SPANISH YEÍSMO AND THE PALATAL RESONANTS:
TOWARDS A UNIFIED ANALYSIS

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0. INTRODUCTION: SPANISH YEÍSMO AND /ı/-GLIDING*

A key defining feature of Spanish dialects is the presence or absence of the palatal lateral phoneme /ʎ/ in opposition to the palatal fricative /ʃ/. In those dialects where /ʎ/ and /ʃ/ are in opposition, the former phoneme is normally realized as a lateral [l], while the latter assumes a variety of non-lateral pronunciations. In an ever-increasing number of Spanish dialects, /ʎ/ has merged with /ʃ/ in favor of a non-lateral realization; this process is known as yeísmo.1 After surviving undisturbed for several centuries, /ʎ/ has, in some areas, evolved to /ʃ/ in little more than a single generation.2 In parallel fashion, it is not unusual, in spontaneous unguarded or rapid speech, for intervocalic [ɻ] to reduce to a nasalized glide [y].3

To date, no theoretical account of yeísmo or /ı/-gliding has been offered. Yeísmo is sometimes described as "delateralization", but this designation gives no indication of why laterality should be lost, especially since the other Spanish

* This article is dedicated to my "co-author", an anonymous Probus reviewer who insisted that an originally disparate collection of ideas be focused and refined. Some excellent suggestions as to how this might be accomplished were presided over the process of revision. Unlike the other collaborating, my co-writer shares none of the blame for any remaining infelicities or inconsistencies. Gracias, colega.

1 Yeísmo is the norm except in a few areas of Spain, rural regions of the Canary Islands, and parts of South America, particularly the Andean region and Paraguay. For the regional distribution, as well as peculiarities of individual dialects, cf. Alonso (1987); Alvar (1959, 1972); Caufield (1981); Moya-Carriol (1979); Navarro Tomás (1964); Toscano Matús (1953). The same process, as well as gliding of /ʃ/, has affected most popular varieties of Brazilian Portuguese and many continental and insular dialects, as well as all Portuguese-based creoles (Bortoni-Ricardo (1985); Azevedo (1981); 79); Amaral (1955: 48).

2 Rapid loss of /ʎ/ is occurring in Bogota, Columbia and many areas of Spain and the Canary Islands; cf. Alvar (1972); Castañá (1964); Cheavon Berrogó (1981); Carmona (1974); Labrador Gutiérrez et al. (1975); Lorenzo Maldonado (1947); Martínez Martín (1982); Montes Giraldo (1969).

3 Since there is no potential merger with other Spanish phonemes as long as nasality is retained, this process is rarely noticed, and its geographical distribution and exact patterns of articulation have never been determined. For some manifestations, cf. Espinosa (1930: 70); Florez (1951: 262); Montes Giraldo (1982: 117); Navarro Tomás (1948: 103); Orza (1966: 137).

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lateral, /l/, does not suffer a similar fate. The existence of other characteristics shared by /l/ and /l/, which also resist completely satisfactory explanation, suggests that the search for a hitherto undisclosed phonological unity of the palatal resonants might be a worthwhile endeavor. The remainder of the present study will explore one potential route of unification, with the discussion organized as follows: sections 1 and 2 present distributional and articulatory data supporting the notion that /l/ and /l/ are characterized by a complex articulation, involving the simultaneous activation of coronal and dorsal articulators. Sections 3 and 4 incorporate these observations within a model of feature geometry, and analyze the Spanish palatal resonants as single timing slots simultaneously linked to two articulator tiers. The resulting model is applied to yeismo and /l/-gliding in their various manifestations. Section 5 discusses certain apparent restrictions, and the overall results are summarized in section 6.

2. NOTEWORTHY FEATURES OF /l/ AND /l/

The Spanish palatal resonants /l/ and /l/ share several characteristics in addition to yeismo and /l/-gliding, among which:

(i) both phonemes occur word-initially or intervocally, and do not participate in clusters,

(ii) Spanish contains no words with antepenultimate stress containing /l/ or /l/ as the first element of the final syllable: *telefoño, *telefollo.

(iii) At the level of derivational morphology, onset-initial /l/ and /l/ alternate with rhyme-final /l/ and /l/, respectively: bello-beldad, desdenar-desdén.  

Spanish /l/ and /l/ developed historically from a number of sources, all involving two segments. Synchronically, there are characteristics of /l/ and /l/ which hint at some sort of “dual” structure, when compared with non-palatal consonants. Two exemplary cases are:

(i) Speakers of languages like English, which lack the palatal phonemes /l/ and /l/, normally interpret Spanish [l] and [l] as the clusters [lj] and [nj], respectively, and in intervocalic contexts anglophone learners divide these clusters into a rhyme + onset combination: bahío – ban-yo (Quilis and Fernández (1973: 118-123); Navarro Tomás (1967: 132-4)). It is usually assumed that these misinterpretations result from the lack of comparable phones in English, but Spanish variational data reveal additional sources for this pronunciation. Popular Spanish of many regions shows fluctuation between [l] and (onset-initial) [lj] and between [l] and [l] (in the latter case even in dialects where /l/ does not exist as a separate phoneme): Antonio – Toño, familia – familia, leundo – lludo, uentsillo – uenstilo, niños – ninhos, etc.  

These alternations demonstrate not only that /l/ and /l/ can fuse with a following from a glide to acquire a palatal articulation (an unremarkable event in the history of Spanish), but also that at least some Spanish speakers may, fleetingly or consistently, analyze /l/ and /l/ as phonological clusters.

(ii) The palatal resonants possess empirically measurable temporal differences with respect to their non-palatal counterparts [n] and [l]. The average duration of (intervocalic) /l/ is 20% greater than that of intervocalic [l], and the formant transitions to the following vowel are nearly twice as long for /l/. The qualitative results for [l] and [l] are similar, although the quantitative imbalance is lower: the average duration of [l] is approximately 10-15% greater than that of [l], while the formant transitions to a follow-

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4 Harris (1983: I41, f. 10) accounts for the fact that /ļ/ does not participate in two-segment onsets by observing that it is not an onset. This, however, would not disqualify /ļ/ from occurring in the second position of an initial cluster, since the hierarchy of sonority would not be violated (presumably /ļ/ and /ļ/ are equivalent in terms of sonority). Harris (1983: 14) states the rule “an onset followed by a liquid must constitute an onset”, which must eventually be modified to exclude *SC clusters. When lack of clustering of /ļ/ in other positions is discussed, some type of cluster is usually hinted at (cf. Creasey (1978: 114-5); Harris (1981: 32-3); Niñez Cedillo (1985: 276), for example excluding [+high], [-front] segments.

5 Harris (1983: 30-4) prefers not to confound nasal and lateral depalatalization into a single rule, analyzing the former phenomenon as a special case of the general deining of point of articulation features for all rhyme-final nasals in Spanish (cf. also Harris (1984)).

6 Cf. Espíndola (1950: 160); González de la Calle (1963: Ch. 7); Sala (1974); Toscano Maceo (1953: 103). Precisely this type of evolution occurred in early Romance and gave rise to the palatal phonemes /l/ and /l/. This hints at a partial revision of the postulated route of evolution of intervocalic /ļ/ as: [l] > [l] > [l] > [*lj] > [l]. Incorporating a metathesis of yod common in other environments (e.g. lace > lace > lefe y leye > leche, cf. Portuguese leite), Grande (1966: 90) cites early graphological evidence where the precursor of the Spanish palatal lateral was written /ļ/ and /ļ/, suggesting the route of evolution we have proposed. Cf. Ceballos (1954) for a panorama of parallel developments, all involving segments which could plausibly be analyzed as bisegments.
ing vowel are roughly 50% greater for [i/ (Quilis 1981: 211-19; 282-90)]. The question of relative duration may be implicated by yetismo; in those areas where yetismo is variable, loss of /j/ is greater in rapid, casual speech, and there is a direct although not exceptionless correlation between overall rate of speech and delateralization of /l/ at the idiolectal and microdiallalevel (e.g. Martínez Martín 1983: Ch. 2), Lipski (forthc.).

The lower frequency of occurrence of /l/-gliding may in turn reflect the relatively smaller increment in duration of /l/ as compared with /l/.

2. THE ARTICULATORY "DUALITY" OF /j/ AND /y/

The preceding section has shown that circumstantial evidence can be mustered in favor of a "special" phonological status for /j/ and /y/, but the ems of proof remains on those who would pursue this line of argument. In the case of yetismo and /l/-gliding, the resulting articulation differs only in the presence/absence of nasal resonance. Moreover, both processes result from the loss of closure: lateral in the case of yetismo and nonlateral in the case of /l/-gliding. In other words, stricture features are involved in these changes. On the other hand, rhyme-final nasal/lateral depalatalization appears to change place of articulation features, from palatal to alveolar. Close scrutiny of the articulatory characteristics of the sounds involved reveals a greater degree of unity than appears at first glance. Nowhere is

7 To postulate underlying [b] in yélites dialects for all words in which the grapheme ( occurs is without independent motivation. On the other hand, systematic alternations of the sort bella "beautiful" vs. beltish "beauty" strongly suggest the existence of /l/ at least in such forms; no alternations with rhyme-final [l] can be found for words which unquestionably contain an underlying [j], such as rayo "ray", joya "jewel", and so forth. For purposes of the present analysis, I therefore assume existence of some type of palatal lateral configuration even in yélites dialects, in the latter case limited to elements undergoing alternation with rhyme-final [l] (this is consistent with the analysis of Harris (1983: 50-52), which is independent of the possible laterality of the "palatal" phoneme which undergoes alternation with [l]).

A significant achievement of contemporary phonology is the recognition that distinctive features are not undifferentiated bundles or matrices, but rather have an internal geometry in which clusters of features are grouped into hierarchically arranged nodes, each of which may be separately associated or dissociated. Concurrently, phonology is moving toward models which acknowledge the essential

8 For "classic" tracings of palatographic impressions, cf. Navarro Tomás (1967: 111-34). Although these results were obtained more than half a century ago, the techniques of palatography have not evolved to the point where contemporary results suggest flaws in the original conclusions (cf. Painter (1979: 207) and the accompanying discussion; cf. also Ladefoged (1957, 1982: 148)). To satisfy my own concerns about the validity of vintage palatography, I prepared some palatograms of native Spanish speakers under conditions which probably differed little from those enjoyed by Navarro Tomás, the topographical configurations coinciding in major details with those deriving from earlier studies. Referring to languages other than Spanish, Knowles (1988) surveys x-ray data on the articulation of palatal segments which suggest a complex articulatory geometry. Ladefoged (1988: 135) incorporates these data in his analysis: "the traditional stem palatal ... a complex segment with both post-alveolar coronal and front dorsal attributes".

9 In the case of /l/-gliding, the inverse process sometimes occurs: the nasalization of /l/ (and occasionally /l/) and subsequent increasing of oral constriction to yield [l]; /t̪o̞ma/ > tapma; /nowa/ > nowa; /paβa/ > paya; /paβa/ > paya; i/l/ > ialo, etc. Cf. Gallego Navarro (1974: 169); Kury (1960: 354-6); Rueda Matos (1953: 103); Floreá (1965: 35).
role of quasi-independent articulators, including the lips, tongue blade, tongue body (dorsum), and tongue root. A total consensus on feature geometry has yet to be achieved; the configuration in (1) illustrates the most widely accepted common denominators (cf. Clements (1985, 1987); Halle (1983, 1988); Sagey (1986b), Ladefoged (1988)):

(1)

![Diagram](image)

There exists evidence in favor of the subordination of the feature [lateral] to the coronal node, thus making lateral occlusion irrelevant in dorsal articulations (e.g. Sagey (1986b), Halle (1988)). The description of Spanish [ʎ] supports this model of feature geometry, which intuitively is not difficult to accept, since lateral occlusion is almost always realized by the tongue body alone, and is impossible with the lips or the tongue root. Noticeably missing from (1) are structure features such as [continuant], which are generally assumed to be attached to the root node, or perhaps to an oral cavity node. A geometric model such as (1) implicitly allows for the simultaneous activation of more than one articulator; segments characterized by closure on more than one articulator tier are complex.

10 In the case of complex segments whose members differ in degree of closure, the attachment of [continuant] to the root node is problematic, and has led to suggestions that each articulator tier be individually specified for closure (e.g. Sagey (1986a)). Subsequently (Sagey (1986b), Halle (1988)), it has been suggested that closure on multiple articulator tiers be indicated by multiple pointers from the root node to the articulators involved. However, if only a single specification for [continuant] is allowed at the root node, such a procedure will not account for complex segments containing internal differences in degree of closure without modifications to the theoretical model.

The key to unifying the treatment of Spanish /ʎ/ and /n/ lies in an articulator-based model of feature geometry such as (1). The description of Spanish [ʎ] and [n] reveals that these elements are "dual" in that each consists of a single skeletal slot linked simultaneously to a coronal articulator tier and a dorsal articulator tier. /ʎ/ and [n] have the general form (2) and (3), respectively, where COR abbreviates the coronal (tongue blade) articulator tier and DOR the dorsal (tongue body) articulator tier, and where only positive feature specifications are implied:

(2)

![Diagram](image)

(3)

![Diagram](image)
The difficulty of reconciling the "dual" structure of the Spanish palatal resonants with the lack of convincing synchronic evidence in favor of a determined order of components disappears with the realization that apparent manifestations of linear order are observational artifacts arising from the complex articulation. 11

The analysis of /l/ and /l/ as linked to two articulator nodes may possibly account for the longer transitions to a following vowel and/or the slightly greater duration of these segments as compared with the corresponding alveolar resonants. Since the two articulators are linked to a single timing slot, relative phonetic length is irrelevant to the phonological structure, which remains that of a single unit. However, the closure across a proportionally greater area and the interlocking action of muscles affecting different sections of the tongue as well as different patterns of movement make it not inconceivable that the complete articulatory gesture characterizing /l/ and /l/ might require more time than for /l/ and /l/. 12 The dual analysis may also account for the distributional limitations of the Spanish palatal resonants, if we make the not unreasonable assumption that in constraining allowable consonant sequences at the deepest stratum of lexical representation (for example the 3-segment rhyme rule discussed by Harris (1983)), what is counted are articulator nodes rather than timing slots. 13

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11 Carreira (1988) has attempted a bisegmental analysis of /l/ and /l/, proposing an underlying structure involving a rhyme-final /l/ or /l/ followed by an onset-initial glide /l/. Subsequent rules reorganize the syllable structure, following assimilatory processes. Among other things, this analysis cannot directly account for word-initial resonants, which must be handled by ad hoc declarations of "extraprosodically".

12 This possibility is also suggested by detailed descriptions of the articulation of palatal resonants, as well as by informal accounts of /elmo, such as the following (González de la Calle (1963: 141)): "El yeismo ... es debido fundamentalmente a la relación articulatoria de la l ... si recordamos la complejidad articulatoria de la prepalatal l, comprobaremos que tal sonido no establece un contacto con el paladar superior al conector de la l y de la f. El contacto de la l y de la f es perfectamente natural y posible en una proyección descendida y baja como la que frecuentemente adopta el valgo ledrano".

13 This is not the appropriate place for a detailed exploration of such a possibility, especially given the scarcity of Romance examples which permit separating the action of putative constraints on the number of skeletal slots from limitations on the number of articulator nodes. One possibility might be the Latin "labialvocal" /l/, which cannot be comfortably analyzed as either a single segment or as a consonant cluster (cf. Devine and Stephens (1977)). Remaining within Spanish another candidate is the "palatal + affricate + r" /l/, which can be conveniently analyzed as either a single segment or as a consonant cluster (cf. Sieskow and Kreyer (1983: 34-35), and even as linked to two skeletal slots (Heil (1984)). Palaeograms of [l] show a articulation similar to that of [l] and [r], namely an oral contact topologically containing both the palatal articulation of [l] and the occlusion of an alveolar/dental [l]. Although the Spanish phones [l] and [l], allophones of /l/, do not give similar evidence of duality (except for the alternation between affricate [l] and fricative [l], they pattern with [l] and [r] as the only Spanish obstruents categorically disallowed as the first element of onset-initial consonant clusters. Together with /l/, they have a palatal contact profile that suggests the simultaneous action of coronal and dental articulators (cf. Kesting (1986), Navarro Tomás (1967: 125-138)). Harris (1983: 93) offers a filter based on the requirement of dissimilarity, analyzing all the obstruents as labiovelar (that is, articulated at or behind the alveolar ridge). If there is validity to the suggestion that constraints on consonant clusters are based on articulator nodes rather than timing slots, then the exclusion of [l], [l] and [l] from clusters would be due to the action of two articulators. The exclusion of /l/ (which is indecisively velar/anal) as the first member of onset clusters appears to be independent of the quasi-syllabic status of this consonant (cf. Harris (1983: 30)). This hypothesis is reinforced by the fact that in Peninsular dialects having the interdental fricative phoneme /l/, this element, which by no stretch of the imagination is a "alveolar", patterns with /l/, including non-occurrence in onset clusters.
In the case of /l/, (4) accounts both for true yelesa dialects, assuming the necessity of postulating underlying /l/ in at least some words, and for llesta dialects. Among speakers of llesta dialects, delateralization of /l/ occurs variably, at a rate which appears to increase with speech rate and which is also affected by style and extralinguistic variables such as social class. For individuals exhibiting this behavior, yeleso is a fast speech phenomenon, presumably replicating the events that in other areas and time periods gave rise to totally yelesa dialects. In other words, the "parameter" accounting for yeleso versus llesta with occasional delateralization is the point of application of (4): in yelesa dialects this rule applies (at least in the case of /l/) at the morpheme level, while in llesta dialects (4) applies variably and occasionally at the postlexical level.

Parallel to (4), "depalatalization" of rhyme-final /l/ and /l/ represents delinking of the Dorsal articulator node, resulting in the corresponding alveolar resonant:

(5)

\[
\begin{array}{c|c}
\text{ant} & \text{ant} \\
\hline
\text{COR} & \text{COR} \\
\hline
\text{X} & \text{X} \\
\hline
\text{DOR} & \text{DOR} \\
\hline
\text{[high]} & \text{[high]} \\
\end{array}
\]

\text{Condition: X is rhyme-final}

Currently, (5) operates only at the deepest lexical stratum (stem level), while (4) is a postlexical rule (which in the case of underlying /l/ in strictly yelesa dialects might also conceivably apply as a post-cyclic lexical rule). Spanish prohibits all rhyme-final palatal consonants, including /l/ and /l/; therefore if reduction of the combination of two articulator nodes in rhyme-final position is at least partially responsible for the synchronic occurrence of (5), alveolar resonants are the only permissible result of delinking one of the articulator nodes.

5. THE QUESTION OF PROPAROXYTONIC RESTRICTIONS

The analysis of the preceding paragraphs still does not explain why /l/ and /l/ cannot occur in the onset of the final syllable in words with antepenultimate stress. Spanish contains many proparoxytones with branching onsets in the final syllable (e.g. taximetro, féretro, múltiple), so no limitation of timing slots/articulator nodes associated with the onset of the final syllable will exclude /l/ and /l/ while permitting the actually occurring words. None forms such as *telefemo* telefemo presented to native speakers are not rejected out of hand, as is the case with configurations which violate major phonotactic templates. It seems most plausible that the restrictions relating to /l/ and /l/ are simply reflections of Latin phonotactics, given that /l/, /l/, /l/, etc. result from combinations which were excluded in the penultimate prosodytions (cf. Pensado (1984), Roca (1985)). Similar historical carryover accounts for the scarcity of the same consonants in the onset of penultimate syllables of proparoxytones, but those words that do exhibit these configurations are not regarded as aberrant (e.g. cánamo ‘hemp (rope)’, esparrágis ‘asparagus’, pichica ‘wow!’), and active morphological processes can produce the same combinations, e.g. addition of the suffix ico: doncella ‘maiden’ > doncellicico ‘maidenlike’.

6. SUMMARY AND CONCLUSIONS

The preceding sections have addressed the "special" status of /l/ and /l/ in Spanish. An attempt has been made to reconcile apparently contradictory evidence suggesting both a simple and a dual structure for the palatal resonants. The following points have emerged from the discussion:

(a) Both /l/ and /l/ are complex segments, linked to both a coronal and a dorsal node, but occupying a single timing slot.

(b) In rhyme-final position, a general rule detaches the dorsal articulator node, resulting in simple segments linked to a coronal articulator node (l) and (n).

(c) In the syllable onset, both yeleso and /h/-gliding represent detachment of the coronal articulator node, interpreted as a type of lention in which the articulator characterized by the greater degree of closure is deactivated.

(d) Parametric variation between yeleso and llesta dialects of Spanish reflects the place of application of the rule detaching the coronal articulator of /l/ in yeleso dialects this occurs in the lexical component, while in llesta dialects, the rule applies (variably) only at the postlexical level.

The reason why certain dialects implement yeleso and/or /h/-gliding and others do not, or the reasons for the rapidity of spread of yeleso vs. the relative lack of forward momentum of /h/-gliding, are not direct results of the preceding analysis, which attempts simply to accommodate the unique characteristics of palatal resonants within theories of Spanish phonology. Some highly tentative and preliminary results suggest that increased articulatory rate across generations and during the rural to urban transition may be instrumental in leading to yeleso, but additional research is necessary, in order to evaluate this hypothesis, and to assess the relative importance of extra-Hispanic linguistic contacts, dialect mixing and
paradigmatic restructuring in determining the ultimate destiny of Spanish palatal consonants. By attributing to /d/ and /n/ a unique phonological status in accordance with special behavior characteristics, a step has been taken toward the ultimate goal of a synthesis of diachronic and synchronic processes in Hispanic phonology.

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