

LIQUIDS: FROM MAINTENANCE TO ELISION IN CLUSTER SYLLABLES AND WORD FINAL POSITION.

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ABSTRACT: Liquid consonants embody an intrinsic linguistic relationship in many languages as proved by phenomena such as metathesis. By analyzing the historical behavior of liquid consonants in cluster syllables before plosive consonants and in word final position in those languages where liquid consonants are related significantly, I intend to pursue a linguistic goal (endogenous): to define the different internal stages of development of liquid consonants when change occurs. I will define the different stages and propose a lineal phonological path of /r/ and /l/ from their standard pronunciation to their complete elision.

Once we have the different variants, which are presented sequentially, we will have obtained a useful tool to achieve a sociolinguistic goal (exogenous): to compare a concrete case of two Spanish dialects that have traditionally been considered as closely related: Cuban and Andalusian Spanish. Sociolinguistic research methods are employed to investigate the possible variants resulting from different realizations of /r/ and /l/.

Finally, I will intend to employ the results to enlighten an old and interesting dilemma about the THEORY OF ANDALUCISMO. I will evaluate the analyses of the emigration patterns to America from Spain from the 16th Century onwards and a follow up of the development of liquid consonants through history and in present days. From the results, I propose the divergent point of these two dialects (Trudgill, 1999) and explain variation and change in relation to liquids in Spanish.

1. INTRODUCTION. In any study of phonology, when consonants are described, the analysis of liquid consonants (/l/ and /r/) is presented together: from Navarro Tomás, (1945) to Penny (2000). This association is due partly to their points of articulation (Alveolar). One of the most common metathesis (Penny 1991) also occurs by the transposition of these two consonants: /l/ instead of /r/ and visa versa (Zitzke 2001). This phenomenon deserves attention in certain phonetic contexts in different languages to approach a possible common pattern of development. The fact that one liquid consonant is replaced by another can be seen as evidence of liquids forming a natural class.

The phonetic contexts where confusion of liquids often occurs are contexts in which these consonants suffer lenition in their point of articulation. These contexts of lenition also provide us with non-standard realizations of

liquids (variants). The two most referred contexts proposed by different authors are:

a. CLUSTER SYLLABLES IN POST–NUCLEAR POSITION (Alonso 1961), (Kirchner 2001) with examples such as: *ce/r/veza*, *ca//vo*.

Other authors like Chela–Flores (1994) have disagreed with Amado Alonso providing another context of neutralization in pre–nuclear position. I.e. *clineja* instead of *crineja* and *croche* instead of *cloche*. However, post–nuclear position and word final position are the most common positions to observe liquid variants.

b. WORD FINAL POSITION (Navarro Tomás 1945) (Kirchner 2001). For instance in words such as: *amo/r/*, *ma//*.

Kirchner (2001), among many, pointed out that // and /r/ can lenite to approximants in weak position.

One of the linguistic goals of this study is to organize all the possible variants found for // and /r/ and try to design stages of realizations in which those variants would be placed in a logical¹ internal development from // to Ø and from /r/ to Ø.

2. LITERATURE ON LIQUID CONSONANTS. There has been a significant production of literature focused on liquid consonants in different languages around the world. These studies range, for example, from the early works of Navarro Tomás in 1945 in Spanish to van der Torre in 2003 in Dutch.

One of the most complete and wide studies was gathered by The University of California. The University of California's study showed important percentages of liquid consonants in 317 languages of the UPSID (UCLA Phonological Segment inventory Database). According to the UPSID, out of 317 languages studied:

95.9% have at least one liquid consonant.

72.6% have more than one.

81.4% have one or more laterals.

76% have one or more rhotics.

These high percentages suggest that our study of the relationship between liquid consonants could be a wide spread phenomenon in many languages across the world. Kirchner (2001) also affirms that some languages have two or more liquid consonants. The example of Tamil, a Dravidian language of Southern Indian, is especially interesting. Tamil has five contrastive liquid consonants: two rothic, two laterals and one described as a rothacized lateral. (Narayanan, Byrd & Kaun. 1999). These contrasted phonemes are found as allophones in other languages, and could provided *some clues about the classification of certain found variants*.

Reviewing the literature on liquid consonants one also observes the fact that vowels and liquids present an intrinsic relationship among languages (van der Torre 2003) For example, van der Torre mentions that in Dutch, lateral liquids that occurred before a coronal stop and after a low back vowel (post-vocalic position) changed into back round vowels. The author provides some interesting German-Dutch comparative examples (2003: 173):

German	Dutch	
Walt [lt]	woud [ut]	forest
alt [lt]	oud [ut]	old
Gold [lt]	goud [ut]	gold

These examples are just an instance of a very common variant of liquids in weak positions: vocalization, as we will observe throughout the coming sections.

3. THE THEORY OF LENITION. In order to observe all the different behaviors of liquid consonants in different languages, in the context mentioned above, it is crucial to consider the Theory of Lenition. This is relevant to determine whether variants result from a reduction in the articulatory effort or, alternatively, from sociolinguistic processes based on norms, prestige, stigmatization, etc.

Thus our central research question includes: Do /r/ and // involve the same articulatory effort? Which of the two would be the logical internal development of liquids: lateralization or rothicization? Do they occur with the same phonetic frequency?

Phonologically conditioned lenition patterns are driven by a phonetic imperative to minimize articulatory effort (Kirchner 2001). The traditional consensus that lenition is a unified phenomenon, is formulated by Hyman (1975): 'a segment X is said to be weaker than a segment Y if Y goes through an X stage on its way to zero'. Therefore, we must assume that, when /l/ presents rothcization and it is realized as [r], /l/ goes through the stage of [r] to /Ø/ because /r/ is a weaker segment. Following the same line of reasoning, we would assume that when /r/ presents lateralization and it is realized as [l], /r/ goes through the stage of [l] to /Ø/ because /l/ is a weaker segment. Since rothcization and lateralization are opposite phenomena, we have to conclude: first, that one of the two assumptions mentioned above is wrong, and second, that lenition is not a unified phenomenon, although it is doubtlessly the most frequent one. So, our question of which of the two would be the logical internal development of liquids: lateralization or rothcization, remains unanswered. The lenition process will discover/revealed some crucial variants of liquids to take into account in our theoretical model of liquids' realizations. Beside the Theory of Lenition we need to observe the order of variants from stronger to weaker before a possible stage of complete elision.

Hock (1991) proposed the following strength scale for consonantal sounds:

gemminate stops > voiceless stops > voiced stops > voiceless fricatives
> voiced fricatives > liquids > laryngeals > glides > Ø

Since he does not distinguish between lateral and rothic sounds we cannot test which sound requires less articulatory effort. However, he affirms that /l/ and /r/ can lenite to approximants in weak position (cluster syllable or final word position). Through Hock's scale, we obtain two variants that stand as possible realizations of liquids on their way to Ø: approximants and glides (followed by a third group with semivowels and vowels). Therefore we have some pieces for our theoretical model:

/r/ > ? > approximants > ? > glides > vowels > ? > Ø (elision)

/l/ > ? > approximants > ? > glides > vowels > ? > Ø (elision)

The process of Lenition and Hock's scale (1991) provides us with variants of liquid consonants that not only imply a reduction in the articulatory effort but also represent important orderly steps towards elision. In the next section we will analyze the different realizations for the sounds /r/ and //, and specific examples of different languages for each of them.

4. TOWARDS A THEORETICAL DEVELOPMENT OF INTERNAL STAGES OF REALIZATIONS OF /R/. Although a distinction is made between cluster syllable contexts and word final position, the literature on liquids and the Theory of Lenition point out very few differences between realizations in these contexts. Both are considered weak positions, and in most cases, a liquid consonant does not reflect its standard pronunciation in either of them. Therefore, it seems appropriate to study both contexts together, mentioning any possible discrepancy between the two positions, as a marked case. The following are the variants found for the sound /r/:

a. APPROXIMANT. (Coronal lost). As mentioned, a common manner of articulation of rothics is approximant. (Walsh Dickey 1997) We find examples of approximant for /r/ in spontaneous speech in Costa Rica (most contexts) and Puerto Rico (cluster syllables and word final position) when /r/ is realized as a retroflex rothic.

b. VOCALIZATION: /r/ > [i]. (Coronal lost). There are cases in which rothics alternate with vowels (Walsh Dickey 1997). The realization of rothics as vowels has different social values in different languages. This phenomenon does not represent the standard pronunciation, but rather appears to be overtly stigmatized in languages like English and Spanish (Wells 1982). These examples indicate that the phenomenon of vocalization is more stigmatized than other post-nuclear phenomena. However, in the Dominican Republic, vocalization has become the dialectal characteristic (standard) with examples such as /káita/ instead of *carta*, /táide/ instead of *tarde*.

It is important to point out that vocalization is context bound, since it cannot appear either in word final position, if the final syllable is unstressed e.g.

/asúka/, or if the vowel preceding the liquid consonant is /i/. (i.e.: *firme* /fime/ in Venezuela: Zamora y Guitart 1988).

c. LATERALIZATION: /r/ > [l] (Dorsal Addition). In many examples of Caribbean Spanish (Antilles, Cuba) and Chilean Spanish, /r/ is realized as [l] (Lapesa 1981). Chela–Flores (1994) affirms that lateralization is a process that involves a search for stability. Examples of lateralization are: /Calbón/ instead of *carbon* (Antilles), /mujél/ instead of *mujer* (Chile), /querél/ instead of *querer* (Chile).

d. ELISION: /r/ > /Ø/. Examples of elision of /r/ in word–final position are found in Pawnee (Parks 1976). The elision of /r/ in English and Spanish in post-nuclear position is more frequent and less stigmatized than the elision [l]. (Chela–Flores 1994). We find examples of elision such as /comprá/ instead of *comprar* (Andalusian Spanish).

RESULTS. From these alternative realizations of /r/, we can deduce the following pattern in terms of the reduction of articulatory effort:

/r/ > *laterals > approximants > glides > vowels > Ø (elision)

*We still do not know if lateralization is one of the logical internal stages of development for /r/. Nevertheless, we can assume that if that is the case, it will come before approximants, since approximants are diffused sounds without any clear articulation. Therefore lateralization, the merging of [l], requires more articulatory effort than approximation, and for this reason it is expected to be placed before approximants in the scale of strength.

5. TOWARDS A THEORETICAL DEVELOPMENT OF INTERNAL STAGES OF REALIZATIONS OF /L/. The following are the variants found for the sound [l]:

a. APPROXIMANT. (Coronal lost) Some authors, like Walsh Dickey (1997), find approximants to be the most common manner of articulation of laterals.

a.a [l] > [ɣ]. There are cases like British English (RP and Cockney, Gimson and Cruttenden 1994) in which the realization of [l] in weak positions is represented by the allophone of /g/. In American English

there is a light variety of /l/ in prevocalic positions, and a dark variety for postvocalic positions, like in coda (Narayanan, Byrd, & Kaun 1999).

b. VOCALIZATION. (Coronal lost)

b.a. /l/ > [w]. In relation to l-vocalization, in Polish /l/ > /w/ is found in all positions (Carlton 1991), although most of the cases occur in coda position (Walsh Dickey 1997).

Brazilian Portuguese (Azevedo 1981) also provides examples of /l/ > /w/.

b.b. /l/ > [j]. In other languages, like Linngithigh and Alngith (Australia), (Smith 1996), /l/ is realized as the semiconsonant /j/.

b.c. /l/ > [u] (Coronal lost). In Catalan, there has been a change from coda /l/ in Standard Catalan to coda /u/ in the Balear dialect. e.g. *alba* > /auba/ (Alcover and Moll 1968). This is assumed to be a historical process: the coronal node of all laterals has been lost in coda position. Today there are no synchronic alternations between /l/ and /w/ in Catalan. However, we have other examples of this process to be a synchronic phenomenon, as in Mehri, a southern Arabian Semitic language (Johnstone 1975). These facts reflect a rather unclear historic perspective of this variant.

Likewise, vocalization of /l/ in English and Spanish is overtly stigmatized (Wells 1982). However, as it happens with the rhotic sound /r/, in the Dominican Republic, vocalization has become a standard dialectal characteristic. e.g. /áito/ instead of *alto*.

Laterals, which are more similar to vowels, are more stable in this position and the process they undertake make them similar to the syllabic core, that is, the vowel. (Chela-Flores 1994).

c. ROTHICIZATION: /l/ > [r] (Dorsal lost). There are many examples in which /l/ becomes /r/ in the contexts mentioned: in Florentine Italian (Holton 1994), Modern Greek (Newton 1972), Andalusian Spanish (Holton 1994), and Caipira Portuguese (Azevedo 1981), among others. All of these are instances of rhoticization. According to Trugill (1999) in the case of Modern Greek [r] is an example of a 'vestigial feature above the level of conscious awareness'.

Examples of rothcization are found in Andalusian Spanish: /arto/ instead of *alto*, /cardo/ instead of *caldo*, /arpes/ instead of *Alpes*, etc.

Rothcization realization represents a process of tension of the class of liquids, a marked process in post–nuclear position. This process acts against the Descent Principle (Chela–Flores 1994), which refers to tongue movements from upper positions or marked positions in the vocal cavity to lower positions, in search of the normal (unmarked) tongue position when words are not uttered. It is a process of relaxation. This fact indicates that the liquids /l/ and /r/ do not present the same difficulty in pronunciation.

Even though we have been studying variants in both contexts, it is worth mentioning that in word final position, English and Spanish show a similar case of a diachronic change. Both languages have a Latinate suffix *-al*, which shows up as *-ar*. Eg. *vel-al* > *velar*, *angul-al* > *angular*, *pol-al* > *polar*. (Van der Torre 2003)

ELISION: /l/ > /Ø/. Chela–Flores (1994) points out that the elision of /r/ is more frequent and less stigmatized than the elision of /l/ in post–nuclear position of English and Spanish words, i.e. /migué/ instead of Miguel.

RESULTS. After having seen the variants for /l/, its theoretical model of logical (reduction of articulatory effort) realizations would be:

/l/ > *rothics > approximants > glides > vowels > Ø (elision)

*We still do not know if rothcization is one of the logical internal stages of development for /l/. But we can assume that in the case that it is, it will come before approximants, since approximants are presented in the spectrogram as diffused sounds that are not /r/, /l/ or another sound. Therefore in rothcization, the merging of /r/ requires more articulatory effort and for this reason it would be before approximants in the scale of strength.

Once we have accounted for the most important realizations of /r/ and /l/, we need to investigate which of our two phenomena (lateralization or Rothcization) will fit as a logical internal stage for realizations of liquid consonants.

6. LATERALIZATION AS THE LOGIC INTERNAL STAGE FOR THE REALIZATION OF LIQUIDS. We have shown that according to the Theory of Lenition, based on the articulatory effort, one of the phenomena mentioned (lateralization or rothicization) cannot constitute an internal step of realization of liquids on their way to \emptyset (elision). The following are arguments in favor of considering lateralization as an internal phase of development in rohtics' lenition, and refuse rothicization as a process that does not follow the principle of reduction of the articulatory effort in the case of laterals' lenition. It then follows that rothicization is not to be included in our theoretical model, and that it needs an alternative explanation.

a. THE INCREASE OF LATERAL CONSONANTS. An increase in the number of liquids in a specific language tends to consist of an increase in the number of laterals, not of rohtics. The neutralized liquid is closer to a lateral than to a rohtic. (Chela–Flores 1994). This fact will lead us to conclude that the realization of /r/ as // (lateralization) is more common than the opposite process (rothicization).

b. SIMILARITIES BETWEEN LATERALS AND VOWELS. Vocalization is common and part of the natural development of liquids in weak contexts. Chela–Flores (1994) affirms that laterals, because they are more similar to vowels, are more stable in these positions, and the process they undergo makes them similar to the syllabic core, that is, the vowel. This association reveals that it is logical for // to appear in these contexts before plosives, as a previous step to vocalization in the theoretical model.

c. THE DESCENT PRINCIPLE. //>/r/ involves a tension process of the liquids, a marked process in post–nuclear position. It acts against the Descent Principle (Chela–Flores 1994), implying that the liquid sounds // and /r/ do not present the same difficulty. It thus appears to be more natural/logical to go from /r/ to // (lateralization), than the other way around (rothicization).


These arguments lead to the following developmental scale for realizations of /r/ on their way to elision:

/r/ > laterals > approximants > glides > vowels > \emptyset (elision)

Conversely, we must refute the hypothesis of rhoticization as an internal stage for /l/ realizations on their way to elision:

/l/ > approximants > glides > vowels > Ø (elision)

Then, how do we explain rhoticization as a possible realization of /l/? It must be assumed that the rhotic realization of /l/ occurs as an alternative development:


 rhoticization > approximants > glides > vowels > Ø (elision)
 /l/ > approximants > glides > vowels > Ø (elision)³

It thus appears that rhoticization cannot be explained by linguistic factors such as those that lateralization allows. Rather, sociolinguistic variables may present decisive factors that make a specific dialect to opt for the alternative merge of /r/ as a realization of /l/: rhoticization.

Now that we have defined the theoretical development of liquid consonants, it is worth mentioning the inverse phenomenon of intrusive /l/ and /r/. Gick (2002) proposed the following steps:

Vocalization–Linking–Merger–Reanalysis [Intrusion] and Generalization. (Gick, 2002)

These steps clearly follow the reverse path on the scale proposed above:

Ø > vowels > glides > approximants > /l/ or /r/

Observe that this reverse development strengthens the validity of the first two proposed stages; vocalization and elision are contiguous stages.

We have defined the most common variants for liquids, and the different order of these variants in a theoretical strength model. In the following sections, I intend to analyze the data collected by the author in Andalusia and Cuba, to observe the variants found and fit them in the model. Hopefully this analysis will bring some insights to the different variants these modalities of Spanish reflect and therefore the stages that characterized each variety of Spanish.

7. A COMPARATIVE STUDY OF LIQUIDS IN ANDALUSIAN AND CUBAN SPANISH. Let us compare the results of a previous comparative study on Andalusian and Cuban Spanish. (See graphs 1-4 and tables 5 and 6) The

purpose of this study was to analyze the behavior of liquid consonants in cluster syllables before plosive consonants in Cuban and Andalusian Spanish. Sociolinguistic research methods (Labov 2001)⁴ were employed to investigate the possible variables resulting from different realizations of /r/ and /l/, mainly coda position. The most frequent variants found were /r/, /l/, vocalization, approximant and elision. These results coincide with those from authors like Penny (2000):

‘Syllable–final and word–final liquids are most frequently neutralized in Andalusian varieties. The realization of neutralized phonemes is very varied ranging from: /r/ to /l/, with a number of possible intermediate articulations. Deletion of these neutralize phonemes are also frequent’.

In relation to American varieties he affirms: ‘In some varieties of American Spanish, we also find neutralization and/or weakening, including lost’ (Penny 2000). The varieties referred coincide with the LOWLAND AREAS of American Spanish.

The following is a summary of the results obtained. The graphs displaying the data are presented at the end of this paper:

a. CUBA. Age 1 (less than 25 years old) shows more maintenance with /l/ and /r/, while Age 2 (more than 25 years old) presents high frequency of elision and approximant realizations. However, with respect to change, Age 1 presents more examples of lateralization with /r/ (See graphs 1 and 2).

A conclusion is that lateralization for Age 1 does not carry stigmatized values or connotations, but when Age 2 changes, elision or approximant is preferred.

b. ANDALUSIA. For /r/ the amount of elisions grows proportionally with age. On the contrary, the occurrence of approximants is inversely proportional with age. Age 2 shows the highest level of maintenance.

For /l/, Age 1 shows the highest frequency of rhoticization and maintenance.

Maintenance decreases with age and elision increases with age. Elision finds its highest frequency with Age 3. Age 3 also shows the highest level of approximants (See graphs 3 and 4).

As a conclusion, in Andalusia, young people are more conscious of the norm, and the stigmatized variant seems to be the elision. Age 3 presents more regularity between careful and non-careful style, which implies that there is not conscious awareness of a norm.⁵

c. COMPARATIVE CONCLUSIONS. The two phenomena under consideration, rothicization (Andalusia) and lateralization (Cuba) occur with regularity but also high frequency of elision is found: up to 20% in Cuba and 12.5% in Andalusia. (See Tables 5 and 6). These phenomena are more common among young people, who are nevertheless more aware of the norm, and therefore these variants do not seem to be stigmatized.

8. POSITION OF THESE DIALECTS IN THE SCALE MODEL OF 'R' AND 'L'. After studying the behavior of liquids in these two dialects, we could place Cuban Spanish (characterized by its lateral realization) to follow our model of development for realizations of /r/:

/r/ > laterals (Cuba) > approximants > glides > vowels > Ø (elision)

Andalusian Spanish (characterized by its rothic realization) could not be placed in our model for realizations of /l/:

/l/ > approximants > glides > vowels > Ø (elision)

but in an alternative one:

/l/ > rothicization (Andalusia) > approximants > glides > vowels > Ø (elision)

The different phenomena related to liquids in both modalities of Spanish point out different stages of liquid variants and therefore a different development. In the next section, we intend to see if lateralization and rothicization are relevant to emphasize a possible convergent or divergent point of these modalities of Spanish. This topic has been discussed widely in the literature and it is known as Andalucismo.

9. THEORY OF ANDALUCISMO: PARALLEL OR CONTINUUM

DEVELOPMENT. The results of this study may contribute to enlighten an old, controversial, and interesting theory that tries to explain American Spanish as a continuum development of the southern peninsular dialect (mainly Andalusian). The opposed view proposes that American Spanish is not derived from Andalusian Spanish but is a dialect that undertook parallel development, which ended up having many similar phonetic features. In order to reveal a possible relation between Andalusian and Cuban Spanish, we will observe the migratory movements in the first trips to America and some diachronic data.

IMMIGRATION PATTERNS. In the evaluation of this theory, authors have focused on the issue of immigration, with questions such as: who were the first colonizers?, where did they come from?, and what was their final destination in America?

Boyd-Bowman (1964) carried out the most extensive study on this topic.

He studied 40,000 colonizers from 1493 to 1600. The following are some of his results:

40 % from Seville plus 14% from Extremadura

70% of the sailors hired for America were from Andalusia

18% from Castilla

For Mexico he found:

31% from Andalusia plus 13% from Extremadura

20.2% from Castilla

In Puerto Rico:

42.3% from Andalusia

19% From Castilla

Dealing with female immigration from 1493-1519, he affirmed:

69% from Andalusia.⁶

These percentages reflect the important role of Andalusian population in

the process of colonization in America. The immigration argument has been used repeatedly as a pro-Andalucismo argument.

b. DIACHRONIC DATA. According to Lapesa (1981), Examples of neutralization of /r/ and /l/ are found in Spain from the 12th to the 15th century and in America from 1525 to 1560.

Contreras (2000) studied 216 documents, paleographically transcribed, including peninsular as well as Chilean (*criollos*) authors, from 1548 to 1798. With respect to Andalusian features in Chilean documents, Contreras found the following for the 17th century:

1663 Pedro Velez *adbitrando, ádbitros* (árbitros)

1670 Juan de Agurto *Ferre_ y Ferrer_* (Ferrer)

1696 Juan Gómez *mujel_* (mujer)

In the 18th century he found many more examples but he did not cite names:

1712 *particula_* (particular), *recu_*so (recurso)

1729 *Lispergue_* (Lisperguer)

1766 *buerba* (vuelva), *mir_* (mil), *sardrá* (saldrá), *Getrudis* (Gertrudis)

1771 *qualquié_* (qualquier)

1772 *ádvitro* (árbitro)

1789 *arcavala* (alcabala)

Contreras (2000) states that neutralization between liquid consonants was a phenomenon that took place in the Chilean dialect until the end of the 18th century; and it decreased from then onwards due to the standardization of the linguistic norm relegating this feature to the less educated social classes. Contreras (2000) ascribes the confusion of liquids in Chilean Spanish to the influence of the Andalusian dialect.

Navarro Tomás (1948) carried out a study on neutralization, confusion and distribution of liquid consonants in areas in Puerto Rico. *El Jíbaro* shows the Spanish modality peasants spoke in Puerto Rico around 1845 (Navarro Tomás 1948). In relation to liquid consonants he mentions examples such as: *cuelpo*, *parmillo*, *pueita*, *aiguno*. Navarro Tomás (1948) pointed out four main realizations for liquids: // instead of /r/ (lateralization), /r/ instead of // (rhoticization), something in between (approximant) and vowel instead of liquids (vocalization). He analyzed the pronunciation of different words through out the country and found a diversity that did not allow him to delimit a clear isogloss for the variants of liquid consonants. Navarro Tomás (1948) affirms that the language that colonizers brought to America was a mixture of different features, and both dialects developed in a parallel manner and the similarities nowadays are simply coincidental.

c. CONCLUSIONS. Even though the immigration patterns are relevant, they do not provide sufficient evidence to either affirm or discard the assumption of a continuum between Andalusian and American Spanish. It is difficult to know

if colonizers really originated from the regions they claimed to be from, and crucially where exactly they settled in America. The data mentioned in 9b. shows examples of neutralization of liquids but the variants are many and varied, and they coexist (lateralization, rothicization, approximant, vocalization).

Authors will always find arguments for the controversy. If we used the process of neutralization of liquids, Andalusian and American Spanish seem to approach each other, and we could argue in favor of the Theory of *Andalucismo*. If we focus on lateralization and rothicization, we could say that both dialects diverge and therefore there is a parallel development.

Moreover, no clear conclusion can be drawn with respect to the THEORY OF LOW AND HIGH LANDS, since the opposite phenomenon is found between Andalusian (rothicization) and Cuban Spanish (lateralization), however in Puerto Rico (also in the Caribbean sea) both phenomena are found (Navarro Tomás 1945).

Finally, we should pay attention to variation to review why different variants emerge and constitute peculiarities of certain dialects or modalities and the explanation for different phenomena, sometimes even opposed ones, within the same language.

10. VARIATION AND CHANGE. Penny (2000) states that the propagation of linguistic features in America is determined by the contact between speakers of many mutually intelligible varieties, which produced a 'multiplicity of competing variants'. When variants compete, the simplest variant normally emerges as the winner (Trudgill 1986). In the case of American Spanish, we have seen that there is not one single variant. For example, in the Dominican Republic, and in parts of Venezuela (Zamora y Guitart 1988), vocalization has become the dialectal characteristic for /l/ and /r/, e.g. /áito/ instead of *alto*, /káita/ instead of *carta*. In Andalusia, rothicization is a common realization of /l/, but also in areas of Puerto Rico. In many variants of Caribbean Spanish (Antilles, Cuba) and Chilean Spanish, /r/ is realized as /l/ (Lapesa 1981). As mentioned, a great amount of examples of elision are also found. So, which one is our winner variant? A

possible explanation will maintain that those variants were still competing in the Mainland when the conquest took place, and therefore the solutions were multiple in the extended geographical area of the American speaking world. This possibility is supported by the data collected by Contreras (2000) in the colonial period, where he finds: *ádbitro, Ferrel y Ferrer, mujel, particular, reculso...* These instances constitute a clear example of the instability of those variants. From the 18th century onwards, the norm would establish the different standard variant for each dialect.

If the simplest variant emerges when they compete (Trudgill 1986), another issue is to explain why the logical variant for liquids is not elision or vocalization. This does not seem to be an internally induced (endogenous) variation but an externally induced (exogenous) variation. That is, it has to be explained with sociolinguistic factors. Our results, like those of many others, proved vocalization (Wells 1982) and elision (Chela–Flores 1884) to be commonly stigmatized variants. Rothicization must be explained then by external induced factors, although a priori, our results in Andalusia do not show this variant as a stigmatized variant. This does not represent an isolated fact since often a variant that does not respond to the Theory of Lenition, emerges and spreads even throughout language borders like the example of uvular /r/ in Europe (Chambers and Trudgill 1998).

11. CONCLUSIONS AND FUTURE RESEARCHES. In this paper, I distinguish retrospectively between internal induced (endogenous) variation in the realizations of liquids, proposing a theoretical model of development, and external (exogenous) variation, explaining the lack of presence of certain variants due to stigmatization. I define the different stages and propose a lineal phonological path of /r/ and /l/ from their standard pronunciations to their complete elisions following the Theory of Lenition:

/r/ > laterals > approximants > glides > vowels > Ø (elision)

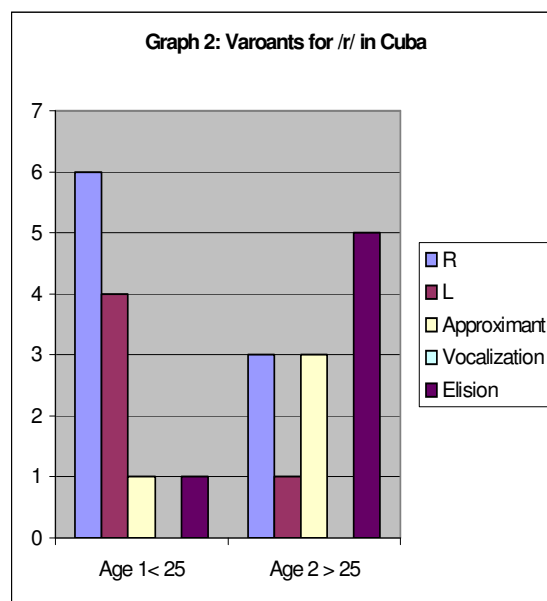
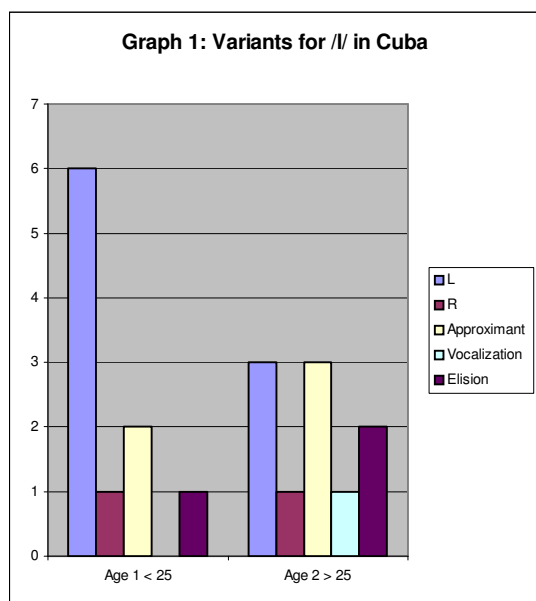
rothicization > approximants > glides > vowels > Ø (elision)

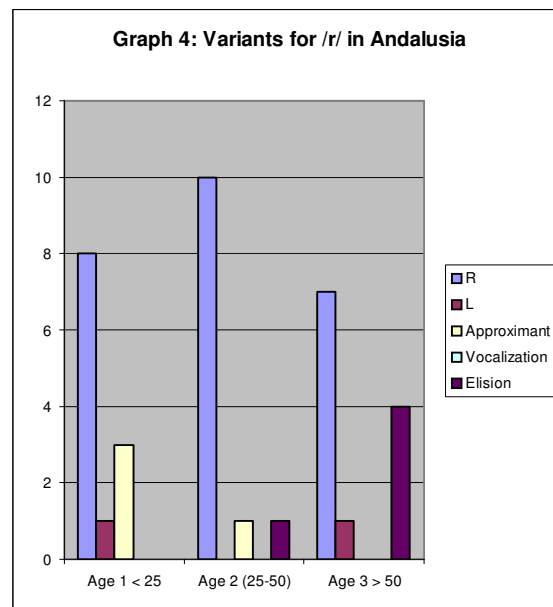
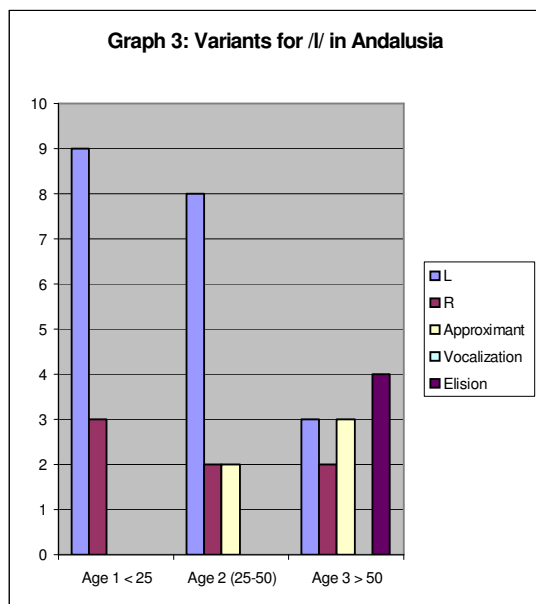
/l/ > approximants > glides > vowels > Ø (elision)

Once the sequentially different variants are known, I compared a concrete case of two Spanish dialects that have been traditionally considered closely related: Cuban and Andalusian Spanish.

Finally, I apply the results to deal with the Theory of Andalucismo, paying attention to immigration patterns to America from Spain from the 16th Century onwards and to the diachronic data some authors have proposed. From the results, I propose the divergent point of these two dialects (Trudgill, 1999) and explain variation and change in relation to liquids in Spanish.

As we mentioned, stigmatization of the variants vocalization (Wells 1982) and elision (Chela–Flores 1884) prevent them from appearing in high frequency. Future research should address the external induced factors that make rhoticization a common and frequent realization of /l/ in varieties like Andalusian Spanish where a priori, this variant does not show as a stigmatized value.





5. Percentages variants for /l/ Cuba–Andalusia

	L	R	Approximants	Vocalization	Elision
Cuba	45%	10%	25%	5%	15%
Andalusia	56%	19%	14%	0%	11%

6. Percentages variants for /r/ Cuba–Andalusia

	R	L	Approximants	Vocalization	Elision
Cuba	37%	21%	17%	0%	25%
Andalusia	69%	6%	11%	0%	14%

ENDNOTES

1. Logical refers to the realization that follow the principle of reduction of the articulatory effort, the expected variant in weak contexts. It should not be read as the opposite of illogical.
2. UPSID: (UCLA Phonological Segment inventory Database), study carried out by the University of California in Los Angeles with a corpus of 317 languages
3. Even though some authors consider geminates a variant of liquids, in our data we did not found relevant percentages of occurrence of this variant. Therefore we exclude it from our analysis (see tables 5 and 6). Nevertheless, it is worth mentioning that in our theoretical model geminates would occupy an alternative stage (like rothicization), as a non-natural realization of liquids effort wise.
4. The data collected for the different variants of 'r' and 'l' was analyzed in Praat (version 4.1.19), and later with VARBRUL. Gender and style were the social variables to consider. Two stylistic variables were isolated: a list of words (reading) and sentences (memorization) were administered in a series of recorded interviews conducted by the author. However, the graphs (1-4) in this study only show cross-tabulations of variants of liquids by age. The tables (5 and 6) represent the percentages of occurrence of each variant in Cuba and Andalusia.
5. In Andalusia, these results reflect the differences in level of education between young and elderly people. The majority of young people had access to education, completing at least primary instruction until the age of 13 and normally high school until the age of 18. On the other hand, Age 3, are rare to have received

any kind of instruction, and most of them ended instruction after learning how to read and write. It is therefore logical that young people are more aware of the standard norm, taught at schools, while older people are not aware of this standard norm and they present no differences between careful and non-careful styles.

6. We refer to female immigration due to the important role women have in their children's education in the first years when children are acquiring the language.

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