THE CONTRASTIVE PHONEMS
IN BASQUE:
VALUES AND TRANSCRIPTION

TXILLARDEGI
San Sebastian

1. The contrastive phonemes in Basque: values and transcription.

1.1 - A first problem is to <u>choose</u> the Basque dialect taken as "standard Basque". But there is not, for the moment, (at the phonological level), such a "standard".

We are obliged to suggest the following table for the Basque "koine":

p b		t d					c ɟ	k g		
m				n			ɲ	(ŋ)		
(β)	f	(ð)		ᴊ				x (ɣ)	h	
			s		ş	ʃ				
			ts		tş	tʃ				
				l			ʎ			
				ɾ						
				r						

1.2 - Some I.P.A. symbols are difficult to write; so in this work we will use instead:

    [š] for [ş]

    [ć] for [tş]

    [š̌] for [ʃ]

    [č] for [tʃ]

    [ƀ, đ, ǥ] for continuants [β, ð γ]

    [t̬, d̬] for [c, ɟ]

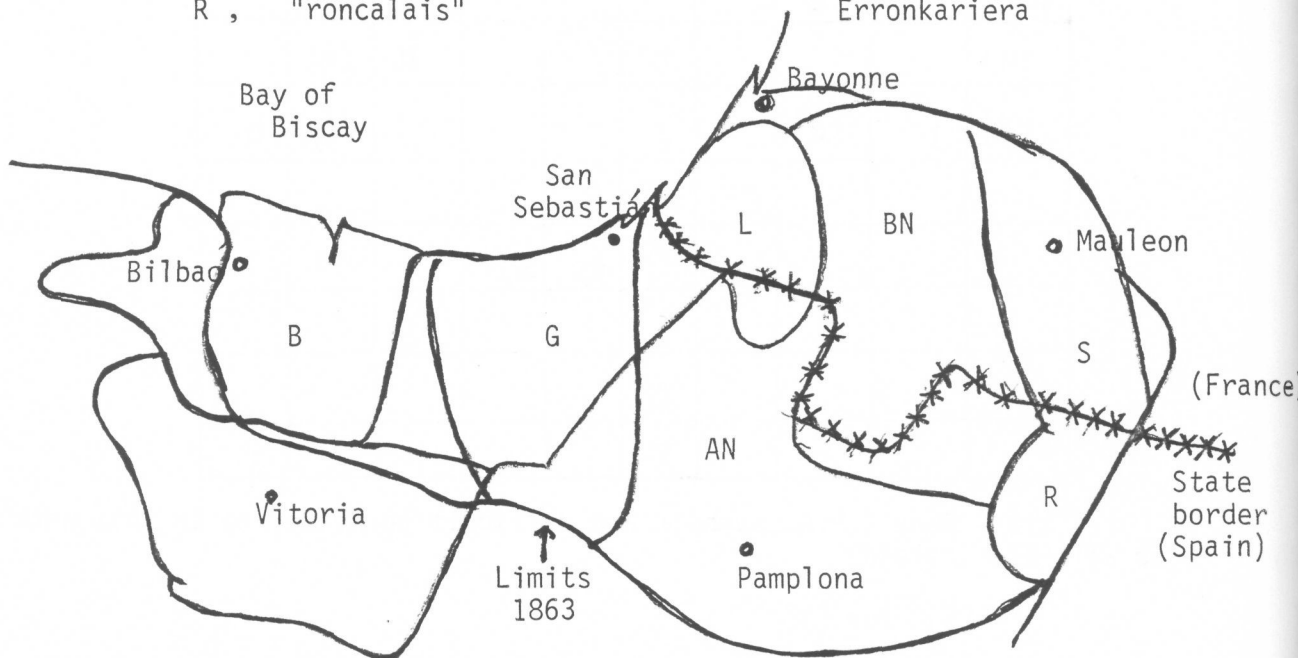   [n̬] for [ɲ]

    [l̬] for [ʎ]

    [r̄] for [r]

    [r] for [ɾ]

1.3 The geographical distribution of the Bsq. dialects is the following:

Common dessignation (French) (Bonaparte, 1863)		Bsq. name
B ,	"biscayen"	Bizkaiera
G ,	"guipuscoan"	Gipuzkera
AN,	"haut-navarrais"	Nafarrera
L ,	"Labourdin"	Lapurtera
BN,	"bas-navarrais"	Baxenabarrera
S ,	"souletin"	Zuberera
R ,	"roncalais"	Erronkariera

When we make allusion to them, we will only give their capital letter.

1.4 The sounds [ъ , ъ , g] (= IPA , [β, δ, γ]) only appear after vowel (syllabic or not), and after [r̄].

The sound [ŋ] only before a velar .

So they are between parenthesis (in the table).

1.5 We will use the SPE-features.

But some remarks seem necessary.

1.51 We think it is better to consider:

h = [+obs].

against the initial value in SPE.

1.52 For the retroflexes (or post-alveolars), we take:

$$\{\acute{s} , \acute{c}\} = [- \text{ ant}]$$

even if their point of articulation varies from a dialect to another.

2. <u>Possible onsets</u>

2.1 In <u>medial</u> position.

2.11 <u>$C</u>

All the segments being [+ cons] can be onsets in that position.
For example:

[sesen]	[se$sen]	'bull'
[sara]	[sa$ra]	'are' (you)
[hař̃o]	[ha$ř̃o]	'hollow'
[oćo]	[o$ćo]	'wolf'
[aco]	[a$co]	'yesterday'
[neśka]	[neś$ka]	'girl'
[biđe]	[bi$đe]	'way'

We wrote [+ cons], not [+ syll]. Since in the most common dialects
(B, G, AN and L), it is usually accepted that there are not rising diphthongs.
This is only true as a first approximation to the facts. Even in recent
loans, that tendency is clear:

Sp. [nóbjo]   'boy-friend',   Bsq. [nobišo]

[śwéř̃te]   'luck',   [súbeř̃te]

But in BN, S and R rising diphthongs are normal. It seems to be
an innovation: but it is <u>not always</u> sure. We will come back to it.

Let us recall that rising diphthongs are normal in French and in
Spanish.

2.12 <u>-#C</u>

2.121 In Bsq. no word begins with [r], nor [r̄]. Even now, the
epenthesis of a vowel is obligatory:

Sp. [r̃ádo]   'lightning',   Bsq. [ar̄ado]

[r̃epúblika] 'republic',   [er̄epublika]

2.122 In isolation no word begins by [ɓ, ɗ, ɠ]:

[biɗe], not [ɓiɗe]

But in composition, this same word can change its status:

[biɗe], but "Hirubide" [hirubiɗe]

2.123 No word can begin with affricates. It is possible to give not more than one example:

[caȓ], 'evil'

2.124 It is difficult, but not impossible, to find any word beginning by a palatal sound when it is [- obs]:

[ʝabuȓ], 'a bit short'

(but [labuȓ] exists: and it is normally the case with these pairs).

2.13 $CC

We can make the same remark: since normally we don't have any rising diphthongs, we can write:

*$Cj and *$Cw

for B, G, AN and L. But not for the others:

(R) [enún egwáȓt] 'I don't remember'

(BN) [donjane] 'Saint Jean Pied de Port'

2.131 There is one rising diphthong, common in Bsq.: [wi]. And if it was difficult to give examples for $wi onsets:

[wici] ('Huici', a village in Navarre)

it is not so for $Cwi onsets. For example:

[otaɗwi] (family name)

[aḍaśtwi] (fam. n.)

[aʝwic] (mountain name in Biscay)

[aȓwic] (village name in Navarre)

[-dwi] (very common toponymie-suffix)

2.132 Let us give some lists of $CC onsets.

$CrV (normally pronounced CȓV):

pr	[impȓimatu]	tr	[eśtȓata]	kr	[eśkȓamentu]
	[apȓopoś]		[aśtȓabuɗua]		[deśkȓasia]
	[alpȓoxa]		[atȓalaka]		
	[krompȓitu]		[iśtȓipu]		
	[alpȓaketa]		[kontȓa]		
	[kompȓome]		[butȓoe]		
br	[libȓatu]	dr	[andȓe]	gr	[gȓasia]
	[lambȓo]		[andȓaka]		[saŋgȓikol] (BN)

fr̃   [afr̃untu]

It is easy to see that:

a) most of these examples are <u>loans</u> (Sp. "imprimir", Fr. "à propos." and so on).

b) In many cases, we cah find the same word with the cluster <u>split</u> into two syllables: [andr̃e]=[andere], 'woman'; [gr̃asia], but [garasi] 'grace')

c) in some cases (gr, kr, fr) it is almost impossible to find any normal and usual word. But in others, the clusters are the consequence of an inncecssary metathesis:

Bsq. [alpr̃aketa]	Sp. [alpar̃gata]	'sort of sandal'
[kompr̃ome]	[konfor̃me]	'in agreement'
[alpr̃oxa]	[alfor̃xa]	'wallet'

2.1333 - For <u>#CrV</u> we have:

<u>pr</u> [pr̃omeś]	<u>tr</u> [tr̃aɓena]	<u>kr</u> [kr̃akaɗa]
[pr̃inc]	[tr̃amaŋkulu]	[kr̃aɓelin]
[pr̃oɓa]	[tr̃iku]	[kr̃iśtaw]
[pr̃eśt]	[tr̃uke]	[kr̃iśtal]
[pr̃eśeśki]	[tr̃eśna]	[kr̃uciaɟa]
[pr̃emu]	[tr̃iśkanca]	
<u>br</u> [br̃okolio̦]	<u>dr</u> [BN, [dr̃aw-]	<u>gr</u> [gr̃ina]
[br̃awki]	(not only BN:	
[br̃aŋka]	old AN, etc.)	
[br̃uśa]		
[br̃oma]		
<u>fr</u> [fr̃aka]		
[fr̃ajɗe]		
[fr̃aŋko]		
[fr̃anćeś]		
[fr̃oɟa]		

Again it is hard to find any example with <u>gr</u>. And:

a) most of them are recent <u>loans</u>: Sp. [proméśa]. Sp. [prwéɓa]. Sp. [preśto], and so on.

b) Sometimes, the old equivalent of the more recent loans shows an epenthesis; [foroɟa] (=[fr̃oɟa]), [giriśti(n)o] (=[kr̃iśtaw]), [dr̃aw-] (=[deraw-]), etc..

c) Sometimes the <u>br</u> cluster comes from a more difficult <u>bl</u>:

[br̄uśa]< *Sp.*[blúśa]; [kr̄abelin], Sp. [klab̄él]

Or from a innecessary metathesis: [tr̄ab̄ena], Sp. Fr. [tab̄érna, tavérn].

d) We have one example of #frwV:

[fr̄witu], Fr. [frẅí], "fruit", 'fruit'

2.134 When we go into the <u>Cl</u> clusters, it is almost impossible to find anything but very recent and anomalous loans:

[kob̄lakari]	[plasa]
[pośib̄le]	[pleɟu]
[šafla]	[klaśe]
	[blaj]
	[flakia]
	[flakuška]

The old loans don't show any stop before <u>l</u>:

Lat. placet Bsq. [laket]; or, by epenthesis: [balakatu]
(< *Sp. aplac.*) and even some recent loans show the same tendency:

Sp. [florénθjo], Bsq. [lorenciḓo], or [lorencio] at least.

2.135 So we can write the list:

pr, tr, kr, br, (dr), (gr), fr

(pl), (bl), (fl); with *tl, *dl.

3 Rhymes

3.1 As we wrote before: falling dipthongs are normal in <u>all</u> the dialects of Basque; and we have five: [aj, ej, oj, aw, ew]. For example:

[hajc], 'rock'

[śej], 'six'

[bakojc], 'each'

[law], 'four'

[lewn], 'smooth'

3.2 Basque has never a voiced sound in final position, nor in syllable final position. Nor has, today, any <u>r$</u> or <u>r#</u>.

3.3 <u>Final</u> clusters.

3.31 <u>VCC$</u> rimes.

For example:

[arins$ki]	[ber̄s$kin]
[dakar̄s$kit]	[ehor̄s$le]
[leb̄ils$ke]	[jans$kera]

[ahans$ten]   [laɓur̄s$ki]

[ehor̄s$keta]   [funś$ki]

[gorans$ko]
                     [ar̄ś$tol] (arch.)
[bels$kote]
                     [hor̄ś-to] (arch.)

Sometimes it is possible to read:

"berantkor" (= [berantkor̄] (?))

"ausartki"   (usually [awśar̄ki])

"arruntki"   )[ar̄uŋki], without /t/)

3.322 And we have too:

[suɓiawr̄]   (sometimes pronounced [suɓjáwr̄]. in Spanish)

[mendawr̄]   [hajc]

[inč̬awr̄]   [nolaɓajt]

[inč̬awśti]   [bakojc]

[hawć]   [otojc]

[lewn]   [majs]

[ar̄awn]   [gajc]

Very common, falling dipthongs being very common as well.

3.32 For VCC# we have:

[ahunc]   [bośt]

[har̄c]   [p̄reśt]

[umesur̄c]   [cimiśt]

[halc]   [derist]

[menć]   [derisk]

[anc]   [dakuśt]

[bulc]

[awśar̄t]

[dakar̄t]

[dakar̄k]

[bar̄t]

[ar̄unt]

and, for CC after a falling diphthong:

[dewśt]   [ewlc]

[dewśk]   [er̄lawnc]

[dirawśt]   [dewr̄c] (arch.)

[awnc], [ajnc]   [aṝawlc]

[sawśk]   [beawr̄t] (pop.
                                                         "behar dut'
                                                         AN)

with a template VCGC# (maximum cluster in word final position).

4. Some immediate consequences

    4. 1 For the onsets we found C as the old normal one (or CC when
we have /r/ as second element; and /l/ in very recent and rare loans). It
is clear that the affricates are monophonematic in Basque; and that the
orthographe is misleading: "tz", "ts" and "tx" for, respectively, [c], [ć]
and [č].

    We find the same conclusion for the rhymes. The template for consonantal
CC is normally: [-obs] [+obs]. But it can be [+obs] [+obs] iff the first one
is [+cont], and the second one [-cont]. So it is impossible to consider
the affricates as bi-phonematic; unless we accept another template, and even
another sonority hierarchy. They are monophonematic.

    4.2. There is not any symetry about the glides (j, w). They
can normally go after a syllabic segment; but this is not the case before it.
(Again, not usually; except in BN, S, R).

    4.3 The aspirated stops (written "ph", "th" and "kh", but the
syllable boundary being on left: $ph, $th, $kh), can go only immediately
before the vowel. It is normal to believe that the old Basque only had $C
as possible onset; the aspirated stops being, of course, monophonematic (the
orthograph is again misleading); and are used only in L, BN, S.

5. Sonority hierarchy

    Looking at the possible onsets and rhymes, the sonority hierarchy
(inverted, of course) shows up this order:

    (stops) $<$ (affric) $<$ (fric) $<$ (nasals) $<$ 1 $<$ r $<$ (j,w) $<$ V

    5.1 The position of /f/ is ambiguous (the sound seems to be
recent, and badly integrated in the phonological system). We have frV
(as prV, etc.): and we don't have srV, etc. (R and some varieties of BN
excepted).

    5.2 /h/ can only be before V in L; but it can precede a rising
diphthong in BN and S. In onsets it goes with the fricatives, but not
in rhymes; since sequences Vh are impossible. Same situation after a non-
syllabic vowel.

    5.3 The group [fric] [affric.] is possible in rhymes:

    [apajsčo], 'little priest'

even if it is not very frequent.

    5.4 [w] is more consonantal than [j] (less sonore). It is not
possible to see it directly, but there are different reasons to believe it.
For example: in the declension, the items with final w, go with the consonantal

items; but it is less frequent for items in j. It is especially clear with [gaw], 'night' (= [gaj], in R and S). The suffix -ko (= 'of') gives:

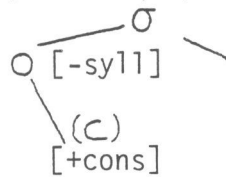[gaw] [gaweko] (b, G, L, AN); but [gaj]→[gajko], (S, R).

the same as [gajc]→[gajceko] (never *[gajcko] or * [gajsko]).

5.5 So we could suggest as sonority hierarchy:

$$\left\{\begin{matrix} p, t, k \\ b, d, g \end{matrix}\right\} < \left\{c, ć, č\right\} < f < \left\{s, ś, š\right\} < \left\{m, n\right\} < l < r < w < j < V$$

6 Onset tree

6.1 For the old items (old Basque) we can postulate:


We put [+cons] in order to avoid the rising diphthongs.

6.2. If we consider to be necessary to generate rising diphthongs, because of:

a) the existence of such diphthongs in BN, S, R.

b) the general existence of rising [wi] in all dialects (but not of [ju]; recall 5.4 in this respect).

c) the existence of a lot of recent loans with rising diphthongs: [śosjaliźmo], for example.

d) the very extended ethic forms with rising diphthongs, even in G or B. For example:

G, [djat], 'I (do) it'
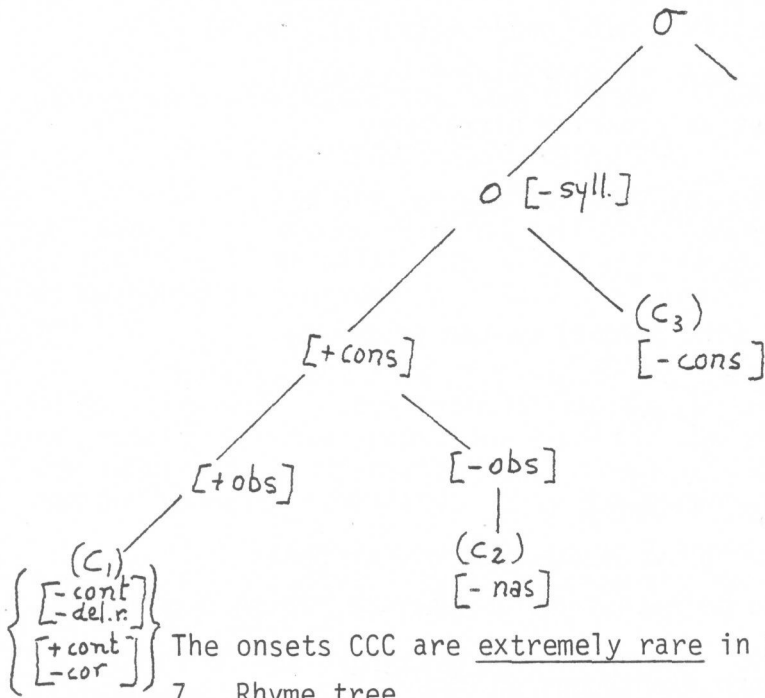
B, [žwat],   ""

And we would need:
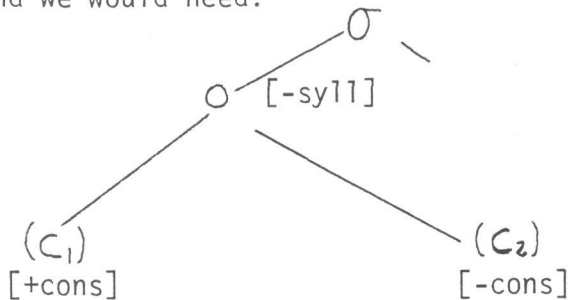
$$\text{with} \left\{\begin{matrix} \phi \\ c_1 \\ c_2 \\ c_1\, c_2 \end{matrix}\right\} \text{(ex. bel.)}$$

C meaning [-syll] and V [+syll]. And the glide being aleatory (not obligatory). (F.i.: [jawr̄ta], village in Navarre).

6.3 If we want to integrate the groups [+obs] [-obs], we could

suggest finally for Basque onsets:

σ

O [-syll.]

(C_3) [-cons]

[+cons]

[+obs]

[-obs]

(C_1)
$\left\{ \begin{matrix} \begin{bmatrix} -cont \\ -del.r. \end{bmatrix} \\ \begin{bmatrix} +cont \\ -cor \end{bmatrix} \end{matrix} \right\}$

(C_2) [-nas]

The onsets CCC are <u>extremely rare</u> in Basque.

7   <u>Rhyme tree</u>

It seems that Basque has not changed in rhymes.

We could postulate:

σ

R

V [+syll]

PR

(C_1) [-cons]

[+cons]

(C_2) [-obs]

[+obs]

(C_3) [+cont]

(C_4) [-cont]
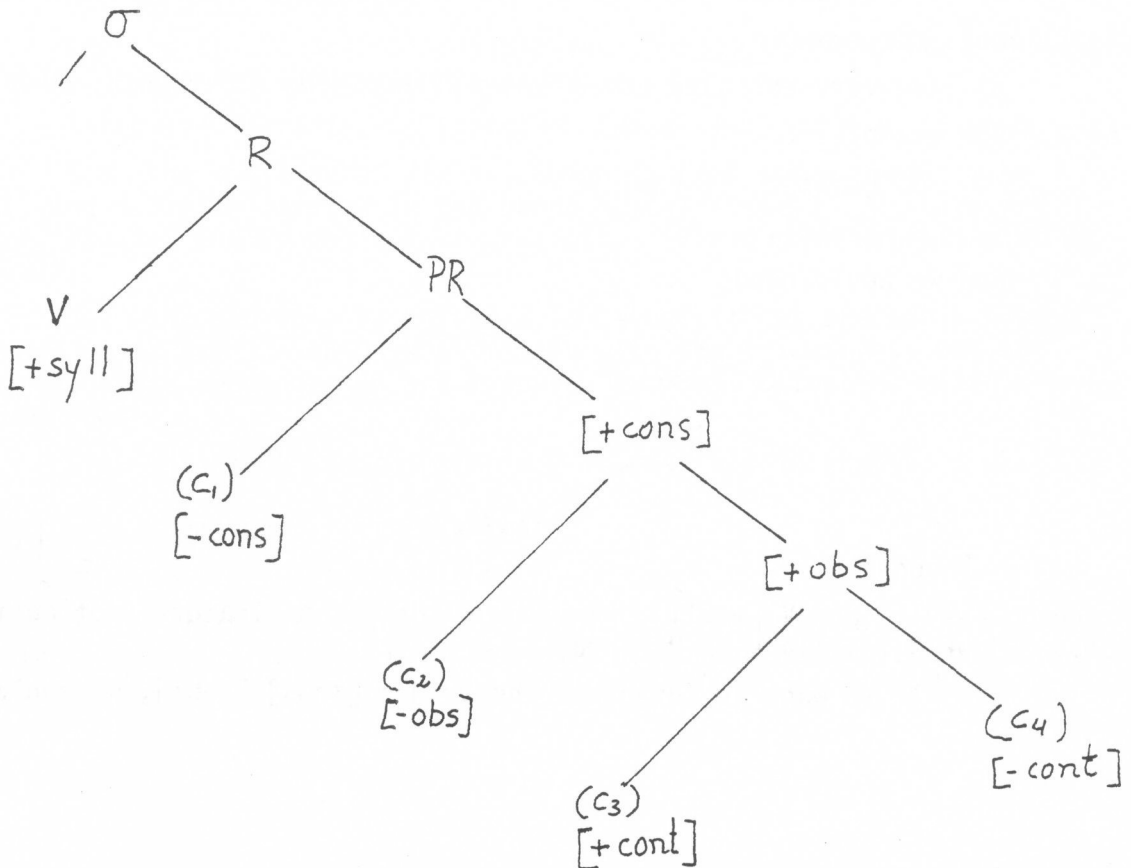
7.1 We have never $*C_2 C_3 C_4$ (= $*$ [obs] [+cont] [-cont])

For the three possible C (after V(C$_1$)), the possible clusters are

- C$_2$ C$_3$ [-obs] $\begin{bmatrix} +obs \\ +cont \end{bmatrix}$

- C$_2$ C$_4$ [-obs] $\begin{bmatrix} +obs \\ -cont \end{bmatrix}$

- C$_3$ C$_4$ $\begin{bmatrix} +obs \\ +cont \end{bmatrix}$ $\begin{bmatrix} +obs \\ -cont \end{bmatrix}$

8 Suffixes

Basque has some C suffixes:

-k, ergative; and 2.pers. marker;

-t, 1. pers. mark.;

-n, 2. pers. mark., femin.;

-s, instrumental.

8.1 When we add -k to a noun (proper name), no linking vowel is required if the word ends in V:

[majte]   ·   [majtek]

[peru]   [peruk]

But when it ends by C, an e is required:

[olac]   [olacek]

[ajtor̄]   [ajtor̄ek]

Normally Vj diphthongs go with V-items, and Vw diphthongs with C-items:

[garaj]   [garajk]

[hamalaw]   [hamalawek]

It is curious; since the rhyme awk could be possible. We are obliged to see that:

[olac#k] $\longrightarrow$ [olacek]

[hamalaw#k] $\longrightarrow$ [hamalawek]

8.2 But when we add -k to a verb, the direct junction is allowed:

(B) [dweśt]   'he (does) to me'

[dewśk]   '...to you' (masc.)

[dewćo]   '...to him'

[dewśku]   '...to us'

[dewću]   '...to you' (resp.)

[dewćue]   '...to you' (pl.)

[dewce]   '...to them'

It seems that we have:

[dweć+t]   [dweć+k[

with the boundary ⊕ , different from the ⊛ written before.

And we could say that:

[dewć+t]   ⟶   [dewśt]

[dewć+k]   ⟶   [dewśk]

[dirawć+t]   ⟶   [dirawśt]

    etc.

but, in addition:

[hamalaw#k]   ⟶   [hamalawek]

[k͞riśtaw#s]   ⟶   [k͞riśtawes]

8.2. With -n, in final position, we only find -na#:

[derić+t]   ⟶   [deriśt]

but   [derić+n]   ⟶   [deriśna];   or [deriźna]

* [deriśn] (with the rime iśn) being impossible.

We don't find [+syll] [+obs]   [+obs]
                       [+cont]   [-cont]

in the general tree (& 7):