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ALLOMORPHIC VARIATION OF DEFINITE ARTICLES IN JERSEY:

A SONORITY BASED ACCOUNT

By

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B.A. in Liberal Studies, University of Montana, Missoula, Montana, 2004

Thesis

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Allomorphic Variation of Jersey Definite Articles: a Sonority Based Account

Chairperson: Dr. Mizuki Miyashita

Allomorphic variation is a common linguistic phenomenon in Jersey (Jersey Norman French). Definite articles in Jersey each have at least two allomorphs. The occurrence of each allomorph has been attributed to the composition of word initial syllable following the article (Liddicoat 1994). Instead of using a ruled-based approach, this thesis examines the variation found among Jersey definite articles and uses sonority-based principles to analyze the allomorphic variation. Using Jersey phonotactics, this thesis first puts forth a Jersey specific sonority hierarchy and then utilizes that hierarchy and principles of syllabification to syllabify phrases containing definite articles. Then using sonority based principles, such as the Sonority Sequencing Principle and Syllable Contact Law, this thesis analyzes the syllabified phrases. The analysis identifies the sonority based conditions that trigger the allomorphic variation found in the data. This thesis contributes to the field of linguistics in several ways. It supports the use of both the Universal Sonority Hierarchy and language specific sonority hierarchies. This thesis also supports the practice of using available data sources for analysis. The analysis of a described but analyzed phenomenon contributes valuable information to the general knowledge of Jersey and sonority. Finally, this thesis also serves as an important resource for the study of Norman dialects in Europe such as Guernsey, Sark and Norman, as Jersey is a member of this linguistic group. This thesis contributes to both the field of Jersey linguistics and to the field of theoretical linguistics, while accounting for the allomorphic variation of Jersey definite articles.

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I would like to thank my thesis chair, adviser, and friend, Dr. Mizuki Miyashita. My exposure to phonology, and indirectly sonority, is because of her. She spent many hours reading and editing this thesis and provided invaluable guidance throughout the research and writing of this thesis. I also extend my appreciation and gratitude to Dr. Leora Bar-el. Not only did she agree to sit on my committee, she has provided me with excellent instruction and guidance as my professor and advisor. I never would have experienced the joy of linguistics if it had not been for Dr. Bar-el. I thank, also, Dr. Naomi Shin for providing superb insight as a member of my committee and for her encouragement. I am also deeply indebted to Drs. Tully Thibeau and Irene Appelbaum for their outstanding instruction and assistance during my linguistic education. I would also like to extend my gratitude to several of my peers. First to Ryan Denzer-King, who not only read my thesis and provided insightful and thought provoking feedback, but who also has provided many hours of interesting linguistic discussion throughout out our time as graduate students. I also thank Scott Sterling for reading and commenting on my thesis. I would like to express my gratitude to Gustavo Guajardo. He read my thesis and was the prescriptive grammarian I needed. This thesis, and my education, would never have been possible if it had not been for the support of my best friend, my husband, Sean McCarvel. He has believed in my abilities even when I have faltered. He has provided the foundation for my education. Lastly, I would like to thank my family for their love and support.

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SECTION 1: INTRODUCTION

Definite articles in Jersey exhibit allomorphic variation. The masculine and feminine singular article morphemes /l/ and /la/ each have two allomorphs, while the plural definite article morpheme, /lei/, has three allomorphs. Grammars of the Jersey language describe the variation of allomorphs and attribute the phenomenon to the phonological composition of the word following the article, specifically whether the word begins with a vowel, consonant, or consonant cluster (see Birt 1985 and Liddicoat 1994). While this provides a basic, surface explanation, it does explain the underlying motivation for such alternation of allomorphs. In order provide a theoretical explanation for the alternation of allomorphs I posit a language specific sonority hierarchy of Jersey. Using this hierarchy and principles of syllabifications, such as the Minimal Onset Satisfaction Principles (Rocca 1994) and the Core Syllabification Principles (Clements 1990), I syllabify Jersey phrases containing definite articles. I then use principles of sonority, for example the Sonority Sequencing Principle (Clements 1990) and the Syllable Contact Law, to illustrate how the alternation exhibited by the definite article allomorphs is predictable when these principles are taken into account.

This thesis contributes to both the field of theoretical linguistics and to the field of Jersey linguistics. Theoretically this thesis provides support for the use of language specific hierarchies in the analysis of syllable structure. The absence of speaker intuitions in syllabification can be mitigated by using a language specific sonority hierarchy in addition to principles of sonority and syllable structure. Using the sonority hierarchy and these principles phrases can be syllabified without the aid of speaker judgments. The

language specific sonority hierarchy put forth in this thesis is a finer gradation of the Universal Sonority Hierarchy (Clements 1990). The Universal Sonority Hierarchy captures general trends across languages, while language specific sonority hierarchies capture the intricate phonotactic details of a language. The Jersey Sonority Hierarchy does not contradict that Universal Sonority Hierarchy, but instead reinforces its rankings of various classes of sounds.

This thesis also contributes to both fields in that it analyzes a previously unanalyzed phenomenon, that of allomorphic variation of Jersey definite articles, using cross linguistic principles. The current literature (Liddicoat 1994) describes the occurrence of definite article variation, but does not provide an analysis or put forth any underlying theoretical motivation. The field of Jersey linguistics has been limited to mostly sociolinguistic and historical linguistic research. This thesis is the first in many years to approach Jersey linguistics from the standpoint of phonological theory. It is the only thesis I know of that uses principles of sonority to analyze Jersey phrases and posit a Jersey Sonority Hierarchy.

This thesis is organized as follows: in Section 2 I discuss the language background of Jersey, including where it is spoken, its status, history, and dialects. The data I use in this thesis, along with the sources for that data, are reviewed in Section 3. I give an overview of the phonemic inventory, including consonants, vowels, and diphthongs, in Section 4. Syllables, syllable structure, and Jersey syllable structure are reviewed in Section 5. Principles, parameters, and laws dealing with syllables and sonority are discussed in

Section 6. In Section 7, I propose a Jersey specific sonority hierarchy. I present the morphophonemics of Jersey definite articles, examining the allomorphic variation for each article and positing an underlying morpheme for each in Section 8. In Section 9, I use the principles from Section 6 and the hierarchy from Section 7 to analyze the allomorphic variation of Jersey definite articles seen in the data from Section 8. I conclude the thesis and discuss implications in Section 10.

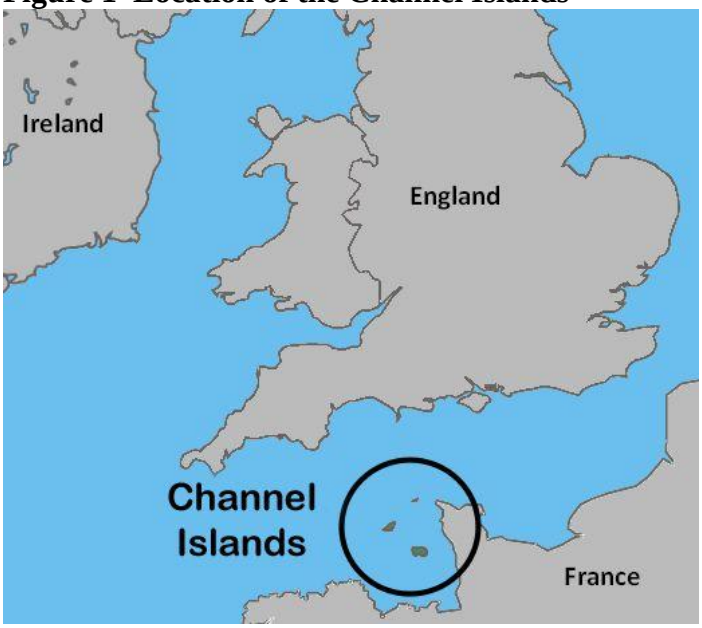
SECTION 2: LANGUAGE BACKGROUND

This section provides an overview of where Jersey is spoken, its status relative to speaker numbers, and some of the linguistic history of Jersey. I also present the issue of whether Jersey is a language or a dialect of French and the dialectal variation found among Jersey and neighboring Norman languages and within Jersey itself.

2.1 Geography

Jersey is an endangered language traditionally spoken on the Island of Jersey. This island, along with the Islands of Guernsey, Sark, Herm, and Alderney, form the Channel Islands, which are a dependency of the United Kingdom (Jones 2001). The Channel Islands are located off the coast of Normandy, France in the Bay of St. Malo, as shown on the map in Figure 1.

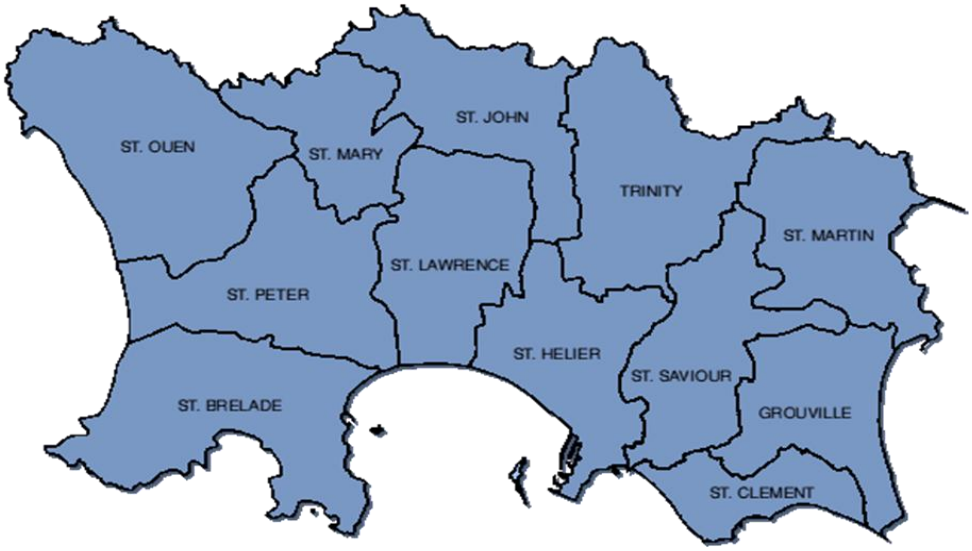
Figure 1 Location of the Channel Islands



(http://en.wikipedia.org/wiki/File:Channel_islands_location.png)

The Island of Jersey is divided into parishes, which are geo-political divisions within the island, similar to counties in the United States (Figure 2 below). Each parish has its own distinct dialect of Jersey, which are referred to as *parlers* and are discussed below in Section 2.6.

Figure 2 Parishes on the Island of Jersey



(http://user.itl.net/image/maps/jsyall.gif)

2.2 Status – Documentation and Vitality

Jersey is a fairly well documented, yet endangered language (Birt 1985; Brasseur 1977, 1978a, 1978b; Carré 1972; Collas nd; Jones 2001, 2003, 2005a, 2005b, 2007; Le Feuvre 1976, 1979, 1983; Le Maistre 1966, 1979a, 1979b, 1981, 1993; Liddicoat 1990, 1991, 1994; Spence 1960, 1985, 1987). According to La Société Jersiais[1] in a 2001 census of

[1] La Société Jersiais is a society founded in 1873 for the preservation and encouragement of Jersey culture and language.

the Island of Jersey, 2,674 people were fluent speakers of Jersey (societe-jersiaise.org). This represents approximately 3% of the Island's population, with the majority of the population speaking English. An earlier census in 1989 showed 5,720 speakers (Jones 2001). Despite active revitalization efforts, the Jersey speaking population is declining (Jones 2001).

2.3 Linguistic History

Jersey, known as Jérriais [ʒɛ̀rjei] to speakers, is also referred to in the literature as Norman French and Jersey Norman French. Jersey should not be confused with Jersey Legal French or Jersey French, which is the dialect of French used administratively on the Island of Jersey for written legal documents and contracts. Historically, the original inhabitants of the Island of Jersey probably spoke Gaulish, which was eventually replaced by Vulgar Latin in the second century (Jones 2001). In 933 William Longsword brought Norman French to the island after the annexation of Channel Islands into Normandy (Liddicoat 1994). The version of Norman French brought by Longsword evolved into the Jersey language spoken on the Island today. As a result of the rich linguistic history of the Island, Jersey's lexicon contains many words of Norse, Latin, and Gaulish origin. Though the Island of Jersey is part of the United Kingdom and has been influenced by English, French has had a stronger cultural influence on the Island. Due to contact with both countries and their languages, there are also a number of English and French loanwords.

2.4 Dialect or Language

While Jersey is related to French, both daughters of the Northern division of the Gallo-Romance subfamily, there is some debate as to whether Jersey is a dialect of French or a language unto itself. Ethnologue (Gordon 2005) and some linguists, such as Anthony Liddicoat and N. C. W. Spence, consider Jersey a dialect of French, yet speakers and those engaged in revitalization of Jersey, Frank Le Maistre and Paul Birt, for example, consider Jersey to be a language distinct from French (Jones 2001). Jones (2001) considers Jersey a language and not a dialect of French. The criterion of mutual intelligibility is often used to distinguish a language from a dialect (Chambers and Trudgill 2002). Social and political factors must also be taken into consideration in distinguishing languages from dialects. For example, Norwegian and Swedish are mutually intelligible, but are not considered dialects; instead they are viewed as languages, just as Italian and Spanish, also mutually intelligible, are considered separate languages (Chambers and Trudgill 2002). This distinction between dialect and language is based on sociopolitical reasons and not linguistic reasons, such as mutual intelligibility. The case of Jersey and French is similar. There is a certain amount of mutual intelligibility, though phonological, morphological, semantic and syntactic differences make Jersey harder to understand for French speakers than other dialects of French (Liddicoat 1994). Also, much of the Jersey lexicon is not found in standard French. For example, 'young girl' in Jersey is *hardelle* [hardel] while in French it is *jeune fille* [ʒœn fiːj]. Another difference between the two is that Jersey, unlike French, does not distinguish between first person singular and plural in its pronouns. Jones (2001) argues that for these linguistic reasons, plus sociopolitical reasons, Jersey is not a dialect of

French, but a language distinct from French[2]. After taking into account the linguistic difference between Jersey and French, this thesis refers to Jersey as a language.

2.5 Dialects

Among the Channel Islands there are other languages that are closely related to Jersey and are considered dialects of one another. The dialect most closely related to Jersey is the dialect of Sark (Sercquiais), which descends from Jersey speakers who settled the Island of Sark. Two other related dialects are Guernsey (Guernesiais), spoken on the Island of Guernsey, and the now extinct Alderney (Auregnais), once spoken on the Island of Alderney. Jersey and the dialects of Sark and Guernsey share a certain degree of mutual intelligibility, with Jersey and Sark being more intelligible, and there is a small inventory of lexical items that are unique to each dialect (Liddicoat 1994). The use of the word dialect in this thesis refers to those dialects mentioned in this section.

2.6 *Parlers*

Within Jersey there are dialectical differences found from parish to parish. Jersey linguists refer to these variants as *parlers* and are referred to as such in this thesis. *Parlers* are regional dialects of Jersey, similar in idea to regional dialects of English in the United States. They are mutually intelligible, regional variations found within a language. The variation found among the *parlers* is primarily phonological and, to my knowledge, there are no syntactic or semantic differences. The phonological difference most pertinent to this thesis is that of vowel changes. In some parishes the phonemes /e/

[2] For a more extended discussion on the differences between Jersey and French, see Spence (1960), Jones (2001), and Liddicoat (1994).

and /ɛ/ “have coalesced into a single phoneme” (Liddicoat 1994: 114). The phoneme /ei/ has become /ɛː/ in some *parlers*. Also in the dialect of Sark and the *parler* of St. Ouen, /z/ has become /ð/. Due to the fact that the quality of the vowel has no direct bearing on my analysis and for consistency in data presentation in this thesis, I have chosen to use the most common *parler*. This *parler* is referred to as West Jersey, which is spoken in most of the parishes on the western part of the Island.

SECTION 3: DATA SOURCES

All data used in this thesis come from Liddicoat (1994). This source was chosen due to the fact that it is the only widely available source of phonetically transcribed Jersey sentences. Liddicoat (1994) uses several sources for his data. The primary source of data comes from interviews conducted by Liddicoat in 1985. Liddicoat interviewed ten Jersey speakers and also used a questionnaire to obtain his data. These speakers were primarily over sixty years of age and were all native speakers. Liddicoat's secondary sources of data are written texts, such as newspapers. These include two texts found in *Lé Bulletiñ d'Quart d'An dé l'Assembliée d'Jérriais*. All data presented by Liddicoat are phonetically transcribed into IPA, except the glossary, which is phonemic. The data in this thesis are taken directly from Liddicoat's phonetic transcriptions.

3.1 Compilation of Data

Allomorphic variation occurs in a variety of parts of speech in Jersey. Variation can be found in pronouns, negation morphemes, conditionals, verbs, nouns, and adjectives. For this thesis only articles are focused on in order to eliminate the possibility of other factors, such as semantic constraints, influencing allomorph choice. In order to obtain data for this thesis, all of the examples (over 500 items) in Liddicoat (1994) were reviewed. Since Liddicoat (1994) contains data from both Sark and Jersey, I then separated the Jersey data from the Sark. Next, all the Jersey data (341 individual items along with four texts) were examined for examples that contained articles. These were then sorted by gender, number, and definiteness. These data were culled through to give examples from a variety of phonological environments, such as prevocalic, postvocalic,

preconsonantal, postconsonantal, and sentence initial. This ensures a well balanced array of data available for analysis.

SECTION 4: PHONEME INVENTORY

In this section I review the basic phonological inventory of Jersey. Jersey's phoneme inventory is broken down into two sections, consonants and glides in Section 4.1 and vowels and diphthongs in Section 4.2.

4.1 Consonants and Glides

The phonemic inventory of consonants and glides found in Jersey is presented below in (1), which is adapted from Jones (2001)[3]. The few allophonic variations of consonant that occur in Jersey are not included in the table. The phoneme /r/ has two allophones, [r] and [ɹ], with the latter rarely occurring (Liddicoat 1994). Also, consonant length in Jersey is phonemic, with length being represented by the following geminates: /tt/, /dd/, /ss/, /zz/, /ʃʃ/, /ʒʒ/, /ll/, /nn/, /rr/, and /ðð/ (Spence 1960, Liddicoat 1994).

(1) Jersey Consonants and Glides

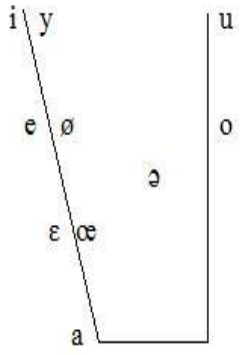
	Bilabial	Labio-dental	Dental	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
Stop	p b			t d			k g	
Fricative		f v	ð	s z	ʃ ʒ			h
Affricate					ʧ ʤ			
Nasal	m			n		ɲ		
Lateral				l		ʎ		
Approximant	w					j		
Trill				r				

[3] The table in (1) is adapted from Jones (2001) in that /ð/ has been given its own place of articulation column, 'Dental,' distinct from /s/ and /z/. The table does not contain the glide /ɥ/. While /ɥ/ does occur phonemically in Jersey it is not listed by Spence (1960), Liddicoat (1994), or Jones (2001). Liddicoat (1994:124) does note that in Jersey /ɥ/ "may fall together with /w/ thereby decreasing the number of semivocalic phonemes to two."

4.2 Vowels and Diphthongs

The inventory of vocalic phonemes found in Jersey is shown below in (2). The phonemes /y, ø, œ, u, o/ are rounded vowels, while /i, e, ɛ, ə, a/ are unrounded.

(2) Jersey Vowels



Long and nasal vowels are phonemic in Jersey. The phonemes /e/, /ɛ/, /a/, and /o/ have both long and nasal forms, while the phonemes /i/, /y/, /œ/ and /u/ have long forms but lack nasal forms (Liddicoat 1994). The phonemes /ø/ and /ə/ lack both nasal and long forms (Liddicoat 1994).[4] The vocalic allophones, excepting [ə], can also be long and/or nasal. For a discussion on the phonemes found in Jersey, consult Spence (1960, 1985, 1987) and Liddicoat (1994).

Diphthongs are found in most of the *parlers* of Jersey, though there are some *parlers* that lack diphthongs (Liddicoat 1994). There are two diphthong phonemes, /au/ and /iə/, and several allophones. The following allophones are the diphthongs listed by Liddicoat

[4] While Liddicoat (1994) states that /ø/ has no phonemic nasal form, I found several instances of phonemic /ø̃/.

(1994): [ou] for /oː/, [ei] for /eː/, [wɔ] and [uo] for /uː/, and [øy], and [ɐy] for /œː/. For the purpose of this thesis, I treat diphthongs as one segment. This choice in analysis is discussed in Section 5.1.3.

SECTION 5: SYLLABLES

As sonority is the principle framework used in this thesis for analyzing the allomorphic variation of Jersey articles, syllables must be discussed in order to understand the analysis presented in Section 9. Syllables are the structural units that organize strings of phonological sound, and the organization of syllables is based on the inherent sonority of the phonological segments (Blevins 1996).

Syllables are composed of three parts, the onset, the nucleus and the coda. This is seen by examining the Jersey word [dyð] 'hard.' The onset of [dyð] is composed of the consonant [d] while the nucleus is the vowel [y]. The coda position is occupied by the consonant [ð].

The type of segment allowed to occupy each position is language-dependent. In English, any segment with the feature [+sonorant] can occupy the nucleus of a syllable (Mohanan 1991). Often, syllable nuclei are composed of a segment that has the feature [+syllabic] (Clements 1990) and are usually vowels. Though sometimes, again depending on the language, the nucleus can be composed of a glide or a consonant (Selkirk 1984, Clements 1990). For example, in English, which has syllabic consonants, the phoneme /r/ can be a nucleus, as in /pʰeɪ.p̩/ *paper*. This is not true of Jersey, which does not allow syllabic consonants (Liddicoat 1994).[5]

Syllables, at a minimum, must contain a nucleus, with the most basic syllable type being that of a single vowel (V). The most common syllable type is that of a consonant (C) and

[5] The absence of syllabic consonants in Jersey may be due to consonants lacking a [+syllabic] feature.

a vowel, CV (Clements 1990, Blevins 1996). These two syllable types are known as open syllables, referring to the absence of a coda. A closed syllable is one with a coda, (C)VC, with the onset being optional. Open syllables in Jersey are discussed in Section 5.1.1 and closed syllables in Section 5.1.2.

5.1 Jersey Syllable Structure

There are a number of allowable syllable types in Jersey, which I discuss in the following sections. Allowable syllable composition in languages is often attributed to sonority based constraints (Clements 1990, Blevins 1996).

5.1.1 Open Syllables

In Jersey, as with most languages, the open syllable is the preferred syllable type, with over 60% of verbs ending in open syllables (Liddicoat 1994). The composition of open syllables in Jersey can be that of a nucleus-only, as in the example in (3), or that of an onset plus a nucleus, as in the example in (4). These vowel only syllables can be composed of any vowel, except for /ə/ (Liddicoat 1994). Unlike other languages that allow syllabic consonants, such as English (Crystal 2003) and Berber (Dell and Elmedlaoui 1985), the nucleus position in Jersey syllables can only be occupied by vowels (Liddicoat 1994). Consonants and glides cannot occupy the nucleus of a syllable, with glides being treated as consonants for the purpose of syllable composition (Liddicoat 1994).

(3) Open Syllables - V

a. /ɛ̃/ ‘fishing hook’

b. /a/ ‘at, in, to’

c. /oː/ ‘bone’

(4) Open Syllables - CV

a. /bɛ̃/ ‘well’

b. /sy/ ‘sour’

c. /ma/ ‘evil’

In word initial onset position, C can be any consonant except /ð/ and /z/, though /z/ does occur in this position in loanwords, such as [zɛ̃] ‘zinc’ borrowed from German *zink.* /ð/ and /z/ can be onsets of syllable that are not word initial, such as [krœː.ðɛ] ‘to excavate’ (Liddicoat 1994).

Open syllables can also have consonant clusters in onset position, as in example (15) below. Consonant clusters of more than two consonants, especially those in which the third consonant is not a glide, are usually avoided in Jersey, and are quite rare (see Section 5.4). The composition of consonant clusters of more than two consonants is restricted, with the third consonant being almost always limited to glides (Liddicoat 1994), as in [krwɛː] ‘cross.’

(5) Open Syllables - CCV

a. /brə̃/ ‘brown’

b. /fwɛː/ ‘faith’

c. /dvã/ ‘front’

5.1.2 Closed Syllables

Closed syllables, while not the preferred syllable type (Liddicoat 1994), are found in Jersey. The simplest, though more marked, closed syllable is composed of a vowel and a consonant, as seen in (6).

(6) Closed Syllables - VC

a. /ɑːl/ ‘garlic’

b. /ɛð/ ‘floor’

c. /œʃ/ ‘axle-pin’

Closed syllables can also be any of the following compositions: CVC, CCVC, CCCVC, CVCC, CCVCC, and CVCCC (Liddicoat 1994). As noted above, the triple consonant clusters are avoided, so while syllables of the type CCCVC and CVCCC are shown in glossaries and dictionaries, they are rarely realized this way in speech. Avoidance strategies employed in speech are discussed in Section 5.4. Examples of the above syllable types are shown in (7).

(7) Closed Syllables

a.	CVC	/lɛːz/	‘width’
b.	CCVC	/grɛːs/	‘grease’
c.	CCCVC	/glwɛð/	‘glory’
d.	CVCC	/batr/	‘to hit’
e.	CCVCC	/prɑ̃dr/	‘to take’
f.	CVCCC	/sɛrkj/	‘weed’

5.1.3 Unallowable Syllable Types

There are two syllable types that are not allowed in Jersey. As mentioned above, consonants cannot be a syllable nucleus and as a result C is in an unallowable syllable type. Also, in monomorphemic words, a syllable composed of only two vowels, VV, is not allowed (Liddicoat 1994). As mentioned in Section 4.2.1, vowels that are adjacent in Jersey are treated as diphthongs and are thus treated as a single segment in being assigned to a single nucleus of a syllable. This analysis is supported by the analysis of Schane (1994), who notes that diphthongs correspond to two non-identical vowels within a single nucleus.

5.1.4 Consonant Cluster Avoidance Strategies

While there are examples of consonant clusters, such as those in (7), consonant clusters are not the preferred composition of onsets or codas in Jersey syllables. As noted above in Section 5.1.1, Jersey avoids complex consonant clusters, i.e. those having more than two consonants. According to Liddicoat (1994) Jersey uses epenthesis and deletion to

break up consonant clusters. There are certain consonant clusters in Jersey onsets that are realized as CəC, with /ə/ being inserted between consonants (Liddicoat 1994). This is seen in the examples below in (8).

(8) /ə/ Epenthesis

a. /lvi/ → [ləvi] ‘lever’

b. /rmjɛd/ → [rəmjɛd] ‘remedy’

c. /skabɛ/ → [səkabɛ] ‘stool’

(Liddicoat 1994: 136-137)

Insertion of /ə/ between consonants does not occur in all consonant clusters. For example, it does occur when the sequence is [lv], as in (18a) above, but not when the order is reversed as in [vlik] ‘whelk.’ This may stem from the sonority of the respective sounds, which will be discussed in Section 9.

Word final complex consonant clusters of CCC can only be composed of /rbr, rdr, rtr/. When these do occur, the final /r/ is deleted (Liddicoat 1994). This also occurs in word final consonant clusters, those of CC, where the final consonant is a /r/. Examples of both can be seen in (9).

(9) /r/ Deletion

a. /arbr/ → [arb] ‘tree’

b. /tœrtr/ → [tœrt] ‘to twist’

c. /batr/ → [bat] ‘to hit’

(Liddicoat 1994: 139)

The presence of these avoidance strategies hints at the fact that Jersey goes to certain lengths to avoid creating consonant clusters that do not adhere to the Sonority Sequencing Principle (Clements 1990), which is discussed in Section 6.2.2. It is also possible that these forms are not a result of phoneme insertion and deletion but are actually instead occurs of allomorphic variation. Regardless of the analysis, sonority appears to affect the appearance of morphemes in Jersey.

SECTION 6: THEORETICAL BACKGROUND

There are a number of principles, parameters, and laws that are used for the syllabification of data and analysis in this thesis. This section gives the background and examples of these various principles. Principles concerning syllabification and sonority are covered in Sections 6.1 and 6.2 respectively.

6.1 Syllable Principles

Syllables are an important unit of organization in language. Most, if not all, speakers can provide syllabification of words when asked (Blevins 1996, Duanmu 2008). The basic assumptions behind syllabification have been codified into principles, laws, and parameters, some of which I present below. I first discuss three principles dealing with syllabification and onsets, the Minimal Onset Satisfaction Principle (Roca 1994), the Maximal Onset Realisation Parameter (Roca 1994), and the Law of Initials (Vennemann 1988). I then discuss the Law of Finals (Vennemann 1988), which covers the composition of codas. The last principle I discuss is the Romance Resyllabification Principle, which deals with syllabification across word boundaries.

6.1.1 Minimal Onset Satisfaction Principle

One of the most basic syllable constraints is that of the Minimal Onset Satisfaction Principle (Roca 1994). The Minimal Onset Satisfaction Principle (Roca 1994) accounts for the fact that the most preferred syllable type cross-linguistically is CV and that series of VCV are most often syllabified as V.CV (Blevins 1996). Roca (1994) states that

syllables with codas are disallowed when there is a segment present that can be syllabified into the onset.

(10) Minimal Onset Satisfaction Principle

When suitable segments are present, they will be syllabified into the onset.

(adapted from Roca 1994)

Using the Minimal Onset Satisfaction Principle a polysyllabic word, such as [piðo], 'gander,' is syllabified as [pi.ðo], with [ð] being syllabified into the onset of the second syllable instead of into the coda of the first syllable, *[pið.o]. The Minimal Onset Satisfaction Principle helps account for word medial consonant clusters in the data that may appear as sonority violations, but in fact are parts of separate syllables.[6]

6.1.2 Maximal Onset Realisation Parameter

Working in conjunction with the Minimal Onset Satisfaction Principle is the Maximal Onset Realisation Parameter (Roca 1994). The Maximal Onset Realisation Parameter (Roca 1994) requires that onsets are satisfied before codas in syllable formation.

(11) Maximal Onset Realisation Parameter

Onset construction must be completed prior to coda formation.

(Roca 1994: 145)

[6] Sonority and principles of sonority are discussed in Section 7.2.

As with the Minimal Onset Satisfaction Principle, the Maximal Onset Realisation Parameter aids in the syllabification of word medial consonant clusters. In [pikɑ̃bwɛː] 'wood-pecker' there appears to be a choice as to which position [b] can occupy. [b] can be syllabified into either the coda of the penultimate syllable [pi.kɑ̃b.wɛː] or into the onset of the ultimate syllable [pi.kɑ̃.bwɛː]. The Maximal Onset Realisation Parameter and the Minimal Onset Satisfaction Principle dictate that the latter of the two possible syllabifications is preferred.

6.1.3 Law of Initials

As noted by Vennemann (1988) the composition of syllable onsets is often similar to that of word initial onsets. Vennemann (1988) notes that this is true in Italian and Latin, and refers to this preference as the Law of Initials (Vennemann 1988), which is given in (12).[7]

(12) Law of Initials

> Word medial syllable heads are the more preferred, the less they differ from possible word initial syllable heads of the language system.
>
> (Vennemann 1988: 32)

The Law of Initials helps to determine the composition of onsets in a given language. While the Maximal Onset Realisation Parameter states that onsets must be satisfied before codas, the Law of Initials provides balance so that the composition of onsets does not violate a language's constraints on the composition of consonant clusters. If

[7] In Vennemann's (1988) Law of Initials, 'head' refers to 'onset.'

syllabifying word medial consonants into onsets creates a consonant cluster in the onset, the allowable word initial onset consonant clusters should be examined to see if there is a similar cluster allowed in the word initial onset. If it is not allowed, then it is preferred to resyllabify the consonants into allowable clusters. For example, the word [parfnɛ] 'to spread out for drying' contains the word medial cluster [rfn]. The Maximal Onset Realisation Parameter requires that the cluster be syllabified into the onset [pa.rfnɛ], which does not conform to certain sonority principles, such as the Sonority Sequencing Principle (Clements 1990) discussed in Section 6.2.2. By using the Law of Initials in examining the allowable word initial onset clusters for Jersey in (13), it is seen that [rfn] is not an allowable word initial onset consonant cluster. Taking this into account, [parfnɛ] is syllabified as [par.fnɛ], with [fn] being an allowable word/syllable initial onset.

(13) Allowable Word/Syllable Initial Onsets in Jersey

bj	fj	gj	kj	mj	nj	pj	rg	sj	ʃj	tr	ʧɥ	vj	ʒɥ
br	fr	glw	krw	ml	nw	pw	rj	sm	ʃw	trw		vr	ʒw
bw	fw	gr	kw	mw			rk	sn		trɥ		vw	ʒt
bz		grw	kz				rkj	st		tw			
		gw					rw	str		tɥ			
							rɥ	sw					
								sɥ					
								stʃ					

To determine the allowable word initial syllable onsets shown in (23), I examined two Jersey glossaries (Spence 1960 and Liddicoat 1994). Liddicoat (1994) notes that there are a number of initial consonant clusters that, while listed in glossaries and dictionaries do not actually occur in everyday speech. These clusters, discuss in Section 5.1.4, are realized as CəC and I have not included them in the table of allowable onsets. I only list consonant clusters in this table, since, for the most part, single consonants are allowable onsets.[8] These allowable onsets are also used to help determine the Jersey sonority hierarchy presented in Section 7.

6.1.4 Law of Finals

Similar to the Law of Initials is the Law of Finals (Vennemann 1988). Vennemann (1988) notes that like the word initial/syllable onset similarity, word final codas and syllable codas compositions are similar.

(14) Law of Finals

> Word medial syllable codas are the more preferred, the less they differ from possible word final syllable codas of the language system.
>
> (Vennemann 1988: 33)

The Law of Finals helps determine allowable coda composition and helps with syllabification. In the syllabification of [parfnɛ] above, I used the Law of Initials to determine that [fn] is an allowable onset. Using the Law of Finals I determine that [rf] is

[8] See Section 6.1.1 for restrictions on single consonants in the onset position.

most likely not an allowable coda since it does not appear in word final codas, as shown in the table in (15).

(15) Allowable Word Final/Syllable Final Codas in Jersey

bj	gj	kj	lt	mp	pj	rb	rm	st
						rd	rn	
						rg	rp	
						rk	rs	
						rkj	rʃ	
						rl	rʒ	

As with the allowable onsets, to determine allowable codas I examined the glossaries of Spence (1960) and Liddicoat (1994) and created a list of word final coda consonant clusters. Liddicoat (1994: 139) states that "It should be noted that consonant clusters with final /r/ are, however, rare. The preference is for deletion of the final consonant in such groups." I have not included the Cr combinations, since it seems that these forms occur only in glossaries and dictionaries. As with onsets, there are no distribution restrictions on the single consonants that can occupy coda position.

6.1.5 Romance Resyllabification Principle

In Carinaletti and Repetti's (2009: 94) investigation into the resyllabification and prozodization of clitics in Romance languages, they discuss the fact that "within resyllabification contexts, a word final consonant can resyllabify as the onset of the following word, but not if the result would be a complex onset." As Jersey is a Romance

language I assume that this restriction on resyllabification occurs in Jersey as well. I take this restriction to apply also to the syllabification of word initial consonants into codas of preceding words. Since Carinaletti and Repetti do not posit a rule or constraint when discussing resyllabification, I term this phenomenon the Romance Resyllabification Principle. The Romance Resyllabification Principle is stated as follows:

(16) Romance Resyllabification Principle

A consonant at a word's edge can re-syllabify as the onset of the following word or as the coda of the preceding word, but not if it results in the creation of a consonant cluster.

(adapted from Carinaletti and Repetti 2009)

This principle also prevents the syllabification of consonant clusters across word boundaries, as this would also result in a consonant cluster. For example, with the phrase [teim leiz ɑ̃gjei] 'we were English' (Liddicoat 1994: 341) the application of the Romance Resyllabification Principle prevents [l] from being syllabified into the coda of [teim], *[teiml]. It allows for the syllabification of [z] into the onset of [ɑ̃g], [zɑ̃g]. I assume that it prevents the syllabification of the consonant cluster across word boundaries also. The Romance Resyllabification principles prevents [lz] in [ei lz eipɛ̃n] 'and the thorns' (Liddicoat 1994: 361) from syllabifying into the onset of [ei], *[lzei], as this creates a consonant cluster where there was not one before.

While the term resyllabification implies initial syllabification at the polymorphemic word level, I do not discuss the level at which syllabification first takes place.[9]

The principles covered so far in this section are used in Section 9 in the syllabification and analysis of Jersey phrases that contain definite articles. Principles, such as the Minimal Onset Satisfaction Principle, the Maximal Onset Realisation Parameter, and the Law of Initials are used to determine onset composition. The Romance Resyllabification Principle prevents these principles from syllabifying consonant clusters into onsets or codas across word boundaries. The Laws of Initials and Finals (Vennemann 1988) help determine the phonological composition of onsets and codas, respectively, during syllabification.

6.2 Sonority Principles

The concept of sonority is couched in auditory phonetics.[10] The term sonority usually refers to the overall amplitude or 'loudness' of a sound when compared to sounds of similar stress, pitch, and duration (Blevins 1996). Segments are believed to have certain inherent sonority properties, making certain sounds more sonorous than others, with vowels being presumed to be the most sonorous (Clements 1990). Sonority has been adopted into phonology in an attempt to understand the motivation behind syllable formation. This section examines sonority hierarchies briefly in order to provide proper background for understanding the sonority principles described herein. I then discuss the

[9] It is quite possible that syllabification takes place initially at the word level and then again at the phrasal level or that it takes place only at the phrasal level. This argument is outside the scope of this thesis and is not addressed further.

[10] While the exact physical correlates of sonority are the topic of debate among linguists, that debate is not addressed by this thesis.

Sonority Sequencing Principle (Clements 1990) and the Core Syllabification Principle (Clements 1990), which guide syllabification through the use of sonority rankings. The Syllable Contact Law (Clements 1990), which assists in the syllabification of word medial consonants, is then discussed.

6.2.1 Sonority Hierarchies

Though this is discussed in more detail in Section 7 below, it is imperative that I discuss sonority hierarchies prior to certain sonority principles given in this section. A scalar ranking of sonority is a key concept in understanding sonority. A sonority hierarchy is the ranking of sounds by their level of sonority. Sounds are assigned indices and ranked along a scale by their sonority relative to the sonority of other sounds. This ranking is determined by taking a number of factors into account, such as features and phonotactics. The most basic sonority hierarchy is feature based, using the binary values of [±syllabic], [±vocoid], [±approximant], and [±sonorant] (Clements 1990). The resulting hierarchy shown in (17) is generally accepted as the universal sonority hierarchy on which many language-specific hierarchies are based.

(17) Universal Sonority Hierarchy

Vowels>Glides>Liquids>Nasals>Obstruents

(Clements 1990: 292)

These divisions are then assigned an index number based on their rank in the hierarchy. Sonority hierarchies based on other factors, such as phonotactics, including the Jersey Sonority Hierarchy, are discussed in Section 7.

6.2.2 Sonority Sequencing Principle

It has been observed that sonority seems to rise and fall within a syllable, with the nucleus being the peak in a sequence of sonorous sounds. This phenomenon is captured by the Sonority Sequencing Principle, as put forth by Clements (1990).

(18) Sonority Sequencing Principle

> Between any member of a syllable and the syllable peak, only sounds of higher sonority rank are permitted.
>
> (Clements 1990: 285)

The Sonority Sequencing Principle explains why certain consonant clusters in syllables are more preferred in onset and coda positions. For example cross-linguistically onsets composed of an obstruent and a liquid (OL) and codas of the inverse composition (LO) are quite common (Clements 1990). Since obstruents are lower in sonority than liquids, the segment higher in sonority is closer to the syllable nucleus in both the onset and the coda. This principle may account for /ə/ insertion between certain onset consonant clusters, which were discussed in Section 5.4. It was noted then that [lv] is not an allowable consonant cluster word initially while [vl] is. This is explained through the Sonority Sequencing Principle (Clements 1990). According to the Universal Sonority

Hierarchy, [l] is higher in sonority than [v], [l] being a liquid and [v] being an obstruent. In a sequence of liquid obstruent vowel (LOV), there is a member of the syllable that is lower in sonority between the initial consonant and the nucleus, which violates the Sonority Sequencing Principle. When /ə/ is inserted there is no intervening member of higher sonority between L and the nucleus, instead it is now the onset of the second syllable (LV.OV)

6.2.3 Core Syllabification Principle

The Core Syllabification Principle was first posited by Clements and Keyser (1981, 1983) and later revised by Clements (1990). The Core Syllabification Principle (Clements 1990) provides a basic framework for syllabifying words and phrases. This approach assumes that there is a peak of sonority associated with the nucleus of each syllable. Any phoneme which is [+syllabic] is assigned as the syllable node and adjacent segments are syllabified based on their sonority ranking in comparison to the nucleus. This assures that segments that are lower in sonority than the nucleus are syllabified into the onset or coda of a syllable. The Core Syllabification Principle (Clements 1990) is defined below in (19).

(19) Core Syllabification Principle

a. Associate each [+syllabic] segment to a syllable node

b. Given P (an unsyllabified segment) preceding Q (a syllabified segment) if P is lower in sonority rank than Q adjoin it to the syllable containing Q (iterative)

(Clements 1990: 317)

The Core Syllabification Principle provides a basic framework for the assignment of segments to nodes, such as onset, nucleus, and coda, within the syllable. For example, if I apply the Core Syllabification Principle to the word [mwɔʃɛ] 'heap pile' I first identify segments that are [+syllabic], which in Jersey are the vowels [ɔ] and [ɛ]. These are then assigned to their own syllable nodes (also known as the nucleus). Focusing on the first vowel, [ɔ], the unsyllabified segment preceding [ɔ] is [w], which, as a glide, is lower in sonority than [ɔ] (refer to the Universal Sonority Hierarchy in (17) for rankings). According to the Core Syllabification Principle, if the segment is lower in sonority than the following syllabified segment, it is adjoined to that syllable. Now the first syllable is composed of [wɔ]. This is an iterative process, so now the segment preceding [w] is examined. [m] precedes [w] and is lower in sonority than [w]. It is then adjoined to [w] and the first syllable is formed, [mwɔ.]. As there are no more segments preceding [m], the second syllable can be formed. [ɛ] is preceded by [ʃ]. [ʃ] as on obstruent is lower in sonority than [ɛ], so it is adjoined to form the second syllable, [ʃɛ]. The word then is syllabified as [mwɔ.ʃɛ].

6.2.4 Syllable Contact Law

The Syllable Contact Law (Clements 1990), in addition to the Sonority Sequencing Principle, is used in this thesis to help explain the avoidance of sonority plateaus and the syllabification of certain segments into codas or onsets.

The Syllable Contact Law, as put forth by Vennemann (1988), deals with consonantal strength, which works inversely of sonority. The greater the consonantal strength the less sonorous a phoneme is.

(20) Vennemann's Syllable Contact Law[11]

> A syllable contact A$B is the more preferred, the less the Consonantal Strength of the offset A and the greater the Consonantal Strength of the onset B; more precisely – the greater the characteristic difference CS(B)-CS(A) between the Consonantal Strength of B and that of A
>
> (Vennemann 1988: 40)

Clements (1990) adapted Vennemann's law and proposed the version in (31), which is used in this thesis.

(21) Syllable Contact Law

> In any sequence C_a $ C_b there is a preference for C_a to exceed C_b in sonority.
>
> (Clements 1990: 287)

The Syllable Contact Law explains the fact that at syllable margins there is a preference for the final segment of the first syllable to exceed in sonority the first segment of the second syllable. The Jersey word [primzol] 'primrose' is syllabified as [prim.zol]. The word medial consonant cluster [mz] could be syllabified into the onset of the second syllable, according to the Maximal Onset Realisation Parameter and Minimal Onset

[11] $ = syllable boundary

Satisfaction Principle. Since [m], as a nasal, is higher in sonority than [z], an obstruent, the Sonority Sequencing Principle requires that the [m] be syllabified into the coda of the first syllable and [z] into the onset of the second syllable. This occurs so that [z], a segment lower in sonority than [m], does not occur between [m] and the syllable nucleus. This results in the syllabification of [primzol] as [prim.zol], which is preferred.

6.3 Summary

The principles, parameters, and laws discussed in this section are pertinent to the analysis of Jersey definite articles presented in Section 9. The Minimal Onset Satisfaction Principle, the Maximal Onset Realisation Parameter, the Law of Initials, and the Law of Finals help to determine composition of the onsets and codas of syllables. The Romance Resyllabification Principle plays an important role in prohibiting the formation of consonant clusters through resyllabification across word boundaries. This is important when examining the syllabification of articles, as seen in Section 9. The Sonority Sequencing Principle, the Core Syllabification Principle, and the Syllable Contact Law ensure that syllables abide by principles of sonority when syllabification occurs.

SECTION 7: JERSEY SONORITY HIERARCHY

The concept of sonority hierarchies was discussed briefly in Section 6.2.1 and is an important aspect of this thesis. Below I discuss the ranking of sonority along with the need to create a language specific sonority hierarchy for Jersey. I then demonstrate how a Jersey specific sonority hierarchy explains certain phonological sequences that the Universal Sonority Hierarchy (shown in (17) above) cannot. The Jersey Sonority Hierarchy is used to analyze the variation of definite articles in that it ranks the segments according to their inherent sonority, which then allows for the syllabification of phrases.

7.1 Sonority Rankings

Clements (1990) originally determined the indices for sonority ranking by adding the number of pluses of the binary features mentioned in Section 6.2.1. In other hierarchies, such as those found in Selkirk (1984) and Parker (2002), the assignment of indices is based solely on the inherent sonority of a segment relative to that of other segments. For example, the ranking of the Universal Sonority Hierarchy can be as shown in (22).

(22) Sonority Rankings with Arbitrary Number Assignment

Vowels - 5

Glides – 4

Liquids – 3

Nasals – 2

Obstruents – 1

The value of the numbers is not as important as the ranking of each relative to the other. The Jersey specific sonority hierarchy posited in this thesis uses an arbitrary assignment of numbers. The group located at the lower end of the sonority hierarchy is assigned the number 1 and the numbering increases monotonically up the hierarchy.

7.2 Factors in Determining Sonority Hierarchies

As noted with Clements's (1990) Universal Sonority Hierarchy, the use of binary features is one way to determine the ranking of segments. Another way in which sonority hierarchies are determined is by examining the distribution of the sounds within a given language, or the phonotactics of the language. Phonotactics refer to the ways in which phonological sounds can be put together to compose a well formed word (Goldsmith 1996). Phonotactic constraints found within a given language are used to posit specific values for sounds in order to create a language specific hierarchy. Phonotactic constraints have been used to determine sonority hierarchy for Blackfoot by Elfner (2005), for Pali by Hankamer and Aissen (1974), for Tohono O'odham by Miyashita (2003), for Gallo-Romance by Jacobs (1992), for Imdlawn Tashlihiyt Berber by Dell and Elmedlaoui (1985), and for Hungarian by Siptár and Törkenczy (2000), to list a few.

In order to account for the phonotactics found in Jersey, Jersey specific sonority hierarchy had to be determined. This was due to the fact that while the Universal Sonority Hierarchy accounted for a portion of the Jersey data, it did not account for all of the data. In particular there are certain sound patterns found in Jersey that are in direct contradiction to the Universal Sonority Hierarchy. There are two particular consonant

cluster patterns in Jersey syllable onsets that cannot be accounted for using the Universal Sonority Hierarchy, these being the sequence of Stop+/v/, i.e. /dv/, /gv/, (23) and Stop+/z/, i.e. /bz/, /kz/, /dz/ (24).[12]

(23) Stop+/v/

a. [dvɑ̃tɛ] ‘apron’

b. [gvil] ‘ankle’

(24) Stop +/z/

a. [bzɑ̃] ‘heavy’

b. [kzi] ‘look for’

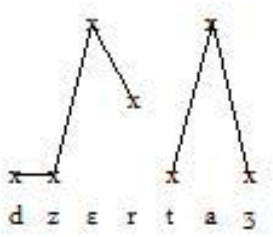
c. [dzɛrtaʒ] ‘the clearing of land for farming’

When using the Universal Sonority Hierarchy for words such as [gvil] ‘ankle’ (33b) and [dzɛrtaʒ] ‘the clearing of land for farming’ (34c), sonority plateaus occur. Sonority plateaus refer to the condition when two adjacent sounds are of the same sonority strength. Sonority plateaus are dispreferred within a syllable as accounted for by the Sonority Sequencing Principle and at syllable margins by the Syllable Contact Law.[13] In (25) the sonority plateau occurs in the onset of the first syllable [dzɛr].

[12] /dv/ and /gv/ are both listed by Liddicoat (1994) as being affected by /ə/. These forms though are found throughout the data, see example (8c). This is discussed in Section 10.3, Implications.

[13] Blevins (1996) notes that languages which allow syllable initial and syllable final geminates, such as Trukese and Estonian, respectively, tolerate sonority plateaus. The fact that Jersey does not allow syllable initial or syllable final geminates suggests that sonority plateaus are not tolerated in Jersey.

(25) [dzɛrtaʒ] 'the clearing of land for farming



Since the sequences mentioned above in (23) and (24) are fairly common in Jersey, the sonority hierarchy used in analyzing Jersey should reflect this. In Jersey, then, /v/ and /z/ must be extracted from the obstruents and assigned their own respective indices that must be ranked higher than obstruents. Cross linguistically there is a tendency for fricatives to be ranked higher in sonority than stops (Jespersen 1904, Selkirk 1984, Dell and Elmedlaoui 1985, 1988, Blevins 1996, Parker 2002). This delineation will help to eliminate the sonority plateau shown in the example in (25).

Another type of sequence that occurs in Jersey is found in syllable codas, and is /st/. The Universal Sonority Hierarchy cannot account for the consonant cluster /st/ as they are both obstruents and ranked together on the Universal Sonority Hierarchy. In (26) the Universal Sonority Hierarchy has been used to assign the sonority indices for the word [ɛst] 'east.' This results in a sonority plateau in the coda, [st], as both are obstruents and thus equal in sonority. As noted above, sonority plateaus are dispreferred.

(26) [ɛst] 'east'



In order to account for these and other phonological patterns, I examine Gallo-Romance sonority hierarch posited by Jacobs (1992). Jacobs (1992) uses phonotactics to determine a Gallo-Romance specific sonority hierarchy. Since Jersey is a member of the Gallo-Romance family, and as such, shares certain phonemes in common with Gallo-Romance, the Gallo-Romance sonority hierarchy forms some basis of the Jersey specific sonority hierarchy. In the hierarchy in (27), Jacobs (1992) ranks the consonants found in Gallo-Romance from most to least sonorous.

(27) Gallo-Romance Sonority Hierarchy

r

l

n, m

s, z

f

p, t, k, b, d, g

(Jacobs 1992: 71)

Unlike the Universal Sonority Hierarchy, the Gallo-Romance sonority hierarchy distinguishes between alveolar fricatives, /s, z/ and other obstruents. In Jersey, /s/ and /z/ pattern quite differently than other obstruents, as discussed above. /z/ does not have the same distribution as /s/ in Jersey, but this is due to the fact that /z/ is found only intervocalically and evolved in this position from intervocalic /r/ historically (Spence 1960, Liddicoat 1994)[14]. In Jersey /z/ is found word initially, but only in loanwords (Liddicoat 1994).

Liquids in the Universal Sonority Hierarchy are one group, which the Gallo-Romance sonority hierarchy splits into two separate sections, with rhotics being more sonorous than laterals. The division of liquids into rhotics and laterals helps explain the fact that /r/ and /l/ have different distribution in Jersey. For example, /rl/ is an allowable word final coda, as in [kɔrl] 'curl' but /lr/ is not.

Jacobs (1992) also distinguishes between /f/ and other obstruents. This distinction is useful in accounting for certain distributional differences between /f/ and /v/ and other obstruents in Jersey. Although the phoneme /v/ does not occur in Gallo-Romance, I have included it since it occurs in Jersey and has a similar distribution to that of /f/, the only difference between the phonemes being voicing. The separation of labiodental fricatives from other obstruents is highly beneficial to an analysis of Jersey sonority. /f/ and /v/ behave differently than other obstruents. Obstruent+/f/ or /v/ occurs in word initial onsets in Jersey, for example in [dvɑ̃] 'front.' The other obstruents are left together to form one

[14] The change of one sound segment over time to another brings up the questions as to whether sonority of that segment also changes. This is discuss in Section 10.3, Implications.

category, termed Other Obstruents, as I have not found any motivation to warrant separating them by voicing or articulation.

Since Jersey is a member of the Gallo-Romance family and shares a similar phoneme inventory, I use the Gallo-Romance hierarchy to create gradients within the Universal Sonority Hierarchy to construct a Jersey specific sonority hierarchy, given in (38). The changes which distinguish the Jersey Sonority Hierarchy from the Universal Sonority Hierarchy are bolded.

(28) Jersey Sonority Hierarchy

Vowels - i, y, u, e, ə, o, ɛ, œ, a, ɑ

Glides - w, j, ɥ

Rhotics - r

Laterals - l, ʎ

Nasals - m, n, ɲ

Alveolar Fricatives - s, z

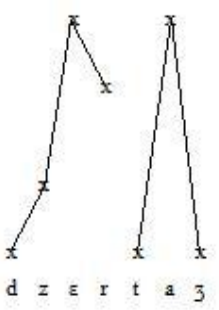
Labiodental Fricatives - f, v

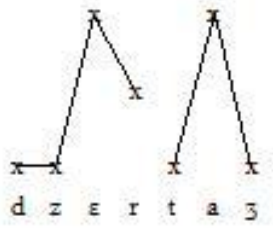
Other Obstruents - p, b, t, d, k, g, ð, ʧ, ʤ, ʃ, ʒ, h

By using the Jersey Sonority Hierarchy to examine the examples given in (35) and (36) above, the sonority plateaus created by the Universal Sonority Hierarchy disappear. (29a) below analyzes [dzɛrtaʒ] ((25) repeated here as (29b)) using the Jersey specific hierarchy.

(29) Analysis of [dzɛrtaʒ] 'the clearing of land for farming'

(a) Jersey Sonority Hierarchy (b) Universal Sonority Hierarchy





Now that /z/ has been extracted from the obstruents (along with /s/) and ranked in its own higher ranking group, the sonority plateau has been removed from the onset of the first syllable. This analysis now abides by the Sonority Sequencing Principle.

In (30) I compare an analysis of [ɛst] using the Jersey Sonority Hierarchy and Universal Sonority Hierarchy, with (27) being repeated here as (30b).

(30) Analysis of [ɛst] 'east'

(a) Jersey Sonority Hierarchy (b) Universal Sonority Hierarchy





As with (29) above, the analysis in (30a) does not contain the sonority plateau that occurs in (30b) when the Universal Sonority Hierarchy is used.

The benefit of using a language specific sonority hierarchy is that language specific phonological patterns are accounted for. The Jersey Sonority Hierarchy proposed here aids in the analysis of the allomorphic variation found among Jersey definite articles in the following section.

SECTION 8: MORPHOPHONEMICS OF JERSEY DEFINITE ARTICLES

This section presents the data used in the analysis in Section 9. Like other Romance languages, Jersey has grammatical gender, where nouns have a grammatically determined gender that is reflected through agreement in articles and adjectives. The choice of article depends on both the gender and number of the noun. There is further variation seen within the article chosen, which, according to Birt (1985) and Liddicoat (1994), is dependent upon the phonological environment.

Since Jersey definite articles are affected by the number and gender of the nouns, I have presented the known allomorphs of Jersey definite articles in table (31). The underlying morphemes for these allomorphs are discussed in their respective sections.

(31) Jersey Definite Article Allomorphs

	Singular	**Plural**
Masculine Definite	[l], [le]	[lei], [lz], [leiz]
Feminine Definite	[la], [l]	[lei], [lz], [leiz]

As is seen in the table in (31), the definite plural articles are identical for both genders, [lei, lz, leiz] and are therefore treated as one in this thesis. They are simply identified as the definite plural article without mention of gender. In this section I first discuss the masculine definite article, followed by the feminine definite article, and then the definite plural article.

8.1 Masculine Definite Singular Article Allomorphs – [l] and [le]

The masculine definite singular article allomorphs are [l] and [le]. According to the description given by Liddicoat (1994), the use of the two allomorphs, [l] and [le], is determined by the presence or absence of word initial consonant clusters in the word following the article. The majority of the data given pattern as described, examples of which are shown below in (33) and (34). Given the restricted use of the allomorph [le], occurring only before consonant clusters, I posit that the underlying morpheme for the masculine definite singular form is /l/. This choice is reinforced by the analysis presented in Section 9.1.

While Liddicoat (1994) does not specify the conditions under which [l] surfaces, the elsewhere condition is assumed for this allomorph. This is due to the fact that [l] surfaces in a rather unrestricted environment, which is when the word following the article begins with a vowel or a consonant. The data found support this assumption. In (32), [l] occurs before vowels, as in (32d) and before consonants, as in (32a-c). In the data presented in this section, the allomorph under discussion is bolded and the environment is underlined.

(32) [l] before C or V

a.	[vɛː **l** gardẽ]	'see the garden'	(169)
b.	[kõt **l** foːsɛ]	'by the hedgerow'	(263)
c.	[ei **l** mijœ]	'is the best'	(182)
d.	[aprẽ **l** ãgjɛː]	'learnt English'	(242)

(Liddicoat 1994)

In (32b) the noun [foːsɛ] ‘hedgerow’ begins with a single consonant, [f], and the allomorph [l] occurs. In (32d) the noun [ɑ̃gjɛː] ‘English’ begins with a vowel, [ɑ̃] and the allomorph [l] surfaces.

As discussed, according to Liddicoat (1994), the other allomorph, [le] is supposed to occur only before consonant clusters. This distribution is seen in the examples below (33).[15]

(33) [le] before <u>CC</u>

a.	[ɑ̃lvɛːm **le** <u>vr</u>ɛ]	‘took the seaweed’	(286)
b.	[kõt **le** <u>pr</u>ogrɛː]	‘against progress’	(285)
c.	#[**le** <u>ʃj</u>ɛ̃]	‘the he’ (the one)	(362)
d.	#[**le** <u>ʒv</u>a]	‘the horse’	(234)

(Liddicoat 1994)

In (33a) the noun [vrɛ] ‘seaweed’ begins with the consonant cluster [vr] which, according to Liddicoat (1994) conditions the occurrence of the allomorph [le] instead of [l]. While the majority of the data abide by the rule posited by Liddicoat (1994), there are cases where the allomorph [le] is found before single consonants, instead of [l] and the allomorph [l] is found before consonant clusters instead of [le]. In each example in (34)

[15] The following symbols are used in this thesis: # - sentence boundaries, . – syllable boundaries, || - word boundaries.

below, the word following each article begins with a single consonant and, according to Liddicoat (1994) the allomorph [l] should occur, yet [le] is what actually occurs.

(34) [le] before C

a.	#[**le** ʒur]	'the day'	(339)
b.	[ʤɛð **le** t̲ɑ̃]	'hardly the time'	(222)

(Liddicoat 1994)

For example, in (34a) the noun [ʒur] 'day' begins with a single consonant, [ʒ]. Liddicoat (1994) implies that this noun should be preceded by the allomorph [l] not the attested [le].

There are also occurrences of the opposite, in that [l] occurs in a position where, according to Liddicoat (1994), [le] should occur. With consonant clusters, Liddicoat (1994) predicts that the allomorph [le] should occur, yet there are data where [l] occurs instead of [le]. This is seen in (35), where [l], which is expected only before vowels and single consonants, surfaces instead of [le]. The description given by Liddicoat (1994) makes no mention of data that do not abide by the patterns he discusses.

(35) [l] before CC

a.	[fɛ **l** br̲ɑ̃kɑʒ]	'done the 'branchage''	(267)
b.	[kə **l** tr̲avɑː]	'the work'	(348)

(Liddicoat 1994)

In (35a) the adjective [brɑ̃kɑʒ] ‘branchage’ begins with the consonant cluster [br]. It is predicted by Liddicoat (1994) that the allomorph [le] should occur, instead the allomorph [l] occurs.

The use of the allomorph [le] before single consonants, as seen in (34) and the use of the allomorph [l] before consonant clusters, as seen in (35), are unaccounted for in the predictions made by Liddicoat (1994). These pieces of data indicate that some force must be affecting allomorph choice beyond the occurrence of vowels or consonants as the first segment of the word following the article. I propose that this variation can be accounted for and predicted if sonority is taken into account. This analysis is explored in Section 9.

8.2 Feminine Definite Singular Article Allomorphs – [la] and [l]

As with the masculine definite singular article, the feminine definite singular article exhibits allomorphic variation. The feminine definite article allomorphs are [la] and [l], with the underlying morpheme being /la/. The choice of /la/ as the feminine definite singular article underlying morpheme ensures morphemic contrast with the masculine definite singular article /l/. Both the feminine definite singular allomorphs [l] and [la] are equally occurring, one before vowels and the other before consonants. This prohibits one from being an ‘elsewhere’ distribution, which is often used when determining underlying morphemes. In addition to the argument of morphemic contrast, the analysis presented in Section 9.3 also supports the selection of /la/ as the underlying morpheme.

According to Liddicoat (1994), the distribution of [l] and [la] is determined by the phonological composition of the word following the article. Liddicoat (1994) states that the allomorph [l] is found prevocalically. I assume, as I did above with the masculine definite article, that [la] must occur before consonants. This is confirmed by the data I found, examples of which are shown in (36).

(36) [la] before C(C)

a.	#[**la** g̲ɑːʃ]	'the cake'	(245)
b.	[da **la** r̲e]	'on the road'	(208)
c.	[dvin **la** r̲epõs]	'guesses the answer'	(212)
d.	[eikɔl a **la** t̲rinte]	'school in Trinity'	(192)

(Liddicoat 1994)

As seen in (36), [la] occurs before single consonants and consonant clusters. In (36a), the noun [gɑːʃ] 'cake' begins with the consonant [g], and in (36d) the word following the article begins with a consonant cluster, [tr], with the allomorph [la] occurring in each example.

As stated, the allomorph [l] occurs when the word following the article begins with a vowel. Examples of this distribution are shown in (37). In (37c) the noun [armwɛð] 'wardrobe' begins with a vowel, [a], and the allomorph [l] occurs.

(37) [l] before V

a.	[avɛk **l** ɑ̃gjɛtɛr]	'with England'	(342)
b.	[nɛ ʧitiːm ʒɑ̃mei **l** iːl]	'never left the island'	(222)
c.	[ɑ̃ dsuː d **l** armwɛð]	'under the wardrobe'	(268)
d.	[tɛz a **l** eikoul]	'was at school'	(265)

(Liddicoat 1994)

As with the masculine definite article, I propose that the variation that occurs among the feminine definite singular article allomorphs can be explained by the notion of sonority. I expect all variation found among definite articles to be the result of sonority and I discuss this analysis in Section 9.

8.3 Definite Plural Article Allomorphs – [lei], [lz], and [leiz]

As with the masculine and feminine definite singular articles discussed above, Liddicoat (1994) states that the occurrence of the different definite plural allomorphs is dictated by the phonological composition of the word following the article. Of the three occurring forms, Liddicoat (1994) only discusses the environment for the allomorph, [lz], which he states occurs prevocalically. Liddicoat (1994) does not actually list [leiz] as an allomorph for the definite plural article, though this form was found in the data. This thesis accounts for all the allomorphic variation found in Jersey definite articles, so [leiz] is included.

I propose that the underlying morpheme for the definite plural is /lei/. /lei/ is chosen as the underlying morpheme due to the fact that it occurs where, sonority-wise, other

allomorphs could but do not occur. The analysis in Section 9.3 provides additional support for this argument. Also, /lei/ is morphologically distinct from the masculine and feminine singular underlying morphemes, /l/ and /la/, and it is the most widely distributed. Of the 34 plural definite allomorph examples I collected, 26 are examples of [lei]

Since the other allomorphs given by Liddicoat (1994) are prevocalic [lei] must occur before words which begin with consonants. The data support this, since all examples found with [lei] occur prior to words that begin with consonants, examples of which are shown in (38).

(38) [lei] before <u>C(C)</u>

a.	[tu **lei** ʒ̲ur]	'everyday'	(339)
b.	[dɑ̃ **lei** k̲jo]	'in the fields'	(262)
c.	[swɔtr **lei** m̲oto]	'after the cars'	(272)
d.	[pur **lei** s̲jɛn]	'for the ones'	(354)

(Liddicoat 1994)

For example, in (38c) the allomorph [lei] is found before the noun [moto] 'cars,' which begins with a consonant [m]. [lei] also occurs before consonant clusters, as is seen in (38b) where the noun begins with the cluster [kj]. It appears that the allomorph [lei] occurs before consonants and consonant clusters.

The other allomorph for the definite plural article discussed by Liddicoat (1994) is [lz], which, according to Liddicoat, occurs prevocalically. Examples of this distribution are given in (39). In (11d), where the word, [almɑ̃] 'Germans' begins with the vowel [a], the allomorph [lz] surfaces.

(39) [lz] before V

a.	[pa **lz** almɑ̃ː]	'by the Germans'	(382)
b.	[ei **lz** eipɛ̃n]	'and the thorns'	(361)
c.	[parmi **lz** ɑ̃gjei]	'among the English'	(281)
d.	[paːskɛ **lz** almɑ̃]	'because the Germans'	(343)

(Liddicoat 1994)

Now I turn to the allomorph that is not discussed by Liddicoat (1994), [leiz]. In reviewing the data, I found three distinct occurrences of [leiz], which are shown below in (40). The distribution of [leiz] seems to match that of [lz] (seen in (39)), with both occurring prevocalically, yet upon closer examination, appears to have a different distribution.

(40) [leiz] before V and after C

a.	#[oprei k **leiz** almɑ̃]	'after the Germans'	(205)
b.	[teim **leiz** ɑ̃gjei]	'we were English'	(341)
c.	[k i n **leiz** ave]	'since they had seen'	(354)

(Liddicoat 1994)

In (40b) the word following the article begins with a vowel, [ɑ̃] – [ɑ̃gjei], ‘English.’ This is similar to the environment seen above, in example (39c) [parmi **lz** ɑ̃gjei] ‘among the English,’ for the allomorph [lz]. Yet closer examination reveals that [leiz] surfaces only if the word preceding the article ends in a consonant. In (40b), the word preceding the allomorph [leiz] ends in a consonant, [m] - [teim], unlike (39c), where the word preceding the article, [parmi] ends in a vowel, [i].

While the phonological environment for the allomorphs [leiz], [lz], and [lei] can help predict which allomorph will occur, it does not explain nor account for the variation among the allomorphs. As with the other definite articles discussed in this section, sonority is a plausible underlying motivating factor influencing the distribution of the plural definite article allomorphs.

8.4 Data Summary

I have shown in this section the allomorphic variation found among the definite articles in Jersey. While Liddicoat (1994) states that the variations shown are predictable by examining the phonological composition of the initial segment of the word following the article, I have found data that do not conform to his predictions. I use sonority in the next section to analyze, account for, and predict the variation found among Jersey definite articles.

SECTION 9: SONORITY BASED ANALYSIS OF DEFINITE ARTICLE ALLMORPHIC VARIATION

All of the definite articles in Jersey exhibit allomorphic variation, as shown in Section 5. According to Liddicoat (1994) this variation is attributed to whether the word following the article begins with a consonant or a vowel. The existence of data that are not in accordance with the description given by Liddicoat (1994) indicates that it is not the presence or absence of consonants word initially in the word following the article that is responsible for this variation. Instead, I put forth in the following section an analysis which uses sonority to account for this variation.

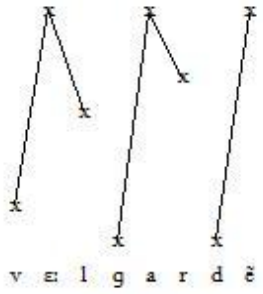
In the following sections I apply the Jersey Sonority Hierarchy from Section 7.2, along with sonority and syllable based principles from Section 6, to analyze allomorphic variation of Jersey definite articles. I also discuss additional reasons for choosing the underlying morphemes discussed in Section 5.

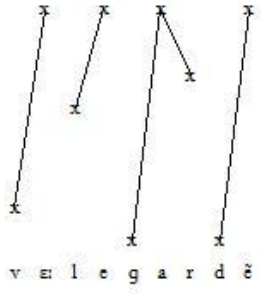
9.1 Masculine Definite Singular Article Allomorphs – [l] and [le]

In Section 8 I posit that the underlying morpheme for the masculine definite singular is /l/, with the two allomorphs being [l] and [le]. According to Liddicoat (1994) [le] is found only when the word following the article begins with a consonant cluster. As I discuss below, this is not always the case. Instead of a simple phonological rule, it is sonority that dictates the usage of [l] and [le]. This explains the presence of data that do not align with the rule presented by Liddicoat (1994).

(41) Syllabification of [vɛː l gardẽ] ‘see the garden’ (Liddicoat 1994: 169)

a. [vɛː**l**.gar.dẽ] b. *[vɛː.**le**.gar.dẽ]



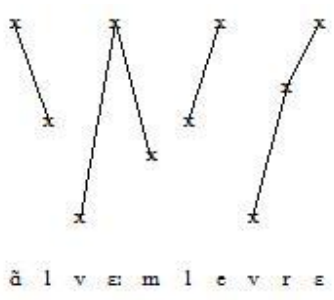


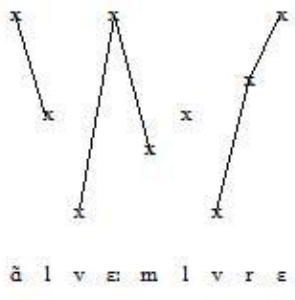
In the example in (41a), the allomorph [l] occurs since it can be syllabified into the preceding coda of the first syllable [vɛːl]. It cannot be syllabified into the following onset of [gar] for two main reasons. First, syllabifying [l] into the onset would violate the Sonority Sequencing Principle since the phoneme [l] is higher in sonority than [g] and the Sonority Sequencing Principle dictates that onsets rise in sonority towards the nucleus of the syllable without any intervening segments lower in sonority (Clements 1990). Second, syllabification into the onset of [gar] would violate the Romance Resyllabification Principle by creating a consonant cluster in the onset of the adjacent word by syllabifying [l] across a word boundary. As seen in (41b), the occurrence of the allomorph [le] would not result in any sonority violations, but since [l] is syllabified into the coda of the preceding syllable, [vɛː], there is no need to use the allomorph [le]. This is due to the fact that there is nothing to condition the usage of [le]. The allomorph [l] surfaces since it abides by the principles of sonority.

As noted in the above section, the morpheme /l/ has two allomorphs. According to Liddicoat [le] appears only in front of words that begin with consonant clusters. These conditions are sonority based. In the following example (42a), the use of the allomorph [le] is necessary in order to avoid ungrammatical syllabification that violates sonority based principles, as seen in example (42b).

(42) Syllabification of [ɑ̃lvɛːm le vrɛ] 'took the seaweed' (Liddicoat 1994: 286)

(a) [ɑ̃l.vɛːm.**le**.vrɛ] (b) *[ɑ̃l.vɛːm.**l**.vrɛ]





In (42a), [le] forms its own syllable. If the allomorph [l] were to occur, as in (42b), then there is no possible way to syllabify [l] into either the coda of the preceding syllable, [vɛːm], or the onset of the following syllable, [vrɛ]. Both syllabifications are prohibited by the Romance Resyllabification Principle, which prevents the creation of consonant clusters, [ml] and [lvr], respectively, across word boundaries. Both possibilities are also violations of the Sonority Sequencing Principle. In the first syllabification of [l] into [vɛːm], [vɛːml], sonority would rise to [l] after falling to [m]. In the case of [lvrɛ], sonority would drop from [l] to [v] and then rise again to [r], violating the Sonority Sequencing Principle. Using the Law of Initials, [lvr] is also not allowed word initially as an onset and therefore is not found word medially as an onset. By using the allomorph

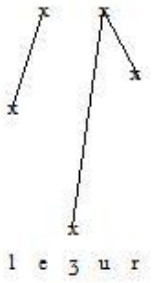
[le], violations of the Sonority Sequencing Principle and the Romance Resyllabification Principle are avoided, though the Syllable Contact Law is violated since [m] is lower in sonority than [l].

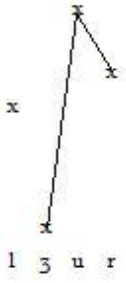
The allomorph [l] occurs for the masculine singular definite article, as seen in (41) unless it violates sonority. In environments where [l] violates sonority, the allomorph [le] surfaces, as in (42).

An analysis using sonority to determine the allomorphic variation of articles is supported by the occurrence in the data of forms that do not abide by the rules posited by Liddicoat (1994). In (43) below, the allomorph [le] occurs before a word beginning with a single consonant. According to the rule posited by Liddicoat (1994) [l] should occur since the onset is not a consonant cluster. Due to sonority principles, such as the Sonority Sequencing and Romance Resyllabification Principles, [le] occurs instead.

(43) Syllabification of #[le ʒur], 'the day' (Liddicoat 1994: 339)

(a) [**le**.ʒur] (b) *[**l**ʒur] or *[**l**. ʒur]



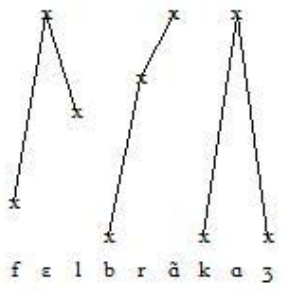


If the predicted but non-occurring form occurs, as in (43b), there are two possible ways to syllabify the phrase, both of which involve sonority violations. One way to syllabify [l ʒur] is to syllabify [l] into the onset of the following word. This would cause violations of the Sonority Sequencing Principle and the Romance Resyllabification Principle. The Sonority Sequencing Principle would be violated by the rise then fall in sonority prior to the rise of sonority to the nucleus since [l] is higher in sonority than [ʒ]. Also syllabification would create the consonant cluster [lʒ] in the onset as a result of syllabifying across word boundaries, which violates the Romance Resyllabification Principle. The other way in which to syllabify this sequence would be to allow [l] to become its own syllable. Since, according to Liddicoat (1994), syllabic consonants are not allowed in Jersey, this is not possible.

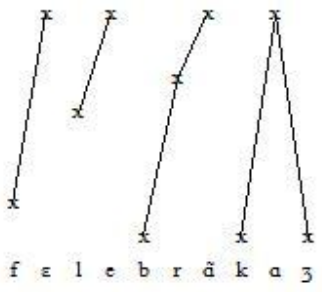
While the use of the predicted form [l] creates ungrammatical syllabification in the above example (43), this is not always the case. In (44b) the use of the form that is predicted by Liddicoat (1994), but is actually non-occurring, does not create ungrammatical syllabification. In (44a) the unpredicted but actually occurring form is syllabified.

(44) Syllabification of [fɛ l brɑ̃kɑʒ] 'done the 'branchage'' (Liddicoat 1994: 267)

(a) [fɛ**l**.brɑ̃.kɑʒ]



(b) *[fɛ.**le**.brɑ̃.kɑʒ]



In (44a) [l] is syllabified into the coda of the first syllable, [fɛ]. This is acceptable since there are no consonant clusters created, which would violate the Romance Resyllabification Principle. In (44b) [le] is the allomorph that is predicted to occur here as the word following the article begins with a consonant cluster, [br]. Since there is a vowel to form the syllable nucleus, [l] is syllabified into the onset abiding by Minimal Onset Satisfaction. Despite this acceptable syllabification, this form does not occur in the data, instead the form in (44a) occurs. This lends support to the analysis that the underlying morpheme is /l/, not /le/. In this case the conditions (sonority dictated) do not exist so the allomorph [le] does not surface and instead the allomorph [l] occurs.

As seen in the examples in (41) through (44), the use of sonority based principles explains which masculine definite singular allomorph occurs in Jersey. The allomorph whose usage does not violate sonority is the allomorph that surfaces. When the use of [l] creates a sonority violation, the allomorph [le] surfaces instead. Sonority explains and predicts the variation seen in the masculine definite singular articles.

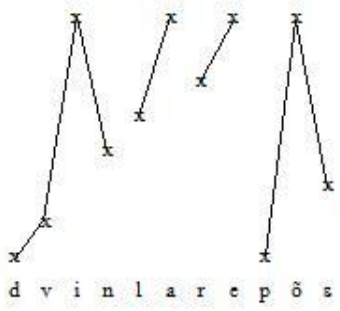
9.2 Feminine Definite Singular Article Allomorphs – [la] and [l]

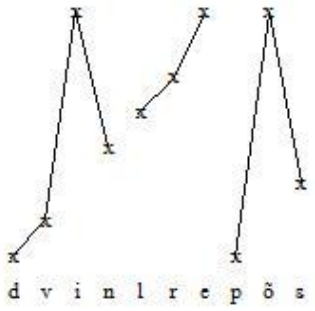
As with the masculine definite singular article, the feminine definite singular article also exhibits allomorphic variation that is motivated by sonority. According to Liddicoat (1994), of the two allomorphs, [la] and [l], [l] occurs only before words that begin with vowels, while [la] occurs before consonants. In examining the data below, I posit that the allomorph [la] surfaces unless it violates sonority. When a sonority violation occurs

using the allomorph [la], the allomorph [l], whose usage is conditioned, occurs instead. In (45) below, [la] occurs instead of [l], as there is nothing sonority-based to condition the usage of [l].

(45) Syllabification of [dvin la repõs] 'guesses the answer' (Liddicoat 1994: 212)

(a) [dvin.**la**.re.põs] (b) *[dvin.**l**re.põs]





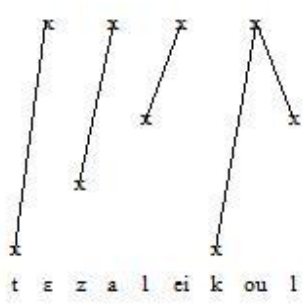
In (45) [la] must occur given the surrounding environment. In examining (45a), the coda of the preceding word, [dvin], and the onset of the following word, [repõs], are composed of consonants, [n] and [r] respectively. The Romance Resyllabification Principle prevents a consonant, in this case [l], from being syllabified to form a consonant cluster, which would be the case if the allomorph [l] occurred, as in (45b). The use of the allomorph [la] instead of [l] allows for the formation of a syllable with [l] as the onset of its own syllable. In (45b), [l] must be syllabified into either the coda of the first syllable, forming the cluster [nl], or into the onset of the following syllable, forming the cluster [lr]. Both of these violates the Romance Resyllabification Principle and [nl] violates the Sonority Sequencing Principle in that [n] is lower in sonority than [l], which results in an intervening segment of lower sonority between [l] and the syllable nucleus. Also, [lr] is

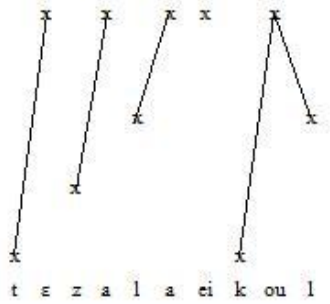
not found word initially in Jersey and [nl] is not found word finally, and therefore neither are an allowable syllable onset or coda, respectively (as predicted by the Law of Initials and Law of Finals).

The other allomorph of the feminine definite singular article is [l]. [l] occurs, within the data I have reviewed, before words that begin with a vowel. The use of [l] is conditioned by sonority based principles, specifically the Syllable Contact Law. (46a) is an example of the occurring form, [l], while (46b) is an example of the non-occurring form, [la].

(46) Syllabification of [tɛz a l eikoul] 'was at school' (Liddicoat 1994: 265)

(a) [tɛ.za.**l**ei.koul] (b) *[tɛ.za.**la**.ei.koul]





In (46a), in order to satisfy the Minimal Onset Satisfaction Principle, [l] is syllabified into the onset of the third syllable. If the non-occurring form surfaces, as in (46b) there is a sonority plateau at the edges of the third and fourth syllables, [.la.ei.]. This is a violation of the Syllable Contact Law. According to the Syllable Contact Law it is preferred at syllable margins that the segment at the edge of the preceding syllable be higher in sonority than the segment it is adjacent to in the following syllable. By using the allomorph [l], this sonority plateau and the violation of the Syllable Contact are avoided.

Using principles of sonority, I can identify the sonority based conditions that trigger the variation of the feminine definite singular article allomorphs.

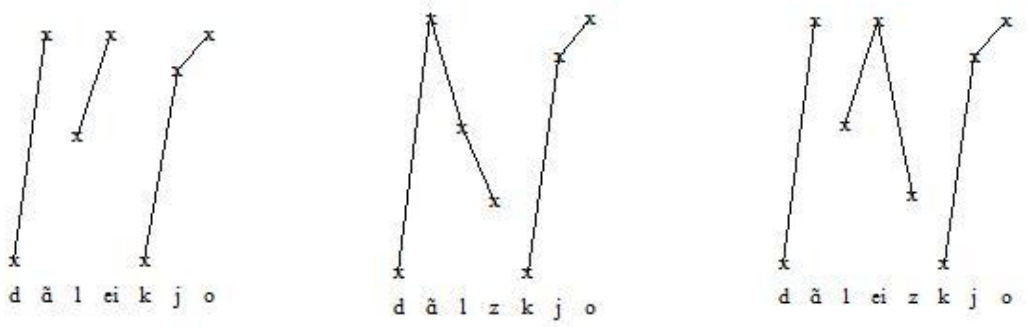
9.3 Definite Plural Article Allomorphs – [lei], [lz], and [leiz]

As mentioned above, the definite plural article allomorphs are [lei], [lz], and [leiz], with the underlying morpheme being /lei/. According to Liddicoat (1994) the choice of which definite plural article allomorph surfaces is determined, as with other articles, by the presence or absence of word initial consonants of the word following the article. As discussed in Section 5.3, the definite plural allomorphs are in complementary distribution. [lz] and [leiz] occur before words whose initial syllable lacks an onset, yet [lz] occurs only after words whose final syllable is an open syllable. The allomorph [lei] occurs before words with codas. This distribution is motivated by sonority.

As noted above the underlying morpheme is /lei/. The fact that [lei] occurs where other allomorphs can also occur, as in (47c), supports the selection of /lei/ as the underlying morpheme. In the examples below, only [lei] occurs, as seen in (47a), while [lz] and [leiz] do not, as seen in (47b) and (47c).

(47) Syllabification of [dɑ̃ lei kjo], 'in the fields' (Liddicoat 1994: 262)

(a) [dɑ̃.**lei**.kjo] (b) *[dɑ̃**lz**.kjo] (c) *[dɑ̃.**leiz**.kjo]

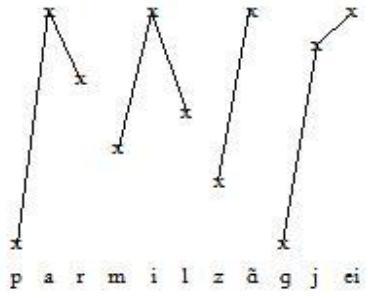


In the form that occurs in the data, (47a), [lei] is syllabified into its own syllable. [l] is syllabified into the onset position of the second syllable in order to satisfy the Minimal Onset Satisfaction Principle and the Maximal Onset Realisation Parameter. In this example the syllable boundaries are identical to the word boundaries. If the allomorph [leiz] occurs, as in example (47c), it is theoretically acceptable because it does not violate sonority, but it is not the form which occurs in the data. The allomorph [lz] cannot occur since syllabifying [lz] into the coda of the preceding syllable would violate the Romance Resyllabification Principle by syllabifying a consonant cluster across word edges. The usage of the allomorphs [leiz] and [lz] is conditioned by sonority and since the conditions, which are seen in (48) and (49), are not present, the allomorph [lei] surfaces.

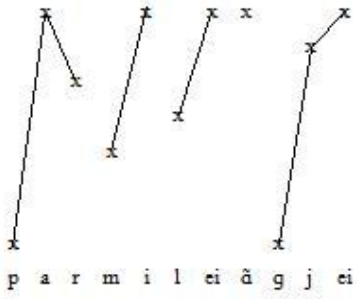
While Liddicoat (1994) states that [lz] surfaces when the word following the article begins with a vowel, this analysis posits that usage is conditioned by sonority based principles, such as the Sonority Sequencing Principle and the Syllable Contact Law. These principles dictate the use of allomorph [lz] in example (48a) below.

(48) Syllabification of [parmi lz ɑ̃gjei], 'among the English' (Liddicoat 1994: 281)

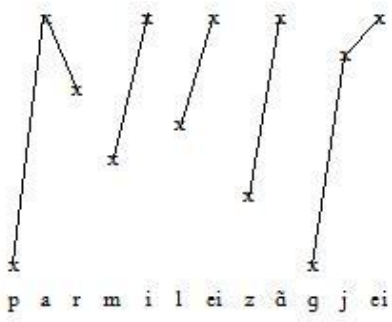
(a) [par.mi**l.z**ɑ̃.gjei]



(b) *[par.mi.**lei**.ɑ̃.gjei]



(c) *[par.mi.**lei**.**z**ɑ̃.gjei]



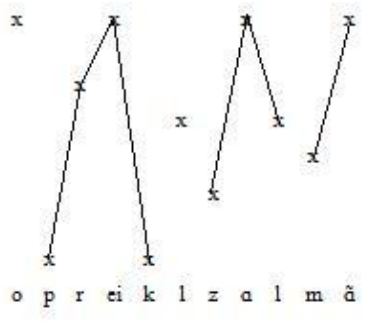
If the other allomorph [lei] occurs, (48b), a sonority plateau is created by the vowels at the syllable boundary of syllables three and four [.lei.ɑ̃.]. As noted above in Section 9.2, the creation of sonority plateaus is dispreferred as it violates the Syllable Contact Law. The Syllable Contact Law creates conditions in which the allomorph [lei] cannot surface. In (48c), the non-occurring allomorph [leiz] surfaces. This does not result in any sonority violations since [l] can be syllabified into the onset of the third syllable and [z] can be syllabified into the onset of the penultimate syllable without creating any sonority violations. Yet this form is not the one found in the data. The conditions that result in the occurrence of the allomorph [leiz] are not found in this data. These conditions are seen

in the examples shown in (49). As these conditions are not present, the allomorph [lz] is used, as seen in (48a), without any sonority violations.

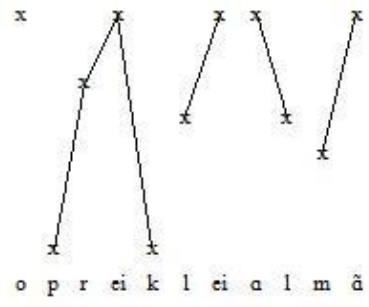
Unlike the other two allomorphs [lei] and [lz], the allomorph [leiz] is not mentioned in Liddicoat's description of definite plural articles. This form occurs in the data, yet is not discussed by Liddicoat. The allomorph [leiz] has the most restricted usage of the three definite plural allomorphs, which is seen in the fact that there are only three occurrences of [leiz] in the data. In order for the allomorph [leiz] to appear the occurrence of either of the other two allomorphs [lei] and [lz] must cause violations of sonority. This is seen in (49), where the use of either [lei], as in (49b) or [lz], as in (49a), causes violations of sonority. In (49c) the attested form is used with no sonority violations occurring.

(49) Syllabification of [oprei k leiz ɑlmɑ̃] 'after the Germans' (Liddicoat 1994: 205)

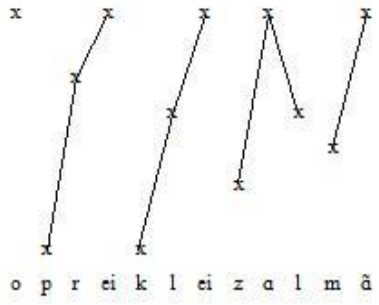
(a) *[o.preik.**l**.**z**ɑl.mɑ̃]



(b) *[o.preik.**lei**. ɑl.mɑ̃]



(c) [o.preik.**lei**.**z**ɑl.mɑ̃]



In (49a) the allomorph predicted by Liddicoat (1994) to occur is [lz], as the word following the article begins with a vowel. The use of this allomorph results in a violation of the Sonority Sequencing Principle and the Romance Resyllabification Principle. If [l] is syllabified into the onset of the preceding syllable, there is a fall then rise in the sonority profile violating the Sonority Sequencing Principle. The occurrence of [lz] also violates the Romance Resyllabification Principle. This is due to the fact that syllabifying either [l] or [lz] into the coda of [preik] creates consonant clusters, [kl] or [klz], through syllabification across word boundaries. Syllabifying just [z] into the

following onset would be acceptable, but that leaves [l] as its own syllable. [l] cannot be syllabified as a syllable nucleus as vowels are the only phoneme allowed to form a syllable nucleus in Jersey.

In (49b) the other non-occurring allomorph [lei] is found. In this case, the syllabification does not produce any unallowable consonant clusters or improper syllable nuclei, but it does violate the Syllable Contact Law in that a sonority plateau is created by the two adjacent vowels of third and fourth syllables. As discuss above, syllable plateaus are not allowed in Jersey. The sonority based conditions are such that the only allomorph that can occur is the most restricted allomorph, [leiz]. This is seen in example (49c) where the sonority based principles put forth herein are abided by. In this example, [lei] forms its own syllable, of the preferred type CV. The [z] of the allomorph is then syllabified into the onset of the following syllable, to create the syllable [zɑl].

Sonority creates conditioning environments in Jersey that result in the allomorphic variation of the plural definite article, and other definite articles. By using sonority based principles I account for the variation found and predict which allomorph will surface in a phrase.

9.4 Analysis Summary

By using sonority based principles, I have explained the allomorphic variation of the definite articles in Jersey. The principles utilized in this thesis account for the variation described by Liddicoat (1994). Sonority can also account for the distribution seen in

Section 9.1 of the singular masculine definite article allomorphs that pattern in direct opposition to the descriptions given by Liddicoat (1994). The occurrence and distribution of the undescribed plural allomorph, [leiz], can be explained by using principles of sonority. The Jersey Sonority Hierarchy allows the ranking and thus syllabification of Jersey phrases according to sonority principles.

SECTION 10: CONCLUSION

The surfacing of the definite article allomorphs in Jersey is conditioned by sonority. This thesis presented data that exhibit allomorphic variation. The majority of the data is consistent with the patterns discussed in Liddicoat's (1994) grammar. There is a portion of the data, specifically the masculine definite article allomorphs, that is inconsistent with the description. There are also data that contain an allomorph not described by the grammar - the plural definite article allomorph [leiz]. In order to account for the data I posited that sonority based principles were constraining the variation. To assist in the analysis I posited a Jersey-based sonority hierarchy. The Jersey Sonority Hierarchy is based on the Universal Sonority Hierarchy, the Gallo-Romance Sonority Hierarchy, and Jersey phonotactics. Through syllabification of phrases and the application of sonority based principles, such as the Sonority Sequencing Principle and the Syllable Contact Law, I am able to explain and predict the allomorphic variation seen among the definite articles in Jersey.

This thesis makes several contributions to the field of linguistics. This thesis contributes to the general fields of linguistics and brings up a variety of issues that warrant further discussion. First this thesis contributes to Jersey linguistics by providing a theoretical analysis of morphological processes in Jersey because the primary linguistic work in Jersey has been in the field of sociolinguistics. This thesis proposed a language specific sonority hierarchy, which theoretically analyzes the sonority of phonemes and accounts for possible syllabification.

Second, The Jersey Sonority Hierarchy has shown that the Universal Sonority Hierarchy and language specific hierarchies are not in direct opposition to each other. The Jersey sonority hierarchy was proposed based on the Universal Sonority Hierarchy, which is assumed to be applicable cross-linguistically. Other language specific hierarchies mentioned in this thesis (Dell and Elmedlaoui 1985, Elfner 2005, Hankamer and Aissen 1974, Jacobs 1992, Miyashita 2003, Parker 2000, Siptár and Törkenczy 2000) do not contradict the Universal Sonority Hierarchy as well. The fact that language specific sonority hierarchies do not violate the Universal Sonority Hierarchy suggests that the Universal Sonority Hierarchy is merely a starting point from which to develop a language specific sonority hierarchy. Language specific sonority hierarchies take categories found in the Universal Sonority Hierarchy and delineate the categories into more concise rankings that can account for a language's phonotactics.

Third, this thesis brings up the question of the true nature of allomorphy. Early phonology and morphology posited derivational rules to account for phonological differences between two forms of the same morpheme. In this thesis, the insertion of /ə/ was introduced as a good example. Liddicoat (1994) describes this as derivational rule of epenthesis. There are certain consonant clusters that Liddicoat (1994) states surface as CəC but occur in the data as CC. For example, the combination /dv/ is described as surfacing as [dəv] yet the examples in (36) and (45) the word [dvin] occurs. The form of the definite article allomorphs has a similar pattern. The definite article allomorphs in Jersey seem to exhibit a degree of phonological epenthesis or deletion. The underlying morpheme posited for the masculine definite article singular is /l/, with the allomorphs

being [l] and [le]. The formation of the allomorph [le] from /l/ involves the epenthesis of the vowel [e]. The exact opposite is seen in the feminine definite singular article, which in this case is the underlying /la/ and allomorphs [la] and [l]. To form the allomorph [l] from /la/, the vowel [a] is deleted. Epenthesis and deletion rules seem to account for the variation seen among these allomorphs and their underlying morphemes. This analysis is complicated when the plural definite articles are examined. The underlying morpheme for the plural definite articles is /lei/ and the allomorphs are [lei], [lz], and [leiz]. The only similarity between /lei/ and [lz] is [l]. The phonological rules needed to obtain the allomorphs from the underlying morpheme now become more complicated. For example to obtain [lz], [z] must be inserted at the end of [lei] and then the diphthong, [ei] must be deleted. The simple derivational rules become complicated, multi-step procedures. The proposed analysis, in the terms of the Sonority Sequencing Principle, explains why these insertions and deletions occur, which these rules only provide context and no motivation.

Fourth, this thesis prepares an analysis of the allomorphic variation in the framework of Optimality Theory (OT) (Prince and Smolensky 1993, McCarthy and Prince 1993). OT uses ranked constraints to evaluate and select the optimal output candidate. Under the framework of OT, an optimal output candidate can violate constraints if the constraint is low in ranking. This property explains the occurrence of an allomorph in violation of a sonority based principle (i. e. the occurring form violates the Syllable Contact Law, but is still the form that occurs in the data. The other form, which does not occur, violates several sonority principles). This does not complicate the analysis, but simply points to the possible benefit of using OT to further the analysis. Faithfulness constraints found in

OT would also be beneficial to this analysis as they could account for the variation seen among the plural definite article allomorphs. The use of OT to further analyze the data presented in this thesis may provide valuable insight into the variation.

Fifth, this thesis brings up an attention to the notion of extrasyllabicity with respect to the distribution of the phonemes /s/ and /r/ in Jersey. As noted by others, Clements (1990), Siptár and Törkenczy (2000), Parker (2002), and Denzer-King (2009), the phoneme /s/ behaves differently than other fricatives. The /s/+Stop consonant cluster sequence in syllable onsets violates the Sonority Sequencing Principle, yet occurs in many languages, including Jersey. In Jersey, /s/ can combine to form consonant clusters in onsets that violate sonority, such as /st/- /stɑːl/ 'stall,' /sp/- /spaðɛ/ 'to separate', /sk/ - /skabɛ/ 'stool.' The only one that is an issue is the /st/ sequence, since, according to Liddicoat (1994) the /sp/ and /sk/ sequence are realized as [səp] and [sək]. Extrasyllabicity has been used to account for the /st/ sequence (Selkirk (1995), Kiparsky (2003), Denzer-King (2009)). Extrasyllabic segments are believed to be parsed into a category higher than the syllable. Extrasyllabic /s/ in Jersey is a possibility and warrants more research. Similarly, the distribution of the phoneme /r/ in Jersey poses problems for both the Universal Sonority Hierarchy and the Jersey Sonority Hierarchy. /r/+Stop sequences, such as the onsets /rg/ - /rgardɛ/ 'to look,' and /rk/ - /rkuvri/, 'to recover,' violate the Sonority Sequencing Principle. Selkirk (1995) proposes treating /r/ in sequences such as this as extrasyllabic, similar to the treatment of /s/ above. This a possible solution to the problem of /r/+Stop onset sequences.

The proposed Jersey specific sonority hierarchy used may have an additional application. Allomorphic variation is found in many parts of speech in Jersey, such as among conditionals, pronouns, negation morphemes, and prepositions. Application of the Jersey Sonority Hierarchy to phrases containing parts of speech that exhibit allomorphic variation may yield an analysis that can predict these variations. In addition to allomorphic variation, the Jersey Sonority Hierarchy can also simplify further sonority based analysis by reducing the number of rules needed or with OT.

Furthermore, the Law of Initials and the Law of Finals are used in this thesis to determine allowable onsets and codas in Jersey. The composition of onsets and codas abide, for the most part, by the Sonority Sequencing Principle. Using this principle in conjunction with the Jersey Sonority Hierarchy can eliminate the need for the two laws mentioned above. Excepting the cases mentioned in the above paragraph (/s/+Stop, /r/+Stop), the onsets and codas should abide by the Sonority Sequencing Principle, with rankings based on the Jersey Sonority Hierarchy. The possible applications of the Jersey Sonority Hierarchy should be explored.

Finally, one of the basic underlying assumptions of sonority is that the sonority is an inherent property of a sound that is physical and can be measured. The property to which sonority is often linked is amplitude (Blevins 1996). If any of the physical properties of a sound segment change over time, including amplitude, it follows that the sonority index of the sound should also change. In Jersey, as in all languages, certain sounds have changed overtime. One of interest to this thesis is the evolution of intervocalic /z/ from

/r/. The occurrence of /z/ intervocalically does not cause sonority violations as it can occupy the onset of the second vowel's syllable or the coda of the first vowel's syllable. What it does bring up is the question of how does historical sound change affect sonority? Historical change may be able to provide insight into the occurrence of consonant clusters that violate the Sonority Sequencing Principle. A consonant cluster that once abided by this principle may change over time to create a cluster that now violates the principle. Sonority based analysis may need to include and account for the effect of historical sound change.

In conclusion, the implications of this thesis are broad and warrant additional time and research. The true nature of allomorphy, whether allomorphic differences are merely the result of phonological processes or are simply separate individual mental representations, is one issue that falls out from this thesis. Another implication is the analysis of sound sequences that violate sonority. These sequences may be the result of historical sounds change and while that may explain why these sequences occur, it does not analyze the occurrence. This phenomenon could be analyzed using OT or the theory of extrasyllabicity. This thesis is important to the field of linguistics as it puts for a theory-based analysis of described and undescribed data and successfully accounts of the variation found among the data. This thesis is also important in that it raises a number of implications from which further research may be arise.

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