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PALATAL SOUND Change in The Romance Languages

Diachronic and Synchronic Perspectives

ANDRÉ ZAMPAULO

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Palatal Sound Change in the Romance Languages

Diachronic and Synchronic Perspectives

ANDRÉ ZAMPAULO





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Series preface

Modern diachronic linguistics has important contacts with other subdisciplines, notably first-language acquisition, learnability theory, computational linguistics, sociolinguistics, and the traditional philological study of texts. It is now recognized in the wider field that diachronic linguistics can make a novel contribution to linguistic theory, to historical linguistics, and arguably to cognitive science more widely.

This series provides a forum for work in both diachronic and historical linguistics, including work on change in grammar, sound, and meaning within and across languages; synchronic studies of languages in the past; and descriptive histories of one or more languages. It is intended to reflect and encourage the links between these subjects and fields such as those mentioned above.

The goal of the series is to publish high-quality monographs and collections of papers in diachronic linguistics generally, i.e. studies focusing on change in linguistic structure, and/or change in grammars, which are also intended to make a contribution to linguistic theory, by developing and adopting a current theoretical model, by raising wider questions concerning the nature of language change or by developing theoretical connections with other areas of linguistics and cognitive science as listed above. There is no bias towards a particular language or language family, or towards a particular theoretical framework; work in all theoretical frameworks, and work based on the descriptive tradition of language typology, as well as quantitatively based work using theoretical ideas, also feature in the series.

Adam Ledgeway and Ian Roberts

University of Cambridge

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André Zampaulo

Fullerton, California November 2018

List of abbreviations

	aullable beau dame
•	syllable boundary
	(i) unattested form or usage(ii) constraint violation
> Ara.	becomes, yields
Ara.	Aragonese (Pyrenean Ibero-Romance language spoken in Aragon, northeastern Spain)
Aro.	Aromanian (Daco-Romance dialects spoken in Greece, Albania,
	Bulgaria, Serbia, and the Republic of Macedonia)
Ast.	Asturian (dialect group of northwestern Spain)
AstLeo.	Astur-Leonese
Bar.	Barese (central eastern Pugliese dialect of Bari, upper southeastern Italy)
С	(i) central
	(ii) constraint
Cal.	Calabrian (dialect group of Calabria, extreme southwest of Italy)
CastSp.	Castilian Spanish
Cat.	Catalan
Cln.	Cellinese (northern Salentino dialect of Cellino San Marco, extreme
	southeast of Italy)
Cor.	Corsican
Cpd.	Campidanese (dialect group of Campidania, southern Sardinia)
Dal.	Dalmatian (obsolete group of dialects formerly spoken in the Dalmatia
	region of Croatia and Montenegro)
Egd.	Engadine (Romansh dialect of Engadine Valley, southeastern
	Switzerland)
EmRom.	Emilian-Romagnol (group of dialects spoken mainly in the northern
	Italian region of Emilia-Romagna)
F	feminine
F1	first formant frequency
F2	second formant frequency
Fr.	French
Fr-Prov.	Francoprovençal (Gallo-Romance dialects spoken in central eastern
	France, western Switzerland, and northwestern Italy)
Fri.	Friulian (dialect group of Friuli, northeastern Italy)
Gl.	Galician (Ibero-Romance language of northwestern Spain)
Gsc.	Gascon
Ι	input
IPA	International Phonetic Alphabet
Ist-Ro.	Istro-Romanian (Daco-Romance dialects spoken in Istria, Croatia)

It.	Italian
J-Sp.	Judeo-Spanish
Lad.	Ladin
Lat.	Latin
Lecc.	Leccese (southern Salentino dialect of Lecce, extreme southeast Italy)
Leo.	Leonese
Lig.	Ligurian (dialect group of Liguria, northwestern Italy)
LO	Lexicon Optimization
Log.	Logudorese (dialect group of Logudoro, northwestern Sardinia)
Lom.	Lombard (dialect group of Lombardy, central northern Italy)
Mat.	Materano (southeastern Basilicatese dialect of Matera, upper southern
	Italy)
MCat.	Mallorcan Catalan
Mil.	Milanese
Moli.	Molisan (dialect group of Molise, upper south Italy)
Neap.	Neapolitan
Norm.	Norman
Nuo.	Nuorese (Sardinian dialects of Nuoro and province, northeastern
	Sardinia)
0	(i) output
	(i) old
Occ.	Occitan
OT	Optimality Theory
Pic.	Picard (dialects spoken in Picardy and Pas-de-Calais, northern France)
Pied.	Piedmontese (dialect group of Piedmont, northwestern Italy)
PL	plural
PRES	present tense
Proto-Rom.	Proto-Romance
Proto-Sp.	Proto-Spanish
Prov.	Provençal
Pt.	Portuguese
Ro.	Romanian
Roma.	Romansh
Sard.	Sardinian
SES	Santiago del Estero Spanish
SG	singular
Sic.	Sicilian
Sp.	Spanish
SUBJV	subjunctive
Tusc.	Tuscan
UG	Universal Grammar
Up.	upper
Ven.	Venetan
W	west(ern)

Introduction

1.1 The Romance languages

The Romance languages form a large group of linguistic varieties which owe much of their historical development to Latin and are nowadays spoken worldwide, particularly in Europe, the Americas, and Africa, by around 800 million native speakers (Lewis 2009). The most widely known representatives of the Romance family are French, Italian, Portuguese, Spanish, and Romanian, essentially because of their high number of speakers around the world and their prestige as national languages. However, many other varieties are part of the Romance-speaking world. Thus, before embarking on the details of this book, it is important to specify the Romance languages that will be the focus of the following pages and from which historical and contemporary data will be retrieved and analyzed in the present study. The Romance languages featured in this book, along with their corresponding dialects, are organized in the following six major groups:

- 1. Eastern Romance: Romanian and Dalmatian (the latter already extinct)
- 2. Rhaeto-Romance: Friulian, Ladin, and Romansh
- 3. Italo-Romance: Italian, Tuscan, Corsican, and the dialects of northern, central, and southern Italy
- 4. Sardinian
- 5. Gallo-Romance: French, Occitan, and Francoprovençal
- 6. Ibero-Romance: Catalan, Navarro-Aragonese, Astur-Leonese, Galician, Portuguese, and Spanish

In addition to these languages, there are also many creoles whose lexicon is Romance-based and was built mainly under the influence of Ibero- and Gallo-Romance varieties (e.g. Haitian, Papiamentu, São Tomense, Chabacano, etc.). Although data from some of these creoles will be considered, the varieties of the aforementioned language groups will inherently receive primary focus in the following chapters.

1.2 Romance "palatals"

This book presents a thorough investigation of the historical and present-day variation and change patterns undergone by so-called "palatal" consonants in the Romance languages. The word "palatal" is used here as a general term for sounds that have emerged from palatalization processes, which entail not only changes in place of articulation (e.g. a consonant's articulation moving toward a more palatal position), but also changes in manner of articulation (e.g. the emergence of alveolar affricates from Latin /tj dj/). Some scholars favor the use of a more precise term such as "(alveolo)palatal" to refer to these sounds (see Recasens 2013). However, for the sake of simplicity and readability, in this book we will follow the Romance tradition by which palatalization has given rise not only to "true" palatal consonants (i.e. consonants articulated with the body of the tongue against the hard palate), but also to alveolar, palato-alveolar, and retroflex consonants, as shown in Table 1.1.

	Alveolar	Palato-alveolar	Alveolo-palatal	Retroflex	Palatal
Plosive				đ	сӈ
Affricate	ts dz	र्षी देर	tc dz	ts dz	
Fricative		∫3	¢ Z		j
Nasal					ր
Lateral				l	λ
Approximant					j

Table 1.1 Consonants that emerged from palatalization processes in the evolution of the Romance languages

Note: Symbols to the left in a cell are voiceless, to the right are voiced. Single symbols in a cell are voiced.

Table 1.1 illustrates the most relevant consonants that emerged from palatalization processes in the Romance-speaking world, considering documented data from current and past Romance varieties. A couple of remarks on the phonetic symbols used in this table are in order. First, although all of the symbols appear on the International Phonetic Alphabet (IPA), there are discrepancies with regard to the terminology used for the place of articulation of some of them. In particular, while in the IPA chart the place of articulation of the affricates [tf dʒ] and the fricatives [f ʒ] is labeled as "postalveolar", in this book we will refer to these consonants more precisely as "palato-alveolar" affricates and fricatives, respectively, mainly due to the existence of other postalveolar consonants whose place of articulation is "alveolo-palatal" instead, e.g. the fricatives [c] and [z], which may appear as variants of alveolar [s] and [z], respectively, in dialects of Occitan (Oliviéri and Sauzet 2016: 325), and the affricate [dz], which is found in some Lugorese dialects in Sardinia (Blasco Ferrer 1988: 89). Another divergence concerning the sounds in Table 1.1 is with regard to their articulatory classification. Recent phonetic studies depart from the current IPA taxonomy and argue for a revision to its current consonant chart. For example, Recasens (2013) provides linguopalatal and sagittal vocal tract configuration data to suggest that the place of articulation of consonants such as the lateral $[\Lambda]$ and the nasal [n] are actually more accurately described as "alveolopalatal" rather than only "palatal". Again, for the sake of simplicity and readability, this book will follow the current IPA classification and refer to $[\Lambda]$ as a "palatal lateral" and to [n] as a "palatal nasal" consonant. Finally, a few taxonomic inconsistencies are found in the literature with regard to the articulatory classification of the affricates [ts dz]. Some Romance scholars refer to their place of articulation as "dental/alveolar" (e.g. Wheeler 1988b: 248), "dento-alveolar" (e.g. Penny 2002: 98), "alveolar" (e.g. Jones 1988: 319; Vincent 1988: 248), or simply "dental" (e.g. Mallinson 1988: 395; Penny 2002: xx, 99; Repetti 2016: 658). In this book we will opt to use their IPA classification as "alveolar affricates", in light of a "dental affricate" consonant $[t\theta]$ posited for medieval Sardinian (Repetti 2016: 658).

In terms of their historical emergence, it is worth noting that, of all the segments in Table 1.1, the palatal approximant [j]—known in the Romance tradition as "yod"—is the only one that already appeared in Latin, particularly in the pronunciation of unstressed, prevocalic front vowels I and E, e.g. FILIA ['filja] 'daughter', PALEA ['palja] 'straw' (cf. Kent 1932: 108; Elcock 1960: 37; Allen 1965: 51). When considering the development of individual Romance varieties, however, one quickly notices that the configuration of the sounds in Table 1.1 hides a series of synchronic differences and divergent diachronic pathways. For example, while [ts dz tf dz $\int 3 \Lambda p$ j] are all found at one point or another in the history of nearly all of the Romance languages, the consonants [d c j j]] appear only in select areas and varieties.

Another aspect not immediately clear in Table 1.1 is the relevance for studying the diachrony and synchrony of those sounds. The history of the Romance languages showcases a wealth of evolutionary pathways taken by their vowel and consonant inventories from shared roots in Latin. The emergence of the palatal order of consonants, in particular, is of utmost interest for historical linguists working with this language family, since it is well known that Latin displayed only labial, dental/alveolar, and velar consonants (Vincent 1988: 29; Penny 2002: 61; Oniga and Schifano 2014: 15–16). Thus, the rise of palatals represents a phonological innovation that is critical to understanding the current composition and manifestation of the consonant inventories of the Romance languages. As will be argued throughout the book, the variability, complexity, and, in many respects, unique diachronic pathways and synchronic manifestations of Romance palatals constitute a challenging, albeit rewarding, case study worth the attention of Romance and general linguists alike. Furthermore, as will be discussed, Romance palatals offer an illustrative example of how history tends to repeat itself time and again, as many of the sound changes observed in current Romance varieties mirror those that occurred (or are posited to have occurred) in the past, not only in different languages, but, more often than not, in the evolution of the same language.

1.3 Approach and objectives

By relying on phonetic and phonological information to motivate a formal account of palatal sound change, and through the observation and analysis of both historical and current dialectal data, the analyses proposed in this book offer a principled, constraint-based explanation for the evolution of palatals in the Romance-speaking world. The approach pursued here aims to reveal how the traditionally assumed boundaries between synchrony and diachrony become hazy, once a comprehensive and evolutionary account connects and addresses both diachronic and synchronic data. It features a robust and up-to-date literature review on the subject, taking into consideration not only the viewpoints and data from diachronic studies (e.g. Pope 1934; Menéndez Pidal 1950, 1977; Williams 1962; Rohlfs 1966; Vasiliu 1968; Boyd-Bowman 1980; Lapesa 1981; Kibler 1984; Repetti and Tuttle 1987; Harris and Vincent 1988; Ariza 1990, 1994, 2012; Maiden 1995; Posner 1996; Paden 1998; Penny 2000, 2002; Cravens 2002; Castro 2006; Teyssier 2014; among many others), but also the results from various phonetic, phonological, dialectal, and comprehensive studies (e.g. Haiman and Benincà 1992; Gess 1996, 2003; Maiden and Parry 1997; Baker and Wiltshire 2003; Baker 2004; Krämer 2009; Loporcaro 2011; Recasens 2011, 2013, 2014; Gómez and Molina Martos 2013; Zampaulo 2014, 2015; Müller 2015; Rohena-Madrazo 2015; Detey et al. 2016; Ledgeway and Maiden 2016).

By taking into account the role of phonetic information in the shaping of phonological patterns (e.g. Ohala 1981, 1989, 1992, 1993, 2003, 2012; Hayes

1999; Hayes and Steriade 2004; Jun 2004), this book approaches sound change from its inception during the speaker-listener interaction and formalizes it as the difference in constraint ranking between the grammar of the speaker and that of the listener-turned-speaker. This approach is intended to cast light upon how and why similar change events may take place in different varieties and/or the same language across periods of time. Furthermore, in many instances, the use of synchronic dialectal data to understand patterns of diachronic evolution reveals itself as relevant and pertinent to filling in the gap between the present and the past of Romance palatals. The following pages offer, then, a unified and comprehensive explanation for the evolution and dialectal distribution of these sounds. Its basic argument is grounded on the hypothesis that, given (co)articulatory and acoustic-auditory constraints in the speech signal during the spoken communication between two individuals, the phonetic cues present in the signal represent a conditio sine qua non for the relevant changes and evolution of sounds (e.g. Kavitskaya 2002; Ohala 2012; Recasens 2014; and references therein). Thus, this book assumes that the inception of palatal sound change has its seed intra-linguistically and takes place at the level of the individual, while the diffusion of change-which ultimately may lead to a change in the phonemic inventory of all the speakers of a given language-becomes possible with the consideration of other, change-conducive extralinguistic variables (e.g. Ohala 1981, 1989; Labov 1994, 2001; Croft 2000, 2010; Blevins 2004).

Assuming that the configuration of Romance palatals, as illustrated in Table 1.1, represents the outcome of different evolutionary pathways from their roots in Latin throughout the last two millennia, the following questions will guide the remainder of the book:

- 1. What were the Latin sources and diachronic pathways of Romance palatals?
 - 1a. What is the available evidence for their evolution?
 - 1b. Are any particular steps necessary to account for their development?
 - 1c. How are they currently realized across the Romance-speaking world?
- 2. Why and how have their different diachronic steps frequently given rise to similar synchronic results across different languages and areas and, oftentimes, in the evolution of the same language?
- 3. What role does phonetic and phonological information play when accounting for their evolution?
- 4. How can phonetic motivation be integrated in a phonological analysis of their diachronic development and synchronic manifestations?

1.4 Book outline

Chapter 2 provides the theoretical framework that informs the analyses in the book. It builds upon the assumptions and contributions of different—albeit complementary—theoretical approaches to sound change which are deemed appropriate to account for the evolution of Romance palatals, particularly Ohala's (1981, 1989, 2003, 2012) listener-based model and the constraint-based model of phonetically based Optimality Theory (OT) (Prince and Smolensky 2004 [1993]; Hayes et al. 2004; Jun 2004). Specifically, it presents an approach that focuses on the origins of a sound change based upon the interaction among speakers and listeners during oral communication. Furthermore, this chapter exemplifies the theoretical machinery based upon which formal analyses are proposed in the book.

Chapter 3 provides a detailed characterization of both articulatory and acoustic patterns of Romance palatals and their relevance to the goals of the book. While focusing on available data for sounds that are commonly found across the Romance-speaking world, such as [tf dʒ \int ʒ ± j Λ ŋ j], this chapter also characterizes consonants whose emergence appears more restricted and/or for which articulatory and acoustic data do not abound in the Romance literature. As will be shown, knowing the articulatory and acoustic characteristics of these sounds is crucial to understanding the basic phonetic motivations for their diachronic pathways as well as their patterns of synchronic dialectal variation.

Tracking the proposed origins of Romance palatals is central to fully understand how their current dialectal manifestations have come to be so varied. Chapter 4 traces the documented diachronic pathways of palatals in the development of the Romance languages from their origins in Latin. In addition to unveiling their evolution, this chapter also reviews the insights of, and challenges posed by, previous accounts in the literature to explain the series of different phonetic changes that led to the emergence of the aforementioned sounds. Historically documented data as well as sound reconstructions that have been proposed based upon comparative evidence are presented. In light of much disagreement that exists with regard to particular sound reconstructions due to the lack of available historical data, this chapter presents sound reconstructions from the most plausible and phonetically grounded perspective and in agreement with similar change processes observed throughout the Romance-speaking world.

Chapter 5 provides a comprehensive and up-to-date review of the various manifestations of palatals throughout current Romance varieties, based upon

data and maps available in the literature and upon new data, particularly on varieties of Argentine Spanish and Brazilian Portuguese. This dialectal overview is key to illustrate the continuous evolutionary thread of palatals in the history of the Romance languages. Specifically, this chapter demonstrates how recent and current variation and change patterns in many Romance varieties mirror those changes which are documented or reconstructed throughout the linguistic evolution of the Romance languages. An up-to-date dialectal snapshot, therefore, stands as one of the best means through which one can reconstruct changes that took place historically, and for which precise spoken data is ever impossible to access.

Chapter 6 provides a phonetically based formal account of the diachronic and synchronic sound changes discussed in Chapters 4 and 5, following the theoretical assumptions detailed in Chapter 2 and the phonetic characterization of palatal sounds provided in Chapter 3. Specifically, the speaker-listener interaction and the constraint-based model adopted in this book provide the tools to put forth a unified proposal that not only models how and why most of the discussed sound changes could emerge in the first place, but also reveals the mechanisms through which similar change events may reoccur time and again across Romance varieties.

The final chapter summarizes the findings and arguments of the book and reiterates its valuable contribution to studies in Romance and Historical Linguistics. Moreover, it organizes and provides the reader with various venues for future research, particularly with regard to current issues in theoretical approaches to sound change and the collection of new dialectal data with which previous historical accounts may be revisited.

Theoretical considerations

2.1 Introduction

The study of sound change has received considerable direct attention from scholars since at least the nineteenth century (e.g. Paul 1880). Some researchers, however, would argue that phonetic change has been at the center of linguistic scholarship since the fourth century B.C., with Panini's description of Sanskrit grammar (Solé and Recasens 2012: 1). More recently, several authors, working under different theoretical and methodological frameworks, have contributed to improving our understanding of how sounds vary and change over time, focusing on different aspects of language-notably on phonetics and phonology (e.g. Ohala 1981, 1993, 2003, 2012; Kiparsky 2003, 2008; Beddor 2009; Yu 2013, 2015; Krämer and Urek 2016; Iskarous and Kavitskaya 2018) and on sociolinguistics (e.g. Milroy and Milroy 1985; Labov 1994, 2001; Gladwell 2000; Guy 2003)-and also using divergent approaches, such as Neogrammarian sound change (e.g. Hale 2003), usagebased phonology (e.g. Aski 2001; Bybee 2001, 2008, 2015), lexical diffusion (e.g. Wang 1969, 1979; Phillips 2015), among others (cf. Boersma 1998, 2003; Blevins 2004; Bermúdez-Otero 2006, 2007; Miller 2010; Hualde 2011; Solé and Recasens 2012; Yu 2013, 2015). With regard to the Romance languages, more specifically, the interest in sound change has given rise to a rich amount of philological and descriptive research to understand the evolution of each of these languages, including Spanish (e.g. Menéndez Pidal 1950, 1977; Alonso 1967, 1969; Lapesa 1981; Lloyd 1987; Ariza 1990, 1994, 2012; Penny 2000, 2002; Cano Aguilar 2004), Portuguese (e.g. Williams 1962; Castro 1991, 2004; Mattos e Silva 1991; Machado 2012; Teyssier 2014), Galician (e.g. García de Diego 1970; Ferreiro 1996), Catalan (e.g. Wheeler 1988a; Ferrando and Amorós 2011; Alsina 2016), Occitan (e.g. Oliviéri and Sauzet 2016), French (e.g. Pope 1934; Smith 2016), Rhaeto-Romance varieties (e.g. Haiman 1988; Anderson 2016), Sardinian (e.g. Jones 1988; Mensching and Remberger 2016), Italian (e.g. Rohlfs 1966; Vincent 1988; Maiden 1995), and Romanian (e.g. Maiden 2016), as well as particular language groups or the Romance family as a whole (e.g. Harris and Vincent 1988; Cravens 2002; Maiden et al. 2011; Recasens 2014; Ledgeway and Maiden 2016; Schmid 2016).

However, upon considering these studies and the substantial amount of time spent unveiling the evolution of sounds, one may reasonably wonder why it is important for scholars to dedicate their efforts to the study of sound change in the first place. After all, today's speakers of a given language do not know-and, arguably, do not need to know-how words were pronounced in the past. This disregard for the past was at the center of the structuralist enterprise at the beginning of the twentieth century (e.g. Saussure 1983 [1916]) and informed the initial stages of generative approaches of the 1950s and 1960s, targeting the synchronic description of "an ideal speaker-listener, in a completely homogeneous speech-community" (Chomsky 1965: 3). However, as Guy (2003: 398) points out, today's speakers do know something about sound (and language) change. For example, young speakers living in an urban area of central Spain will most probably associate the pronunciation of the palatal lateral $[\Lambda]$ in a word such as *ella* ['eAa] 'she' with that of older speakers of Castilian Spanish and/or of other Spanish dialects, or at least with a different way of saying this word, which they pronounce ['eja]. Likewise, television broadcasters and older speakers of Buenos Aires Spanish are likely to use the voiced palato-alveolar fricative [3] in words that younger speakers now pronounce with its voiceless counterpart [[] or a devoiced variant [3]. Thus, speakers tend to display at least some degree of awareness about ongoing change events in their linguistic variety. The importance of studying sound change lies, then, in the fact that it sheds light upon the origins of synchronic patterns, and how and why these have come to exist in the first place. Metaphorically, researching the evolution of sound inventories is as relevant as studying the history of a country, since it provides us with a better understanding of the intricacies of its current state. Linguistically, the study of sound change reveals the consequences that a given change event incurs to other phonological domains. For example, the change of a sound may produce modifications in segment inventories, syllable structure, stress patterns, etc. Considering the past is crucial not only to understanding the present, but also to inform us about why and how similar change events may take place cross-linguistically and also over time within the history of the same language. The possibility of a change event to reoccur in the evolution of one language or to take place at some point in the history of another justifies regarding diachronic development as an indispensible tool to appreciate how languages work as well as how speakers shape the history of their own language(s).

To understand the underpinnings of the development of palatal consonants and their current dialectal picture in the Romance languages, it is necessary to go beyond describing their historical pathways, however detailed some of them may already be portrayed in the literature. Thus, the characteristics of these sounds must be framed within an appropriate theoretical background that provides the mechanisms with which to understand their variation and change patterns, both currently and historically. This chapter introduces the assumptions of different-albeit complementary-theoretical frameworks that are deemed appropriate to the study of phonetically based palatal sound change in the Romance languages. Specifically, the present approach is defined with regard to what exactly constitutes the origins of a sound change, as opposed to its spread within a given speech community (§2.2.1). Next, the assumptions under which to investigate the constraints on the genesis of palatal sound change are provided (§2.2.2). The formal perspective that guides the present analysis is, then, described (§2.3) and is followed by a few remarks on the importance of considering the interaction among speakers and listeners during oral communication for the inception of sound change (§2.4). A characterization and exemplification of the theoretical model is, then, provided (\$2.5) prior to the concluding remarks that finalize the chapter (\$2.6).

2.2 The concept of sound change

2.2.1 The origins vs the spread of sound change

Most linguistic approaches to sound change often consider it from a broad perspective that occasionally oversees the important details that emerge when taking a closer look into a given change event. Thus, several works in the sound change literature approach a given change generally through a comparison between an initial point A and a final point B, which is commonly illustrated by the linguistic notation "A > B". Nevertheless, many factors come into play in the process of sound change, and the orthographic sign ">" frequently overshadows what occurs in the middle of a change event, missing the gradient nature of variation in production that is necessary for a sound change to take place. If it is right to assume that the cycle of every change event has a beginning, a period of diffusion through the lexicon, and a final stage of completion in the phonemic inventory of all speakers of a language, then it is reasonable to compartmentalize the study of the factors that characterize each step. Furthermore, if one is interested in knowing the internal causes of a given change, then one ought to explore the very first step, i.e. the very origins of

sound change in the interaction among speakers and listeners during oral communication.

Thus, to study the origins of palatal sound change in the Romance languages, the present approach inadvertently focuses on the initiation of sound change and views it as operating at the level of the individual. The analysis put forth in the following pages will, then, inherently concentrate on the possibilities and seeds of change events, rather than on their spread through the lexicon and within speech communities, which characterizes the stage following its inception and involves a much more complex scenario with the inclusion of extralinguistic variables, such as age, gender, education, speech situation, social identification, etc. The present approach, then, centers on the actuation of sound change and explores articulatorily motivated restrictions whose interaction may have a listener form a different pronunciation norm than the one projected by the speaker.

It is necessary to acknowledge, however, that not all sound changes are exclusively phonetically motivated, and other factors may also play a role in the evolution of sounds, such as language processing constraints (Frisch 2004), the functional load of a contrast within the system (Martinet 1978), frequency (Bybee 2001, 2015), morphological relations or analogy (Wanner 2006; Fertig 2015), etc. The approach described here aligns itself with Croft's (2010) view on language change and his proposal on the essential distinction that must be made between innovation and propagation in the study of language change. For the possibility of a change event to emerge, first there needs to be systemic innovation that generates variation in the language, whereby tokens of both the original and the novel variants co-occur in the speech of a given individual and community (see also Jones 2015 for detailed description of the role of the individual and innovation in sound change). On the other hand, for a change event to be completed, tokens of the novel variant need to be propagated within the speech community at the expense of the original variant. By focusing on the constraints on innovation and how it may emerge in the interaction between the speaker and the listener, the present study departs from other scholarly works that emphasize, instead, the constraints that target the propagation of a change event-a practice generally associated with sociolinguistic work (Labov 1994, 2001).

2.2.2 The possibility of sound change

By approaching sound change from the possibility of its initiation, the perspective outlined here combines well-established theoretical models in the literature. Janda (2003), for example, metaphorically correlates the actuation of sound change with the beginning of the universe, by proposing a "Big Bang" theory of sound change. In this model, phonetic restrictions play a crucial role for providing the conditions under which a change in the pronunciation norm may arise, and also for explaining similar recurring patterns of sound change in non-related languages:

Insisting on the obligatory early presence of finely detailed phonetic conditioning explains why regularity holds: purely phonetic environments guarantee that a change is applicable whenever the most general type of conditions are met—and thus why grammatically or functionally based exceptions are absent from this stage. (Janda 2003: 420) cf p54

The need to focus on phonetic conditions (i.e. constraints) in the study of the possible beginnings of a change event is also embedded in the Neogrammarian model revisited and put forth by Hale (2003). In this approach, Hale compartmentalizes the historical record of a language into three filtering subsystems or modules, each having its own set of restrictions, namely, "Constraints on change," "Constraints on diffusion," and "Limitations of the documentary record," which, altogether, lead to the "Historical record" of a language, as represented in Figure 2.1.

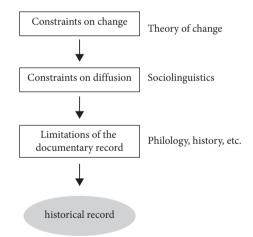


Figure 2.1 Hale's (2003: 345) modules leading toward the historical record of a language.

While the study of sound change is carried out under the constraints that condition its possibility at the individual level (as indicated by the first module in Figure 2.1), the success of its diffusion throughout the lexicon (cf. Chen and