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Diverging epenthesis processes as result of syncopation: an Optimality Theory account of Syncope, Anaptyxis and Paragoge in two Emiliano-Romagnolo dialects

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Abstract

This thesis explores the different dialectal status of two closely related Emiliano-Romagnolo dialects by employing an Optimality Theory account of syncope and epenthesis (Prince and Smolensky, 1993). Here, the dialects of Bolognese and Riminese represent the Emiliano and Romagnolo languages respectively. The two dialects share a common phonological history as they were both affected by syncope, a process that caused atonic material to be deleted, resulting in new consonant clusters to surface. Bolognese and Riminese, however, differ in the epenthesis process employed when treating a prohibited consonant cluster: anaptyxis occurs in the Emiliano language, restoring the syllable structure by disrupting the cluster with the insertion of a vowel. On the other hand, the process of paragoge takes place in Romagnolo, where a vowel is added word-finally. The objectives of this investigation are therefore identified as the following: (1) define and illustrate the diachronic linguistic phenomena happening in the dialects, (2) explore such difference and how it may be accounted for through the reranking of constraints and (3) to ultimately provide support for the independent status of the Emiliano and Romagnolo languages via the Optimality-theoretical analysis of two representative dialects. In syncope, the analysis illustrates the Bolognese and Riminese output forms surfacing with an identical constraint ranking: hence, the atonic deletion may be justified via one shared account. Contrarily, the two languages are differentiated in the epenthesis analysis: here, either output surfaces depending on the crucial order between two markedness constraints.

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THESIS OVERVIEW

Chapter 1 introduces the various aspects of this thesis; in section 1.1, a distinction is made between the notions of dialect and standard language. Additionally, this section establishes the interest of this research. The following section is concerned with introducing and illustrating the scientific focus of the thesis: more specifically, section 1.2 establishes the two dialects representing the Emiliano and Romagnolo languages. Section 1.2.1 presents the process of syncope, which affected both dialects, and section 1.2.2 investigates the diverging status of the two languages as illustrated by the application of two phonological repairing processes in different word positions. The relevant research question and hypothesis are presented in section 1.3. The remaining two sections of the introduction supply further context for the investigated languages: section 1.4 provides an overview of the geographical and historical events that shaped the differences between the two dialects, whereas section 1.5 presents the general linguistic diversity that characterises the languages of Romagnolo and Emiliano.

After introducing the processes occurring in the dialects and their applications depending on the consonant cluster encountered, Chapter 2 is concerned with the theoretical background of this research. Having identified the problematic consequences of syncope for the dialects' phonotactics in Chapter 1, section 2.1 illustrates the consonant clusters violations according to the literary background; additionally, this section presents the relevant data for this thesis' analysis offered in the following chapter. Section 2.2 is meant to account for the application of the different phonological operations by stipulating an opposing syllable structure of the dialects, and section 2.3 introduces the Optimality Theory framework as the method employed for analysing the processes of syncope, anaptyxis, and paragoge.

Data analysis and results are covered in Chapter 3; section 3.1 offers an overview of the word forms to be analysed via Optimality Theory. Section 3.2 lists and describes the constraints employed in the analysis, which is carried out in the three following subsections: subsection 3.2.1 is concerned with proposing one ranking order that accounts for the syncope process, shared by the two languages. As the main focus of interest of this thesis, the proposed accounts of anaptyxis and paragoge ordering of constraints are provided in subsections 3.2.2 and 3.2.3 respectively. A brief remark on the analysis ranking is discussed in subsection 3.2.4. Furthermore, the implications on the linguistic typology are elaborated in section 3.3.

Following the analysis of the Emiliano and Romagnolo data and having postulated two diverse ranking accounts, Chapter 4 is dedicated to the conclusion of this thesis: here, the final remarks of this investigation are stated by providing an overview of the content treated throughout the chapters, pointing out any limitation encountered in the development of the thesis and suggesting a direction for further studies.

CHAPTER 1 - INTRODUCTION

1.1 Dialect and Standard Language

Dialectal differences can be detected in everyday conversations: instances that testify the diversity of an individual's speech are, for example, the use of lexicon that may result unfamiliar to the hearer, or an altered production of sounds. If the average speaker finds such differences to be "fun-facts" about other dialects, on a linguistic level, investigating such divergences may bring forth further distinction among dialects.

In the linguistics discussion, dialects are commonly described as varieties of a standard language: the dialectal differences in our speech are arguably the most intimate feature of our verbal expression, as they may disclose to our interlocutor our geographical provenience. Dialects differ from one another at the level of phonology, morphology, syntax, and vocabulary at different degrees, rendering the intelligibility between them impossible at times. The degree of intelligibility is dependant on the distance between the dialects' geographical locations: along one direction, the further the stretch between sites is, the more substantial the dialectal variations are encountered. Although the differences across regional dialects are more pronounced, individual regions still present internal variations that are worth investigating. To recapitulate, dialectal variations are confined by geographical bounds and represent language use that is distanced from the "norm". On the other hand, a standard language is the embodiment of this norm. The definitions of a standard language are various, but it is generally defined as a dialect that gained an official status over time, and that unified the population of a country under one single, written and official variant.

This research is interested in the investigation of the phonological aspect of two geographically-near Italian dialects. According to Cerruti and Regis (2014), a large number of dialects are spoken in the Italian territory; furthermore, the "dialect" label attributed to them in the realm of Italian research indicates the independence of their linguistic systems, rendering them distinct from standard Italian and proving a point for this investigation. The aim of this thesis is, therefore, to provide a phonological account of the different applications of opposing processes happening in two closely related Emiliano-Romagnolo dialects.

1.2 Phonological Processes in the Emiliano and Romagnolo Languages

A particularity of the two Emiliano-Romagnolo dialects analysed here consists in the languages sharing the phonological process of syncope, yet making a difference in the type of epenthesis employed. Therefore, the following two subsections are meant to further define the phonological processes of syncope and epenthesis. In 1.2.1, the process of syncope is introduced and illustrated in the dialects. In section 1.2.2, the faceted applications of epenthesis are discussed, and a differentiation line between the Emiliano and Romagnolo languages is defined.

As suggested by the literature on the subject, dialectal variation may be recorded even within the same city (Bafile 2001; Loporcaro 2008; Vitali and Pioggia 2010; Cerruti and Regis 2014). In this introductory section, I proceed by identifying the two representative dialects of the region Emilia-Romagna by keeping in mind the notion of dialect continuum and what it implies in terms of similarities between dialects. In this investigation, the Bolognese dialect will represent the Emiliano language, and Riminese will account for Romagnolo. With 100 kilometres of distance between one other, Bolognese and Riminese are spoken in the cities of Bologna and Rimini respectively. As shown by the map in Figure 1, the torrent Sillaro separates the areas where either dialect is spoken: Bologna is located on its western side in the Emilian area, while Rimini is situated in the territories of Romagna (Wikipedia, 2007).



Figure 1. The region of Emilia-Romagna and the torrent Sillaro (in red) dividing the two dialectal areas. The darker pink colour indicates the eastern territory where the Romagnolo dialect is spoken, whereas the lighter pink denotes the Emiliano language. The cities of Bologna and Rimini are located in Emilia and Romagna respectively. *Note*. Adapted from *Piantina dei dialetti dell'Emilia Romagna,* by OrsOrazio, 2007. Wikipedia.

1.2.1 Syncope in Bolognese and Riminese

Despite the diverse historical and linguistic turns that defined Riminese and Bolognese, the two languages share several linguistic features and processes developed from their geographical vicinity. *Syncope* is the phonological operation that is of pivotal importance in this inquiry, as it is responsible for the phonological differences investigated in this thesis. Syncope is often encountered in the northern dialects of the Italian peninsula, more precisely spoken in the regions of Lombardy, Piedmont, Emilia-Romagna and Marche (Bafile, 2001). Syncope is defined as a weakening process affecting atonic vowels which results in their deletion in word-initial, word-medial and word-final position; this drop of an unstressed vowel has influence over both post- and pre-tonic segments in the Bolognese and Riminese languages. In the Italian literature, the specific case of atonic vowel fall in word-final position is referred to as *apocope*. Bolognese and Riminese vocabulary presents many instances of apocope, which however spares /a/ when in final position (Bafile, 2001). In this thesis, the process of apocope is not treated differently from syncope, and is illustrated in example (1).

(1)	a. Bolognese:	/'kanva/, <i>canapa</i> , 'hemp'	(Bafile, 2001, p. 149)
		/'gal/, gallo, 'rooster'	
	b. Riminese:	/'lɛtra/, <i>lettera</i> , 'mail'	
		/'gat/, <i>gatto</i> , 'cat'	

The atonic word-final vowels in the words above display two trends: unstressed final /a/ is not subject of apocope, as /'kanva/ and /'lɛtra/ display. On the other hand, word-final /o/ in /gal/ and /gat/ are dropped by both Bolognese and Riminese, causing the words to be reduced to a monosyllabic form. Furthermore, the Riminese /'lɛtra/ presents syncope of /e/ word-internally, similarly to the Bolognese unstressed /a/ between the /nv/ cluster.

1.2.2 Anaptyxis in Bolognese and paragoge in Riminese: a diverging point

The process of syncope alters the preferred syllable structure of both Bolognese and Riminese, and may generate sequences of consonants that are not permitted by the language, which therefore required an adjustment (Bafile, 2001). It is specifically in these repair strategies that we find the two dialects parting from one other, proving a point for this investigation. Whereas Emiliano dialects employ *anaptyxis* to recover a prohibited syllable structure, south-eastern Romagnolo dialects restrict themselves to the etymological *paragoge* of /i/ and /e/. Anaptyxis and paragoge belong to the process of epenthesis, which allows a sound to be inserted in a word; more specifically, paragoge specifies that the phonetic material is added word-finally, whereas anaptyxis inserts a vowel between two consonants. These two processes constitute, therefore, two types of epenthesis. The application of anaptyxis in Bolognese and the one of paragoge in Riminese is identified to be the divergence point between the two dialects, and is illustrated below:

It is supposed that along with other phonological processes, syncope caused the Latin form /'juvenis/ to loose all the vocalic material falling outside of the stressed syllable; a form similar to / zovn/ stayed present for some time in the input of Bolognese and Riminese, and it enabled the different epenthesis processes to take place. Ease of articulation and sonority hierarchy may have played a role in why this cluster was initially accepted, and then prohibited by both languages. With the current forms exhibiting anaptyxis and paragoge, it may be concluded that syncope is responsible for the obstruent-nasal pattern created word-finally. The dialects make use of distinct epenthesis processes to accommodate their preferred syllable structure. In (2), Bolognese differs from Riminese in the placement of the epenthesised material: as the cluster is deemed problematic in the Emilian representative, anaptyxis of /e/ is applied to repair the violation of the newly formed CC pattern. On the other hand, Riminese rehabilitates its structure with the insertion of / ϵ / word-finally, therefore applying the process of paragoge.

The Riminese dialect is primarily characterised by the occurrence of paragoge to repair the word forms affected by syncope, as indicated in the literature (Vitali and Pioggia 2010; Vitali 2008). Nonetheless, this language presents a limited number of proparoxytone words which apply the anaptyxis of the etymological vowels /e/, /u/ and /i/ to repair the structure. Two examples of the anaptyxis process in Riminese are provided in item (3):

(3)	Riminese:	/'sobit/, subito, 'right away'	(Vitali and Pioggia, 2010)
		/'sabɛt/, sabato, 'Saturday'	

The Riminese words are syncopated, and anaptyxis of /i/ and / ϵ / surfaces between the coda consonants of the forms. The words /'sobit/ and /'sabet/ provide an example of the insertion of etymological vowels in Riminese via anaptyxis; when considering the urban-speech of Rimini, it must be noted that such process occurs sporadically (Vitali and Pioggia, 2010). From this analysis, the following may be concluded: when in coda position, the obstruent-obstruent cluster is classified as prohibited, and therefore Riminese employs anaptyxis to rehabilitate its proparoxytone words. However, such CC sequence is allowed as an onset:

(4)	Riminese:	/'pdot͡ʃ/, <i>pidocchio</i> , 'louse'	(Vitali and Pioggia, 2010)
		/'bdol/, <i>pioppo nero</i> , 'black poplar'	(Ercolani, 1971, p. 44)

As a result of syncope, Riminese enables the obstruent-obstruent pair to surface wordinitially in the words exemplified in (4). Contrarily to the case of /'sobit/, the consonantal pattern in /pdot \hat{J} / is not considered problematic as it is in onset position; similarly, the CC pair in /'bdol/ does not require any reparation. Bolognese treats the obstruent-obstruent cluster similarly to Riminese:

(5)	Bolognese:	a. /'kodeg/, <i>cotiche</i> , 'pork rinds'	(Bafile, 2010, p. 151)
		b. /'bccon/, boccone, 'bite'	(Ferrari, 1853, p. 119)

In (5a), the word-final cluster is deemed problematic by the Emiliano dialect, and anaptyxis of /e/ prevents the violating word form from surfacing. Contrarily, when the obstruent-obstruent pair is in onset position, illustrated by /'bccon/, Bolognese does not require a syllable structure reparation, and the syncopated form surfaces.

Section 1.2 aimed at describing syncope and epenthesis in Bolognese and Riminese. The examples reported display how the two dialects undergone syncope, similarly to most languages found in northern Italy (Bafile, 2001). Riminese and Bolognese are alike in that they were both affected by the loss of atonic vowels in either word position. However, the different reparation processes consecutive to syncope reveal what is here identified as a divergence point between Emiliano and Romagnolo word-final clusters; the application of anaptyxis and paragoge enables a further exploration of the viable underlying causes. Ultimately, the processes of anaptyxis and paragoge are alike as they both provide syllable structures with the addition of a vowel, but differ in the position in which they do so: the former adds segment consonant-medially, whereas the latter intervenes word-finally. It is important to specify that the processes of syncope and epenthesis explored in this thesis occurred diachronically.

1.3 Research Question and Hypothesis

Having provided an overview of the dialects' processes, the theoretical research question of this thesis is thus presented. The syllable structure of Bolognese and Riminese is altered by syncope, and anaptyxis and paragoge are employed when prohibited clusters surface: do the dialects' syllable requirements dictate the application of different phonological repair process employed by Bolognese and Riminese? Furthermore, how is the variation between syncope, anaptyxis, and paragoge accounted for in Optimality Theory? With these questions, this thesis aims at providing a description of the different epenthesis found in the two Emiliano-Romagnolo dialects. It is hypothesised that three different constraint rankings will be formulated: the first accounting for the process of syncope shared between the dialects, the second defining anaptyxis in Bolognese, and the third describing paragoge in Riminese. The epenthesis analysis will tap into the realm of factorial typology, where a re-ranking of constraints can account for the different word-forms surfacing in Bolognese and Riminese after syncopation.

1.4 A brief history of Emilia and Romagna

The interest of this examination is placed on the dialects of the territory of the northern region Emilia-Romagna. This Italian region borders to the north with Lombardy and Veneto, to the south with Tuscany, the Republic of San Marino, and Marche, while its eastern side is confined by the Adriatic Sea, and its western area borders Liguria.

As suggested by its two names, Emilia-Romagna is composed of two historically and geographically distinct areas, unified under a single region after World War II. This prefiguration was only made official on June 7, 1970, when Emilia-Romagna became a region under the Italian Constitution (Regione Emilia-Romagna, n.d.). A brief historical overview of Emilia and Romagna is provided in this section in order to mark the differences between the once stand-alone territories and to prove a point for this linguistic investigation.

According to Graziani, Montanari, Avellini, and Vannoni (2002, 2004, 1980, 2012), both Emilia and Romagna were inhabited by a number of civilisations, such as the Etruscans in the VI century BC, the main population who reigned over the Emilian area until Romans took over in the III century BC. Romagna's territory was under the power of Etruscans, who lost authority over the area to various Celtic tribes. Romans defeated the Celtics in the III century BC and proceeded by reigning in Romagna, establishing cities such as Rimini and strengthening the status of other cities like Ravenna, which became the capital of the Western Roman Empire in 402 AC after Constantinople.

After the fall of the Western Roman Empire in 476 AC, Emilia and Romagna were invaded by different barbaric population from northern Europe: here, we note the first instance of divergence between the two areas. Emilia, like much of the Italian territory, was subjected to the germanic Lombards, while Romagna remained under the Byzantine Empire's control.

During the course of the VI century, Justinian the Great commanded military campaigns aimed at taking back power over the Empire's territories that were lost to Barbarian populations during the Gothic war. Romagna was among the lost territories, which were all convened under the Exarchate of Ravenna: this lordship was then put to an end by the Lombards reigning in Emilia.

Subsequently to the control of the Lombards, the Franks dominated the Emilian area, which was donated to the Pope by King Pepin. Meanwhile, the regions of Romagna, including Ravenna, remained in Frankish-German possessions. Emilia became part of the Holy Roman Empire and saw its territories being subdivided into feuds; in the following centuries, the feuds evolved to be free municipalities and signorie. Comparably as to the Emilian circumstances, the Franks freed the Romagnolo territories from the Lombards and Romagna became part of the papal states until 1796. That year, the settlement of Napoleon Bonaparte's troops in Northern Italy resulted in the creation of republics dependent on the French ruling: among them, the establishment of the Cispadana republic comprised the Emilian territory. The older administrative system was then restored in 1815 after the referendums that took place in March 1860, the Papal administration was put to an end as the two territories were officially integrated with the Kingdom of Sardinia, which became the Kingdom of Italy the following year.

1.5 The Emiliano and Romagnolo Languages

The Emiliano-Romagnolo dialect is composed of two languages, as the name suggests, which are subdivided in many other dialects spoken in each city of the region. Spoken synchronously to Standard Italian, the Emiliano and Romagnolo languages are Romance languages

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belonging to the Gallo-Italic branch, and together are part of the Emiliano-Romagnolo continuum (Tamburelli, 2018). As stated by Pellegrini (1977), the Emiliano-Romagnolo dialects may be grouped into three main classes: *western Emiliano* (Parma, Reggio Emilia, Piacenza and Modena), *eastern Emiliano* (Bologna and Ferrara) and *Romagnolo* (Ravenna and Rimini); this classification justifies the different status of Bolognese and Riminese, with the former belonging to eastern Emiliano and the latter to Romagnolo.

Misconceptions about the evolution of dialects of the peninsula are identified as the following: dialects either originate from the Standard language of the territory, or they are classified as varieties of the National language. Upon a closer look, it is understood that Italian dialectal origins and evolution are more complex than the identification of a single cause. In fact, Italian dialects developed from old Latin along with Standard Italian, and they present grammatical and linguistic features that do not reflect the evolution of a National Standard language (Berruto 1994; Grassi et al. 2003; Pellegrini 1977). The ancient Romance origins of Romagnolo and Emiliano attribute equal importance of the languages to Standard Italian. The evolution of the dialects from old Latin is attested by the loss of phonetic and morphological features in other vulgar Italian variations, which are in common with Romagnolo; for example, the absence of declinations of nouns during the high Middle Ages (Wikiwand, n.d.).

The factors distinguishing Romagnolo from the languages spoken in Northern Italy are of cultural, geographical and historical nature, and may be identified in the different Latin languages spoken on either side of the Apennines, the initial Byzantine ruling on the area, and the subsequent exposure to a number of germanic influences brought along by Barbarian invasions. Friedrich Schürr (1978), who intensively studied Romagnolo and produced most of the literature available today, confirms the significance of the Byzantine period: the features that characterise the Romagnolo language appeared between the VI and VIII century when the Exarchate of Ravenna isolated the area both culturally and politically. This separation enabled further differences between Romagnolo and its neighbouring vulgar languages, who were ruled by the Lombards.

The absence of a strong Emilian identity is accounted for by geographical and historical reasons: despite the trivial importance of Via Emilia¹, Emilian varieties lack a linguistic epicentre (Foresti, 2010). The area is characterised by a strong lexical fragmentation, which results in a further distinction between a western, central and eastern dialectal section (indicated in Figure 1); causes of such divisions are identified in the particularity of the citizens and historical polycentrism, both contributing to the rise of conflicts between municipalities and signorie (Bellosi, Quondamatteo, 1979).

Being originally from the city of Rimini, the dichotomy between Emilia and Romagna is somewhat still perceived by the Romagnolo speakers, who hold Romagna as a separate entity given its folklore and the gastronomic traditions which are not entirely shared with its step-sister Emilia. Interested by this ongoing "feud" between residents of the same region, this thesis aims to dig deeper into the linguistic evidence that separates Emiliano and Romagnolo.

¹ Via Emilia (*Aemilian way*) is a Roman road built in 189 a.C. with the aim to connect the cities of Rimini and Piacenza and enable commercial exchanges along its way.

1.6 Summary

The Introduction chapter illustrated the phonological processes of syncope, anaptyxis, and paragoge in Emiliano and Romagnolo: the type of reparation process employed by Bolognese and Riminese are identified to set the two languages apart. As a result of syncope, both dialects make use of vowel insertion to repair the CC patterns deemed problematic and diverge in the operation employed: whereas Bolognese disrupts the prohibited CC pair with anaptyxis in-between the cluster, Riminese applies paragoge word-finally. Anaptyxis and paragoge are different applications of epenthesis to restore the syllabic structure that was affected by the emergence of banned consonant patterns resulted from syncope.

CHAPTER 2 - THEORETICAL BACKGROUND

2.1 Consonant Clusters

Syncope gives rise to consonant patterns which not always need reparation; the great number of dialects spoken in the region of Emilia-Romagna induced academics to study the behaviours of the complex consonant clusters resulting from syncopation. This dense grouping of consonants is highly in contrast with Romance languages: in the dialects spoken in the area, as much as three consonants may be grouped together independently from their position in the word (Loporcaro, 1998).

(6) Bolognese: /'zbdel/, *ospedale*, 'hospital' (Loporcaro, 1998, p. 156) /'saŋgv/, *sangue*, 'blood'

As illustrated above, items in (6) from Bolognese present a CCC sequence in word-initial and word-final position respectively; both clusters retain their consonant sequence as they are not judged as prohibited by the language.

Based on the study of rich consonant clusters and the investigation of which CC patterns are allowed or banned in specific dialects, Bafile (2010) provides a general account of the admitted consonant clusters found in various dialects of Emilia. The CC patterns which do not violate the preferred syllable structure are sonorant-obstruent (the sonorant may be nasal or liquid) and sibilant-obstruent in coda position. Bolognese adheres to this classification, as illustrated by the two cases below:

(7)	Bolognese:	/'kald/, <i>caldo</i> , 'hot'	(Bafile, 2010, p.150)
		/'bɔsk/, <i>bosco,</i> 'woods'	

The word /'kald/ presents apocope of final unstressed material and illustrates the admitted liquid-obstruent cluster in word-final position. Similarly, /'bosk/ presents the permitted sibilant-obstruent pair as coda. In both word forms, syncope affected the syllable structure without causing any forbidden consonant encounter; this may be concluded as epenthesis is not applied. Table 1 is provided to further illustrate the cluster combinations surfacing in the dialects.

		Riminese	Bolognese	CC
Sonorant-Obstruent	Liquid-Obstruent	/'keld/ /'ɛlt/ /'pork/	/'kald/ /'ɛlt/ /'perk/	/ld/ /lt/ /rk/
	Nasal-Obstruent	/`dvent/ /'pont/	/'pint/ /'granb/	/nt/ /nb/
Sibilant-Obstruent		/'cosp/ /'gost/	/'bosk/ /'cost/	/sk/ /sp/ /st/

Table 1. List of admitted Riminese and Bolognese coda-clusters.

The process of syncope may give rise to prohibited consonant clusters in the language: obstruent-liquid, sonorant-sonorant, obstruent-obstruent and obstruent-nasal are all combinations of violation of CC patterns in Emilian dialects. The labelling of a CC sequence as permitted or prohibited is determined by the language itself (Vitali, 2008). Bolognese is not accepting of obstruent-nasal and sonorant-sonorant in the final position, illustrated by the example below:

(8)	Bolognese:	/zovn/ > /'zoven/, giovane, 'young'	(Vitali and Pioggia, 2010)
		/mɛrl/ > /ˈmɛrel/, <i>merlo</i> , 'blackbird'	(Vitali, 2008)

After the application of syncope, the Bolognese words are left with a banned cluster that requires reparation: in /zovn/, anaptyxis of /e/ repairs the violation of the CC pattern and results in the surfacing form /'zoven/. In the /mɛrl/ form, apocope caused the fall of final atonic /o/; the resulting word-final cluster of /merl/ is not accepted by Bolognese, which employs epenthesis and inserts /e/ in-between the prohibited consonant cluster.

Accounting for the Riminese patterns, Vitali and Pioggia (2010) identified a small number of prohibited consonant clusters appearing in word-final position: C-sonorant, and specific to proparoxytone items, obstruent-plosive. Despite proparoxytone words (which make use of anaptyxis) and therefore disregarding the obstruent-obstruent pair from this thesis' analysis, this dialect is additionally not accepting of obstruent-nasal clusters, as reported in (9) below. Furthermore, the Riminese data presents a C-sonorant violation, analogue to Bafile (2001) description of Emilian sonorant-sonorant pattern.

(9)	Riminese:	/zovn/ > /'zovnɛ/, giovane, 'young'	(Vitali and Pioggia, 2010)
		/mɛrl/ > /'mɛrlɛ/, <i>merlo</i> , 'blackbird'	(Vitali, 2008)

The items in (9) are analogous to the Bolognese data in (8); in the obstruent-nasal and sonorant-sonorant contexts, Riminese rehabilitates its preferred structure applying the process of paragoge. Therefore, /zovn/ is repaired by the insertion of ϵ / word-finally, surfacing as /'zovn ϵ /. The latter word presents the fall of atonic /o/ and a prohibited cluster emerges: in /m ϵ rl/, the paragogic / ϵ / takes care of the CC pattern violation in Riminese. The syllabic structure rehabilitation is achieved in the resulting /'m ϵ rl ϵ /.

Examples (8) and (9) provide support for a ban on consonant clusters shared by Bolognese and Riminese, namely obstruent-nasal and sonorant-sonorant. The two dialects share a further CC pattern violation, represented in (10):

(10) a. Bolognese: /mɛgr/ > /'mɛger/, magro, 'thin' (Passino, 2012, p. 60)
b. Riminese: /mɛgr/ > /'mɛgri/, magro, 'thin'

Here, the obstruent-liquid cluster is repaired using anaptyxis of /e/ in Bolognese, and with paragoge of /i/ in Riminese, rendering the /gr/ pattern problematic for both dialects. Thus, the

Riminese and Bolognese dialects deny the obstruent-nasal, sonorant-sonorant and obstruent-liquid patterns to surface in coda position. The obstruent-obstruent cluster in coda position is hereafter excluded from this investigation, as Riminese presents the CC violation in proparoxytone words which are rehabilitated by anaptyxis rather than paragoge.

Previously, Vitali (2008) provided a diachronic account of the Bolognese dialect describing its vowels, consonants and general processes that are observed in the language. Certain lexical items may have power over the processes that happen within them, as illustrated in the examples below.

(11) Bolognese: /'nɛruv/, nervo, 'nerve' (Vitali, 2008) /'cɔrv/, corvo, 'crow'

Exemplified by the two words, the consonant liquid-obstruent cluster is present word-finally; in the instance of /'neruv/, the cluster is broken by the anaptyxis of /u/, but remains unchanged in /'corv/. The differentiation made between this identical consonant sequence is dictated by the words themselves (Vitali, 2008). Therefore, the presence of such a language-intrinsic variation excludes the liquid-obstruent pattern from this thesis' analysis.

According to the relevant literature, section 2.1 provides a classification of clusters resulting from the process of syncope, and states which patterns are prohibited to surface in the two dialects. Because of the emergence of forbidden consonant clusters, the syllable requirements of Bolognese need to be rehabilitated by anaptyxis, similarly to the process of paragoge which acts on Riminese's syllable structure. The interest of this investigation is prompted by the dialects' different disambiguation of CC patterns based on their position in the word; thus, the analysis provided in this thesis is based on the occurrence of paragoge and anaptyxis in Riminese and Bolognese words that present prohibited clusters in word-final position. The word forms that present CC patterns in need of reparation are matched between the two dialects to enable a direct comparison between Bolognese and Riminese dialects. Moreover, this investigation aims to provide an account for the process of syncope resulting in permitted consonant clusters, whose classification is shared between the two languages. The generalisations offered in this analysis may account for syncopated feet becoming monosyllabic, and, in the case of prohibited clusters, monosyllabic forms becoming bisyllabic with the insertion of vocalic material.

2.2 Founding support in Syllable Structure

The data presented in 2.1 reveal two tendencies originating from syncopation: the first trend concerns the clusters that are maintained in the dialects, such as sonorant-obstruent and sibilant-obstruent, whereas the second trend presents Bolognese and Riminese restoring the prohibited clusters through anaptyxis and paragoge respectively. In the case of the former, syncope creates clusters which survive in the language without restoring. Here, the syllable structure of the word-forms remains invariable: a bisyllabic word that after syncopation presents a /CVCC/ sequence in both Bolognese and Riminese is fully maintained as such. This is illustrated below with a Latin word exhibiting syncopation:

(12) displays phonetic material being dropped from the Latin /CVCCVC/ words, resulting in the monosyllabic /CVCC/ forms shared by Bolognese and Riminese. In the two dialects, the sonorant-obstruent cluster created by syncope is preserved in coda position: the syllable structure remains therefore unaffected as the languages do not show reparation supplied by epenthesis.

The latter trend presents more interesting syllabification requirements; a syncopated /CVCC/ pattern is reconstructed into a /CVCVC/ sequence in Bolognese, which employs anaptyxis to disrupt the banned cluster. Riminese treats the reparation differently and adapts the monosyllabic structure to a /CVCCV/ pattern, where the paragogic material inserted word-finally. Instances of syncopated and epenthesised CV patterns are illustrated in example (13) at the beginning of the following chapter. According to the literature, the alternation between vowels and consonants in the majority of dialects of the Emilia-Romagna region result in the patterns .CVC and .CCV, as suggested by the word forms provided so far (Bafile, 2001). Corresponding to the structural changes generated by anaptyxis and paragoge, the data presented as yet indicates the former syllable structure to reflect Bolognese requirements, whereas the latter depicts Riminese.

The analysis in this thesis is concerned with the description of Vulgar Latin /CVCCVC/ patterns whose post-tonic material was dropped by syncope, rendering the forms monosyllabic; such forms are evaluated as to be problematic or allowed in the two languages', which act with epenthesis in the former case, and accept the monosyllabic pattern of the latter. Therefore, when providing an account of syncope, the analysed form will present a /CVCC/ sequence as to represent the removal of weak material and the dialects' acceptance of the new syllable structure. Furthermore, this analysis considers the dialects' syncopated monosyllabic forms that became bisyllabic with the insertion of a vowel, and syllabifies them following the Maximum Onset Principle. This principle postulates the preference for consonants to be onsets rather than codas as long as the language-specific constraints are not violated. Syllabification with the Maximum Onset Principle would enable a distinction between open and closed syllables and their sequence in the word forms of the languages; specific constraints on syllable types would therefore be able to explain the different locations where insertion occurs in the two dialects.

In the case of Riminese, a monosyllabic /CVCC/ form results from syncope, which may cause a prohibited cluster to surface. The word is therefore in need of reparation, and paragoge inserts a vowel word-finally, resulting in a /CVC.CV/ pattern: with the application of this process the word is now bisyllabic, and presents a closed first syllable and an open second syllable. Subsequently to syncope, prohibited clusters surface in Bolognese forms like /CVCC/, and anaptyxis restores the ban by breaking the consonant pattern. Thus, an healthy /CV.CVC/ structure describes this dialect's bisyllabic word forms, where the first syllable is open as no coda is present, and the second syllable is closed.

2.3 An Optimality Theory Account of Syncope, Anaptyxis and Paragoge

The phenomena of syncope and epenthesis are investigated using Optimality Theory, henceforth referred to as OT (Prince and Smolensky, 1993). This theoretical framework makes use of violable universal constraints that are ranked hierarchically, which evaluate different competing candidates. OT determines the optimal output form of a given input by counting constraint violations. An optimal candidate is identified as the one with the fewest violations of constraints. Several OT constraints are used to account for the processes of syncope, epenthesis and paragoge occurring in the Riminese and Bolognese languages. In the following chapter, the application of the aforementioned phonological operations is demonstrated by a specific order of constraints to explain the differences between the two dialects.

CHAPTER 3 - DATA ANALYSIS AND RESULTS

3.1 Relevant Data

The objective of this short section is to present the data relevant for the OT analysis. Only a selected number of word forms illustrating syncope and epenthesis is investigated in this chapter. (13a) displays one of the two admitted CC cluster combinations resulting from syncope, exemplified by two representing words. On the other hand, syncope may create patterns that are prohibited from surfacing; the phonological processes of epenthesis occur in the context of such consonant patterns, one of which is exemplified in (13b):

(13) *Syncope*

a. <u>Sibilant-Obstruent Cluster</u> Bolognese: /'bosk/, *bosco*, 'woods' Riminese: /'gost/, *costo*, 'cost'

Epenthesis b. <u>Obstruent-Nasal Cluster</u> Bolognese: /zovn/ > /'zoven/, *giovane*, 'young' Riminese: /zovn/ > /'zovnɛ/, *giovane*, 'young'

Thus, the words analysed with the OT theoretical framework are /'bosk/ and /'gost/ accounting for syncope, and /'zovne/ and /'zovne/ reflecting the epenthesis forms; Bolognese and Riminese are hypothesised to present two different rankings of constraint to justify the processes of anaptyxis and paragoge asserted in (13b). Contrarily, one ranking order is sufficient to justify the process of syncope, where it created CC patterns that are admitted in both dialects. In sum, a total of three rankings is expected to result from this analysis.

3.2 OT Constraints

Various constraints are used to account for the application of different epenthesis' processes surfacing in Bolognese and Riminese syncopated vocabulary; the deletion of segments caused by syncope is also examined in this investigation. Both faithfulness and markedness constraints are employed in the following OT analysis. This subsection offers an overview of the constraints considered useful in this investigation.

(14) Faithfulness Constraints

a. MAX-C

Deletion of consonants is prohibited.

b. DEP-V Insertion of vowels is prohibited. (14) describes two faithfulness constraints as employed by McCarthy (2003). The constraint MAX-C ensures that no consonant is deleted from the surface form, excluding any output candidate with less or different material; this constraint will rank higher than (b) in both the syncope and epenthesis account. The constraint DEP-V does not allow the insertion of vowels and therefore prevents the application of epenthesis; its ranking is expected to be placed higher in the hierarchy compared to certain markedness constraints.

Additionally, markedness constraints account for the different word forms in each dialect:

(15) Markedness Constraints

- a. OCP SON Adjacent segments should not have identical sonority.
- b. SONSEQ Clusters must conform to the sonority scale.
- c. FINAL-C

*V]_w A vowel is not allowed to surface at the end of a word.

d. FINAL-V

*C]w A consonant is not allowed to surface at the end of a word.

The first constraint is derived from the Obligatory Contour Principle found in autosegmental phonology and formulated by Goldsmith (1976). Although originally referring to tones, OCP SON constraints are utilised by Itô et al. (1995) and McCarthy (1988) to specify the identical feature of adjacent segments. Here, this constraint assigns a violation to every CC pattern with an identical or similar sonority level, therefore accounting for the occurrence of a sonorant-sonorant cluster word-finally. The constraint SONSEQ is based on the Sonority Sequencing Principle proposed by Selkirk (1984), where obstruents and liquids are further differentiated. The non-syllabic scale followed in this investigation is reported in (16):

 $(16) \quad p, t, k < b, d, g < f, \theta < v, z, \delta < s < m, n < l < r$

SONSEQ is useful in this analysis as it accounts for the obstruent-nasal and obstruent-liquid prohibited patterns: in these clusters, the sonority of the final consonant is higher than the preceding segment, causing the sonority to increase word-finally. In order not to break the sonority profile of the syllables, the languages apply anaptyxis and paragoge: the two processes create a second syllable and allow the sonority to decrease regularly from the beginning of the peak onwards. Constraints (a) and (b) are relevant for this analysis in that they account for the languages' banned clusters in word-final position and prevent the erroneous forms from surfacing; it is expected for both OCP SON and SONSEQ to appear in a high position of the hierarchy, assigning a violation to the forms presenting a prohibited cluster in coda position.

When adding phonetic material to the Bolognese and Riminese syncopated words, a vowel is inserted in the output without its counterpart in the input; therefore, the epenthesis material is only determined by markedness factors. Accounting for the epenthesis processes employed in the languages, two constraints are used in this analysis: (c) is proposed by McCarthy and Prince (1993), whereas (d) is an adaptation of these authors' work by Rosenthall and Horn (1997). As described by the former, FINAL-C poses that the word forms ends in a consonant, representing the Bolognese output with .CVC as the final syllable. On the other hand, FINAL-V ensures the preference of Riminese's second syllables to be open, hence attributing a violation to any C present word-finally; this constraint is necessary when accounting for the process of paragoge occurring in the Romagnolo language, and would enable a distinction from the surfacing form of Bolognese, which prefers for its syncopated words to end in closed syllables. The ranking of constraints (c) and (d) are presupposed to be decisive in the selection of the most optimal candidate diverging in each language: it is expected that a higher ranking of FINAL-V over FINAL-C would result in the account of Riminese, whereas inverting the order of the two would justify the Bolognese output.

This analysis considers one of the constraints described above to serve an ambivalent function: it must result in an identical syncope ranking in both dialects, and the assumed syncope account should not hinder the crucial ranking of FINAL-V and FINAL-C over each other. Constraint DEP-V is identified to function as buffer; this faithfulness constraint should rank identically in the syncope and epenthesis tableaux. In the former, it is expected to eliminate the candidate not affected by syncope, and it should violate both epenthesis forms in the latter, so as to leave the final decision to the ranking of FINAL-V and FINAL-C.

3.2.1 Proposed Syncope Ranking

Syncope affects the syllable structure of Bolognese and Riminese forms, which drops the unstressed material and enables new clusters to surface at the word margin. In the case of (13b), the surfacing /'bosk/ and /'gost/ are not problematic for the languages as the sonority hierarchy is not violated. To justify the process of syncope occurring analogously in both dialects, the following ranking is proposed:

(17) Syncope

DEP-V >> FINAL-C, FINAL-V

(18) Syncope in Bolognese; crucial ranking tableau.

/bosk/	DEP-V	FINAL-C	Final-V
ræa. /'bosk∕			*
b. /'bos.ko/	*!	*	

(19) Syncope in Riminese; crucial ranking tableau.

/gost/	DEP-V	FINAL-C	Final-V
ræa. /'gost/			*
b. /'gos.to/	*!	*	

The identical crucial ranking in (17) is demonstrated above. Tableaux (18) and (19) illustrate DEP-V dominating over FINAL-V and FINAL-C: candidates (18b) and (19b) are therefore discarded as they violate the higher-ranked constraint. The irrespective order of FINAL-V and FINAL-C allows candidates (18a) and (19a) to surface as optimal outputs with the lowest number of violations.

(20) Syncope in Bolognese; relative ranking tableau.

OCP SON, SONSEQ, MAX-C, DEP-V >> FINAL-V, FINAL-C

bosk	OCP SON	SONSEQ	MAX-C	DEP-V	FINAL-V	FINAL-C
ræa. /'bosk∕					*	
b./'bos.ko/				* <u>!</u>		*
c. /'bos/			*!		*	
d. /ˈbosl/		*!	*		*	
e./ˈbosʃ/	*!		*		*	

(21) Syncope in Riminese; relative ranking tableau.OCP SON, SONSEQ, MAX-C, DEP-V >> FINAL-C, FINAL-V

/gost/	OCP SON	SONSEQ	MAX-C	DEP-V	FINAL-C	FINAL-V
ræa. /'gost/						*
b./'gos.to/				*!	*	
c. /'gos/			*!			*
d. /'gosr/		*!	*			*
e. /'gosʃ/	*!		*			*

Despite the analysis of two distinct underlying forms, the ranking proposed in tableaux (20) and (21) identically account for syncope in Bolognese and Riminese. In both tableaux, candidates (d) and (e) are eliminated by OCP SON and SONSEQ respectively because of the sonority violations. Candidate (c) presents deletion of material from the input and is therefore discarded. DEP-V excludes the bisyllabic candidate (b) from the analysis; the relative ranking of the aforementioned constraints enables candidate (a) to surface as optimal, and permits to further specify the order of FINAL-C and FINAL-V in the epenthesis account.

3.2.2 Proposed Anaptyxis Rankings

Subsequently to the fall of atonic vowels caused by syncope, prohibited consonant encounters originate in Bolognese and Riminese words: by employing the processes of anaptyxis and paragoge, the two dialects set different parameters on their preferred syllable structure. Accounting for the Emiliano language, the ranking in (22) describes the ordering of crucial constraints, and illustrates the process of anaptyxis occurring in Bolognese.

(22) Anaptyxis FINAL-C>> FINAL-V

(23) Anaptyxis in Bolognese; crucial ranking tableau.

/zovn/	FINAL-C	FINAL-V
☞a. /'zo.ven/		*
b. /'zov.nε/	*!	

Tableau (23) presents two candidates, each representing the surface forms of Bolognese and Riminese. For either epenthesised form to surface, a crucial ranking between the FINAL constraints must be established: in anaptyxis, FINAL-C must dominate FINAL-V for the Emilian candidate (23a) to be selected as optimal.

/zovn/	OCP SON	SONSEQ	MAX-C	DEP-V	FINAL-C	FINAL-V
ræa. /'zo.ven∕				*		*
b. /'zov.nɛ/		- - - - - - - - - - - - - - - - - - -	1 1 1 1	*	*!	
c. /'zov/		6 7 7 8 8 8	*!			*
d. /'zovn/		*!				*
e. /'zovz/	*!	- - 	*	- - - - - - - - - - - - - - - - - - -		*

(24) Anaptyxis in Bolognese; relative ranking tableau.OCP SON, SONSEQ, MAX-C, DEP-V >> FINAL-C >> FINAL-V

The general ranking of constraints accounting for anaptyxis is proposed in tableau (24), where candidate (24a) is selected as most optimal. Comparably to tableau (20), candidates (24d) and (24e) present two word-final clusters that are not allowed in Bolognese, and consequently fatally violate constraints OCP SON and SONSEQ. Candidate (24c) is violated by MAX-C and eliminated. The competing dialect forms are reflected by candidates (24a) and (24b), both violated under DEP-V: this constraints acts as a buffer that violates the desired output as well as the competing dialect form. By crucially ranking FINAL-C higher than FINAL-V, candidate (24b) is fatally violated, and the Bolognese /'zo.ven/ is the surfacing form.

3.2.3 Proposed Paragoge Rankings

Riminese repairs its syllable structure with paragoge, hence inserting vocalic material wordfinally as to create a closed-open syllable sequence. In order for the correct candidate to surface in this dialect, constraint FINAL-V prohibits the presence of a coda to the words' second syllable. Opposite to what is proposed in (22) in the anaptyxis account, the candidate presenting paragoge surfaces as output under the following crucial ranking:

(25) Paragoge FINAL-V >> FINAL-C

(26) Paragoge in Riminese; crucial ranking tableau.

/zovn/	FINAL-V	FINAL-C
tæa. /'zov.nε/		*
b./'zo.ven/	*!	

Tableau (26) is the counterpart of tableau (23), where the order of FINAL-V and FINAL-C is reversed as to result in different surfacing candidates. Here, the Bolognese candidate (24b) presents a closed syllable word-finally and is therefore eliminated by the higher ranked FINAL-V. Candidate (24a) violates FINAL-C, although not fatally: this enables the Riminese form to surface as the winning competitor.

(27) Paragoge in Riminese; relative ranking tableau.OCP SON, SONSEQ, MAX-C, DEP-V >> FINAL-V >> FINAL-C

/zovn/	OCP SON	SONSEQ	MAX-C	Dep-V	FINAL-V	FINAL-C
ræ•a. /'zov.nε/				*		*
b./'zo.ven/				*	*!	
c. /'zov/		2 	*!			*
d. /'zovn/		*!				*
e. /'zovz/	*!		*			*

Compared to (24), tableau (27) shows an opposite ranking of constraints relevant to epenthesis. As previously illustrated, candidates (27d) and (27e) violate OCP SON and SONSEQ; with the deletion of input material, candidate (27c) is excluded from the analysis by MAX-C. The Riminese and Bolognese words are assigned a violation by DEP-V for the presence of epenthesis. In tableau (24), both candidates equally violate DEP-V, enabling the establishment of a crucial order of the unranked constraints. Contrarily to the order proposed for anaptyxis, the paragoge candidate

(27a) surfaces as optimal because of the ranking of FINAL-V over FINAL-C. Hence, candidate (27b) is fatally violated by FINAL-V and is discarded from selection.

3.2.4 Give a little, take a little

To provide a successful account of the two phonological processes occurring in the dialects, the constraint ranking of syncope was subject to a compromise. In the current analysis, faithful DEP-V enables a syncope hierarchy that is shared between Bolognese and Riminese, considering the identical classification of admitted and prohibited coda clusters. Hence, DEP-V eliminates candidates without syncopated vowels and permits the unspecified ranking of FINAL-V and FINAL-C, while assuring a win to the form with syncope. Because the relative order of these constraints is specific to either dialect's output, the epenthesis ranking further delineates what was left undefined in syncope: FINAL-C must precede FINAL-V in Bolognese, whereas FINAL-V should outrank FINAL-C in Riminese. Constraint DEP-V is of crucial importance in epenthesis, as it allows the crucial ranking to be established in each language.

In sum, the hypothesis of this thesis did not initially consider the necessity of a shared constraint ranking in syncope, and equally, the impossibility to establish a crucial ranking between the FINAL constraints in this account. This analysis allowed the syncope ranking to be loose enough to invert the order of FINAL-V and FINAL-C so to obtain the correct epenthesis output in each language.

3.3 Implications on Linguistic Typology

The analysis proposed demonstrates the validity of the Optimality Theory framework in accounting for two consistent syncope and epenthesis rankings despite the different sites of vowel insertion found in the dialects. Although this analysis only focused on syncopated words with emerging clusters in coda position, its application may be generalised onto languages that exhibit the two processes appearing in Bolognese and Riminese. For example, the analysis may serve useful to the investigation of many Northern Italian dialects, where syncope and/or epenthesis affect the preferred syllabic structure; in the case of prohibits clusters, the proposed epenthesis analysis may even uncover some details about reparation preferences. The analysis resulting from this thesis is believed to best account for a comparison study, where syncope is recognised to be the divergence point of two dialects spoken in the same geographical area.

In addition, the OT analysis proposed may account for other Gallo-Italic dialects whose stress patterns is either unpredictable or not available in the current literature. The analysis in this thesis was tailored to Emiliano-Romagnolo languages, where stress assignment is only partially predictable (Repetti, 2000).

CHAPTER 4 - CONCLUSION

This thesis has proposed an OT analysis of two opposing phonological processes found in two Romagnolo and Emiliano languages; to enable a direct comparison of syncope and epenthesis, the dialects of Riminese and Bolognese were chosen to represent each geographical area. The language data suggested two trends resulting from the application of syncope: the former, where the emergence of new coda clusters is accepted by the dialects, and the latter, where epenthesis is needed to restore the syllable structure broken by deletion. In the case of prohibited consonant patterns, the divergence between the dialects is indicated by two epenthetic insertions: Bolognese makes use of anaptyxis, whereas Riminese syncopated words prefer paragoge. The OT analysis demonstrated that the dialects' admitted clusters resulted from syncope can be accounted for in a unitary fashion. The location of different epentheses is determined by the ranking between two unranked constraints: for anaptyxis, FINAL-C is required to precede FINAL-V for the Bolognese output to surface. On the other hand, with FINAL-V ranked above FINAL-C, the paragoge form results as optimal. The tableaux display that the site of epenthesis is determined by the constraints FINAL-V and FINAL-C, whose order is purposefully unspecified in the syncope account to enable a simultaneous account of the two processes. With this investigation, I have challenged the possibility of analysing languages that simultaneously present syncope and epenthesis, and successfully identified constraints that enable an account of both processes.

Some of the limitations encountered in investigating this topic concern the restricted number of available literature on the specific dialects and phonological processes. Scholars such as Repetti, Bafile and Loporcaro conducted various researches on syncope, epenthesis, syllable structure and sonority sequencing in the dialects of Emilia-Romagna. This thesis made use of the applicable information formulated by these academics, and proposes a comparative analysis of two processes occurring semi-analogously in different languages.

To further define the relationship between syncope and epenthesis in Riminese and Bolognese, future research could implement the OT analysis by including constraints specific to the type of vowels preferred for insertion, the sparing of /a/ by apocope, and the behaviour of clusters in onset position. Moreover, exploring the area of stress could be of valuable insight to the processes of syncope and epenthesis, despite the lack of stress pattern descriptions of the dialects in the current literature.

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