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English Influence on L2 Speakers' Production of Palatalization and Velarization

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ENGLISH INFLUENCE ON L2 IRISH SPEAKERS'

PRODUCTION OF PALATALIZATION AND VELARIZATION

by

JENNIFER GABRIELE

A master's thesis submitted to the Graduate Faculty in Linguistics in partial fulfillment of the

requirements for the degree of Master of Arts, The City University of New York

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This manuscript has been read and accepted for the Graduate Faculty in Linguistics
in satisfaction of the thesis requirement for the degree of Master of Arts.

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ABSTRACT

English Influence on L2 Speakers' Production of Palatalization and

Velarization

by

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Irish is a Celtic language spoken in Ireland. It is currently endangered with only 73,803 people using the language on a daily basis as of 2016 (Official Office of Statistics, 2016). The reason for the decline is that English is the dominate language, pushing Irish to the periphery. Revitalization efforts have been put into place in an attempt to revitalize the language. There has been a growth in L2 speakers of Irish. The position of English as the dominate language, and high amounts of L2 speakers creates an environment where English is likely to influence the Irish language. The purpose of this thesis was to examine existing literature on the palatalization contrast and to add data of my own from L2 speakers of Irish in the United States to determine the influence English has on the palatalization contrast. L2 Irish speakers living in the United States have limited contact with native Irish and thus English would potentially have a stronger influence on the palatalization contrast. It was found that these speakers do exhibit control over the palatalization contrast in word initial position. However, there is reason to believe that there are differences in the phonetic realization of the L2 speakers production and native speaker production. It appears that the L2 speakers are producing palatalization as Cj clusters

rather than a palatal off-glide on the consonant. These results highlight that there is a certain level of competence in the language, dispelling myths that L2 speakers are not capable of communicating in Irish.

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1.0 Introduction:

Irish is a Celtic language and is the native language of Ireland. It is closely related to

Scottish Gaelic and Manx. Today the language is considered to be highly endangered. There are

no known monolingual speakers left of Irish. Nearly all of the Irish speakers in Ireland today are

Irish-English bilinguals, many of whom English is their first language. According to McCloskey

(2001), there are more second language speakers of Irish than there are native speakers. The day

to day communications in Ireland are, for the most part conducted in English with the exception

of some isolated rural areas called the Gaeltacht where Irish is still the primary language of

communication. Despite revitalization efforts, the Irish language is still reported as being in a

state of decline (Carnie 1995; Shah 2014).

The extreme level of contact between Irish and English is leading to some rapid change

within the language sparking some debate about the nature of that change and the future of the

language. The goal of this paper is to focus on one aspect of Irish sound patterns and to look

closely at how exactly English influence is or is not changing the realization of that aspect of the

language.

Previous literature has documented that the Irish palatalization contrast is disappearing in

young speakers and second language speakers alike in Ireland. English influence is claimed as

the main force behind this change (Snesnareva 2016, 2017; O'Broin 2014; Ó Béarra 2007). A

detailed look at the existing literature combined with the introduction of data from a population

of speakers in the United States will be looked at to determine the role of English in this change.

Another common claim is that English is causing the palatalization contrast to move from a

phonemic contrast to a positional contrast, where palatalization only appears before front vowels,

as this is where palatalization exists in English (O'Broin, 2014 and Snesnareva, 2016). This

article seeks to give a detailed explanation of just how English is affecting the palatalization contrast and put it in the greater context of the language situation in Ireland.

2.0 Background

2.1 Arrival of English in Ireland

In order to fully understand the status of Irish in modern day Ireland, it is important to understand the history of the language and how English came to be the dominant language in Ireland. The first known influx of non-Celtic speaking people to Ireland was a Viking presence around the ninth to the eleventh century. Although the languages spoken by these groups did not affect the status of the Irish language, the towns that the Viking groups established became centers for trade with England. This increased contact with the English, opening the door for English settlements (Kallen 1994). The Anglo-Norman Invasion in 1169 was the first English settlement in Ireland, thus beginning the period of colonization. When colonization started, there was still an Irish speaking elite that coexisted with the English aristocracy that was now in Ireland. The English brought with them, not only the English language, but also the French language as there was a level of bilingualism in England at the time. French was the language of politics and education, while English was the language of everyday life. French however did not leave a lasting imprint on the language landscape in Ireland (Amador-Moreno 2010).

When the Anglo-Normans arrived, Irish was the dominant language and the Anglo-Normans began to assimilate to Irish culture, and with that learned the Irish language. In the early twelfth century there began to be a decline in the use of the English language. The English aristocracy began to fear for the loss of the English language and culture due to the assimilation that was occurring and began to demand that everyone of English descent must speak English through The Statutes of Kilkenny (Kallen 1994). However, despite these efforts Irish remained

the dominant language through the 15th century (Amador-Moreno 2010). The parliament of 1495 reiterated and added onto The Statutes of Kilkenny, removing the Irish language from having any official status. (Kallen 1994).

In the 16th and 17th century the English began an attempt to spread out of the major cities and towns where they were currently residing. They wanted to take over more of Ireland. The Irish tried to fight back against this and failed. The failure of the Irish to prevent the English from taking over more land lead to The Flight of The Earls which was the fleeing of the Irish ruling Elite, leaving Ireland completely in the Hands of the English Aristocracy. As a way to reward those Englishmen who fought against the Irish rebellion the English aristocracy gave stretches of land to the soldiers. These plots of land also served as a way to spread English culture and language. Until this time, Irish was the language predominantly spoken in the rural areas of Ireland. Now, with the introduction of more English speakers in rural areas there was a growth of bilingualism (Flippula 1999)

A period of widespread bilingualism followed in the 18th century, in which most Irish speakers learned English as a second language in order to have the option of upward mobility. Irish was further marginalized with the idea that it was a backward language of the lower class. Schools began teaching English, and the Catholic church also converted to English in an effort to keep up with the modernizing world (Filppula 1999).

All of these things had a great impact on the status of the Irish language, however, another huge impact came with the Irish potato famine in 1845. The areas that were most affected by the Irish potato famine were the rural areas, which was where most of the Irish speakers lived. The potato famine killed approximately one million people and forced the emigration from Ireland of a little more than one million other people overseas. This was a

major blow to the status of the Irish language, being that the majority of the people who had died or left Ireland were Irish speakers (Filppula 1999).

Through the English takeover of Ireland, the English language became the dominant language. English was the language of the political Elite and the economic industry. This language situation where one language is the dominant language and the other is forced into the periphery leaves the minority language vulnerable to further decline and loss (Nettle & Romaine 2002). A shift towards the dominant language occurs since the dominant language is seen as a chance for upward mobility and an entry way into the modern world. Nettle & Romaine (2002) explains that there is generally a three generation shift from monolingualism in the minority language to monolingualism in the dominant language. The first generation is monolingual in the minority language, the second generation is bilingual in both the minority and dominant language, and the third generation is monolingual in the dominant language. Parents do not see the benefit in teaching their children the minority language as it does not have any social or economic advantages. It was this dynamic created in Ireland that has lead to the endangered status of the Irish language today.

2.2 Language Situation in Ireland Today

With English being the dominant language in Ireland, the Irish language has become marginalized. The language is still in a state of decline and is considered an endangered language. According to the 2016 census in Ireland 1,761,420 people claim to be able to speak Irish. However, when broken down the numbers may not appear so optimistic. Only 73,803 people reported speaking Irish every day, 111,473 reported speaking on a weekly basis, and 586,535 reported speaking less often than a weekly basis. Furthermore, 558,608 of the people who claim to speak Irish reported only speaking Irish in the school system, and another 418,420

people claim to have never spoken Irish (Central Statistics Office 2016). The variability in types of speakers presented here in these responses highlights an issue when talking about a community of speakers, that is, who exactly constitutes a speaker of that language. Based on the responses from the census data it can be assumed that there are a number of different levels of language proficiency at play. O'Rourke (2011) explains that there is a continuum of speakers from native speakers to people who only have a passive knowledge of the language (those who can understand but do not speak the language). This variability makes it difficult to tell the exact number of proficient speakers left for the language.

A major reason for the dwindling numbers of speakers is the pressure to speak English. The majority of Ireland operates in English in day to day communication making English a necessity if one wants to be part of the larger community. The business industry operates almost entirely in English, meaning that English is imperative for finding a job outside of the Gaeltacht. Thus, families don't feel the need to pass Irish on to their children. The necessity to speak English, combined with a lack of community level support for Irish has made it difficult for Irish to survive.

The areas within Ireland where Irish is still the dominant language of the community and the language used in daily operations are called the Gaeltacht. Most of the native speakers of Irish are from the Gaeltacht regions. These areas are isolated predominantly rural communities located mostly on the west coast of Ireland.

Figure 1. Map of the Gaeltacht Regions in Ireland
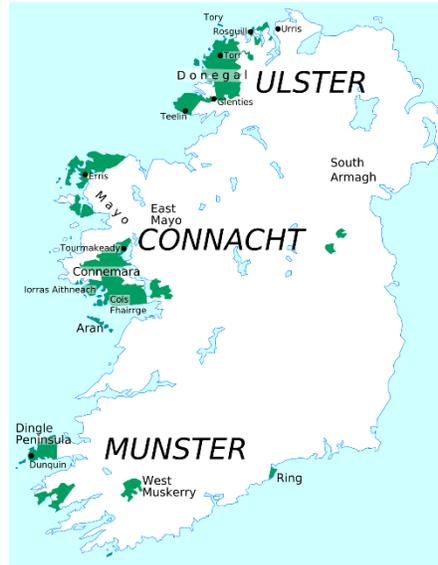
Although Irish is the preferred language of these communities, the number of speakers in these areas is dropping for a number of reasons. One reason is that there is a lot of emigration of young people out of the Gaeltacht to bigger cities. Many young people leave to go to school and never move back. Being that the Gaeltacht are predominantly rural communities in a quickly modernizing world there are not many job opportunities, forcing the younger generation to leave in search of a job outside of the agricultural lifestyle. Many of these people end up leaving the Gaeltacht and with it they leave their language behind. They no longer have a use for it outside of the Gaeltacht and being that everyone also speaks English inside of the Gaeltacht there is not much motivation for them to maintain their language. Furthermore, the people who do leave the Gaeltacht will sometimes return, however, it is often with a spouse and children who don't speak any Irish at all causing the number of Irish speakers in the Gaeltacht to decline and the need for English to rise in these areas (Carnie 1995).

Another big issue in the Gaeltacht concerning the presence of English, as outlined by Denvir (2002), is tourism. In the 1980s Ireland suffered from an economic depression. One of

the strategies used to bounce back from this depression was tourism. Tourism was also another way for Ireland to modernize. However, with the modernization came a huge impact on the language. Ireland's culture and heritage were used to draw tourists to the country. Being as the Gaeltacht is the center of Ireland's heritage and the area which is most in touch with old Irish culture, tourism to these areas skyrocketed. English is the dominant language of Ireland as a whole and the tourism industry alike, which meant that with tourism to the Gaeltacht came a real need for the inhabitants of the Gaeltacht to begin speaking English on a much more regular basis in order to accommodate the tourists. During the tourist season the language of conversation when an inhabitant of the Gaeltacht meets a stranger is English, rather than Irish, which the people from the Gaeltacht would normally use as their default language.

The need to communicate is a strong force which drives language choice. When everyone speaks English and only a few speak Irish, it makes for a tough hurdle for Irish to get over.

2.2.1 Revitalization Efforts in Ireland

In order to help save the Irish language, there was a number of revitalization efforts put into place starting when Ireland gained independence from England in 1922. Some of these efforts included making Irish the first official language of Ireland, which went into effect in 1937. Irish was also recognized as an official language of the European Union in 2005. A large portion of the revitalization effort was placed on the school system. It was thought that the school was the best place to educate and create new speakers of the language. Irish was required in many schools as a school subject. Through the school system it was hoped that a state of widespread bilingualism would be achievable (Shah 2014; Carnie 1995; Slatinska & Pecnikova 2017). In the 1940's immersion programs were implemented in schools for native speakers who

wanted to learn in the medium of Irish, and also for English speakers who wanted an intensive Irish program with which to learn the language of their heritage.

Despite the revitalization movement, there are many who believe that Irish revitalization has not been enough and has not taken enough of a hold for long term survival of the language (Carnie 1995; Shah 2014). One factor that thwarted some of the revitalization was how the language was implemented in the school system. According to Carnie (1995), by focusing predominantly on the school system as a means to promote the language, a situation where once the children leave school there is no longer any reason to use the language, was created. A study done by Murtagh & van der Silk (2004) found that after students left school there was a significant drop in the use of Irish. This drop in language use was due to the fact that there was no longer any social networks available for these speakers to take part in. Outside of the Gaeltacht there is no reason for Irish to be used and thus students, even within 18 months of leaving school, will see a decline in the amount of Irish spoken (Murtagh & van der Silk 2004).

Furthermore, Irish was a mandatory school subject, which meant that all students had to take Irish throughout their schooling, as well as pass an exam. The classes that students were forced to take were often focused more on older literature and not very interactive. Students found the language hard to learn due to the teaching mechanisms and found they left school not learning enough to function at a societal level (Slatinska and Pecnikova 2017). All of the issues with Irish in the school system left students with ill feelings toward the language, further stigmatizing Irish as backwards and useless, adding to it the feeling of being boring and hard (Shah 2014). Ó Laoire (2005) suggests that another issue is that much of the teaching methods, even in some more updated syllabi, focus on traditional language teaching methods which are centered around the tourist scenario, teaching the student how to interact with native speakers

when visiting the country. This does not work with Irish language teaching. This is not the line of conversation a second language Irish speaker would ever have living in Ireland.

There were also issues with the implementation of the immersion programs. The native speakers and second language learners were lumped into classes together, which meant that either the second language learners struggled to keep up or, classes were too easy for the native language speakers. There were no recognized linguistic differences between the two groups of speakers (Ó Laoire 2008; O'Rourke 2011). This lead to neither group being appropriately challenged and able to fully learn or maintain the language. Lastly, an issue with the immersion programs is that there were many immersion programs held in the Gaeltacht over the summer (Carnie 1995). These programs were meant to show English speakers that the language was alive and well while also allowing them to be immersed in the language for better learning. However, while this may be good for the support of second language learning it did make for a burden on Irish in the Gaeltacht. The influx of English speaking students meant that outside of school there was a lot of English being spoken between the English-speaking students. The native Irish speakers being out numbered would partake in English conversation with the English-speaking students attending the summer immersion schools. This brought more English use to daily life in the Gaeltacht where there otherwise wouldn't have been (Carnie 1995).

One major issue with the revitalization effort was that there was a long-held stigma that Irish is backwards and useless, while English is the language of progress and upward mobility (Carnie 1995). Many people do not see the need for Irish. Making Irish the first official language of Ireland was a step towards making the language relevant, however, without community level support for the language it is not going to be used. The need to communicate is still a heavy motivator and most people will not speak Irish simply because it is an official

language. Work needs to be done to lift the stigma that is on the language.

Carnie (1995) also spells out another big problem with the revitalization efforts. English and Irish services are often both available in an effort to make Irish more relevant on a societal level. However, the presence of English makes it so that the Irish is not used by a lot of people, as English is the language that they are more comfortable in. Furthermore, even for those that want to use the Irish option, it is often the issue that the Irish is much less funded, making the English the more attractive option.

While, Irish is still an endangered language and there are many issues with the way the revitalization efforts were put forth it is important to note that there have been some success along the way. One such success would be the effect Irish radio programming has had in putting Irish in a relevant context. Particularly Radío Na Life, stationed in Dublin. The school system may have created new speakers but it did not create a social network where the language could be spoken outside of school. Learning in school did not put Irish in a relevant day to day context. Irish radio managed to do just that, it allowed for Irish to be used on relevant topics that mattered to the listeners (Cotter 2001) . While the Gaeltacht radio stations had been thriving, it wasn't until Radío Na Life was implemented that people living in the city had programming that was relevant, such as whether, traffic, music and arts programming rather than the agricultural programming that was common for the Gaeltacht radio stations. As of 1994, 14,000 listeners were between the ages of 15 and 30 years of age (Cotter 2001). This shows at least a passive use of the language. Cotter (2001) explains however, that the radio program has done more than just that. How the program is run allows for a community of speakers. There are seven full time employees and a group of temporary volunteers. This volunteer work base allows for more and more people to get involved and join a community of speakers using the language. It is just this

kind of community support that there needs to be in order to keep the language relevant and alive. While the school can teach students the language, it is communities like this that will allow the language continued use when students leave school.

2.2.2 Identity as Motivation

Amongst all the negativity there appears to be a ray of hope for the Irish language. There appears to be a growth of second language speakers in Ireland and other countries as well. Carnie (1995) noted that between data collection trips to Ireland in 1994 and 1995, there seemed to be an emergence of Irish pride and with that a shift in attitude toward Irish. The language is now being used as a marker of Irish culture and history. Carnie (1995) believes that it is this attitude change that is causing the emergence of more Irish being spoken.

Slatinska and Pecnikova (2017) did a recent survey of Irish speakers from both Gaeltacht areas and English-speaking areas and found that there was a common theme of national identity that kept coming up. Many of the participants felt that learning and speaking Irish was a way to be more of a part of the national culture. Many people were also motivated to learn the language and pass it on to their children. They felt that this was their way of keeping the language alive and in turn their culture. Another factor that was found in the learning and maintaining of the language was that participants felt that a positive attitude towards Irish was important. They felt that the only way to keep the language alive was to lead by example and have a positive attitude, so that other people would see the language as a good thing and also want to learn and keep the culture alive. These responses show how important the language is for the maintenance of the cultural identity for these speakers. However, some of the respondents did express concern for the future of this growth of speakers, if there was not more community support to allow the language to be spoken outside of the home.

The idea that the Irish language is a marker of national or cultural identity has even spread abroad. For example, there are approximately 22,000 people who claim to speak some level of Irish in the United States (O'Broin 2014). For example, as part of this thesis a small survey of some of the teachers and students at a small non-profit school in New York was conducted. Seven participants answered the surveys. Of those seven people, six of them referenced getting in touch with their heritage or a "strong sense of Irish identity" as their motivation to learn Irish (the seventh learned because of an interest in Irish music rather than a way to express his/her own cultural heritage). Of these seven speakers, three of them have maintained the language for about 20 years. All of the respondents started learning the language after the age of 18, with three of them starting after the age of 50 years old. The fact that these speakers have been able to reach a high level of proficiency and maintain the language for such a long period of time shows that cultural identity can be a strong motivator. These people are living in New York far removed from any consistent use of the language and were still able to learn and maintain it. One benefit they have is being involved in the school where they can use the language on a weekly basis with other speakers. Without access to the Irish language school many would have a hard time finding other speakers to converse with in Irish. Only one respondent had a relative who spoke Irish, and another had recently begun to teach their children in hopes of further helping to keep the language alive.

2.2.3 Second Language Speakers of Irish

In Ireland today, there are more second language speakers of Irish then there are native speakers (McCloskey 2001). This growth in second language speakers creates a new set of problems. One problem is that there is now somewhat of a stigma against the second language speakers of Irish. These speakers are not seen as true speakers of the language. For example, Ó

Béarra (2007) states that second language speakers are not learning the language "correctly" and that there is so much transfer from English, that Irish today cannot be understood without knowledge of English. O'Rourke (2011) surveyed the impressions of second language and native speakers alike on the use of Irish. These were students in a college program which was taught through the medium of Irish. They all had a high proficiency in Irish and were in the same classes. What was found through the discussions with these students was that the second language speakers and the native speakers didn't interact much outside of the classroom and most of their conversations outside of the classroom happened in English. The native speakers would default to English when addressing a second language speaker and if a second language speaker started a conversation in Irish the native speaker would respond in English. The native speakers felt that it was helpful to the second language speakers to switch to English as this was the language second language Irish speakers were arguably more comfortable. This dynamic made the second language speakers uncomfortable speaking Irish outside of the classroom. In order for the second language speakers to be able to maintain the language there needs to be support for these speakers so they can use Irish. Without using a language, it could start to fade and the competence level of these speakers could begin to decline.

2.2.4 English Influence on Irish

The fact that there are no known monolingual speakers of Irish left, along with the fact that there are more second language speakers than native speakers, means that there is going to be a great deal of influence from English on the Irish language. Contact between languages often causes transfer from one language to the other, particularly with second language speakers whose perception of the sounds of a non-native language may not be as sharp as those who learned as their first language. Furthermore, when a whole community of people speak both

languages there is likely to be a lot of mixing between the two languages.

A number of studies have documented changes in Irish due to contact with English. As a means to look at the influence of English on Irish, Stenson (1993) looked at English loan words into Irish. It was found that borrowing from English increased over the last few centuries, but more importantly that the way the words were being borrowed into the language was changing. Instead of the phonemes in the English words being assimilated to the closest Irish equivalent they were being kept the same once imported into Irish. Nearly all Irish speakers are Irish-English bilinguals and therefore all have knowledge of both sound systems making it unnecessary for the phonemes of English words to assimilate to the Irish. Furthermore, a number of studies have claimed that English is causing the loss of some phonological processes and contrasts. For example, the palatalization contrast, which will be discussed in detail below, is said to be disappearing or changing (O'Broin 2014; Ó Béarra 2007; Snesnareva 2016, 2017). O'Broin (2014) and Ó Béarra (2007) have also found that in addition to palatalization the processes of lenition and initial mutation are beginning to disappear.

2.3 Phonology of Irish

The purpose of the following section is to provide a brief overview of some of the phonetics and phonology of Irish.

In order to determine how a language is changing, it is important to discuss what the norm is for that language. For Irish, along with many languages of the world, that can be difficult as there is no "standard" of the language that is actually spoken by native speakers. A standard was developed for the purposes of teaching Irish in schools. However, native speakers generally will speak one of the three main dialects of Irish: the Connemara, Munster, or Ulster dialect.

Irish vowels are generally described as the vowels i, e, a, o, and u appearing in long/short pairs (Bennett, Ní Chiosáin, Padgett & McGuire 2017). However, Ní Chasaide (1999) claims that the long vowels are i e æ ɔ o and u and the short vowels are ɪ ɛ a ʌ ɤ and ə, thus the long/short distinction may not be sufficient to describe the vowel system as the long vowels also differ in quality from the short vowels.

Table 1. Consonant Inventory (Hickey 2014, Ní Chasaide, 1999 and Ní Chiosáin & Padgett, 2012)

	Labial	Coronal	Dorsal	Glottal
Stops	pˠ pʲ	tˠ tʲ	kˠ kʲ	
	bˠ bʲ	dˠ dʲ	gˠ gʲ	
Fricatives	fˠ fʲ	sˠ sʲ	(xˠ) (xʲ)	h
	(vˠ) (vʲ)		(ɣˠ) (ɣʲ)	
Nasals	mˠ mʲ	nˠ nʲ	(ŋˠ) (ŋʲ)	
Liquids		lˠ lʲ		
		rˠ rʲ		

Irish has a voiced voiceless distinction for all obstruent with the exception of the coronal fricatives and glottal fricative. There is also a phonemic contrast between palatalized and velarized consonants that extends through out the entirety of the consonant inventory with the exception of the glottal fricative (Hickey 2014; Ní Chasaide 1999). Minimal pairs showing this contrast can be seen in (1).

(1) lae   /lˠe/   day   Léigh /lʲe/   read
    buí   /bˠi/   yellow Bí   /bʲi/   be
    naoi   /nˠi/   nine   Ní   /nʲi/   nothing
    (Ó Siadhail, 2012)

Historically the palatalization contrast came from Q-Celtic a sub branch of Insular Celtic,

it started as a secondary articulation of velars and coronals before high front vowels and eventually spread to the rest of the consonant system creating what is the present-day contrast (Hickey 2014). There are some differences across dialects that affect the phonetic realization of this contrast. For example, the realization of the coronal stops can appear as affricates particularly in the northern Ulster dialect. The Ulster dialect also has a three-way distinction in the laterals and the coronal nasals, where there is a palatalized velarized and neutral lateral and coronal nasal, the neutral form occurring before a central vowel (Hickey 2014 and Ní Chasaide 1999). The velarized voiced labial fricative /vˠ/ is often pronounced as /w/ and the palatalized voiced velar fricative /ɣʲ/ as a palatal glide /j/. The palatalized coronal fricative /sʲ/ is phonetically /ʃ/ for most speakers. Lastly, /r/ is often described as /ɹ/ in word initial position and does not contrast in palatalization, while a palatalized and velarized tap appear word medially and word finally. Word finally the palatalized tap /ɾʲ/ becomes a palatal fricative for most speakers (Hickey 2014 and Ní Chasaide 1999).

Another notable aspect of Irish phonology is lenition. Lenition is when the initial consonant of a word gets weakened, that is a stop will become a fricative and fricatives either disappear or are pronounced as an /h/. Lenition is used as a marker for a morphological distinction to show past tense and the gender of the noun, when a noun is feminine the first consonant will be lenited following *an* the word for 'the' in Irish. Some pronouns are also a trigger for lenition on the first consonant of the following word (Stenson, 2008), as seen in (2).

(2) bean /bʲænˠ/ woman an bhean /an vʲænˠ/ the woman
bí /bʲi/ to be bhí mé /vʲi mʲe/ I was
gúna /gˠunˠə/ dress a ghúna /a ɣˠunˠə/ her dress

The labiodental fricative only arises through the process of lenition. A voiced labiodental

arises from the lenition of /b/ or /m/. According to Hickey (2014) the bilabial nasal, /m/ patterns

phonologically with the stops rather than the other nasals. The velar fricatives also arise in a

similar way, they also appear through the process of lenition. When /k/ gets lenited it becomes

/x/ and when /g/ or /d/ gets lenited it becomes /ɣ/. Not all of the consonants in the Irish

consonant inventory get lenited. Table 2 gives a full list of the consonants that go through the

process of lenition and what sound they become.

Table 2. Lenition of Consonants

Phoneme	Lenited
b	v or w
p	f
t	h
d	ɣ
k	x
g	ɣ
m	v or w
s	h
f	silent

Another phonological process to be discussed is eclipses. Eclipsis is another initial

mutation which affects some of the consonants in the Irish consonant inventory. The consonants

that undergo eclipses are listed in Table 3. Like lenition there are some consonants that only

arise through eclipses, /ŋ/ only arises through the eclipsis of /g/.

Table 3. Eclipses of Irish Consonants

Phoneme	Eclipsed
p	b
b	m
t	d
d	n
g	ŋ
k	g
f	v or w

Some triggers for eclipses are the numbers seven through ten, plural possessives, and the

preposition *i* 'in' (Stenson 2008). Examples can be seen in (3).

(3) teach /tʲæxˠ/ house   seacht detach /ʃæxˠtˠ dʲæxˠ/ seven houses
    carr /kˠɔɪˠ/ car   a gcarr   /ə gˠɔɪˠ/   their car
    grá /gˠɹə/ love   i ngrá   /ə ŋˠɹə/   in love

2.3.1 The Palatalization Contrast

The palatalization contrast is the aspect of Irish phonology that will be focused in the the

remainder of this thesis. As described earlier, this contrast is exhibited in all three dialects of

Irish and extends through all of the consonants in the phoneme inventory excluding the glottal

fricative. Irish palatalization is said to phonetically resemble Russian palatalization (Ní Chiosáin

& Padgett, 2012). Russian palatalization, as described by Kochetov (2006), is a secondary

articulation on the consonant where the tongue body is higher and more front than the non-

palatalized consonants. The effects of the palatalization are that the second formant of the

consonant and following vowel are lower. In addition, for stops, the release is longer and louder.

Although represented in the IPA as C^j for palatalized, and C^ɣ for velarized, these Irish

consonants are generally described as having an /i/ or /j/, like secondary articulation on the

consonant for palatalization and an /ɯ/ like secondary articulation for velarization (Bennett, Ní

Chiosáin, Padgett & McGuire 2017; Hickey 2014). Of course, depending on the consonant this

will vary some.

Palatalization for Irish is not just phonemic it is also important on the morphological level.

Palatalization is used for plural formation and to mark genitive singular case as seen in (4).

(4) cat   /kˠatˠ/   cat   cait   /kˠatʲ/   cats
    bád   /bˠɔdˠ/   boat (nom. Sg.)   bháid /wɔdʲ/   boat (gen. sg.)

According to Hickey (2014), the Irish contrast is phonologically one of a palatalized consonant

versus a plain consonant. However, phonetically, the contrast is realized as a palatalized

consonant versus a velarized consonant. According to Ní Chiosáin & Padgett (2012),

velarization could have arisen as a way to make the contrast more salient and preserve the contrast before high front vowels, as palatalization is not acoustically salient before these vowels.

Ní Chiosáin & Padgett (2012) looked at the acoustics and perception of Irish palatalization in the context of Kochetov (2002), in which the claim is made that cross-linguistically palatalized labial consonants are preferred to palatalized coronal consonants. Furthermore, Kochetov (2002) has found that cross linguistically coda position is a weak environment for palatalization due to the fact that the secondary characteristics associated with palatalization are dependent on the release of the consonant, and it is phonetically common for consonants in coda position to be unreleased. The acoustic data of the Irish palatalization contrast collected by Ní Chiosáin & Padgett (2012) was found to be very similar to that of Russian. Palatalization causes the raising of the second formant while velarization causes lowering of the second formant. These secondary articulations are most salient before high front vowels for velarization and before high back vowels for palatalization. When a palatalized consonant is before a high back vowel, there is a lowering of the second formant as it transitions into the following vowel. Likewise, when the consonant is velarized and preceding a high front vowel there is a raising of the second formant as it transitions into the following vowel. These are the environments in which the contrast is most salient. The second formant is the stronger cue for palatalization, however, it is also found that the burst of palatalized stops is longer and louder for palatalized consonants. It was also found that F2 was higher for the labial stops than it was for the coronal stops, while the release burst was longer and louder for coronals than for the labials. It was found that labials were preferred to coronals. Ní Chiosáin & Padgett (2012) also looked at the perception of the palatalization contrast in Irish speakers. It was found that

palatalized labials were perceived more accurately than palatalized coronals suggesting that the rise in F2 for a palatalized consonant is a stronger cue than the longer louder burst since it was the coronals that had more of a noticeably longer louder burst than the labial consonants. When looking at the perception of the contrast in onset and coda position it was found that overall palatalized consonants were better perceived in onset position than coda position, matching the findings of Kochetov (2002).

There is not much articulatory data on the Irish language, however, one major study by Bennett, Ní Chiosáin, Padgett & McGuire (2017) used ultrasound imaging of the tongue to determine tongue positions during the palatalization and velarization gestures. It was found that, overall, the palatalized consonants had a tongue body position that was higher and more front than non-palatized consonants and the velarized consonants had a tongue body position that was lower and more back than non-velarized consonants. When broken down by place, it was found that there was not as much of a difference in tongue body height between the palatalized and velarized stops but there was a difference for backness. Velar fricatives on the other hand had a big difference for tongue height for palatalized and velarized fricatives. Coronals overall had less of a difference in tongue backness but not in height of the tongue. Another factor that the articulation data in Bennett, Ní Chiosáin, Padgett & McGuire (2017) shows is that for labial consonants the tongue holds the same position for palatalization whether it is before a front vowel or a back vowel This suggests that palatalization is occurring before high front vowels even though it is not acoustically salient in that context. Therefore, the contrast is in fact a contrast between palatalized and velarized consonants regardless of vowel context, rather than being a contrast between palatalized and plain before a back vowel, and velarized and plain before a front vowel.

2.4 Second Language Phonology

The goal of this section is to discuss some of the important aspects of second language phonology and how this could potentially affect the production of the palatalization contrast in second language speakers of Irish.

While there seems to be some debate over the existence of a critical period, there appears to be evidence that there is an effect of age on the ability to acquire native-like production of a language. The older someone is when they start to learn a second language the harder it is to perceive and produce the contrasts (Flege 1995, 1999). There are two common types of errors that are made by second language learners: transfer errors and developmental errors (Archibald, 1998). Developmental errors are described as errors occurring once a phonological contrast is learned and that contrast is applied in environments where it does not belong. Errors resulting from transfer are due to the mapping of the phonology of the native language to the sounds of the second language. Native speakers are attuned to the acoustic cues of their language and familiar with the articulatory gestures required in producing the sounds of their language. When presented with the sound and contrasts of another language, it is going to be hard for them to perceive some of the new sounds due to the lack of knowledge of the acoustic cues differentiating the sounds. The palatalization contrast in Irish is a prime example of this. English does not have contrastive palatalization. This means that it could be potentially hard for English speakers learning Irish to perceive contrastive palatalization and velarization. Diehm (1998) in a study of English speakers learning to speak Russian found that instead of producing true palatalization, the contrast was realized as a consonant followed by a palatal glide. It is likely that the same would happen for second language speakers of Irish. English speakers may hear the palatalization, but misinterpret what they hear as a Cj cluster, thus causing them to

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produce the palatalization as a Cj cluster.

Velarization does not have as clear of a parallel in English as does palatalization potentially making velarization harder for English speakers to produce. However, English does have consonant clusters with /w/ such as *quip* and *tweet* which English speakers could be mapping the velarization onto.

Of course, individual consonants should be looked at to determine where some of the difficulties would lie. Just because English has consonant glide clusters does not mean that for every consonant the contrast would be easily heard and articulated. For example, unlike British English, American English does not have /lj/ clusters, therefore it is possible that production of palatalization on /l/ would still be hard for some English speakers. On the other hand, velarization of /l/ might be easier for English speakers (depending on dialect) due to the existence of the dark /l/ in English which is realized as a velarized /l/ in syllable coda position. While English does not typically have this consonant in onset position, it is a familiar gesture for these speakers, perhaps making this consonant easier to produce. Irish English is described as only having a clear /l/, which means that this generalization may only hold for American English.

Some dialects of English also do not have any form of palatalization of /n/ at least in onset position (English words such as onion and continuum have a glide following /n/). Also, worth noting is that English does not have consonants such as /x/ and /ɣ/. Production of these consonants alone may prove difficult for some speakers making the addition of palatalization and velarization to them all the more challenging.

Taking into consideration the factors mentioned above there is a chance that the palatalization contrast will be learned in second language Irish speakers, however, it will be

realized in a phonetically different manner. Instead of being a contrast between a consonant with a secondary palatal articulation and a secondary velar articulation it may be realized as a consonant followed sequentially by a palatal glide /j/ contrasting with a consonant followed by a velar glide /w/.

Palatalization in second language Irish speakers living in Dublin were looked at by Snesnareva (2016, 2017). Words containing target palatalized and non-palatalized sounds in three environments, word initially, medially, and word finally, were recorded (this study only looked at palatalization not velarization). Formant transitions were measured to determine if the consonants were palatalized or not. Word initially, 17 percent of the words that were supposed to have palatalization did not have it. Word finally, the error rate was more than double at 44 percent of the palatalized consonants being produced without palatalization. It was noted that word finally "errors often occurred before back vowels" (no percentage was given). Snesnareva (2016) interpreted these findings as showing that the palatalization contrast was moving from a phonemic contrast to a positional contrast where palatalization only occurs before front vowels. The reasoning given was that English does not have contrastive palatalization but does have allophonic palatalization before front vowels due to the coarticulation of the consonant with the following vowel. However, word initially this did not appear to be the case. Palatalization loss was not reported to be more common before back vowels in word initial position. In general the contrast was robust in word initial position. Therefore, perhaps a more accurate analysis would be that due to the higher error rate in coda position and not in word initial position it is possible that the palatalization contrast is being lost in coda position. These results are in line with the findings in Ní Chiosáin & Padgett (2012) and Kochetov (2002) that coda position is a weaker environment for the palatalization contrast. Lastly, another issue with the finding that the

palatalization contrast is becoming an allophonic contrast before high front vowels, is that in

initial position palatalization is most salient preceding high back vowels making it unlikely that

the contrast would be lost in this context.

Snesnareva (2017) used the same data as Snesnareva (2016), however, with a different

goal: to look at whether there were patterns in the palatalization errors that could not be

explained by English influence. If so, this would constitute evidence of the emergence of a new

dialect forming in Dublin Irish. What was found was that overall more palatalization loss

occurred in sonorants and labials. This, they concluded, could not be due to English influence

and thus, must be a new dialect in the making. Labials should not be difficult for an English

speaker to palatalize since there are words which have a labial consonant followed by a glide in

English allowing the speaker to hear the contrast and produce it at least according to their own

native phonology. However, sonorants are potentially a different story. Irish English does have

lateral glide and nasal glide clusters; therefore, these sequences would arguably be produced by

second language speakers.   Hickey (1996) found that /j/ can sometimes be deleted in syllable

onset before coronals such as /n/ and /l/. This tendency could perhaps add to the lack of

palatalization in the production of some of the palatalized sonorants found in Snesnareva (2017).

Furthermore, Nance (2014) looked at palatalization of laterals in Scotland and found that there is

a high rate of palatalization loss among second language and younger speakers of Scottish

Gaelic, a closely related language with a large amount of English influence. If the same error is

occurring in Scotland it is unlikely that this is a dialect forming in Dublin. Another sonorant that

English does not have preceding a glide is /r/.

3.0 Present Study and Research Questions

There is no doubt that English as the dominant language of Ireland is causing changes to

Irish. There is an increasing amount of Irish second language speakers and those who learned Irish as their first language are also fluent in English. This creates the opportunity for English to impose its phonetics and phonology onto Irish.

However, to what extent is this happening and what is the nature of the changes. This applies particularly to the palatalization contrast which is the focus of this paper. It appears in the existing literature that there are some conflicting results as I summarized above. Some of the changes to the contrast are perhaps due to natural phonetic factors, as described above for coda position and palatalization. If the contrast is disappearing in coda position there would be reason to believe that this is not due to English, but rather a weakness in perception in this environment, perhaps quickened by the amount of second language speakers, but all together not a direct transfer from English.

The palatalization contrast was chosen in part due to the fact that it is an integral part of the phonology of the language and is also used as a marker for morphological distinctions. These factors should provide for stability in the contrast, however it is not a contrast that English speakers would be directly used to, making it vulnerable to change. Putting these together it makes for a good contrast to test the influence that English can have on the language.

In order to further test the effect English has on the contrast, the production of the palatalization contrast was looked at in second language speakers who grew up in and are living in the United States. This group of speakers would theoretically have even more English influence on their Irish, as they are more cut off from native Irish speakers, and rely predominantly on videos and recordings of native speech to learn the sound system. Furthermore, there is no Irish for them to come into contact in day to day life. Speakers in Ireland, are more likely to come into contact with Irish.   This isolation from Irish is going to

mean that whatever effects English has on Irish will be enhanced in these speakers. If the palatalization contrast is actually disappearing or moving towards a positional rather than phonemic contrast, then this should be evident in these speakers as well if not more so. The main questions this paper sets out to answer are as follows:

1) Do second language speakers of Irish living in the United States produce a clear contrast between palatalized and velarized consonants?

2) If there is a clear contrast, does it differ acoustically from native Irish speaker productions?

3) If the second language speakers exhibit a loss of palatalization or velarization, is there a pattern to the contexts that the loss appears in?

4.0 Methods

4.1 Participants

The participants for this study were second language Irish speakers whose first language was American English and who grew up and live in the United States. The participants had to have started learning Irish after 12 years of age so as to ensure the population would be representative of speakers who would have more effects of English transfer as they have become older and are less attuned to non-native contrasts. All the participants also had to be able to reliably hold a conversation in Irish, so as to make sure that they were familiar enough with the language to produce the correct word being elicited.

The participants who took part in this study were four males who were between the ages of 18 and 55. They all currently live and grew up in the United States and started to learn Irish at the ages of 18, 24, 32, and 50. They have been speaking Irish for 6, 19, 21 and 32 years respectively. This provides for a good amount of comparison to see the difference age and

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length of time speaking can influence the development of the palatalization contrast. All of the participants take lessons or teach at a non-profit Irish language school on Long Island, New York, where they have the chance to interact in a community of speakers on a minimum of a weekly basis.

Although nothing can be definitively concluded based solely on the data from these participants due to there being such a small number of them, this study provides a preliminary set of results to provide a snap shot of what is possible for this population of speakers. From this some ideas can be put forth about the possible direction of change the language is taking and pave the way for some future studies.

4.2 Materials

A word list was created so that each word contained one of the target consonants chosen to represent the palatalization contrast. All of the consonants appeared word initially and both before a high front vowel and a high back vowel. This ensured that each consonant was seen in either vowel extreme, where the contrast is most salient and where it is acoustically masked. The words were chosen using the pronunciations from an online dictionary (www.teanglann.ie). This was to make sure that the words used had as close to the same vowel as possible across all three dialects in an attempt to remove variability amongst participants trying to emulate one dialect over the other. A list of English words was also created as a baseline measure to see how the consonants differed from English to Irish. For a full list of the words used see Appendix 1 at the end of this thesis.

4.3 Procedure

All participants first took a language background survey to find out when and where they learned to speak Irish and to find out their motivation for learning the language as well as other

languages they may speak to ensure that there were no other obvious linguistic experience that would interfere with the learning of the contrast in question.

Any participant that had learned Irish before the age of 12, or who was not competent in the language would have been excluded along with anyone with previous knowledge of a language with a similar palatalization contrast such as Russian. Once it was determined that the participants fit the criteria of the study, sound recordings were made in order to determine the nature of the palatalization contrast.

In order to elicit the desired sounds the list of words was created as described above and presented to the participants in a PowerPoint slide show where the participants read the word in a carrier phrase, which was taken from Bennett, Ní Chiosáin, Padgett & McGuire (2017) (*Scairt Aoife _____ Dé Céadaoin.* Aoife shouted ____ on Wednesday.). The sentences were recorded on a Zoom H4n at 96 kHz in a quiet room of the Irish language school. The words were presented in a random order and two or three recordings of each were taken (two of the participants do not have a third round of recordings due to a time constraint or technical difficulties).

One drawback is that the words were presented in written form. The orthography of Irish uses vowels to mark the palatalized and velarized consonants (which are referred to as slender and broad respectively). The vowels *i* and *e* will appear on either side of a palatalized consonant while *a o* or *u* will be used on either side of a velarized consonant to denote that the consonant is not palatalized. For example, in the word *chiúnaí* /xʲunˠi/ meaning 'hushed' the first *i* is not pronounced it is only there to mark the first consonant as palatalized. The same goes for the *a* it is only there to mark the *n* as not palatalized. The fact that there are markers to the palatalization contrast so clearly embedded into the orthography could mean that there will be fewer errors

than would appear in natural speech. In order to combat this, a carrier phrase was used to hopefully create a more natural rendition of the word's pronunciation.

4.4 Analysis

In order to determine if there is palatalization or velarization present in the speech of the participants, Praat was used to measure the second formant at the onset of the vowel and again at the midpoint of the vowel. For a palatalized consonant before a high back vowel the second formant should drop, and the second formant should rise for a velarized consonant before a high front vowel. When a palatalized consonant is before a high front vowel, the gesture is masked and thus there should be no change in the second formant transition. The same is true for a velarized consonant before a high back vowel, the second formant will not change due to similar tongue position for the velarization gesture and for the following vowel. After formant transitions were measured the difference between the formants were taken. A high positive difference signified palatalization and a high negative difference signified velarization in acoustically salient environments. It is in these environments that the analysis was most focused as this is where palatalization is said to not be occurring in other studies.

The average difference between the two formants was taken for the palatalized consonants before a high back vowel and for the English consonants in the same environment. In order to determine if a deviation was made, a deviation being when a palatalized consonant was not palatalized, the difference in the formant transition was compared to the English and if it was within a few hundred Hz (to account for natural variation) then it was determined that no palatalization occurred. The same went for velarization before high front vowels and English counterparts before the high front vowels.

5.0 Results

5.1 Existence of the contrast

First and foremost, the question of whether or not this population of speakers has the contrast was explored. Three of the four speakers had very low rates of palatalization or velarization loss with one of the participants exhibiting no instances of palatalization loss. The second speaker however had a rate of palatalization loss that was 84.5 percent and a 50 percent rate of velarization loss potentially indicating that this speaker does not actually have the contrast. This could potentially be explained by the fact that this speaker has the least amount of experience with the language. When looking at just the speakers who are more experienced, it is clear that it is possible for the palatalization contrast to be acquired. There is only a 9 percent rate of palatalization Loss and an 18 percent rate of velarization loss.

Table 4. Percent of Palatalization Loss

Participant	% Palatalization Loss
1	9.09
3	18.18
4	0
All	9.09

Table 5. Percent of Velarization Loss

Participant	% Velarization Loss
1	27.27
3	13.64
4	9.09
All	18.18

5.2 Consistency in Where Palatalization and Velarization Loss Occurs

Breaking down the errors by place and manner showed that across participants the most errors occurred for the palatalized nasals and velarized fricatives. As far as place is concerned the most errors occurred in palatalized coronals and velarized velars. Across participants every participant failed to velarize the velar fricative except for participant three who had velarization for one of his repetitions. The coronal nasal was also problematic with all participants producing it without palatalization except for participant four. The two words that consistently had absence of palatalization or velarization were niúmóine /nʲumonʲa/, meaning 'pneumonia', and choiche /xˠixʲə/, meaning 'forever'. Otherwise absence of palatalization and velarization was more or

less randomly scattered.

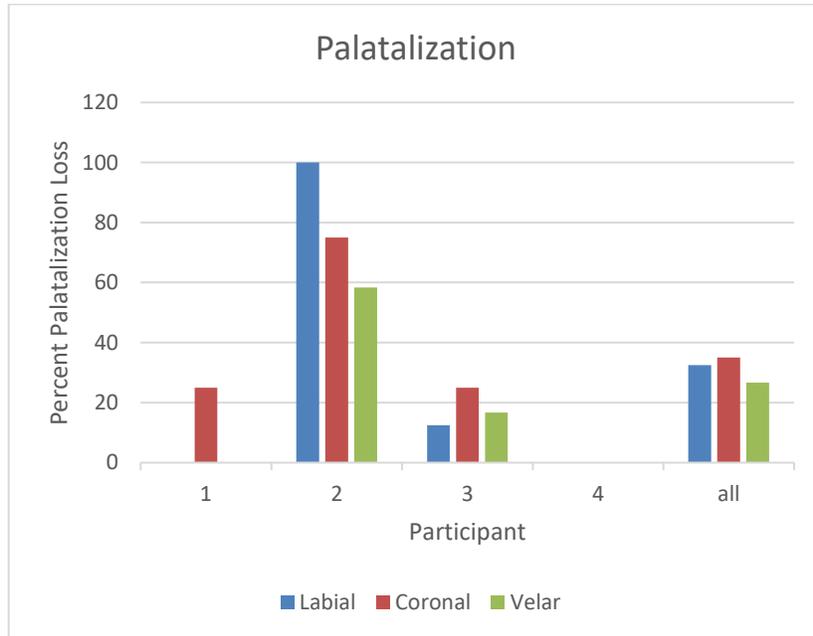Figure 2. Percent Palatalization Loss Across Place of Articulation for Palatalized Consonants

Figure 3. Percent Palatalization Loss Across Place of Articulation for Velarized Consonants
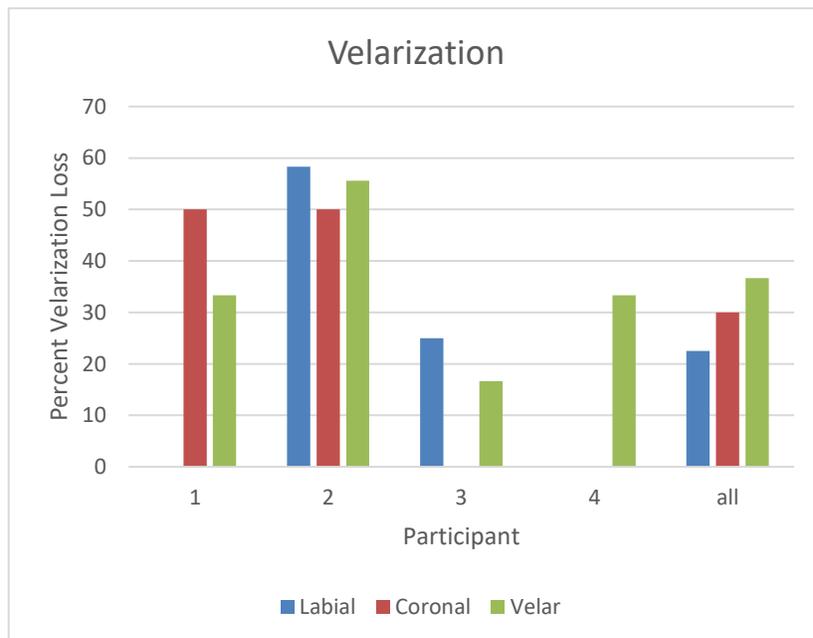
Figure 4. Percent Palatalization Loss Across Place of Articulation Without Participant 2
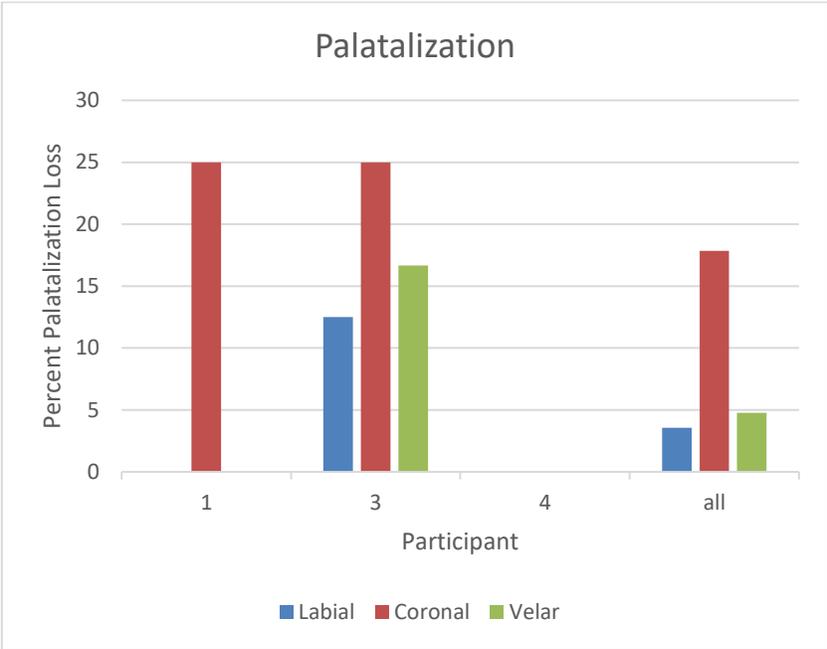

Palatalization

Percent Palatalization Loss

Participant

Labial ■ Coronal ■ Velar

Figure 5. Percent Velarization Loss Across Place of Articulation Without Participant 2

Velarization

Percent Velarization Loss

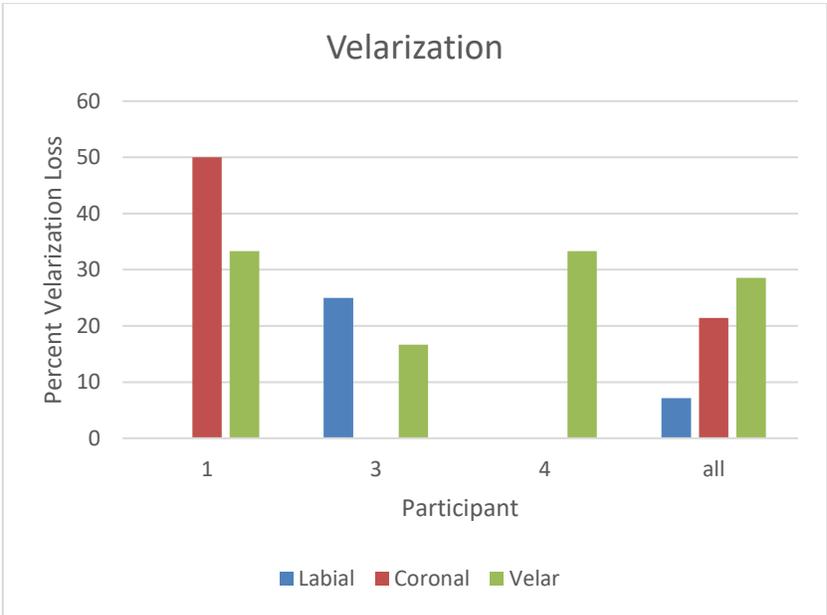Participant

Labial ■ Coronal ■ Velar

Figure 6. Percent Palatalization Loss Across Manner of Articulation for Palatalized Consonants
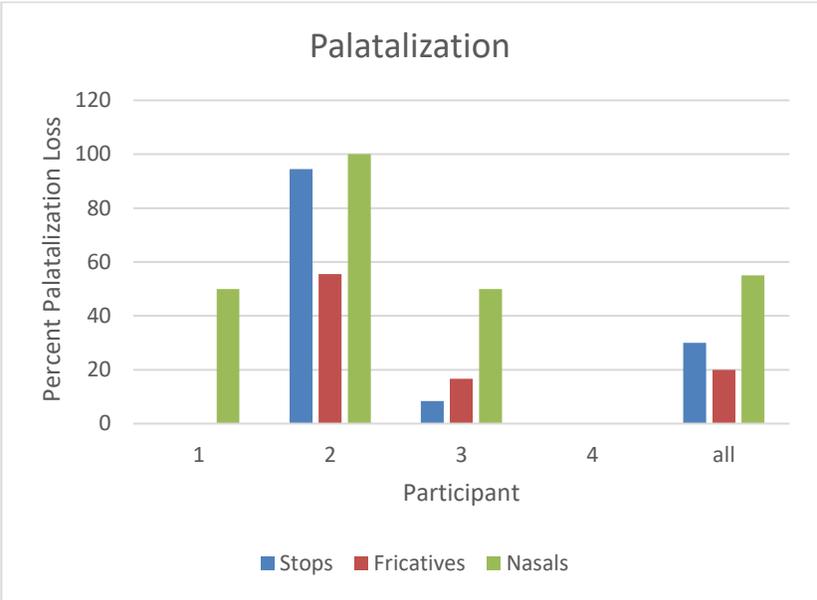

Figure 7. Percent Velarization Loss Across Manner of Articulation for Velarized Consonants
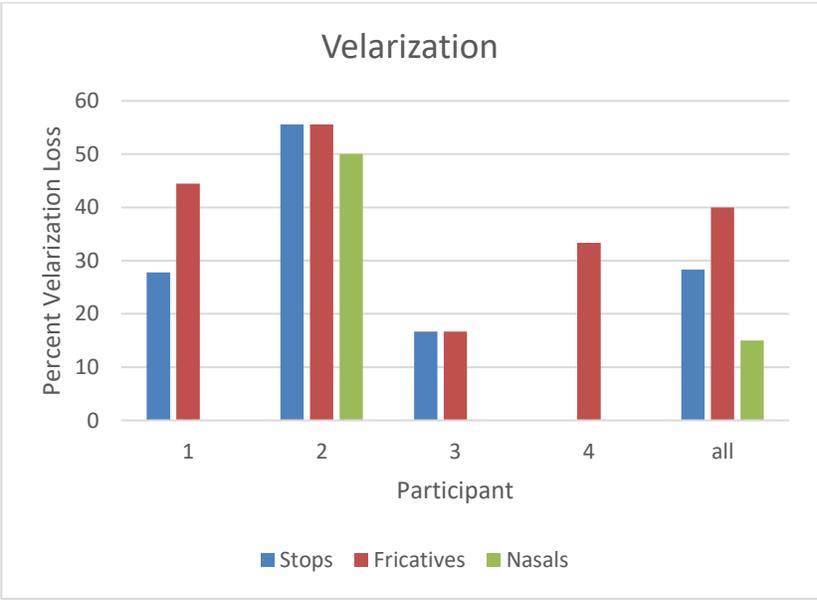
Figure 8. Percent Palatalization Loss Across Manner of Articulation for Palatalized Consonants Without Participant 2
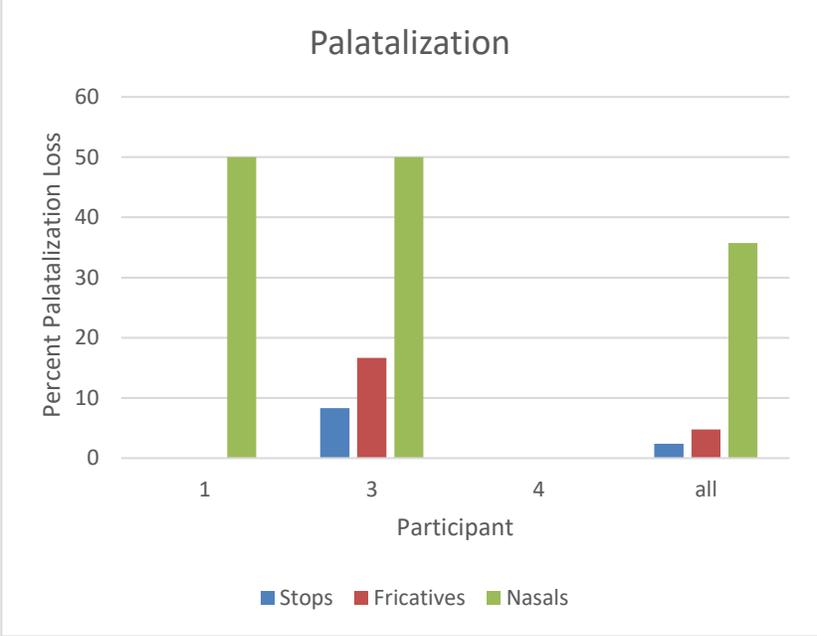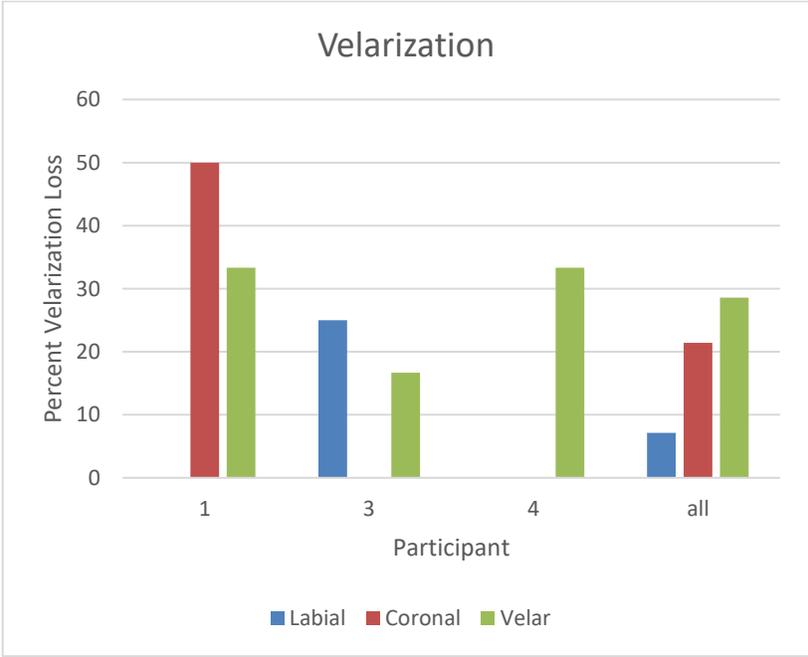

Figure 9. Percent Velarization Loss Across Manner of Articulation for Velarized Consonants Without Participant 2

5.3 Age Effects

The participant who started learning Irish the latest and had the least amount of time speaking the language, unsurprisingly, had the highest percent palatalization and velarization loss. The participant who was youngest when learning to speak but who had only been speaking for six years performed roughly the same as the two speakers who had been speaking for 19 and 21 years. Of the two speakers who had been speaking the longest the participant who was older actually had lower percent palatalization and velarization loss. These results suggest that the variation among participants is influenced by age and length of time speaking, however the age when learning began seems to have a very strong effect when looking at the two participants who had only been speaking for four and six years. The participant who started learning at 50 had much higher rates of palatalization and velarization loss than the participant who started learning at 18 despite having similar length of time speaking the language. Of course, there are other factors that could be at play that were not looked at here such as the amount of time speaking the language on a daily basis and how often they come into contact with other people who speak Irish.

Figure 10. Age when Learning Began and Percent Palatalization and Velarization Loss
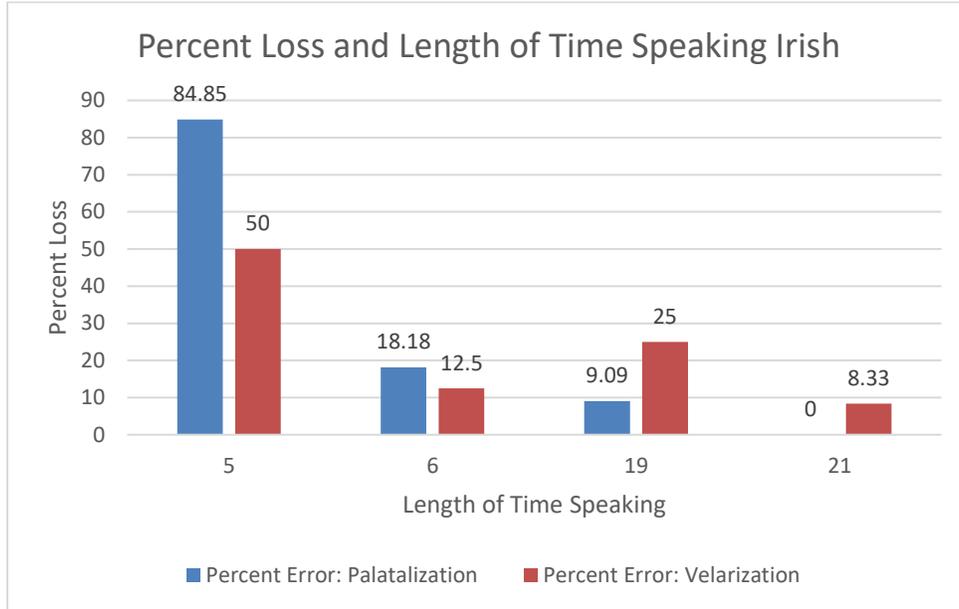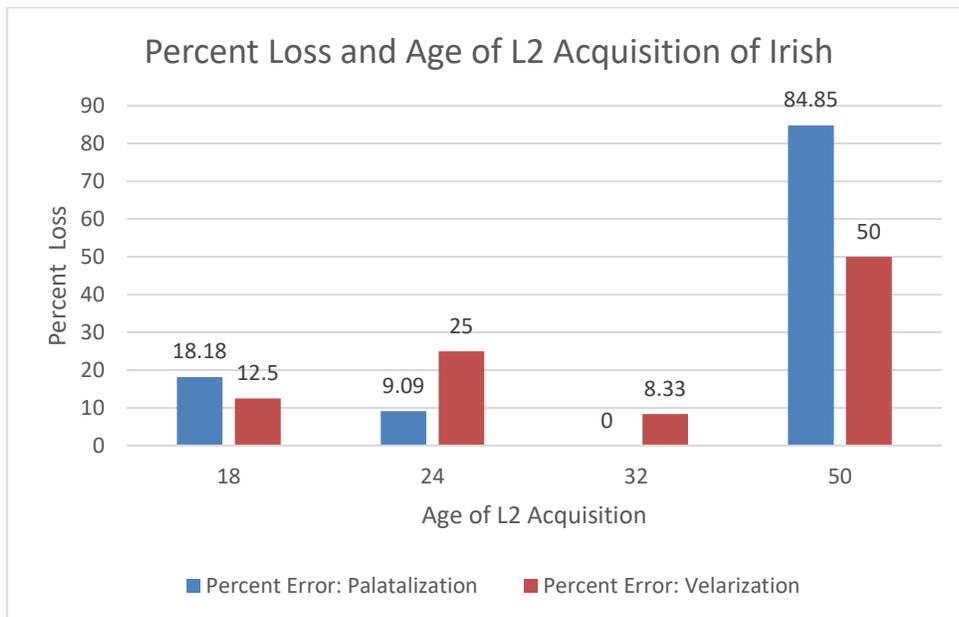

Figure 11. Length of Time Speaking and Percent Palatalization and Velarization Loss

6.0 Discussion

One purpose of this thesis was to do a review of the literature concerning the language situation in Ireland and discuss the extent to which English influences the change of Irish. Much of the existing literature holds that the primary source of change is due to English contact. This paper focused on consonant palatalization, which is said to be disappearing, or according to some, moving to a positional contrast where palatalization only occurs before front vowels since English has allophonic palatalization in this position. The findings from existing literature in conjunction with the findings of a brief study conducted on another small group of second language Irish speakers were looked at to make the argument that the contrast is not disappearing, nor becoming positional before front vowels alone. Rather, the contrast is alive and well in onset position but possibly changing in terms of its phonetic realization. In addition, there is reason to believe that the contrast could be disappearing in coda position. However, it is not necessarily due to English influence. The rest of this section will aim to flush out these arguments.

The palatalization contrast is said to be transitioning to a contrast in which it occurs only before front vowels or disappearing all together (Ó Béarra, 2007; Snesnareva, 2016; O'Broin, 2014). However, data from the second language speakers in the United States presented above provides support that the contrast is not disappearing, at least in word initial position. These speakers do not get regular contact with native speakers in order to learn native-like production of the contrast, yet still exhibit very low rates of palatalization or velarization loss. The same was found by Snesnareva (2016, 2017) for word initial position.

Turning to the claim that palatalization is only occurring before front vowels, there are problems as discussed above with this argument. Namely, that palatalization is more salient

before back vowels and thus would not be misperceived by the second language speakers. Furthermore, the fact that English has allophonic palatalization is not the only aspect of English that can have an impact on the palatalization contrast. These studies leave out the fact that there are consonant glide clusters such as in the words *music*, *few*, *cute*, and *putrid*, to name a few. These consonant glide clusters in conjunction with the fact that palatalization is more salient in general before back vowels will aid second language speakers in hearing and producing the contrast. Velarization is not mentioned in these studies, however, the same would hold for velarization in that before front vowels it would be more perceptually salient. Furthermore, there are English words such as *quip* and *tweet* that have a velar glide following a consonant which, like palatalization, could allow the second language hearer to map the velarization onto. Since the velarization is not quite as similar to Cw clusters as palatalization is to Cj clusters. This parallel may not aid the second language speakers as much leading to the expectation that velarization would have a higher percent of velarization loss. The speakers from the United States did not exhibit a loss of the velarization contrast. The rate of velarization loss was low at 18 percent. However, as expected the rate of velarization loss was higher than the rate of palatalization loss, in fact it was double the rate of palatalization loss.

Snesnareva (2017) came to the conclusion that a new dialect of Irish was emerging in Dublin, since English could not account for there being a higher rate of palatalization loss in sonorants and labials. However, there is some reason to believe that English is the cause for there being difficulty in the production of the contrast. The data from the United States speakers can further speak to this idea. There was not a higher rate of palatalization loss for labials in the data presented above for second language speakers living in the United States. This provides support for the emergence of a new dialect in Dublin Irish. If English was the cause of this

palatalization loss in labials it would have been present in the data from the speakers in the United States.

Although there is good evidence that the palatalization contrast exists in onset position for second language speakers, this does not mean that the contrast is not disappearing in coda position. Snesnareva (2016, 2017) found a higher percent absence for palatalization in coda position, which would be in line with the fact that palatalization is not as perceptually salient in coda position due to phonetic factors, such as consonants in coda position not being released. Being that palatalization and velarization are secondary articulations produced on the release of a consonant it is likely that they will be lost on a consonant that is unreleased. If there is a trend towards the palatalization contrast disappearing it is not necessarily due to English contact; rather the cause is natural phonetic factors that could have caused this disappearance regardless of the influence of English, which has happened in other languages of the world such as Bulgarian (Kochetov 2002).

There is evidence that the contrast is achievable for second language speakers of Irish, however, it is likely that due to English influence this contrast is not the same as a native speaker's production of the contrast. The palatalization exhibited here may not be a coarticulation on the consonant but rather a consonant followed by a glide. Due to the presence in English of Cj clusters and the lack of contrastive palatalization in their first language, English speakers may have a hard time perceiving native Irish palatalization and instead are mapping it onto the closest auditory equivalent. In this case being the consonant glide clusters. This is attested by Diehm (1998) in a study with second language Irish speakers where, the L2 speakers exhibit this pattern of producing a palatalized consonant as a Cj cluster.

There is reason to believe that the same is occurring with these speakers. It appears that

there is a full glide rather than true palatalization in the production of the four participants in this study. The formant transitions of the consonants have relatively long durations, some of which are as long as 100ms.

However, aside from these minor indications nothing can concretely be said without comparison to a native speaker. In order to really test whether or not the palatalization contrast is being produced as a Cj cluster, it would be necessary to record the production of the palatalization contrast from both native Irish speakers and second language speakers. The next step would be to measure the slope as well as the duration of the second formant transitions, in order to see if the slopes of the formant transitions for the native speaker is steeper and the duration is shorter than that of the second language speaker.

Lastly, with a large population of second language speakers, the effects of factors such as age, length of time speaking or learning the language, frequency of language use, etc., are important to take into account. Depending on where a speaker falls, their competence level in the language will differ creating some speakers with near native control of the contrast and some speakers who do not appear to have the contrast at all. This was exhibited with the four participants looked at in this study. While it appears the palatalization contrast still exists it is likely vulnerable. The more variability in the production of the contrast the more likely new speakers will not hear examples of the contrast being produced, and thus will learn to speak Irish without the palatalization contrast, adding to the pool of people who do not have the palatalization contrast.

Another way having a large amount of second language speakers in the speaker population can quicken language change would be the speeding up of a change that is naturally happening. The change from the palatalization contrast occurring in all positions to the contrast

being lost in coda position is not a direct influence from English, however the fact that there are so many second language speakers could hasten the change. If perception of the palatalization contrast is weaker in coda position for native speakers, there is a good chance it is even weaker for second language speakers. This could make it all the more difficult to perceive the contrast in that position, meaning that they will have a harder time producing the contrast. Thus, there is a chance it will be lost quicker being that the majority of the population of speakers will have difficulty with the contrast in that position.

7.0 Conclusion

Second language Irish speakers are the future of the Irish language (McCloskey, 2001) yet there is a belief that second language speakers are destroying the language (Ó Béarra 2007), or that they do not know enough to sufficiently function in a conversation (O'Rourke, 2011). It is these beliefs that will hold the second language speakers back and with them, the language as a whole. There needs to be support for these speakers. If they are not seen as true speakers of the language it will be hard to develop community support and create a thriving environment where the language can be spoken outside of the Gaeltacht.

Taking an in depth look at how these speakers are producing the language can show that though there are changes happening to Irish it is not just "an imitation of English", as put by Ó Béarra (2007). Furthermore, as was shown in this study, there is a certain level of competence exhibited by the second language Irish speakers in their production of the palatalization contrast, despite limited exposure to native speakers. The acoustic details of the contrast may differ from native speakers, but it is there. The second language speakers have the same system of contrast as the native speakers. The second language speakers in this study as well as other second language speakers have the ability to communicate with each other and native speakers alike.

The more that is known about the speech of the second language Irish speakers the easier it will be to dispel the myths behind these speakers and unify the Irish speaking community. This in turn, helps the language to move forward and hopefully become a full thriving language in Ireland once more.

Appendix 1

Word List for Target Palatalized and Velarized Consonants

Irish Words

Before /u/	IPA Transcription	English Gloss	Before /i/	IPA Transcription	English Gloss
piúratánach	pʲurˠətˠɔnˠaxˠ	puritain	píopa	pʲiopˠa	pipe
púca	pˠukˠə	ghost	pointe	pˠinʲtʲə	point
biúró	bʲurˠo	bureau	bía	bʲia	food
búcla	bˠukˠlˠə	buckle	buí	bˠi	yellow
tiús	tʲusˠ	thickness	tinn	tʲinʲ	sick
túr	tˠurˠ	tower	taoibh	tˠivʲ	side (pl)
diúg	dʲugˠ	drop	díreach	dʲirʲaxˠ	straight
dúch	dˠuxˠ	ink	daoine	dˠinʲə	management
ciúin	kʲuɪnʲ	quiet	cíor	kʲiɔrˠ	comb
cúig	kˠuigʲ	five	cuí	kˠi	proper
giúmar	gʲumˠərˠ	mood	gíog	gʲiəgˠ	chirp
gúna	gˠunˠə	dress	guím	gˠimʲ	I pray
sú	sˠu	juice	suí	sˠi	sitting
siúcra	sʲukˠrˠə	sugar	sicin	sʲikinʲ	chicken
fiúntas	fʲunˠtˠəsˠ	worth	fion	fʲʌnˠ	wine
fustaire	fˠusˠtˠərʲɜ	fidgety person	faoistin	fˠisʲtʲinʲ	confession
chiúnai	xʲuní	hushed	chíor	xʲiorˠ	combed
chun	xˠunˠ	towards	choiche	xˠixʲə	forever
míuil	mʲulʲ	mule	míle	mʲilʲə	thousand
múinteoir	mˠunʲtʲɔ.ɾʲ	teacher	maoirseoir	mˠirʲsʲɔrʲ	supervisor
niúmóine	nʲumˠonʲa	pnemonia	ní	ni	nothing
nuachtán	nˠuaxˠtˠɔnˠ	newspaper	naoi	nˠi	nine

English Words

Before /u/	IPA Transcription	Before /i/	IPA Transcription
pooch	putʃ	peet	pit
boot	but	beet	bit
tomb	tum	team	tim
dule	dul	deal	dil
coup	kup	keep	kip
goul	gul	gear	giɹ
soup	sup	seep	sip
shoot	ʃut	sheet	ʃit
fool	ful	feel	fil
moon	mun	meer	miɹ
newt	nut	neat	nit

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