

# BIPOSITIONALITY AND PLACE LICENSING IN GETXO BASQUE PALATALIZATION

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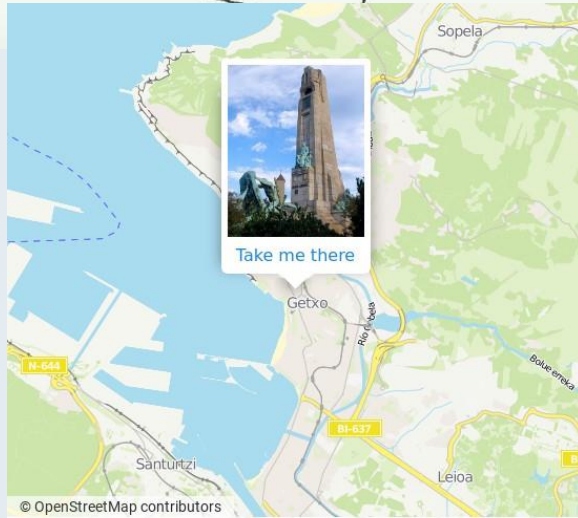
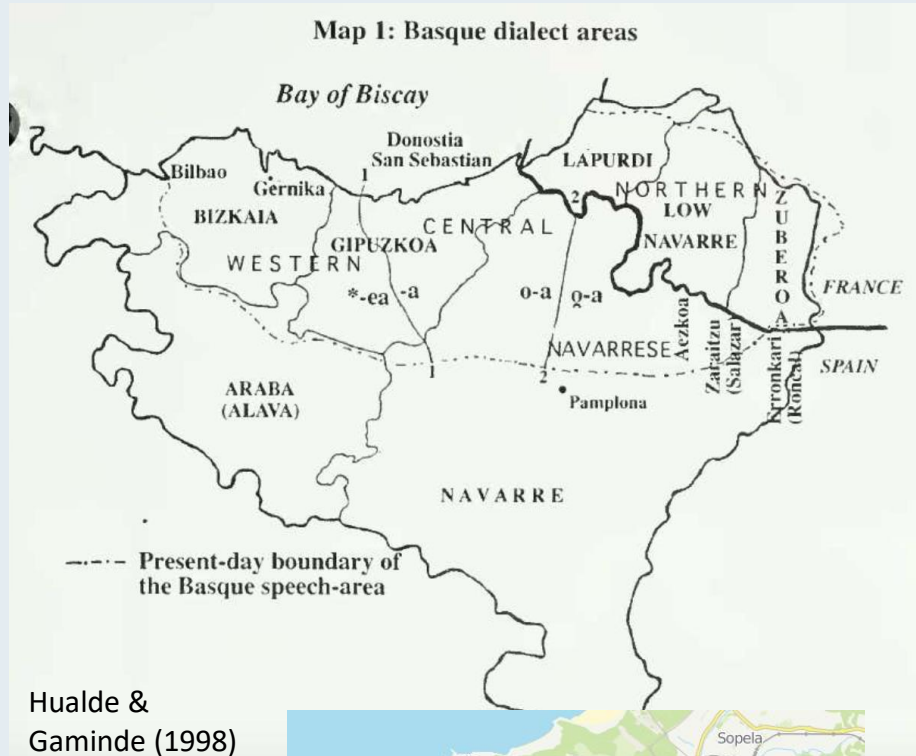
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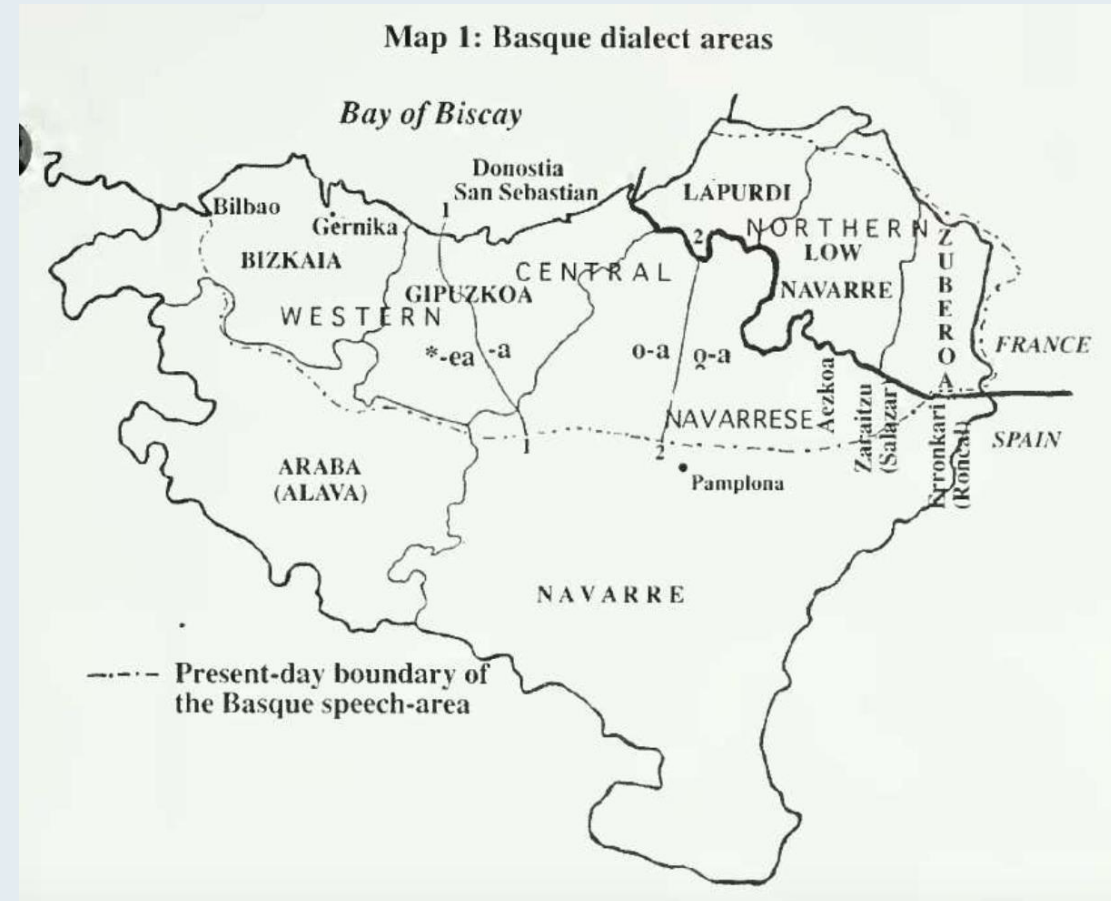
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# Getxo



# The phenomenon

- A typical feature of Basque dialects: alternations deriving from **palatalization** ( $n, l, t, s > \eta, \lambda \dots$ )
- It varies significantly for the outcomes (classified as **restrictive** (e.g. Baztan), **intermediate** (e.g. Donostia), and **general** (Northern Biscayan) – Hualde 1991: 108)
- The palatalization recorded in Getxo Basque (**Hualde & Bilbao 1992 – henceforth, HB**) is very **different** from that recorded in Gernika (Northern Biscayan) and appears to be an ongoing phenomenon currently under innovation (Itxaso Rodriguez p.c.)



Hualde & Gaminde (1998)

# Distributional facts in Getxo Basque

- A five vowel system (**i, e, a, o, u**) + four i-final diphthongs (**ei, ai, oi, ui**) and two u-final ones (au, eu)
- The fifth i-final diphthong (**ii/ij**) seems to be missing from surface forms
- Neither vowels nor consonants contrast **phonetically** for length
- Word-final consonants are restricted to **coronals** (sonorants and voiceless obstruents)<sup>1</sup> – we take this to be the default specification of place
- Closed syllables in general do not permit place contrasts: as codas, laterals and nasals show strong **place of articulation agreement** effects (e.g., asal > asa $\Lambda$ -jana ‘eaten peel’, gison > gisom-**b**arri ‘new man’)
- Palatal **ɲ, ʎ** have restricted distributions (not found word-initially; derived from UR /in, il/)

<sup>1</sup> The only exceptions to this are a result of inflectional suffixes in /-k/ – /k/ is otherwise unattested root-finally.

# Palatalization

- Inside the prosodic word (glide absorption – cf. Hualde 1991)

ojn	‘foot’	oɲ-e	‘the foot.ABS-SG’
mutil	‘boy’	mutiʎ-e	‘the boy.ABS-SG’

- Across the prosodic word (without glide absorption)

ojɲ-andi	‘big foot’	mutiʎ-andi	‘big boy’
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- HB analyse **ɲ**, **ʎ** as synchronically allophonic, derived from UR /in, il/. However, this means they have to mark many ‘lexical’ exceptions.

# Paradox

- The process seems to apply and not apply at the phrasal level
- The palatalization rule is sensitive to both the leftward phonological context within the word level *and* the rightward phonological context of the phrase level
- The trigger and the target of palatalization need to belong to the same ‘word’

*/in##V/ and /il##V/*

mutil + andi → muti $\lambda$ -andi                      ‘big boy’

mendi + luse → mendi-luse \*mendi- $\lambda$ use      ‘long mountain’

- But still, the rule will only apply if the phrasal juncture is vowel-initial

mutil + bet → mutil- $\beta$ et \*muti $\lambda$ - $\beta$ et              ‘a boy’

# HB's solution

- The rule is **lexical** and has many **exceptions** in loanwords. At least one in a native root

arruina                    'ruin'                    isilik                    'quiet'

- Lexical rule, all /n/ /l/ become palatalized after /i, j/
  - *even those in closed syllables (not surface true)*

/agin/ 'tooth' → \*agij

/agin + bari/ → \*agij-bari

- These are then corrected in a **Duke-of-York** derivation by post-lexical neutralization rules:

/agin/ → agij → agin                    'tooth'

agij + bari → agim-bari                    'new tooth'

It's quite complex (Duke-of-York), some orderings have to be **stipulated** (palatalization wrt nasal place assimilation).

- (a) The rule is actually **exceptionless** (loanwords included) *iff* its application is exclusively at morpheme boundaries.
- (b) The rule can be **related** to the positional distribution of place features of nasals and laterals, as well as the process of nasal-place assimilation across word boundaries.

# Advantages of reanalysis

- An alternative account is possible based on
  - *positional underspecification of nasals and laterals;*
  - *the spreading of place into derived onsets created by the bipositional spreading of word-final codas into rightward vowel-initial morphemes.*
  - *This will be related to Getxo Basque's general rules of place assimilation.*
  - *The analysis is formalized in the framework of **Strict CV** (Lowenstamm 1996; Scheer 2004; etc.) & **Element Theory** (KLV 1985; etc.).*
- The advantage of this analysis is as follows:
  - *It fully unifies the so-called 'lexical exceptions'.*
  - *It avoids HB's Duke-of-York derivation and HB's necessary ordering stipulations between palatalization and nasal-place assimilation.*
  - *Getxo palatalization will no longer require a division between word and phrase-level phonology, instead it exploits other general phonological facts about the variety.*



# Analysis

- Recall: distribution of Place in nasals and laterals in Getxo Basque:
  - *Word-final consonants are restricted to coronals > we take COR to be the default specification of place.*
  - *As codas, laterals and nasals show strong place of articulation agreement effects with ensuing consonants:*  
asal > asa~~l~~-jana ‘eaten peel’      gison > gisom-bbarri ‘new man’
  - *Closed syllables do not permit Place contrasts.*
- Accidental gaps aside, Laterals and Nasals are contrastive before filled V-slots: ama ‘mother’, sana ‘vein’, tro~~n~~u ‘knot’.
- HB treat the palatal consonants as derived from underlying /il/, /in/. However this leads to many ‘**lexical exceptions**’: makinista ‘machinist’, isilik ‘silent’.
- **Word-finally**, however, there are no exceptions, not even in loanwords. All in+V, il+V contexts alternate: √makin > makina ‘machine’, fusil / fusi~~l~~-e ‘the rifle-ABS.SG’.
- [j] in diphthongs is derived from UR /i/, it alternates with zero within ‘word’ but not across ‘words’: oin > o~~n~~-e ‘the foot-ABS.SG’ > ojn andi ‘big foot’.



# Distributions of Place - 2

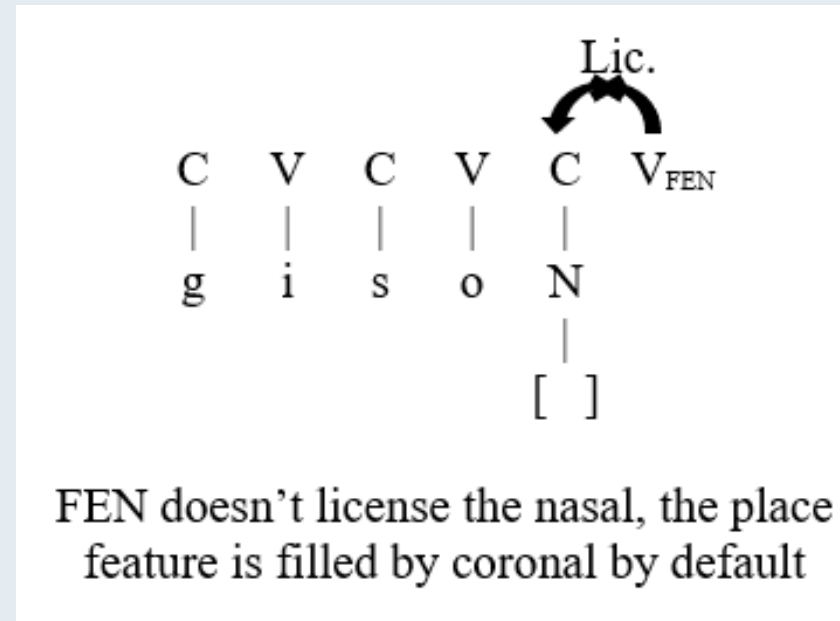
## Underlying condition on roots

- Laterals and Nasals have no underlying place feature in closed syllables. They either share it with an ensuing consonant, or they are placeless.
  - *Internally they will share place with Cs that follow*
  - *Word-finally they will NEVER have underlying place*

## Phonological condition on Place

- A Lateral / Nasal that is +Lic (precedes a filled V-slot) needs a place feature (COR is default)

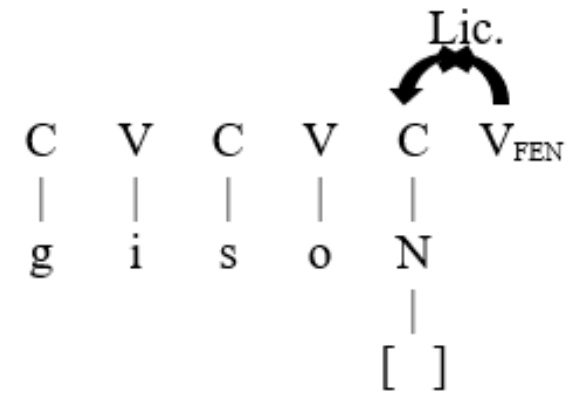
The whole effect is therefore driven by different mechanisms to \*derive\* Place.



(gison 'man')

# Deriving Place within words

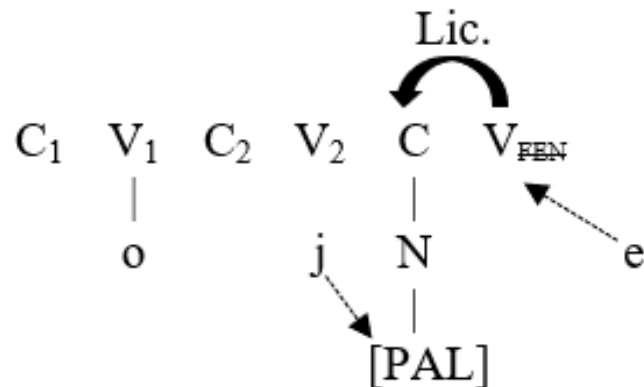
- Coronal is the default place of articulation. Final placeless lateral/nasal will surface as coronal: fusil 'rifle', gison 'man'



FEN doesn't license the nasal, the place feature is filled by coronal by default

- V-initial affixes will join onto the final position of the root making it an 'onset'. +Lic will fuse with l to gain PAL place: [one]

oné 'the foot-ABS.SG' (incomplete – see later)

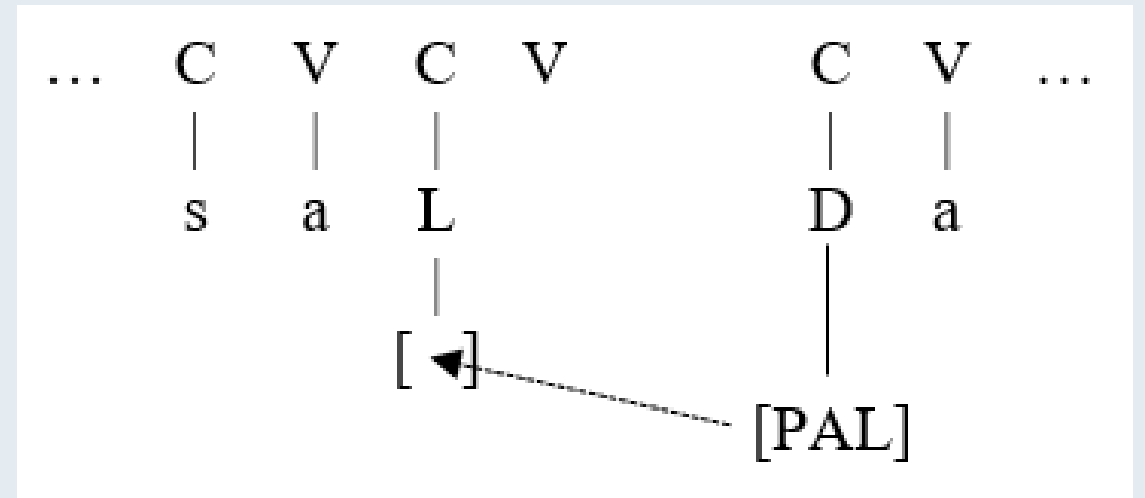
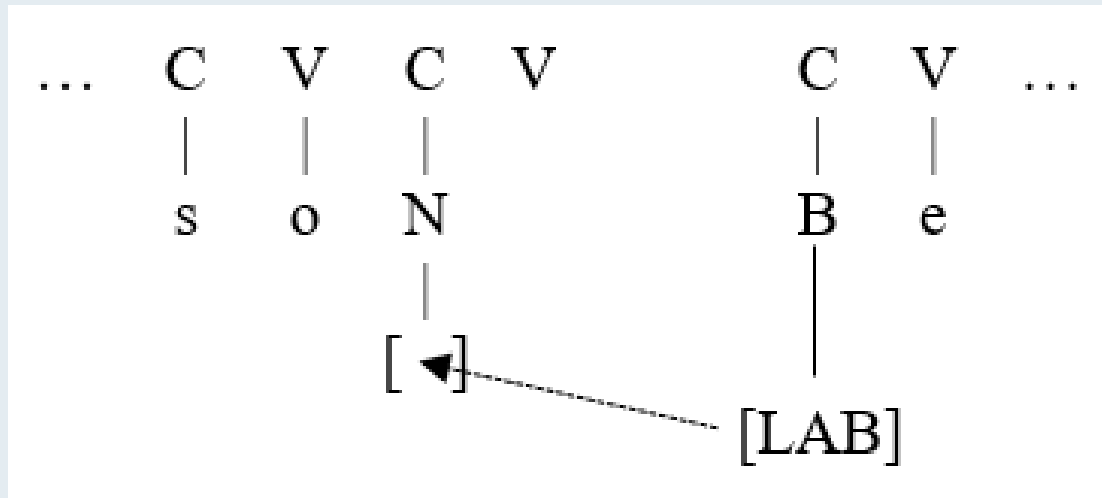


# Deriving Place across words

- Pre-consonantly there will be (ordinary) place assimilation.

gison > gisom-bet 'a man'

asal > asa**ʌ**-jana 'eaten peel'



# Derived Place across words and before V-initial words

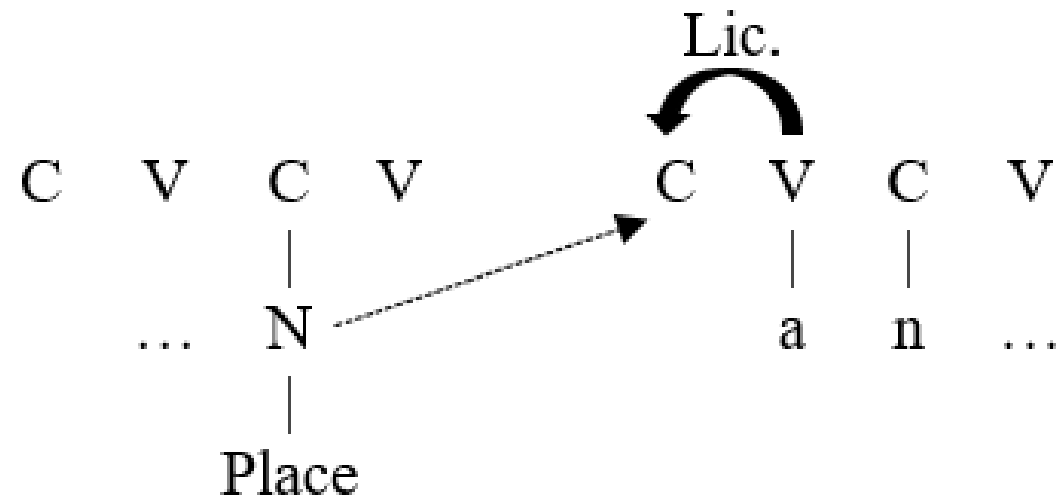
- “Resyllabification” creates the same structure as the previous slide  $C_1$  and  $C_2$ , a bipositional structure where the consonant now occupies a +Lic position.
- As a result, it cannot remain placeless. Where PAL feature is available this will spread into the bipositional complex. This unifies nasal place assimilation and cross-word palatalization with the same structure.

[ojn] ‘foot’

[ojnandi]

‘big foot’

o<sub>i</sub> j<sub>a</sub> n<sub>a</sub> d<sub>i</sub> ‘big foot’ (incomplete – see later)

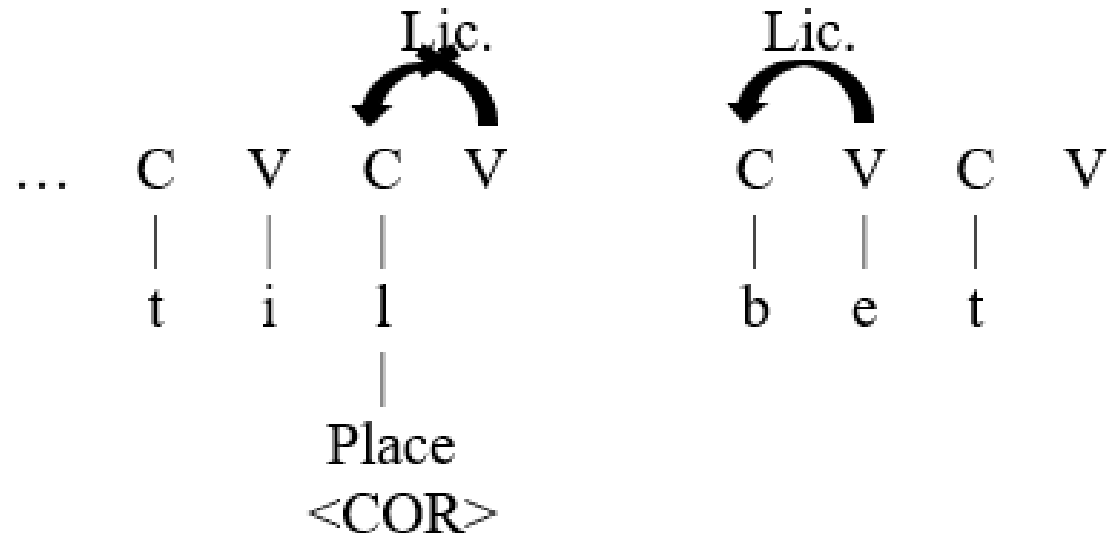


# No Palatalization before C-initial words

The final /l/ and /n/ in these structures *can* become assimilated, but there's no bipositionality, no "resyllabification" before a C.

All things being equal the placeless L and N can remain so, until they're filled by default COR.

/mutil + bet/ → mutil-βet (cf. \*mutiʎ-βet) 'a boy'



# Bipositionality in Basque

- Basque is not usually taken to be a language with the ‘flopped structures’ of geminates (cf. Hayes 1989).
- However, there’s at least one effect where this seems to be the structure.

## Arbizu Basque (Hualde 1988)

u + V yields epenthetic b

However this b is not lenited into  $\beta$  /buru + a/ buruba \*buru $\beta$ a ‘head-ABS.SG’

- This **cannot** be due to an ordering issue since spirantization of stops is otherwise exceptionless and applies post-lexically!

**Solution:** This is a bipositional /b/ linked between V and C. The double linking provides it with the kind of protection from deletion known as geminate integrity (despite not being an underlying geminate and Basque not having surface length contrasts).

Geminate integrity is already used by Hualde (1988) to explain the contrast in: mendi-ak > mendjek ‘the mountains’ vs. /mendi-aa-n/ mendja:n ‘in the mountains’.

The bipositionality of this structure is not in much doubt since it is one of gliding, which many take to be an instance of double linking  $V \rightarrow C$ .



# The representation of vowels/diphthongs

- Recall: **five** vowel system (i, e, a, o, u) + **four** i-final diphthongs (ei, ai, oi, ui) (+ two u-final ones)
- Recall: the **fifth** i-final diphthong (ii/ij) seems to be missing from surface forms
- Recall: (neither) vowels (nor consonants) contrast **phonetically** for length
- HB argue that the diphthongs are **derived** (/Vi/ > [Vj]) – we accept this analysis:
- [Vɲ] < /Vin/ and [VʌV] < /ViIV/
- After /i/ and the i-final diphthongs, palatalization applies **identically**

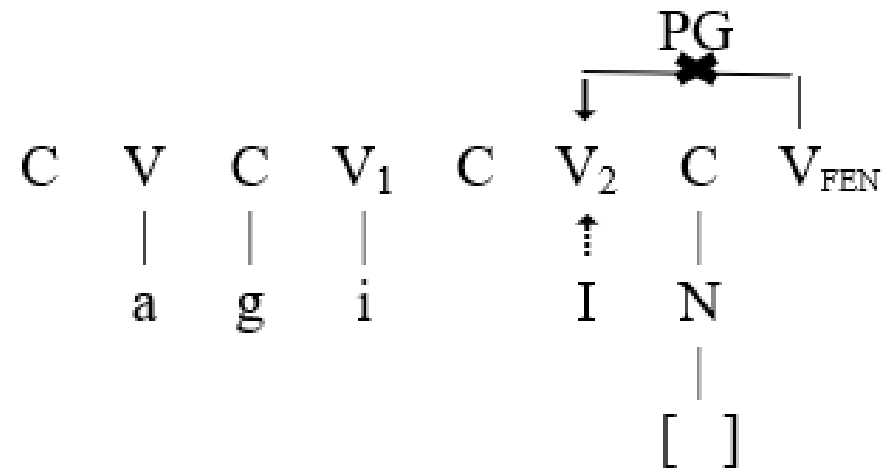
uninfl		abs sg		
min	[mín]	miñe	[miɲé]	'pain'
oin	[óɪ̯n]	oñe	[oɲé]	'foot'
suin	[súɪ̯n]	suñe	[suɲé]	'son-in-law'
mutíl	[mutíl]	mutille	[mutiʎé]	'boy'
matrail	[matr̄áj̄ɪl]	matrálle	[matr̄áʎe]	'cheek'
seseil	[seséɪ̯l]	seselle	[seséʎé]	'February'

(HB p.22)

# The representation of vowels/diphthongs - 1

- Our analysis: glide /i/ is a floating I element; [i] is /ii/

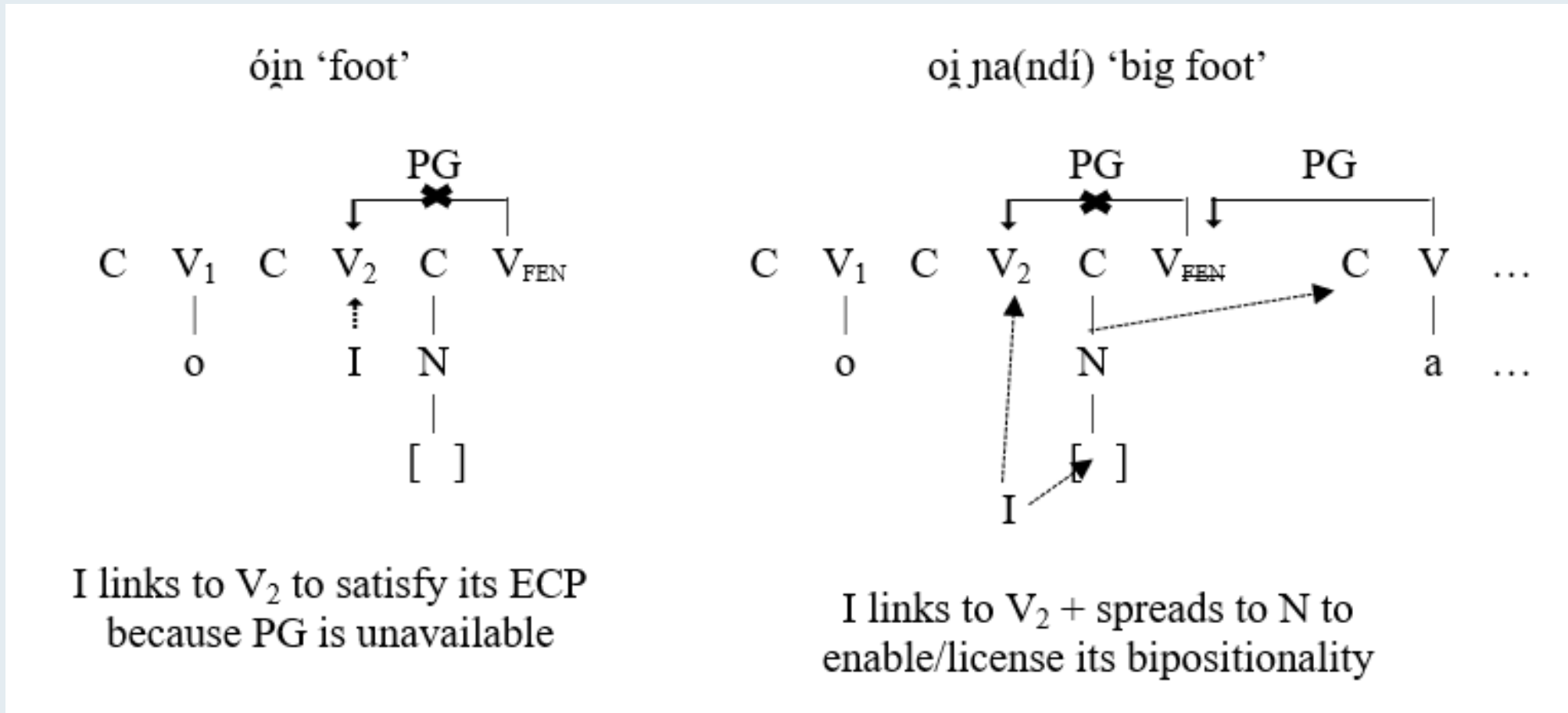
/agin/ [ayin] 'tooth'



I links to V<sub>2</sub> to satisfy its ECP  
because PG is unavailable

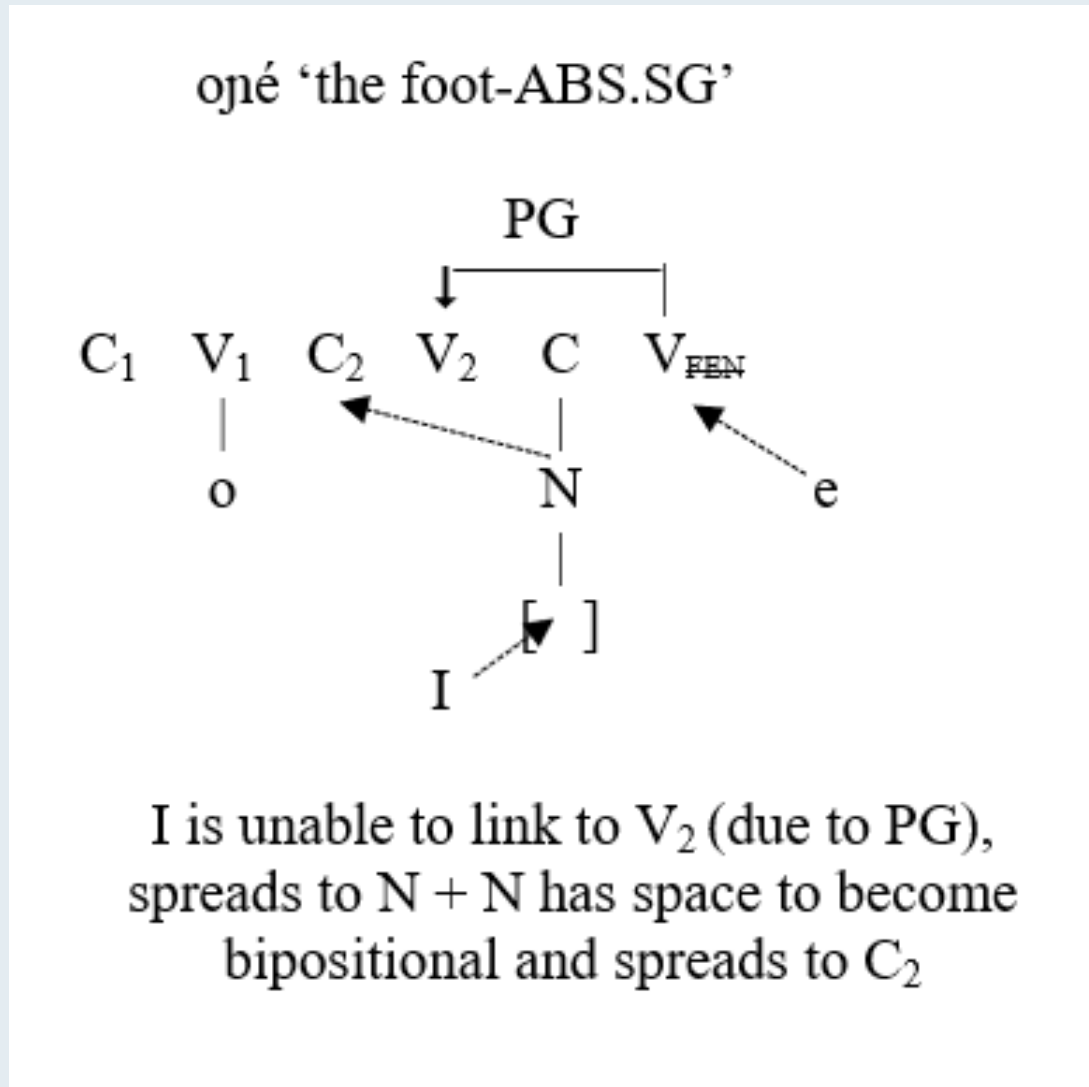
# The representation of vowels/diphthongs - 2

- Our analysis: glide /i/ is a floating I element; [i] is /ii/



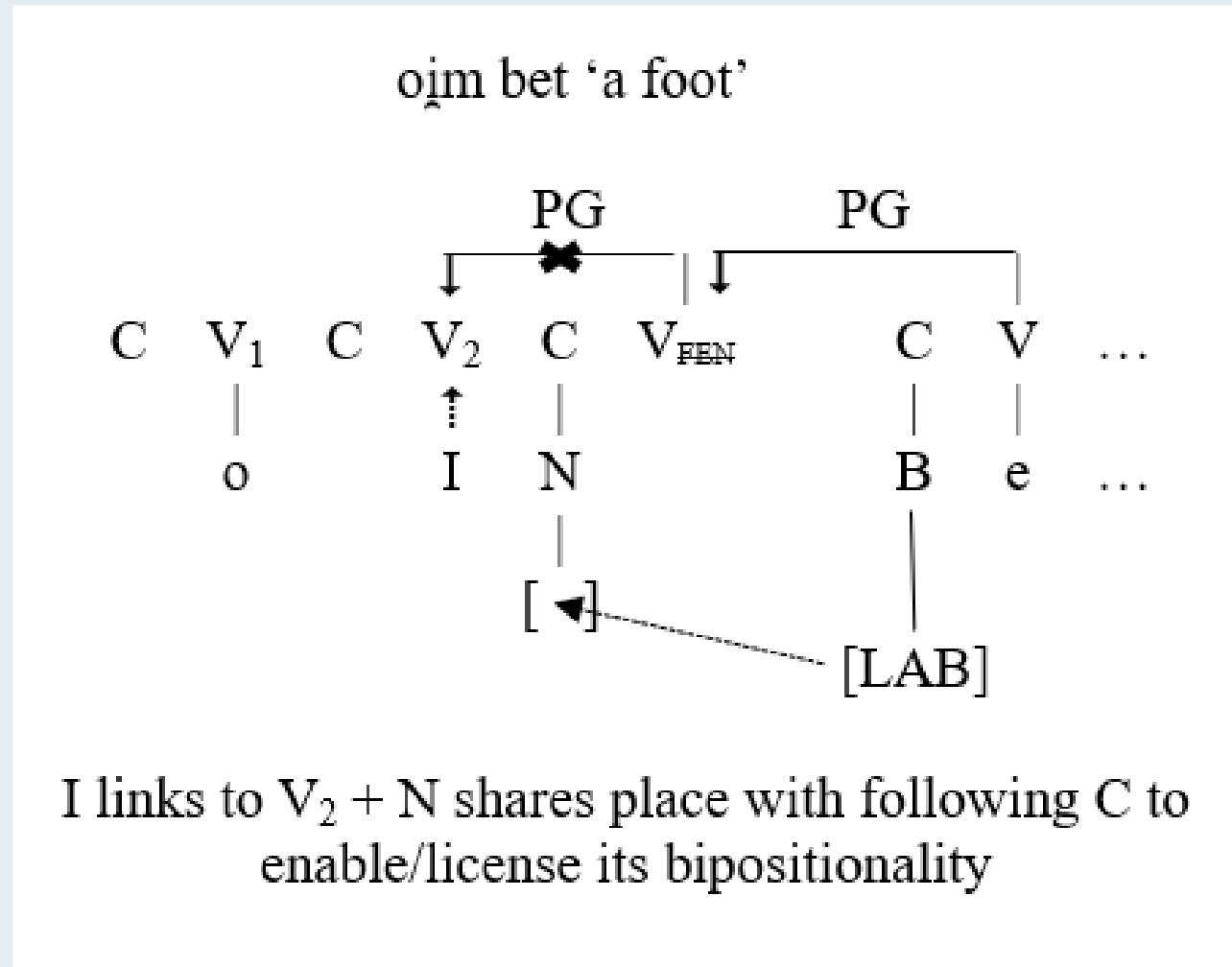
# The representation of vowels/diphthongs - 3

- Our analysis: glide /i/ is a floating I element; [i] is /ii/



# The representation of vowels/diphthongs - 4

- Our analysis: glide /i/ is a floating I element; [i] is /ii/



# Conclusions on Getxo Basque Palatalization

- Place is highly asymmetrically distributed in URs in Getxo Basque (and Basque in general).
- Place assimilation is rampant in Getxo Basque.
- Within or across a word-boundary, if UR Placeless /l/ and /n/ are +Lic they must obtain a place feature. This is either supplied by epenthesis COR, or by local spreading (anything from rightward Cs) but also from leftward i/j if it's available.
- Vowel-initial affixes will adjoin to the root and they make Placeless /l/ and /n/ become +Lic. This makes them need place, and PAL can be sourced from i/j.
- Across words it's actually the same story in Getxo (other dialects are different). Except that before C-initials /l/ and /n/ can become filled by Place spreading (or COR default). Before V-initials, they are licensed but without any Place from the consonant to the right, however they can get local PAL from the left.
- This means that there are no exceptions to the rule either lexically or post-lexically. There are fixed and regularly alternating /l/ and /n/ and no Duke-of-York Derivation. There's just UR empty place that can become filled derivationally (in 1 layer of the phonology).

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