCE, while [voiced: oral] Onsets become [nasal].<sup>1</sup> Affected consonants are largely the set of obstruent [stop] consonants {/p/ /t̪/ /k/ /b/ /d̪/ /g/}, with the addition of [voiceless, labial, continuant] /F/.

#### 4.3.1.1.2 Diachrony

The restricted ambit of eclipsis, the “exceptional” inclusion of a [continuant] consonant, and the “prefixing” of /n/ to vowel-initial words can be understood by examining the mutation in its historical context.

The original process involved the final nasal consonant of an unaccented grammatical morpheme becoming associated with the syllable Onset of a following accented lexical word (Thurneysen 1980: 24, 30, 140-1). Where the lexical word was *vowel*-initial — its first syllable lacked an Onset state — this entailed the functor-final nasal becoming interpreted as that initial Onset.

Where the lexical word was *consonant*-initial — its first syllable included an Onset state — this entailed the functor-final nasal inducing a change of that initial Onset. The ambit of eclipsis can be explained by considering the consonant system of Proto-Insular-Celtic, that originally underwent mutation, as listed in the table below.

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<sup>1</sup> In the course of phone-labelling speech data — Australian English as L1 and as L2 — over a period of five years, the author has noticed that perceptual discriminating between [oral] and [nasal] RESONANCE is the more difficult when these features are timed to coincide with *only* the occlusion phase of a stop.

			stop	continuant	
labial	voiceless		/p/ <sup>1</sup>		
	voiced	oral	/b/	/w/ □ /B/ <sup>2</sup>	
		nasal	/m/		
coronal	voiceless		/t̪/ <sup>1</sup>	/s/	
	voiced	oral	median	/d̪/	/N/
			lateral		/l/
		nasal		/n/	
	dorsal	voiceless		/k/	
voiced		oral	/g/		

**Table 4.11 Proto-Insular-Celtic Consonants<sup>3</sup>**

The effect of eclipsis on obstruent stops was initially one of prenasalisation which simplified to voiced stops in the case of prenasalised voiceless stops<sup>4</sup>, and nasal stops in the case of prenasalised voiced stops (Thurneysen 1980: 89, 147). This is summarised in the table below.

<sup>1</sup> Proto-Indo-European {p} had been lost, but {p} returned to Proto-Goidelic first through {b}-devoicing and later through borrowing, especially from Latin (Thurneysen 1980: 126-40).

<sup>2</sup> {w} □ {B} after the cladogenesis of Proto-Goidelic and Proto-Brythonic from Proto-Insular-Celtic (Thurneysen 1980: 122). This may have coincided with the Goidelic phonologisation of consonant palatalisation and labiovelarisation (“infection”).

<sup>3</sup> Thurneysen (1980: 113-40).

<sup>4</sup> Perhaps via gemination and degemination, at least for the linguals. See Thurneysen (op cit: 115, 117, 126).

		Nasal + Radical	Eclipsed
voiceless □ voiced: oral	labial	N + /p/	/b/
	coronal	N + /t̪/	/d̪/
	dorsal	N + /k/	/g/
voiced: oral □ nasal	labial	N + /b/	/m/
	coronal: median	N + /d̪/	/f̪/
	dorsal	N + /g/	/N/

**Table 4.12 Eclipsis Of Proto-Insular-Celtic Obstruent Stops**

The effect of eclipsis on the other consonants was mixed. Firstly, there was originally no effect on the voiced labial continuant, either as Proto-Insular-Celtic /w/ or Proto-Goidelic /B/ (ibid: 122). However, by the beginning of the Old Irish<sup>1</sup> period, the radical (uneclipsed) consonant was becoming devoiced to /F/ (ibid: 123), thereby creating the present-day “exceptional” contrast between radical /F/ and eclipsed /B/.

Secondly, the effect of eclipsis on all remaining consonants {/m/ /s/ /N/ /l/ /n/} was initially one of gemination. For /m/ and /s/ this was followed by degemination (ibid: 89, 147), thereby neutralising any radical/eclipsed contrast. However, the coronal sonorants {/N/ /l/ /n/} were not degeminated, but were sounded ‘longer’ and ‘more energetically’ (ibid: 85-9). These eclipsed forms subsequently became reinterpreted as the *radical* forms, while the uneclipsed forms became reinterpreted as the *lenited* forms (see the following discussion). In this way, the radical/eclipsed contrast was also lost for these consonants. These developments are summarised in the following table.

<sup>1</sup> The term *Old Irish* refers to the language from the 4th century AD to the beginning of the 10th.

			Radical	Eclipsed	
labial	voiced	oral	/B/ □ /F/	/B/	
		nasal	N + /m/	/mm/ □ /m/	
coronal	voiceless			N + /s/	/ss/ □ /s/
	voiced	oral	median	N + /ʌ/	/ʌʌ/ □ /ʌ <sup>TM</sup> / <sup>1</sup>
			lateral	N + /l/	/ll/ □ /l̪/
		nasal			N + /n/

**Table 4.13 Eclipsis Of Proto-Insular-Celtic Continuants And Sonorants**

### 4.3.1.2. Lenition

This section first describes the effect of lenition on the articulatory paradigm of Modern Irish, and then briefly outlines the historical phonological processes that have established lenition in the language.

#### 4.3.1.2.1 Synchrony

The effect of lenition on word-initial syllable Onsets<sup>2</sup> can be illustrated by the instances, below, where the elicitation form is contrasted with the lenited form that is induced by the [3rd, singular, masculine] possessive adjective a {´}.<sup>3</sup>

<sup>1</sup> The eclipsed rhotic is represented as lamino-dental by analogy with the other coronal sonorants, and because a lamino-dental allophone occurs in the Erris dialect before labiovelarised /ʃ̪/ and /fl/ (Mhac An Fhailigh 1968/80: 43).

<sup>2</sup> Proclitic /s/ is not lenited.

<sup>3</sup> A reconstructed earlier form of this leniter was vowel-final \*esijo (Pedersen and Lewis 1961: 216). Note that the difference between [3rd singular masculine] a and [third plural] a is expressed by the type of mutation, as demonstrated by a chuidsean agus a gcuidsean {´ xið,s,´ n [ag]´s´ gið,s,´ n} ‘his share and their share’. Both are distinguished from [3rd singular feminine] a which does not mutate, but which does prefix /h/ to a vowel initial noun (see further in the discussion).

	Radical: 'x'	Lenited: 'his x'
'children'	páistí {pA:S†,i:}	a pháistí {´FA:S†,i:}
'apathy'	fuacht {Fu´x†}	a fhuacht {´u´x†}
'boat'	bád {bA:ð}	a bhád {´BA:ð}
'mother'	máthair {mA:h\,}	a mháthair {´B\$A:h\,}
'house'	teach {†,ax}	a theach {´hax}
'grapefruit'	seadóg {Saðo:g}	a sheadóg {´haðo:g}
'door'	doras {ðo\`s}	a dhoras {´Vo\`s}
'mare'	láir {†A:\,}	a láir {´lA:\,}
'shame'	náire {flA:\,ë}	a náire {´nA:\,ë}
'cat'	cat {kA†}	a chat {´xA†}
'business'	gnó {g\`so:}	a ghnó {´V\`so:}

Table 4.14 Instances Of Lenition

The Onset states that are changed by lenition and the associated mutant forms are accordingly summarised in the table below.



			Radical	Lenited
labial	voiceless	stop	p {p}Ú{p,}	ph {F}Ú{F,}
		continuant	f {F}Ú{F,}	fh Ø
		voiced	b {b}Ú{b,}	bh {BÚw}Ú{B,}
	voiced	oral	m {m}Ú{m,}	mh {B\$Úw\$}Ú{B\$,}
		nasal		
coronal	voiceless	stop	t {t}Ú{t,}	th {h}
		continuant	s {s}Ú{S}	sh {h}
		oral: median	d {ð}Ú{ð,}	dh {VÚw}Ú{jÚy}
		voiced	l {l}Ú{l,}	lh {l}
	voiced	oral: lateral	n {n}Ú{n,}	nh {n}
		nasal		
dorsal	voiceless		c {k}Ú{c}	ch {x}Ú{ç}
	voiced	oral	g {g}Ú{f}	gh {VÚw}Ú{jÚy}

Table 4.15 Lenition As CLOSURE Reduction

The general process of lenition is one of reducing articulatory CLOSURE: [stop] Onsets become [continuant], while [continuant] Onsets lose all oral cavity occlusion (debuccalisation). The only consonants that do not undergo lenition are the continuants {/B/ /B\$/ /N/ /x/ /V/}.<sup>1</sup>

#### 4.3.1.2.2 Diachrony

The restricted ambit and irregularities of lenition can be understood by examining the mutation in its historical context, by considering the consonant system of Proto-Insular-Celtic, that originally underwent mutation, as repeated below.

<sup>1</sup> The velar nasal {N} occurred only as a nasal allophone before velar stops (ibid: 114, 119), and consequently did not occur in a lenition environment (see discussion).

			stop	continuant	
labial	voiceless		/p/		
	voiced	oral	/b/	/w/ □ /B/	
		nasal	/m/		
coronal	voiceless		/t̪/	/s/	
	voiced	oral	median	/d̪/	/N/
			lateral		/l/
		nasal		/n/	
	dorsal	voiceless		/k/	
voiced		oral	/g/		

**Table 4.16/4.11 Proto-Insular-Celtic Consonants**

Historically, lenition affected the syllable Onset of an accented lexical word, and was induced by the final vowel of a preceding unaccented grammatical morpheme (Thurneysen 1980: 24, 30, 74, 140). The effect of lenition on stop Onsets was one of spirantisation (ibid: 85, 114). This is summarised in the table below.

			Vowel + Radical	Lenited
voiceless	labial		V + /p/	/F/
	coronal		V + /t̪/	/Q/ □ /h/ <sup>1</sup>
	dorsal		V + /k/	/x/
voiced	labial	oral	V + /b/	/B/
		nasal	V + /m/	/B\$/
	coronal	oral: median	V + /d̪/	/D/ □ /N/ <sup>2</sup>
	dorsal		V + /g/	/V/

**Table 4.17 Lenition Of Proto-Insular-Celtic Stops**

The table illustrates that the regularity of the original mutation was subsequently masked in the case of the [coronal] consonants. The lenited form of the [voiceless, stop] /t̪/ (/Q/) merged with the lenited form of the [voiceless, continuant] /s/ (/h/)<sup>3</sup>; and the lenited form of the [voiced, stop] /d̪/ (/D/) merged with the lenited form of the [dorsal, voiced, stop] /g/ (/V/).

The effect of lenition on the continuant consonants was mixed. For the coronal sonorants {N /l/ /n/}, it was stated above that the *eclipsed* forms became reinterpreted as the *radical* forms, while the *uneclipsed* forms became reinterpreted as the *lenited* forms. This is represented below.

				Eclipsed □ Radical	Radical □ Lenited
coronal	voiced	oral	median	ʌ <sup>TM</sup> / □ /N/	/N/
			lateral	/t̪̪/	/l/
		nasal		/fl/	/n/

**Table 4.18 Lenition Of Proto-Insular-Celtic Coronal Sonorants**

<sup>1</sup> /Q/ □ /h/ by the 12th century AD (ibid: 76-7).

<sup>2</sup> /D/ □ /N/ between the 11th and 13th centuries AD, with earliest evidence for the palatalised variant (ibid: 76-7).

<sup>3</sup> See below.

The table also shows that the absence of a lenition contrast for the [median, continuant] is due to the Modern Irish merger of (unlenited)  $\wedge^{\text{TM}}$ / with (lenited)  $\wedge$ .<sup>1</sup> The effect of lenition on the other Proto-Insular-Celtic continuants is summarised below.

		Vowel + Radical	Lenited
continuant	labial	V + /w/□/B/□/F/	∅
	coronal      voiceless	V + /s/	/h/

**Table 4.19 Lenition Of Proto-Insular-Celtic Labial And Voiceless Continuants**

This table shows that the effect of lenition on these consonants was the loss of oral cavity occlusion. The [voiceless, coronal, continuant] Onset, /s/, gave way to the [voiceless, continuant] Onset, /h/, while the [voiced, labial, continuant] Onset, /w/, gave way to the features [voiced, continuant], thereby being subsumed by the following vowel. It can be seen also that the Modern Irish lenition opposition between /F/ and ∅ arose through the subsequent fortition (of /w/ to /B/) and devoicing (of /B/ to /F/) of the radical (unlenited) consonant.

Having characterised mutation from the paradigmatic perspective as a reorganisation of the system of articulatory potential, the discussion turns now to examine eclipsis and lenition from the syntagmatic perspective.

### 4.3.2 Syntagm: The Function Of Mutagenic Fields

Initial consonant mutation operates only within specific *lexicogrammatical* structures.<sup>2</sup> The word classes affected by mutation are generally lexical: verb, noun and adjective, while those inducing mutation are generally grammatical: conjunction, relative, interrogative, preposition, article, possessive, vocative, numeral, copula; a noun can also induce mutation of a following numeral, adjective or noun.<sup>3</sup>

The incidence and the type of mutation is also functor-specific. That is, firstly, not all members of a word class induce mutation: the preposition as ‘from, out of’, for example, does not induce mutation; secondly, whether a word induces mutation can

<sup>1</sup> A phonetic trace of unlenited  $\wedge^{\text{TM}}$ / persists in the Erris dialect through the lamino-dental allophone that occurs before labiovelarised /ɛː/ and /fɪ/ in words like eorna {o:ː<sup>TM</sup>fɪː} ‘barley’, and through the allophonic lengthening of [wide] Peaks before orthographic rr in words like gearr {g,a:ː} ‘short’.

<sup>2</sup> The synchronic description of mutation draws mainly from Christian Brothers’ New Irish Grammar (1986), abbreviated in the text as CB, supplemented by Ó Siadhail (1988) and Ó Sé & Sheils (1993).

<sup>3</sup> Historically, it was the *grammatical* inflection of the noun that induced mutation in a following word.

depend on its function: *idir* induces mutation when it means ‘both’, but does not when it means ‘between’ or ‘among’ (CB: 14); and thirdly, some members of a word class induce one mutation, while others induce the alternative: the preposition *um* ‘at’ lenites a following noun whereas *i* ‘in’ eclipses it.

Furthermore, a mutation induced by a specific functor can be prevented by the phonological shape of the following word. For example, an the (definite) article, *aon* ‘one, any’ and *chéad* ‘first’ do not lenite a following noun if its initial Onset is a coronal obstruent {/t̪ d̪ s/} (CB: 12-3).

This discussion is set out in the following way. The first section identifies the rhythmic contexts that historically induced consonant mutation, along with the lexicogrammatical syntagms with which they typically correlated. The second section introduces the notion of mutagenic fields, and subsequent sections illustrate how mutation functions to integrate various grammatical units: nominal and verbal groups, and prepositional and copular phrases.

#### 4.3.2.1 Diachrony: Rhythmic And Lexicogrammatical Contexts

The association of the phonological process of Onset mutation with lexicogrammatical domains can be understood as arising historically from a regular correlation of rhythmic quanta with specific lexicogrammatical quanta. According to Thurneysen (1980: 24, 140), mutation operated within certain groups of words gathered around a ‘single chief stress’.<sup>1</sup>

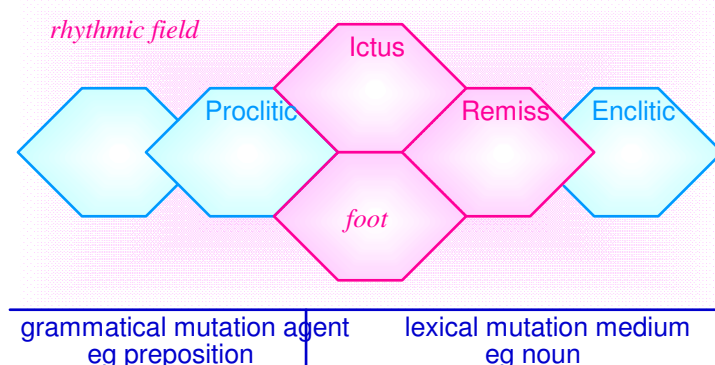
These lexicogrammatical groupings are indicated in Old Irish manuscripts, where function words — ‘words which are not themselves fully stressed’ (ibid: 30) — are written attached to adjoining content words: demonstratives and emphatics are attached as enclitics to a preceding word, while conjunctions, copulas, prepositions, articles, and possessives are attached as proclitics to a following word (ibid). More specifically (ibid: 24):

- (1) conjunctions — with or without affixed pronouns — are written with following verbs;
- (2) copulas are written with following predicates;
- (3) prepositions — with or without affixed pronouns and/or articles — are written with following nouns or verbs;
- (4) articles — with or without affixed possessives — are written with following nouns.

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<sup>1</sup> This raises the *possibility* that Proto-Insular-Celtic *may* have been adopted by speakers whose native language was agglutinating rather than synthetic, since these processes are generally more common *within* words than *between* them. However, this is complicated by the fact that before the 9th century AD, ‘a hand consisting of freestanding capital letters without word division [was] the standard writing of the ancient world’ (Knox B 1990 *Introduction to Homer* (Fagles R translation) *The Iliad* London: Penguin).

The typical correlation of these lexicogrammatical conjunctures with events in the Rhythmic field can be represented as in the following diagram:



**Figure 4.12 A Correlation Of The Rhythmic And Lexicogrammatical Contexts For Articulatory Mutation In Old Irish**

The diagram illustrates that the syllable realising the grammatical item that induces the mutation — the mutagen — is pre-Ictal and thus [weak], while the syllable realising the lexical item that undergoes the mutation — the mutant — is at the Ictus position and [salient]. Reasons why this rhythmic environment should engender articulatory change were outlined in the previous chapter, where it was noted that:

- (1) feet characteristically start with a *rapid* rise to a maximum followed by a *slower* decline, until the moment when the power build-up for the next foot begins (Catford 1989: 346);
- (2) there is a general tendency — as demonstrated for English — for pre-Ictal weak syllables to be produced with greater speed than post-Ictal syllables, and that such syllables are thus extremely liable to be reduced (Cruttenden 1986: 24); and more generally,
- (3) an increase in the rate of speaking, as during unstressed syllables, can result in articulatory positions not being achieved as well as when more time is devoted to the gesture (Ohala 1989: 179).

In the phonetic process giving rise to the initial consonant mutations, the underarticulation effects of the increased tempo extended beyond the pre-Ictal syllable into the Onset of Ictal syllable, and involved functors that were nasal-final, in the case of eclipsis, or vowel-final, in the case of lenition. Functors with other phonological shapes did not engender such mutations of a following Onset.

Eclipsis entailed the [nasal] RESONANCE of a preceding Rhyme being maintained during a following [oral] Onset, or the [voiced] PHONATION of a preceding Rhyme being maintained during a following [voiceless] Onset. The formerly phonological aspect of this process can be *provisionally* illustrated by a Modern Irish eclipsing functor that is nasal-final, such as the preverbal (polar: positive) interrogative particle *an* in the