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ON PALATALIZATION AS A PHONETIC PROCESS

Robert L. Rankin

Abstract: The process usually labeled palatization of dentals or velars, which results in alveopalatal affricates in many languages, is seen to be the result of two separate phonetic developments, (1) change in place of articulation of the stop, and (2) change in manner of articulation of a following yod. Since labial stops do not undergo (1), the phonetic alterations subsumed under (2) can be clearly observed by examining the evolution of pj and bj clusters. Data are provided from several Romance languages to illustrate this evolution.

Dedication: This paper was written in 1973 and presented, along with 25 others by various authors, to Clarence E. Parmenter, Professor Emeritus of Romance phonetics at the University of Chicago on the occasion of his 85th birthday. It is respectfully dedicated to Professor Parmenter.

Palatalization is one of those phonetic processes which is so widespread in the history of languages as to be practically universal. All of the Romance languages except Sardinian and possibly Dalmatian¹ exhibit palatalization of velar stops, [k g], and to a lesser extent, dentals, [t d s z], before a yod [j]² from any one of several Latin sources.

The reflexes of these dental and velar palatalizations are typically affricates rather than alveopalatal stops. Thus in languages which have the process, we normally find something like the following:

tj	>	tʃ	or	ts
dj	>	dʒ	or	dz
kj	>	tʃ		
gj	>	dʒ		

I will show here that the two portions of the affricates in question, the stop and the homorganic release, are reflexes of separate but interdependent evolution of the two elements within the consonant plus yod clusters. The stop consonant has taken the palatal point of articulation of the following [j], while the [j] has taken the obstruent characteristic and voicing of the preceding stop, i.e., it has become a voiced or voiceless fricative instead of an approximant.

However, plausible or natural this theory might seem to be, it would be mere speculation (since we do not observe such evolution in slow motion) if it were not similar development of clusters of labial

stops plus [j] in a number of languages. Romance languages offer a number of interesting examples, Rumanian providing perhaps the best.

Labial stops do not assimilate to the palatal point of articulation of [j], since they are not articulated with the tongue tip or blade. Hence they provide an ideal laboratory in which to observe the evolution of yod following stop consonants generally, without the ambiguity introduced by the competing process of palatalization.

In more than half the Romance languages, [j] after labials evolves into the same kind of fricative that we find following palatalized velars and dentals. Rumanian dialects show yod frozen in various stages of development. The same process, yod increment or yod strengthening, is also productive in Italian, French, Provençal, Rheto-Romance and Portuguese. Let us examine these areas individually.

In Italian, yod increment is most common on Lombardy, Liguria and the Piedmont in the North, and in Apulia, Calabria, Lucania, and Sicily in the South. The yod that undergoes obstruentization may be from a number of different historical sources. The following examples are from Rohlfs (1949:296-308):

	Tuscan	Northern Dialects
pj	piazza pieno	p[aj]a p[ɛ]n, p[ɛ]n, t[ɛ]n
bj	bianco rabbia	bɔʒɛŋk, dʒaŋku rabɔʒə

In Rheto-Romance we find yod evolved even further. As in all of southern Italy and parts of the North, the reflexes of yod have taken on the (occlusive) manner of articulation of the preceding stop. Examples from Surselvan and Engadine dialects of S.E. Switzerland are from Lausberg (1965:398ff.).

	Latin	Rheto-Romance
pj	sapiam	sapcha [pɕ]
bj	rabia	rabgia [bɕ]

In modern French the fricative reflexes of yod are preserved, but the preceding labial consonant has been lost (cf. some of the Italian forms, above).

pj	sapiam	sache [ʃ]
bj	rubeum	rouge [ʒ]

Old Provençal preserved some of the intermediate stages lost in French. Lausberg (1965:398f.) has:

pj	sapiam	sapcha	[ptʃ]
bj	rabia	rauja	[wʒ]

In Portuguese the only yod to undergo the change was a reflex of palatal [ʎ] (Williams 1962). Obstruentization occurred following voiceless labials only.

pj	plenum	cheio	[tʃ]
	plagam	chaga	[ʃ]

Rumanian dialects, especially those of Moldavia and Northern Transylvania north of the Danube, and the Arumanian dialects of Greece and Macedonia south of the Danube, preserve the various reflexes of yod in different stages of development. As I have discussed the intricacies of the Rumanian data elsewhere (Rankin, 1973), a few examples here will suffice. For greater geographical detail see Rusu (1962).

	Literary Rumanian	Wallachia	Other Dialects
pj	piept _v 'breast' piatră 'stone'	pçept pçatrə	p̣kept, p̣tʃept, ḳept, etc. p̣ḳatrə, p̣ṭʃatrə, ḳatrə, etc.
bj	biet 'poor' obiele 'leggings'	ḅyet ³ oḅyele ₊	ḅget, bḍzet, g̣et, etc. oḅgele, obḍzele, ogele, etc.

If we compare the evolution of yod following labial consonants with that of yod following dental and velar consonants, we see that the behavior of the semi-vowel is remarkably similar in all three cases. As noted above, it merely takes the consonantality and voicing of the preceding sound, retains its (alveopalatal) point of articulation, and often becomes a groove instead of a slit fricative.

Using the Rumanian and Italian labial plus yod clusters as a model for the other points of articulation as well, we would have the following stages of yod increment:

Stage I	Stage II	Stage III
pj	pç	pʃ
bj	ḅy	ḅʒ
tj	ṭç	ṭʃ
dj	ḍy	ḍʒ
kj	ḳç	ḳʃ
gj	g̣y ₊	g̣ʒ

In the case of dentals and velars the resultant clusters are homorganic (i.e., affricates) and are relatively stable. Further evolution may involve depalatalization to [ts], [dz] in some languages.⁴ Loss of the occlusive is also common for both the palatal and labial series of stops. In such cases the remaining reflexes of yod are often taken to be products of palatalization of the originally preceding obstruent. French, for example, has lost the occlusive element in all cases. Details of the further evolution of yod following labials specifically are found in Rusu (1962) and Rankin (1973).

The process usually described as palatalization of dentals and velars, which so often results in alveopalatal affricates is seen to be the interaction of two separate phonetic developments:

- (1) Change in point of articulation of the stop (palatalization).
- (2) Change in manner of articulation of the yod (increment).

When these phonetic processes are examined as separate phenomena, there is no longer any question why the result is an affricate, not a palatal stop.

For the sake of clarity and brevity, I have dealt only with stop consonants in this paper. The process of glide increment applies just as regularly to fricatives and resonants. It accounts for such diverse phenomena as the shift of [fj vj] to [fʃ vʒ], then [ʃ ʒ] in the above-mentioned Rumanian dialects and the assibilated reflexes of [rj] in Polish and Czech in an equally natural way. In fact, it generalized to include wau [w], glide increment accounts nicely for the well known passage in Rumanian and Sardinian of the Latin labio-velars qu, gu [k^w g^w] to [p] and [b] respectively.⁴

Formal attempts to write natural rules or otherwise account for palatalization should reflect the dual nature of the phonetic process.

NOTES

1. In the case of Dalmatian, velars did not palatalize before Latin i. The vowel, however, may have diphthongized to [aj] fairly early. Absolute chronology of the change is difficult to establish.

2. I.P.A. notation is used throughout this paper.

3. I have used [ɣ] 'fronted gamma' for the voiceless counterpart of [ç]. The I.P.A. provides no separate symbol for this sound, stating (1949:13) that "The letter j is employed to denote both the fricative

and frictionless sounds, since the two varieties have not been found to exist as separate phonemes in any language." In Arumanian, however, minimal distinctions are possible: ['jine] 'flax, fibre', ['vine] 'he comes'. Similar contrasts may be found in the dialects of Rumanian and Soviet Moldavia. One solution, of course, would be to use [i] for the frictionless and [j] for the fricative sound.

4. Since this paper was originally written, I have published an elaboration of this point. See Rankin (1976).

REFERENCES

- International Phonetic Association. 1949. Principles of the I.P.A. London, reprinted 1969.
- Lausberg, Heinrich. 1965. Lingüística románica, vol. 1, fonética. Madrid. (Translation from German original.)
- Rankin, Robert L. 1973. Yod Increment in Romanian Dialects. Paper read at the Kentucky Foreign Language Conference, April, 1973.
- Rankin, Robert L. 1976. Latin k^w , g^w , > Rumanian p > b: an explanation. Marta Luján and Fritz Hensey, eds., Current Studies in Romance Linguistics, 14-26, Washington, DC: Georgetown University Press.
- Rohlf's, Gerhard. 1949. Historische Grammatik der Italienischen Sprache, und ihrer Mundarten, vol. 1. Bern.
- Rusu, Grigore. 1962. "Evoluția în limba română a lui iod precedat de consoanele labiale și consecințele pe plan fonologic". Fonetica și dialectologie, vol. IV, pp.75-93. București.
- Williams, Edwin B. 1962. From Latin to Portuguese. 2nd Ed. Philadelphia.