RECENT ENGLISH LOANWORDS IN IRISH AND THE INTERCHANGE OF INITIAL SEGMENTS

Magdalena Chudak

Abstract: The aim of the present paper is to show that evidence from the alteration of initial segments in Irish sheds some light on a modern phenomenon whereby recent loanwords from English resist mutations. We begin the discussion with the presentation of the mechanism of word-initial mutations and show how mutations have triggered the reanalysis phenomenon of alteration of initial segments. Then the research on loanwords' resistance to mutations conducted by Stenson (1990) and Watson (1983) is brought to light. Ultimately, we show that frequent previous alterations of a given segment could have made Irish speakers aware that mutations may lead to possible confusion of the radical consonant with other initial segments. Concluding, recent English borrowings block mutations in order to protect the quality of the initial consonant.

Keywords: mutations, Irish language, loanwords assimilation

1. Introduction

The present paper looks into evidence from the alteration of initial segments in Irish which is relevant to the modern phenomenon whereby mutations do not occur in recent loanwords.

The paper is organized as follows. In section 2 we present mutations and mutation patterns in Irish. Section 3 focuses on Irish alteration patterns. The adjustment of English loanwords in Irish is discussed in section 4. In section 5 we evaluate the relevance of the evidence for alteration of initial segments. Finally, section 6 summarizes the findings.

2. Mutations and mutation patterns

2.1 Word-initial mutations

Initial consonant mutations are considered to be distinctive of Irish, Welsh or Breton. Essentially, they are morphosyntactically conditioned alternations of word-initial segment(s). In other words, initial segments of Irish words, in the context which is grammatically defined as mutating, undergo qualitative changes. The corresponding mutated variants of radical (unmutated) segments are also dictated by the grammar of Irish. To put the discussion on a concrete footing, let us consider the mutation of the noun $b\dot{o}$ 'cow':

The noun $b\dot{o}$ 'cow' has two corresponding mutated forms. In the context of the possessive pronoun mo 'my' the initial radical consonant of the following noun, in the case discussed in (1) the radical [b], yields the mutated variant which is [w]-initial (1a). Alternatively, when

preceded by the sequence preposition + definite article, the radical [b] turns into a mutated variant [m] (1b). The type of mutation triggered by the possessive pronoun *mo* is called *lenition* and the one triggered by the preposition followed by the article is labelled *eclipsis*. As one can conclude from (1), the triggers of mutations are morphosyntactic contexts which, by and large, have to be memorized by the speakers.

The effects of mutations on selected word-initial segments are provided in (2) below.

(2)			'bag'	'girl'	'man'
	a.	Radical	<i>mála</i> [ma:lə]	<i>cailín</i> [kaľi:n']	fear [f'ar]
	b.	Lenited	mhála [wa:lə]	chailín [xal'i:n']	fhear [ar]
	c.	Eclipsed	<i>mála</i> [ma:lə]	gcailín [gal'i:n']	bhfear [v'ar]

As shown in (2), to each radical consonant there is assigned a set of strictly defined segmental replacements. Consequently, the initial [m] in the word *mála* under lenition is replaced with [w] but remains intact in the eclipsing context. The radical initial [k] in *cailín*, on the other hand, has a [x] as its lenited variant and [g] as a mutated one. The complete list of mutable Irish consonants and their respective mutation outputs is provided below:

Table 1

Radical	Lenited	Eclipsed
[p]	<ph> [f]</ph>	<bp>[b]</bp>
<t> [t]</t>	[h]	<dt> [d]</dt>
<c> [k]</c>	<ch> [x]</ch>	<gc> [g]</gc>
 [b]	 bh> [w] [v]	<mb>[m]</mb>
<d> [d]</d>	$\langle dh \rangle [\gamma]([j])$	<nd> [n]</nd>
<g> [g]</g>	$\langle gh \rangle [\gamma]([j])$	<ng> [ŋ]</ng>
<m>[m]</m>	< mh > [w][v]	<m> [m]</m>
<s> [s]</s>	<sh> [h]</sh>	_
<f> [f]</f>	<fh> [Ø]</fh>	 bhf> [w]

The general rule is that, under lenition, voiceless plosives are replaced with voiceless fricatives. Likewise, voiced plosives become voiced fricatives. [s] lenites to [h] and [f] when lenited becomes mute. Some consonants, however, render two various mutation outputs depending on their palatalisation status. In the case of [d] and [g] palatalised congeners have as their lenition outputs [j] rather than $[\gamma]$. The same situation obtains with the consonants [b] and [m]: non-palatalised variants lenite to [w], and palatalised ones to [v].

Eclipsis consists in the replacement of the voiceless plosives series by the respective voiced consonants. Voiced plosives become nasals, and [f] mutates to [w].

It is noteworthy that mutations are also marked in writing. While the convention of depicting lenition is fairly uniform and consists in the insertion of the grapheme <h> after the mutated consonant, the rules of marking eclipsis, as can be seen in Table 1, are more complex.

2.2 Mutation patterns

Mutation patterns are patterns of qualitative change entailed in mutations. For each consonant shown in Table 1 above, with the exception of [s], which does not undergo eclipsis,

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¹ The phonetic transcription employed in this paper draws on Irish convention of marking palatalized consonants with an apostrophe.

one can postulate two mutation patterns. The opposition inherent in the mutation patterns is a radical segment vs. a mutated variant, or, more specifically, radical vs. lenited or radical vs. eclipsed. The concept of mutation pattern is illustrated below:

(3)			Radical		Mutated	
	a.	Mutation pattern	[f]	\longleftrightarrow	[Ø]	
	b.	Actual alternation	fear [far]	\leftrightarrow	fhear [ar]	

Accordingly, the radical word-initial [f] is replaced by $[\emptyset]$ (becomes mute) when it is preceded by the leniting possessive pronoun mo 'my'.

The idea behind postulating mutation patterns like the one shown above is two-fold. On the one hand, it captures the fact that a lexicalised mutation pattern determines the output of the consonantal replacement prior to the actual change of the radical segment within a word. Speakers know, as if in advance, that the lenition of [f] results in the deletion of this consonant. Secondly, even if a word-initial consonant has been mutated in a proper context its radical form is still retrievable. Hence the two-directional arrow employed in (3): speakers, if asked, move freely between the radical and mutated variants.

3. Alteration patterns

Another phenomenon which consists in the modification of the word-initial segment is referred to as alteration of word-initial segments. This change entails the replacement of the initial radical segment with another radical segment. In contrast to mutations, alteration of initial segments is dialectally and not grammatically conditioned. Two different dialectal realisations of the same lexeme are "by-forms"; examples of these are given in (4). As presented there, the alteration involves cases where two initial consonants interchange (4a, b), but also where a consonant interchanges with a vowel (4c, d).

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(4) a. cab\'{a}iste [kaba:s't'ə] \rightarrow gab\'{a}iste [gaba:s't'ə] 'cabbage' b. fabhc\'{u}n [fauku:n] \rightarrow cabhc\'{u}n [kauku:n] 'falcon' c. athach [ahəx] \rightarrow fathach [fahəx] 'giant' d. taibshe [tav's'ə] \rightarrow aibhse [av's'ə] 'ghost'
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In each pair of by-forms, the word-form before the arrow, e.g. *cabáiste* (4a), is the historically basic form and the word following the arrow, e.g. *gabáiste* (4a), is a later form. Both interchanging initial consonants in each pair of by-forms, e.g. [k] and [g] in 'cabbage', are radical, hence unmutated, phonemes in Irish. That is, each word given in (4) is an out-of-context variant and as such could serve as a dictionary entry for the lexeme it represents. In some dialects the citation form for 'cabbage' is *cabáiste* and in others it is *gabáiste*. A suggested alteration pattern accounting for this variation is presented in (5):

(5)			Primary initial segment	Secondary initial segment
	a.	Alteration pattern	$[\mathbf{k}_1]$	$[g_2]$
	b.	Actual alteration	cabáiste	gabáiste

The alteration pattern in (6) captures the fact that the initial [k] is the etymological form of the word for 'cabbage' in Irish, and [g] is a secondary development. The unidirectional arrow is

employed to show that the change, if attested, is irreversible in the sense that it gives rise to a new radical form and at this stage there is no access to the primary radical form.

To recapitulate, in Irish there are two phenomena consisting in the replacement of the initial consonant. One of them consists of mutations, whereby a mutated variant is substituted for a radical segment. The other is alteration of initial segments, where a radical consonant is replaced with another radical consonant.

4. English loanwords in Irish

English loanwords have been entering Irish in substantial waves since the 17th century. The crucial difference between the older loanwords from that period and more recent ones is that the latter tend to be less assimilated, both phonologically and grammatically, in the Irish language.

4.1 Older loanwords

With regard to initial segments, one can distinguish two types of loanwords. One group consists of words with the initial /v, h, w, j/. These four segments could not appear at the beginning of Irish native words when they were not mutated. The only context in which one could find them in the word-initial position would be in a mutating environment. Consequently, the assimilation of /v, h, w, j/-initial loanwords consisted in modification of these consonants that resulted in legitimate word-initial segments. The Irish equivalents of English words with adapted initial segments are shown in the following examples:

(6)		English	Irish
	a.	vice	bís [b'i:s]
	b.	vinegar	<i>finéagar</i> [f'i:n'e:g ər]
	c.	vitamín	beathaimín [b'ahami:n]
	d.	haddock	cadóg [kado:g]
	e.	halibut	failbó [falˈəbo:]
	f.	hinge	inse [in's'ə]
	g.	hogshead	oigiséad [og'əs'e:d]
	h.	hurricane	airicín [arˈəkˈiːnˈ]
	i.	wall	balla/falla [b/falə]
	j.	waist	<i>básta</i> [ba:stə]
	k.	yeast	giosta [g'istə]
	1.	yeoman	gíománach [g'ima:nəx]

A slightly chaotic picture of modifications emerges from the examples presented in (6). The initial [w], as well as [v], are replaced by two segments, i.e. [b] and [f]. English [h] finds three various realisations in Irish: [k], [f], or deletion. Finally, [j] seems to consistently turn into [g].

In (7) below there is another group of borrowings. These are derived from English words beginning originally with consonants which are also legitimate Irish radical segments.

(7)		English	Irish	
	a.	back	meaic [m'ak]	
	b.	bargain	margadh [marəgə]	

c.	bank	<i>mangcán</i> [maŋka:n]
d.	Bible	Míobla [m'iblə]
e.	butt	muta [motə]
f.	blanket	<i>plaincéad</i> [plaŋˈkˈed]
g.	circuit	torcaid [t'irkəd]
h.	clamp	glamba [glampə]
i.	dad	gaid [gad']
j.	felt	<i>peilt</i> [p'el't']
k.	gout	dúta [du:tə]
1.	prove	fromh [frov]

Although the initial segments of English words shown in (7), that is [b], [k], [d], [f], [g], [p], can occur freely also in the word-initial position of Irish words, they have been modified. The output consonants have been dictated by the mutations patterns. The workings of this mechanism of reinterpretation are shown in the next section.

4.2 The case of balla/falla 'wall'.

The Irish word for 'wall' is a well-known example of the assimilation of English [w]-initial loanwords. Namely, in Irish, it is rendered as *balla* and *falla*. The distribution of the variants is very clear: *fala* [falə] in Munster (the South of Ireland), but *balla* [balə] in Connacht and Donegal (the West and North).

As regards the etymology of the word, it is an English loanword which entered the Irish lexicon by the 17th century, with the majority of English loanwords. The noun is of masculine gender.

In the 17th century [w] was not allowed at the beginning of a radical form of the word, it could only be the initial sound of lenited words. For that reason, the noun *wall* had to be assimilated, by, among others, change of the initial consonant. The replacement of the consonant [w] was based on mutation patterns. Let us consider the ones relevant to our analysis:

(8)			Radical		Mutated (Eclipsed)
	a.	Mutation pattern	[b]	\leftrightarrow	[w]
	b.	Actual alternation	balla [balə]	\leftrightarrow	bhalla [walə]
(9)			Radical		Mutated (Eclipsed)
	a.	Mutation pattern	[f]	\longleftrightarrow	[w]
	b.	Actual alternation	falla [falə]	\leftrightarrow	bhalla [walə]

Initial [w], if interpreted as lenited, can be the output of lenition of [b], as in (8). On the other hand, if we take into account eclipsis, [w] is an eclipsed [f] in (9).

A foreign word like *wall* can potentially be interpreted as starting "originally" with [f] or [b]. When speakers are faced with a seemingly lenited initial [w], the necessity to revert the assumed mutation arises. And, as has been shown in the mutation patterns in (8) and (9), the likely radical candidates for a mutated [w] are two radical segments, i.e. [b] and [f]. Actually, the word *wall* was assimilated both as *balla* and *falla* in Irish.

Many English borrowings had their initial consonants assimilated in a similar manner, especially when these segments were /v, h, w, j/.

4.3 Recent borrowings

Presently, the attitude of Irish speakers towards English borrowings is equivocal. On the one hand, some speakers, in agreement with a post-revival state policy, tend to avoid English forms and use Irish newly coined equivalents instead. As Ó Curnáin (2007: 1996) observes "[s]uch stylistic avoidance of English borrowings, and hence adoption of Modern Irish neologisms and usage, is now common (e.g. on radio and television)". On the other hand, English borrowings (and there is a vast influx of them nowadays) are not assimilated to the extent they used to be, and so they enter Irish as "foreign bodies".

An especially interesting group of English loanwords contains those that begin with /v, h, w, j/. Recall that it was said that these segments, although present in Irish phonetic system, may be used only at the beginning of mutated words. Let us consider recent English borrowings which seem to violate this rule:

(10)		English loanword	Irish pronunciation
	a.	heap	[he:p']
	b.	happy	[hæ:p'i]
	c.	hedge	[hetf]
	d.	van	[v'æn]
	e.	view	[v'u:]
	f.	warning	[wa:rnin]
	g.	water-proof	[wa:tər pru:f]
	h.	willing	[wil'iŋ]
	i.	wise	[wais]
	j.	worth	[wort]
	k.	wrong	[ra:ŋg]
	1.	yarn	[ja:rən]

As shown in (10), /v, h, w, j/-initial loanwords, although to some extent modified phonologically in word-internal position, are not phonologically adapted in the sense that the initial segment is accepted as a radical consonant. No alteration of initial segment takes place as it used to in earlier stages.

Significantly, this policy towards initial /v, h, w, j/ does not have any impact whatsoever on the system of initial mutations. That is to say, these segments receive radical status but do not subsequently acquire mutated variants. So the consequence is lack of mutation.

4.4 Mutation of recent loanwords

Formerly, the assimilation of English borrowings was not only phonological but also morphological. As an integral part of Irish lexicon, they were regularly mutated. Now, borrowings, aforementioned "foreign bodies", undergo morphological processes only in older speakers' speech. Examples of mutated borrowings are provided in (10) below.

(11) English borrowing Mutated form

a.	family	t'fhamily héin 'your own family'
b.	push	aon phush mhór 'one big push'
c.	only	an t-only duine 'the only person'
d.	plan	an phlan 'the plan'

e.	foul-play	an fhoul-play 'the foul-play
f.	paint	an phaint 'the paint'
g.	machine	an mhachine 'the machine'
h.	plane	an phlane 'the plane'
i.	paint pink	paint phink 'pink paint'
j.	bicycle	mo bhicycle 'my bicycle'
k.	farm	a fharm 'his farm'

The mutation of loanwords, like the one shown in (11), is not the rule in contemporary Irish. According to Watson (1983) and Stenson (1990), at least some initial segments of English borrowings tend to resist mutations. In the case of words beginning with /v, h, w, j/, there is no mutation because no mutation outputs are available in the Irish mutation system. But, for other initial segments, it appears that mutation does not apply simply because the word is a loanword. Ó Curnáin (2007: 2041) observes for the Iorras Aithneach dialect that the lack of mutation is an indication that a borrowing is a modern one.

The research has shown that respective word-initial consonants are not resistant to mutations to the same extent. Stenson (1990) in the study of English loanwords in Ráth Cairn Irish proposes that there is a continuum of word-initial consonants' susceptibility to mutations. The results of this research are presented in the table below:

Table 2

	Lenited/Unlenited	Lenited %	Lenited/Unlenited examples
p	28/4	88	ina philot/ina pilot
b	22/4	85	a bhastard/boy!
m	18/4	82	do mhate/do friend
f	1/22	4	–/barr an fridge
t	10/16	38	chuile thribe/dhá team
d	2/4	33	−/Ní dispute-álfaidh
S	6/6	50	Shign-áil siad ansin/Sasanach an border
k	14/2	88	don chrowd seo/cross-áil an t-arm
g	4/1	80	an-ghame/an-game

The results illustrated in Table 2 can be summarised as follows: labials and velars are the most liable to mutate, dentals the most variable, and [f] is the most resistant.

As regards eclipsis, the data are not complete; still the patterns observed with respect to lenition of initial segments in borrowed words seem to be confirmed:

Table 3

	Eclipsed/Uneclipsed	Eclipsed %	Eclipsed/Uneclipsed examples
p	9/2	82	i bplay/ar an plane
b	12/1	92	ar an mbrain/-
f	6/2	75	ag an bhfactory/ar an phone
t	no data	_	_
d	1/0		_
k	15/4	79	i gcovent/ar an concrete
g	3/1	75	ag an ngovernment/ina gamblers

Again, from the results set out in Table 3 it transpires that word-initial labials are eclipsed most readily, velars and [f] showing more resistance.

Watson's (1983) study confirms that loan-words in /h, v, w, y/ do not have a hypothetical radical consonant restored in base-forms as was the practice at a previous stage in the language. As for /m/ it responds to lenition but does so less consistently than expected, while /f/ does not lenite nor nasalize in East Ross Gaelic.

Inevitably, the question arises why some word-initial segments of English borrowings are more susceptible to mutations than others. Stenson (1990) and Watson (1983) the latter drawing on evidence from East Ross Gaelic, provide two different explanations.

Watson (1983) claims that mutations of loanwords are blocked because mutations hamper the identification of radical word-initial segments: "It would seem to me [...] that the main consideration governing the over-ruling of mutations in the cases mentioned is that of avoiding ambiguity with regard to what the actual radical initial in question is" (Watson 1983: 111). Indirectly, Watson seems to make reference to the phenomenon of alteration of initial segments. The implication that the ambiguity has created alternative radical initial segments previously is not senseless as the results of this process are shown in (8).

According to Stenson (1990), the more complex from the phonological point of view is the change triggered by mutation, the more resistant the segment will be to mutations: "the degree of resistance to mutation that a loanword shows is a function of the degree of distortion its radical initial undergoes when the mutation applies" (Stenson 1990: 22). Accordingly, the mutation of plosives and velars requires the least changes with respect to distinctive features, only [+/- continuant], the mutation of dentals is far more complex, and [f] disappears altogether, entailing the biggest change.

5. Evidence from alteration of initial segments

Let us now introduce evidence from the alteration of initial segments and see whether it can shed some light on the potential reasons for inconsistent mutation effects of various initial segments in English loanwords. Recall that alteration of initial segments is the replacement of one radical segment for another radical one. Assuming Watson's (1983) ambiguity principle introduced above is right, we would predict the following. If a certain sound has been shown to resist mutations, it must be due to the fact that it used to be misinterpreted for other sounds frequently. On the other hand, if a sound is regularly mutated, there should be few alterations recorded for such segment.

In the table below it is shown what the attested outputs of alteration of initial consonants are and how many such changes have been found to exist. The data are obtained from Ó Dónaill (1977) and their etymology has been checked against the information in *Dictionary of the Irish Language Based Mainly on Old and Middle Irish Materials*.

	Τ	a	b]	le	4
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Initial	Altered to	No. of alterations	% of total
p	b, f	14	7
b	f, m, p	38	18
m	b, f	17	8
f	b, p, Ø	39	19
t	d, k,s	18	9
d	g, n, t	24	12
S	d, g, k, t	8	4
k	g, t	23	11
g	d, k	26	13

As can be seen from Table 4, the biggest number of alterations is recorded for segments [b] and [f]. The previous prediction that many prior alterations should give rise to less susceptibility to mutations is proved right here. Recall that lenition of [f] renders the initial consonant mute. It seems that the big number of alterations involving [f] results from the fact that speakers would rather not mutate it for fear of reanalysing an originally [f]-initial word as a vowel-initial one. This argument is strengthened by an extensive body of words exhibiting a reverse change, where, surprisingly, [f] is inserted at the beginning of a word. Examples of this type of alteration are presented below:

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abhra [aurə]
                                             fabhra [faurə] 'eyelash'
(12)
                                             falmóir [faləmo:r] 'wall-cupboard'
               almóir [aləmo:r]
       b.
               aslaigh [aslig]
                                             faslaigh [faslig] 'induce'
       c.
               eireog [er'o:g]
                                             feireog [f'er'o:g] 'pullet, chicken'
       d.
               lapóg [lapo:g]
                                             flapóg [flapo:g] 'little paw'
       e.
                                             foir [for'] 'suit, fit'
       f.
               oir [or']
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There are 66 examples of this type of alteration. This amount of data is even more surprising in view of the fact that there is no process in Irish that would insert [f] in word-initial position. It seems then that the initial [f] has very often been dropped in Irish and even more frequently added at the beginning of a vowel initial word. Probably the mutation of initial [f] is avoided in order not to weaken the identity of this initial segment when it appears at the beginning of a loanword.

As far as the initial [b] is concerned, it is hard to say why, despite so many alterations, speakers mutate it rather readily. We would suspect that the fact that [b] did not preserve its quality in many words of English origin would block mutations. The big number of alterations, on the other hand, may result from the fact that [b], so frequently mistaken for [m] in loanwords, can be derived via two types of mutation patterns: eclipsis and lenition. Still, this issue needs to be studied at greater length.

Initial [s] presents another conundrum. Being involved in few alterations, mutation of [s] is avoided in 50 percent of the cases where, normally, lenition is required. One would expect more susceptibility to mutations here. Two facts may possibly have caused this state of affairs. Firstly, the initial clusters [sp], [st], [sk], [sm], [sf] do not mutate in Irish and the resistance to mutation of the initial [s] may occur by analogy with these clusters. Secondly, table 4 includes only the alterations resulting from reinterpretation based on mutation patterns. The insertion of [s] in word-initial position is a separate phenomenon, accounted for by Ó Siadhail (1989) and exemplified below:

- (16) a. (s)máirtíneach'cripple'
 b. (s)líbíneach 'messer'
 c. (s)lapaire 'a pudgy person'
 d. (s)crománach 'tall stooped person'
 e. (s)cluitéara 'a glutton, sponger'
- Ó Siadhail calls the clusters resulting from the prefixation of [s] "expressive clusters". The additional consonant at the beginning of these mainly pejorative words lends what he calls "greater expressiveness" to the word. All in all, the mutation of [s] may also be blocked due to [s]-prefixation because it may be felt to be unetymological.

Another fact worth mentioning is that that within each pair of voiced-voiceless segments, like /p, b/, /t, d/, and /k, g/, voiced segments are more often reanalysed than

voiceless ones. This tendency patterns nicely with resistance to mutations. For instance, the initial [t] is involved in eighteen alterations, while the initial [d] in twenty four. Recall that the Stenson (1990) reveals that [t] is lenited in thirty eight percent of the cases and [d] in thirty three percent. Our prediction that the bigger number of alternations is, the bigger resistance to mutations should be is proved right again.

Stenson's research has shown that dentals resist mutations to a greater extent than velars and plosives (thirty eight percent against eighty percent). As regards alterations, however, the results for dental consonants are not very different from the ones for plosives and velars. The question arises why dentals are mutated so inconsistently. Since the alteration of initial segments is not relevant here, the reasons for this situation should be looked for in the quality of [t] and [d]. At the beginning of English words these two consonants are alveolars rather than dentals. One of the symptoms of non-assimilation of recent English borrowings is that alveolar consonants retain their quality, introducing a new phoneme in the word-initial position. Alveolars then might be felt by the speakers to be foreign and hence not subject to mutation.

6. Conclusions

Ó Curnáin (2007), in his account of the Iorras Aithneach dialect, observes that the omission of mutations is very obvious in many instances. He claims that the purpose of this strategy is to aid comprehension. In the present paper we have attempted to show that mutations have actually triggered a reanalysis phenomenon known as alteration of initial segments. For instance, [f] has been dropped in a significant number of words. This, in turn, made speakers aware that mutations may lead to possible confusion with other initial segments. For that reason, the initial [f] of the words which have recently entered the Irish lexicon is mutated only in few instances. To conclude, recent English borrowings are not assimilated morphologically in order to protect the quality of the initial consonant.

Magdalena Chudak Catholic University of Lublin mchudak@kul.lublin.pl

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