Glides on the syllable margins: strengthening and weakening fates

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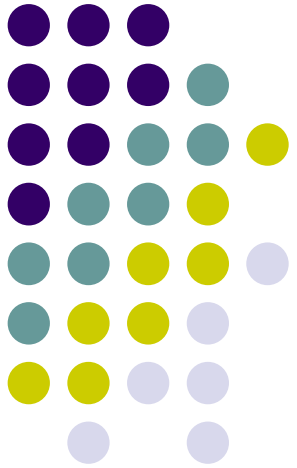
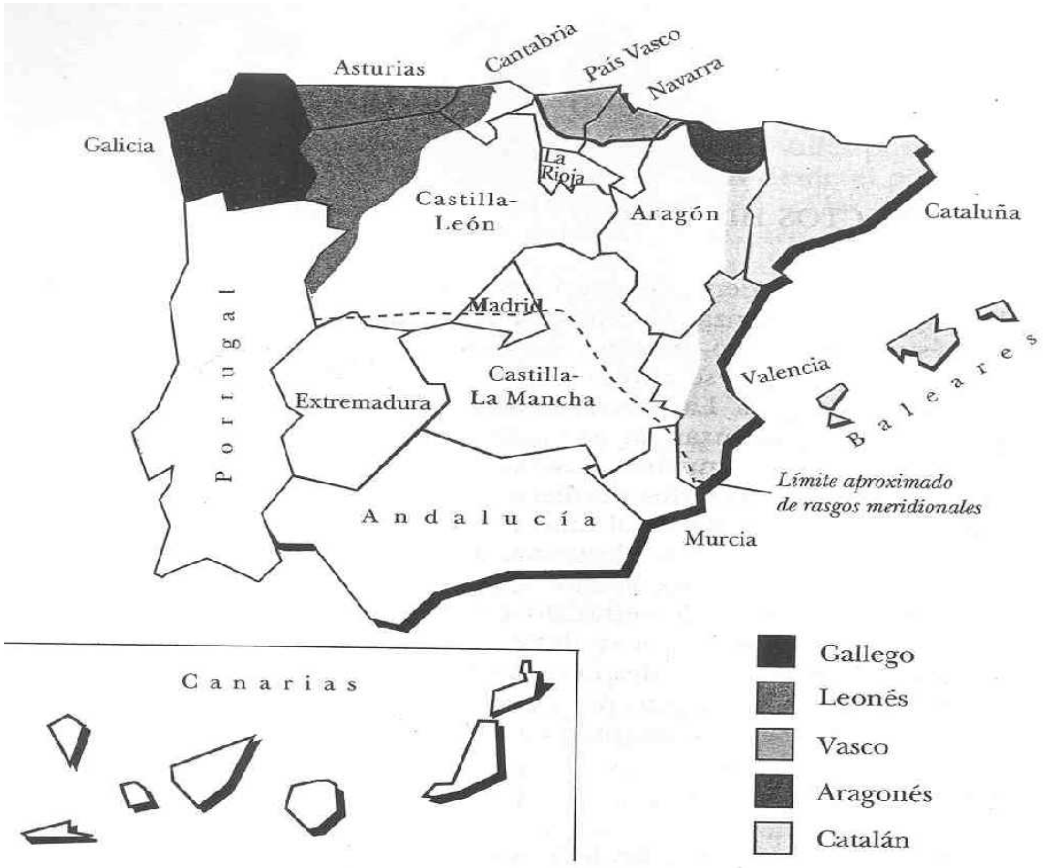


Journées d'étude «Autour de la syllabe: phonétique, phonologie, psycholinguistique, acquisition», 12-13 nov. 2015, Univ. de Poitiers

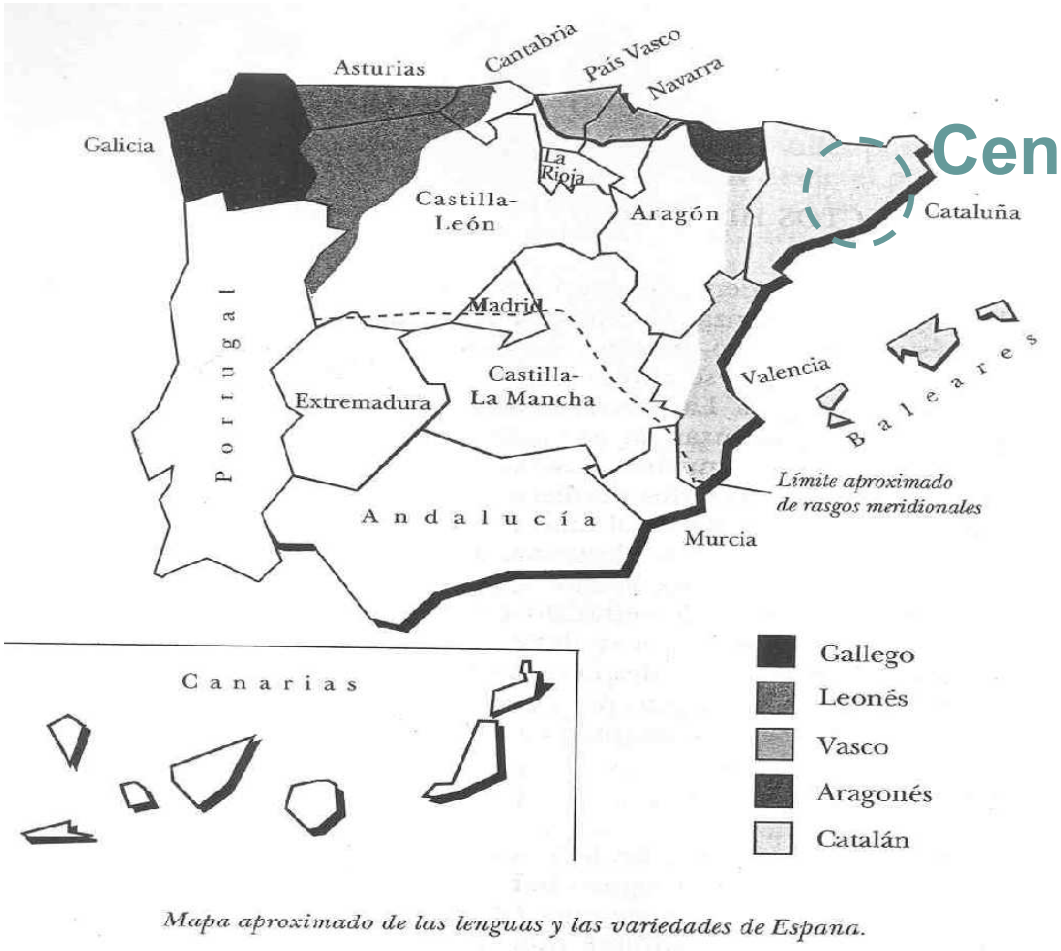
(FFI2013-46987-C3-1-P i 2014SGR918)

Presentation



Mapa aproximado de las lenguas y las variedades de Espana.

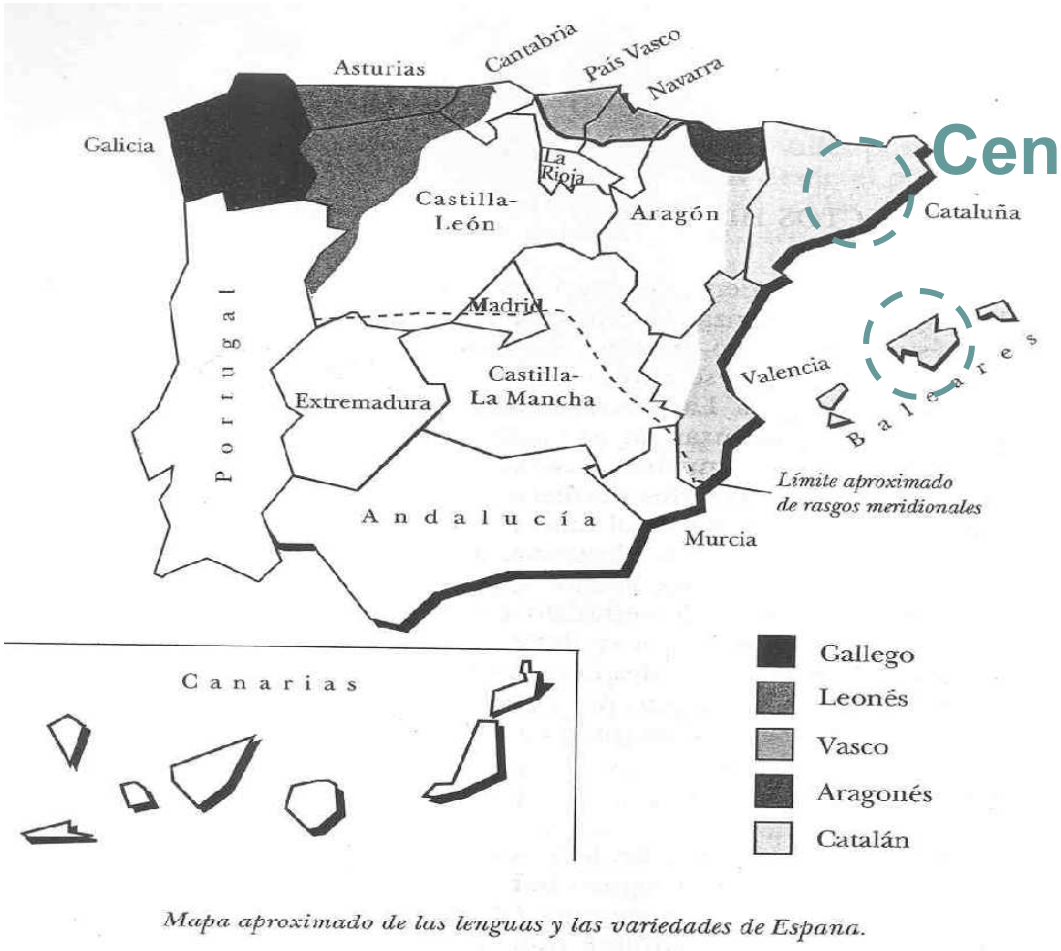
Presentation



Mapa aproximado de las lenguas y las variedades de España.

Central Eastern Catalan

Presentation

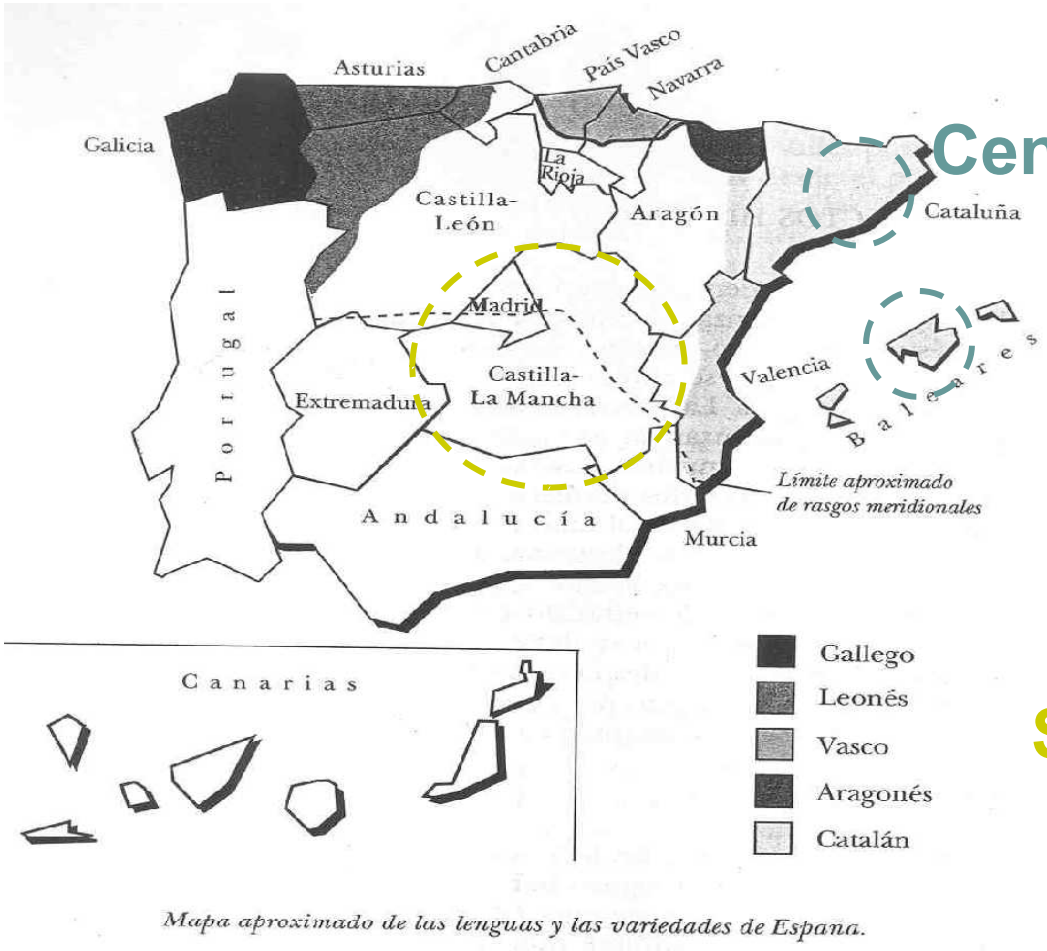


Mapa aproximado de las lenguas y las variedades de Espana.

Central Eastern Catalan

Majorcan (Eastern) Catalan

Presentation



Mapa aproximado de las lenguas y las variedades de Espana.

Central Eastern Catalan

Majorcan (Eastern) Catalan

Castilian Spanish (*ALECMAN*)

Presentation

Variability & regularity:

- The palatal glide **/j/** & the labiovelar glide **/w/** display a vast array of **variation** in Catalan & in Castilian Spanish, according to the syllabic position in which they occur.

Presentation

Variability & regularity:

- The palatal glide **/j/** & the labiovelar glide **/w/** display a vast array of **variation** in Catalan & in Castilian Spanish, according to the syllabic position in which they occur.

- Although in **some positions** there is almost **no variation**.

Presentation

Assumed syllable structure:

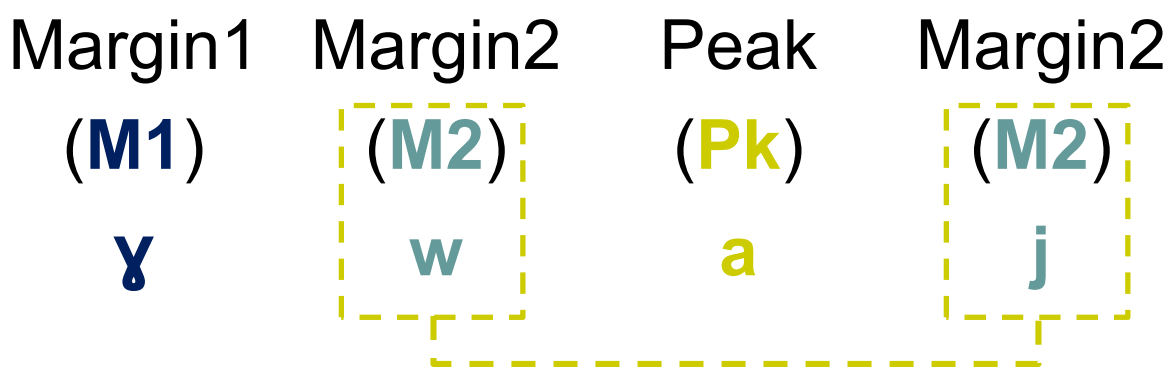
- Syllable positions of Spanish **[ɣwaj]** in *Uru**guay***, following Baertsch (2002):

Margin1	Margin2	Peak	Margin2
(**M1**)	(**M2**)	(**Pk**)	(**M2**)
ɣ	**w**	**a**	**j**

Presentation

Assumed syllable structure:

- Syllable positions of Spanish **[ɣwaj]** in *Uru**guay***, following Baertsch (2002):



Data

Lack of variation:

- In the second position of an onset and in coda position **(M2 margins)**, both glides **always remain unaltered**:

Spanish

d[w]eño	‘owner’	ja[w]la	‘cage’
p[j]e	‘foot’	re[j]	‘king’

Data

Faithful mapping:

- In the second position of an onset and in coda position **(M2 margins)**, both glides **always remain unaltered**:

Catalan

q[w]an	‘when’	di[w]	‘it says’
miss[j]ó	‘mission’	re[j]	‘king’

Data

Faithful mapping in M1:

- **Eastern Central Catalan**: In the first position of an onset **(M1)**, glides are **also maintained** unchanged (in patrimonial words and in loanwords):

[w]eb	‘web’	di[w]en	‘they say’
[j]ogurt	‘yogurt’	fe[j]a	‘it did’

Data

Unfaithful mapping in M1:

- **Castilian Spanish:** In the first position of an onset **(M1)**, glides are always **reinforced** (in patrimonial words and in loanwords):

Maximally		Non maximally	
[gw]elo	‘I smell’	a**[ɣw]**ecar	‘to hollow’
[dʝ]ugo	‘yoke’	ma**[ʝ]**o	‘May’

Data

(Un)faithful mapping in M1:

- **Majorcan Catalan:** Glides remain unchanged in the first position of word-initial onsets, as in Central Catalan **(M1)**:

[w]eb ‘web’

[j]ogurt ‘yogurt’

Data

(Un)faithful mapping in M1:

- **Majorcan Catalan:** Intervocalically, though, **/w/** is usually **strengthened** into a fricative **[v]**,…:

[w]eb	‘web’	di**[v]**en	‘they say’
[j]ogurt	‘yogurt’		

Data

(Un)faithful mapping in M1:

- **Majorcan Catalan:** …whereas /j/ either is realized as a slightly more centralized and open glide ([e̯]; cf. Mascaró & Rafel 1981; Recasens & Espinosa 2005) or is completely deleted:

[w]eb	‘web’	di[v]en	‘they say’
[j]ogurt	‘yogurt’	fe[e̯]a ~ fe[Ø]a	‘it did’

Data

Summary. Glides outcomes:

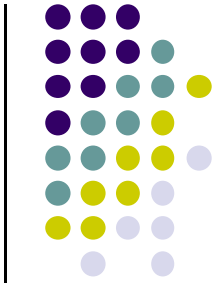
Position	Spanish	Eastern Central Catalan	Majorcan Catalan
M2 glide	Maintenance	Maintenance	Maintenance
Initial M1 glide	Strengthening	Maintenance	Maintenance
Intervocalic M1 /w/	Strengthening	Maintenance	Strengthening
Intervocalic M1 /j/	Strengthening	Maintenance	Weakening

How productive are these processes?

Castilian Spanish:

- One could certainly suggest that the underlying representations of *huelo* and *yugo* already contain the consonants /g/ and /ʝ/ (or /dʝ/), respectively, but…

How productive are these processes?



Castilian Spanish:

- The strengthening affects likewise glides deriving from underlying vowels; for instance /i/ in the conjunction *y* ‘and’:

[i] tú	‘and you’
[dʝ] un día	‘and one day’
amigo **[ʝ]** amiga	‘boyfriend and girlfriend’

How productive are these processes?

Castilian Spanish:

Ex. :Underlying /i/ *y* ‘and’:

Y una mierda voy a ser yo foca

[**dʝù**na mjérða βja se **ʝo** fóka]

Lit. ‘And a shit am I going to be a seal’

Transl. ‘No way am I going to be a seal’

(From TV series *Los hombres de Paco*)

How productive are these processes?

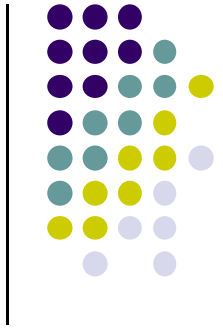
Castilian Spanish:

- The process is also active in recent loanwords: *wasapear* ~ ***gua****sapear* 'to whatsapp'.
- We find similar processes in second language acquisition:

  English: **[gw]**ater 'water', **[dʝ]**ou 'you'

  French: **[gw]**i *oui* 'yes'

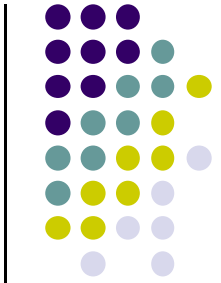
How productive are these processes?



Majorcan Catalan:

- The reinforcement of the labiovelar glide as **[v]** is a dubiously productive process, since loans or learned words such as *Hawaii*, *Power* or *PowerPoint* are realized with **[w]**.

How productive are these processes?

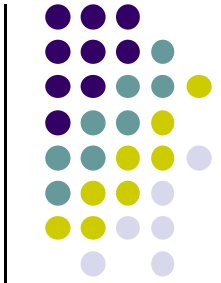


Majorcan Catalan:

- The weakening of /j/ as [e̯], instead, seems an active process, affecting any palatal glide appearing in an intervocalic M1:

ta[j]	'I cut'	ta[e̯]ar	'to cut'
ma[j]		'never'	
ma[e̯] he dit		'I have never said'	

How productive are these processes?

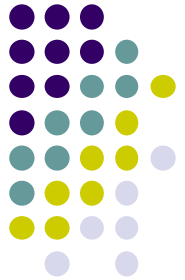


Majorcan Catalan:

- The weakening of /j/ as [e̯] can affect recent loanwords as well:

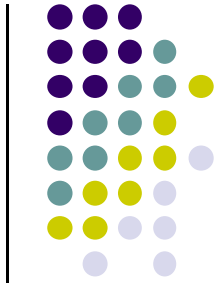
Pla[j]	‘Play (Station)’
Juga a la Pla[e̯] ara	‘Play with the Play now’
Estàs *on* [fae̯ər]	‘You are on fire’

Goals of the presentation



- To study the **variation** that glides present in syllable margins in Spanish & Catalan.
- To prove that the elements replacing the glides **fit better** in the syllabic position in which they appear.

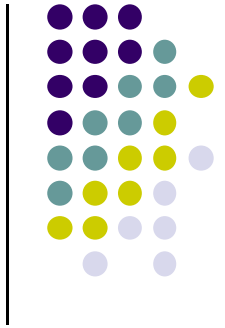
Goals of the presentation



- To show that **M1** & **M2** positions make opposite requirements wrt the sonority of the segments (in line with Baertsch 2002).
- To demonstrate that, to formalize the whole variation, we need constraints related to the syllable (**intrasyllabic**; cf. Baertsch 2002) and constraints referred to segmental strings (**intersyllabic**).

Outline of the analysis

1. The basic constraint set
2. When glides generally fit: M2
3. Adjusting to the syllable margins: M1
   - 3.1. A non-adjusting variety: Central Eastern Catalan
   - 3.2. A one-way adjusting variety: Castilian Spanish
   - 3.3. A two-way adjusting variety: Majorcan Catalan



1. The basic constraint set

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The split margin hierarchy

- In **M1**, less sonorous segments are preferred:

*M1/GLIDE$_{[-HI]}$ >> ***M1/GLIDE$_{[+HI]}$** >> *M1/LIQUID >> *M1/NASAL >> *M1/FRICATIVE >> *M1/STOP

↓

Glides are not optimal outputs in M1

Glide$_{[+HIGH]}$ = j, w **Glide$_{[-HIGH]}$ = [e̞, o̞]**

(in Baertsch 2002 Vowel/Glide$_{[+HI]}$ and Vowel$_{[-HI]}$)

1. The basic constraint set

The split margin hierarchy:

- In **M2**, more sonorous segments are preferred:

*M2/STOP >> *M2/FRICATIVE >> *M2/NASAL >>
*M2/LIQUID >> ***M2/GLIDE**$_{[+HI]}$ >>
*M2/GLIDE$_{[–HI]}$

↓

High glides, almost the optimal output in M2

1. The basic constraint set

Beyond the split margin hierarchy:

- In **intervocalic M1**, more sonorous segments are preferred as well:

*VSTOP$_{M1}$V >> *VFRICATIVE$_{M1}$V >>
*VNASAL$_{M1}$V >> *VLIQUID$_{M1}$V >>
***VGLIDE$_{[+HI],\ M1}$V** >> *VGLIDE$_{[–HI],M1}$V

↓

Again, high glides,

almost the optimal output in intervocalic M1

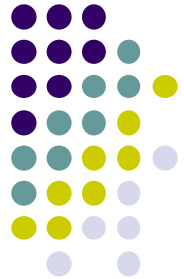
1. The basic constraint set

Faithfulness constraints, among which:

1. **ID-[HIGH]**: Assign one violation mark for every input [High] glide when some of its output correspondents is not [High].

Input: /j_1/	ID-[HIGH]
a. [j_1]	√
b. [e_1]	*

1. The basic constraint set



Faithfulness constraints, among which:

2. ID-GLIDE: Assign one violation mark for every input glide when some of its output correspondents is not a glide.
3. $\text{ID-GLIDE}_{\text{EXISTENTIAL}}$: Assign one violation mark for every input glide when none of its output correspondents is a glide. (De Lacy and Struijke 2000; Struijke 2002)

1. The basic constraint set

ID-GLIDE VS ID-GLIDE$_{EXISTENTIAL}$:

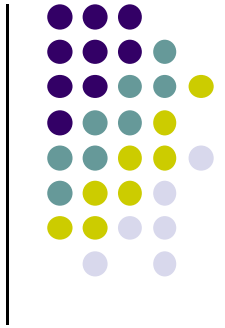
Input: /w_1/	ID-GLIDE	ID-GLIDE$_{EX}$
a. [w_1]	√	√
b. [g_1]	*	*
c. [g_1w_1]	*	√

1. The basic constraint set

Faithfulness constraints, among which:

4. **INTEGRITY:** Assign one violation mark for every input segment that has more than one output segment correspondent.

Input: /w_1/	INTEGRITY
a. [w_1]	√
b. [g_1]	√
c. [g_1w_1]	*



2. When glides generally fit: M2

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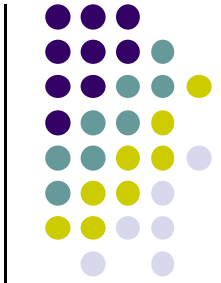
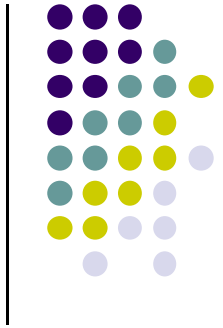


M2: More sonorous segments are preferred. Therefore, glides tend to be maintained in that position. Ex: **Eastern Central Catalan** simple codas:

Input: re/j_1/	ID-GLIDE	ID-[HIGH]	*M2/Glide$_{[+Hi]}$	*M2/Glide$_{[–Hi]}$
☺ a. re[j_1]			*	
b. re[e_1]		*!		*
c. re[j_1]	*!			



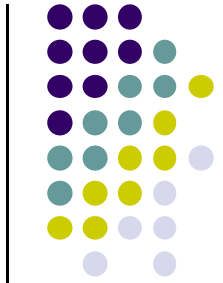
3. Adjusting to the syllable margins: M1

3.1. A non-adjusting variety: Central Eastern Catalan

- **Central Eastern Catalan** is a faithful variety in which the markedness constraint ***M1/GLIDE$_{[+HI]}$** (and ***M1/GLIDE$_{[– HI]}$**) are consistently outranked by the faithfulness constraints INTEGRITY & ID-GLIDE:

  INTEGRITY, ID-GLIDE, ID-[HIGH] >>
  ***M1/GLIDE$_{[– HI]}$** >> ***M1/GLIDE$_{[+HI]}$**

3.1. A non-adjusting variety: Central Eastern Catalan



- Hence, in **Central Eastern Catalan**, /j/ & /w/ also tend to be maintained in simplex onsets (M1) **word-initially**:

/w_1ɛ/b	INTEGRITY	ID-GLIDE	*M1/GLIDE$_{[+HI]}$
☺ a. [w_1ɛ]			*
b. [v_1ɛ]		*!	
c. [g_1w_1ɛ]	*	*!	

/j_1u/gurt	INTEGRITY	ID-GLIDE	*M1/GLIDE$_{[+HI]}$
☺ a. [j_1u]			*
b. [$\underline{j}_1$u]		*!	

3.1. A non-adjusting variety: Central Eastern Catalan

- **Between vowels**, the constraint against high glides in M1, **VGL$_{[+HI],\ M1}$V**, is not strong enough to enforce changes (i.e., lowering) in glides:

d/iw$_1$ə/n	ID-GLIDE	ID-[HIGH]	VGL$_{[+HI],\ M1}$V
☺ a. [i.w$_1$ə]			*
b. [i.o̯$_1$ə]		*!	

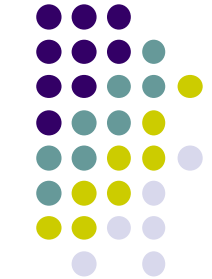
f/ɛj$_1$+ə/	ID-GLIDE	ID-[HIGH]	VGL$_{[+HI],\ M1}$V
☺ a. [ɛ.j$_1$ə]			*
b. [ɛ.e̯$_1$ə]		*!	

3.2. A one-way adjusting variety: Castilian Spanish

- In **Castilian Spanish**, ***M1/GLIDE$_{[+HI]}$** is located at the top of the ranking, crucially above the relevant faithfulness constraints:

  ***M1/GLIDE$_{[+HI]}$** >> *M1/FRIC, ID-GLIDE, ID-GLIDE$_{EX}$ >> INTEGRITY

3.2. A one-way adjusting variety: Castilian Spanish



- In this variety, /j/ & /w/ are **maximally reinforced** in **word-initial M1**:

/w_1e/lo	*M1/GLIDE$_{[+HI]}$	*M1/FRIC	ID-GLIDE	ID-GLIDE$_{EX}$	INTEGRITY
a. [w_1e]	*!				*
b. [g_1e]			*	*!	
c. [$\gamma_1 w_1$e]		*!	*		
☺ d. [$g_1 w_1$e]			*		

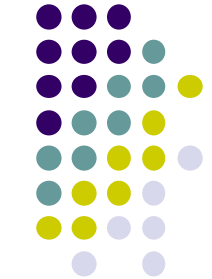
/j_1u/go	*M1/GLIDE$_{[+HI]}$	*M1/FRIC	ID-GLIDE	ID-GLIDE$_{EX}$	INTEGRITY
a. [j_1u]	*!				
b. [$\jmath_1$u]			*	*	
☺ c. [d$\jmath_1$u]		*!	*	*	

3.2. A one-way adjusting variety: Castilian Spanish

- **Intervocalic M1** are reinforced, but **not maximally**. In our approach, this is due to the conjoined action of *M1/GLIDE$_{[+HI]}$ and *VSTOP$_{M1}$V at the top of the ranking as well:

  ***VSTOP$_{M1}$V, *M1/GLIDE$_{[+HI]}$** >> *M1/FRIC, ID-GLIDE, ID-GLIDE$_{EX}$ >> INTEGRITY

3.2. A one-way adjusting variety: Castilian Spanish



- Therefore, /j/ & /w/ are strengthened only into **fricatives**:

/aw$_1$e/car	*VSTOP$_{M1}$V	*M1/GL$_{[+HI]}$	*M1/FRIC	ID-GL	ID-GL$_{EX}$	INTEGRITY
a. [a.w$_1$e]		*!				
b. [a.g$_1$e]	*!			*	*	
☺ c. [a.ɣ$_1$w$_1$e]			*	*		*
d. [a.g$_1$w$_1$e]	*!			*		*

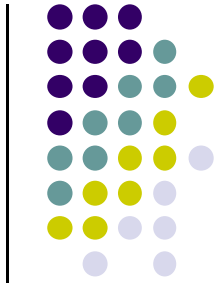
m/aj$_1$o/	*VSTOP$_{M1}$V	*M1/GL$_{[+HI]}$	*M1/FRIC	ID-GL	ID-GL$_{EX}$	INTEGRITY
a. [a.j$_1$o]		*!				
☺ b. [a.ʝ$_1$o]			*	*	*	
c. [a.dʝ$_1$o]	*!			*	*	

3.3 A two-way adjusting variety: Majorcan Catalan

- **Majorcan Catalan** allows, as Eastern Central Catalan, **glides as M1 word-initially**; that is, the markedness constraint ***M1/GLIDE$_{[+HI]}$** (and ***M1/GLIDE$_{[– HI]}$**) must also be consistently outranked by the faithfulness constraints INTEGRITY & ID-GLIDE:

  INTEGRITY, ID-GLIDE >> ***M1/GLIDE$_{[+HI]}$**

3.3 A two-way adjusting variety: Majorcan Catalan

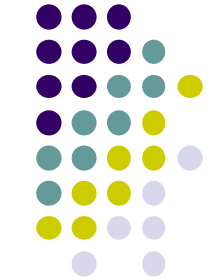


- Hence, glide reinforcements are discarded in favor of the faithful mapping:

/w_1ɛ/b	INTEGRITY	ID-GLIDE	*M1/GLIDE$_{[+HI]}$
☺ a. [w_1ɛ]			*
b. [v_1ɛ]		*!	
c. [g_1w_1ɛ]	*	*!	

/j_1o/gurt	INTEGRITY	ID-GLIDE	*M1/GLIDE$_{[+HI]}$
☺ a. [j_1o]			*
b. [$j\!\!\!-_1$o]		*!	

3.3 A two-way adjusting variety: Majorcan Catalan



- Given that glides are allowed in the strongest position —the initial position—, we expect them to be allowed intervocalically as well, unless…
- …even less constricted segments are required by the pressure of the constraint *VGLIDE$_{[+HI],M1}$V in the ranking:

*VGLIDE$_{[+HI],M1}$V, ID-GLIDE >> *M1/GLIDE$_{[-HI]}$

3.3 A two-way adjusting variety: Majorcan Catalan

- With this ranking, the high glide **[j]** is **not open enough** to appear intervocalically and is replaced by the non-high glide [e̯]:

f/əj$_1$+ə/	*VGLIDE$_{[+HI],\ M1}$V	ID-GLIDE	*M1/GLIDE$_{[-HI]}$
a. [ə.j$_1$ə]	*!		
☺ b. [ə.e̯$_1$ə]			*
c. [ə.j̯$_1$ə]		*!	

3.3 A two-way adjusting variety: Majorcan Catalan

- **Problem of the analysis:** We would expect the labiovelar glide to surface intervocalically as **a non-high glide [o̯]**: i. e., *diuen* *[di.o̯ən].
- That is, it does not seem possible to derive the opposite outcomes for the intervocalic palatal glide and labiovelar glide from the same ranking.

3.3 A two-way adjusting variety: Majorcan Catalan

- **Possible solution:**

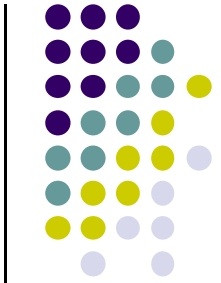
  For alternations such as *diu* [diw] / *diuen* [di.vən], we could assume that the root displays **two allomorphs**, one with the labiovelar glide (**/diw/**) and the other with the labiodental fricative **(/div/**).

3.3 A two-way adjusting variety: Majorcan Catalan

- Moreover, we presume that the two allomorphs appear with the **lexical precedence** 'fricative>glide', as in **{div>diw}** for the root of *diuen.*

- The preference for the dominant allomorph is ensured by the **PRIORITY** constraint: "Respect lexical priority (ordering) of allomorphs" (Bonet *et al.* 2007: 902; Mascaró 2007: 726).

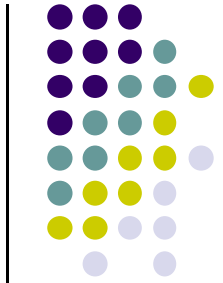
3.3 A two-way adjusting variety: Majorcan Catalan



- The fricative is selected between vowels, even though this outcome violates *VFRIC$_{[+HI],\ M1}$V:

/{/div/$_1$ > /diw/$_2$}+ən/	PRIORITY	VFRIC$_{[+HI],\ M1}$V	*VGL$_{[+HI],\ M1}$V	ID-GL	*M1/GL$_{[-HI]}$
a. [i.w$_2$ə]	*!		*!		
b. [i.o̯$_2$ə]	*!				*
☺ c. [i.v$_1$ə]		*			

3.3 A two-way adjusting variety: Majorcan Catalan



- Yet, in M2 the constraint *M2/FRICATIVE could still enforce the selection of the form with a high glide:

/{/div/$_1$ > /diw/$_2$}/	*M2/FRIC	PRIORITY	ID-GL	ID-[HI]	*M2/GL$_{[+HI]}$
☺ a. [diw$_2$]		*			*
b. [dio̯$_2$]		*		*!	
c. [div$_1$]	*!		*		

Conclusions

- **Different languages** can make **different requirements** with respect to the presence of glides in the syllable margins.

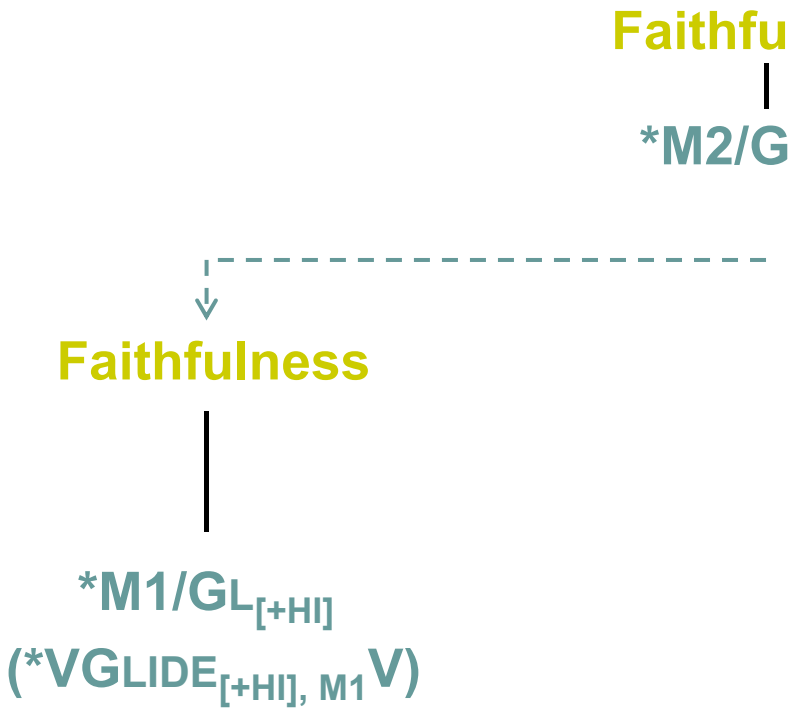
Conclusions

Faithfulness

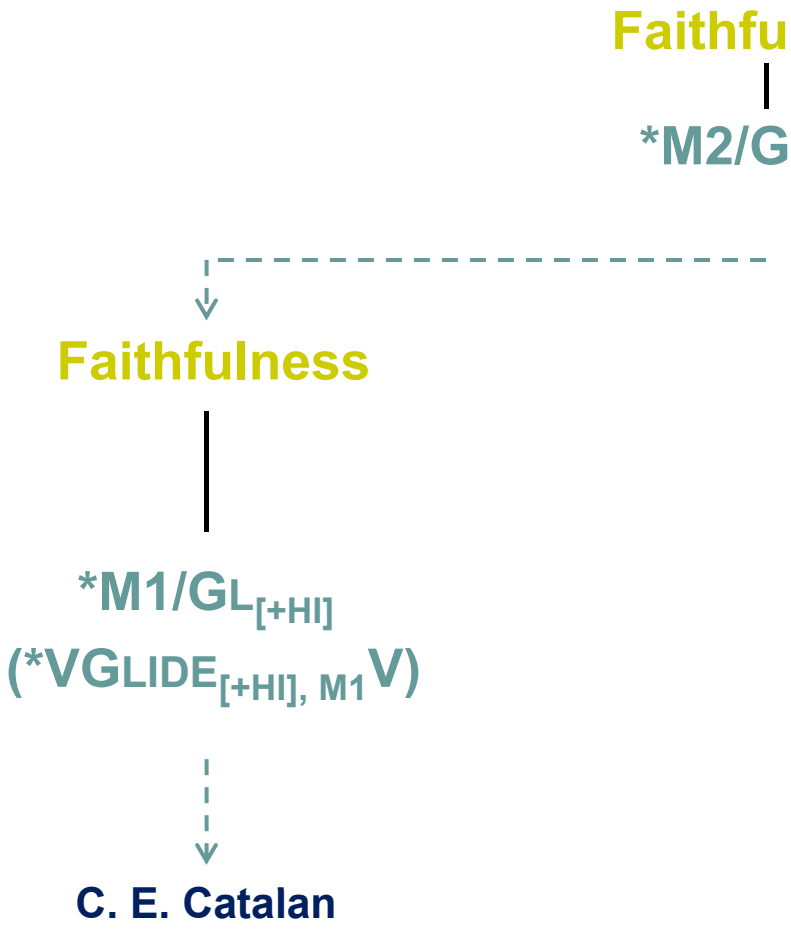
|

***M2/GL$_{[+HI]}$**

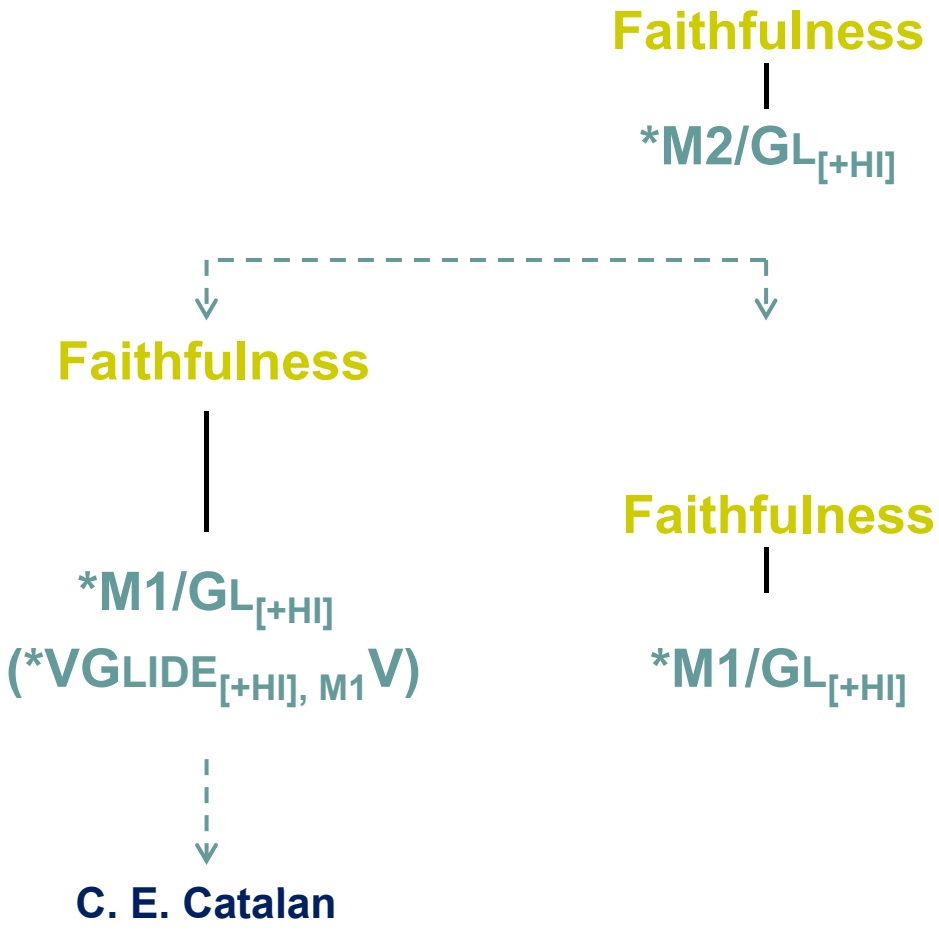
Conclusions



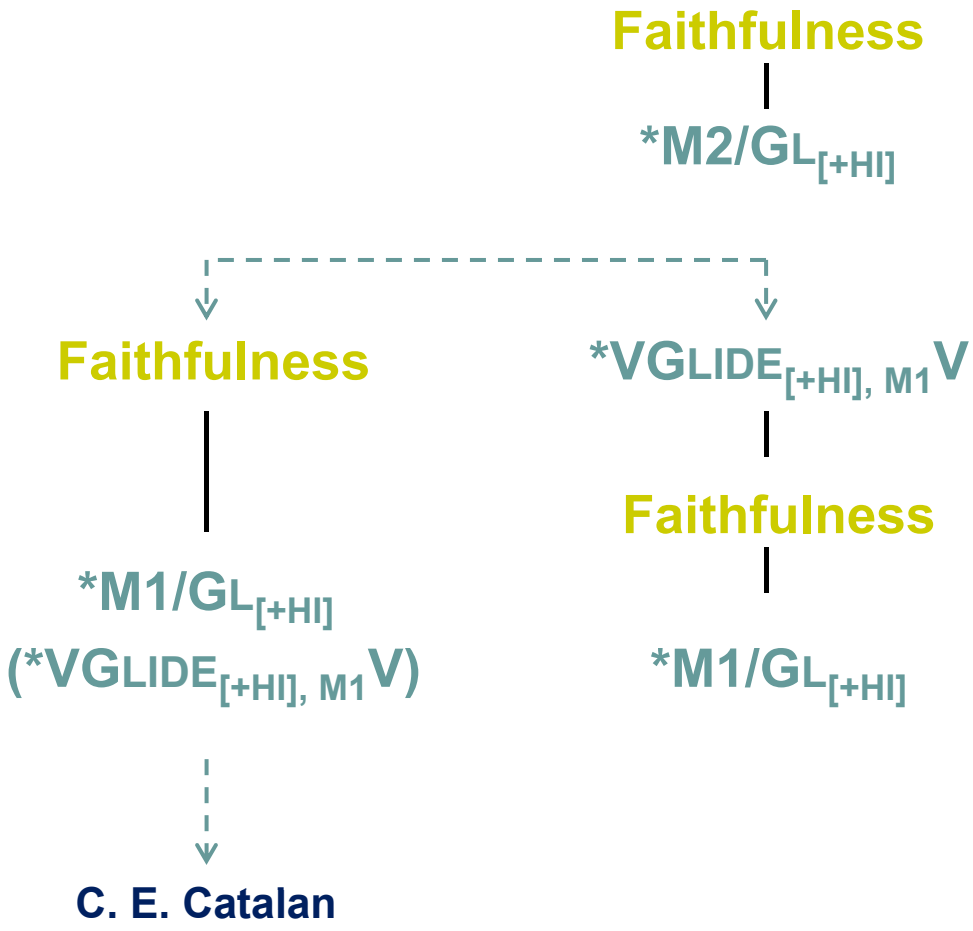
Conclusions



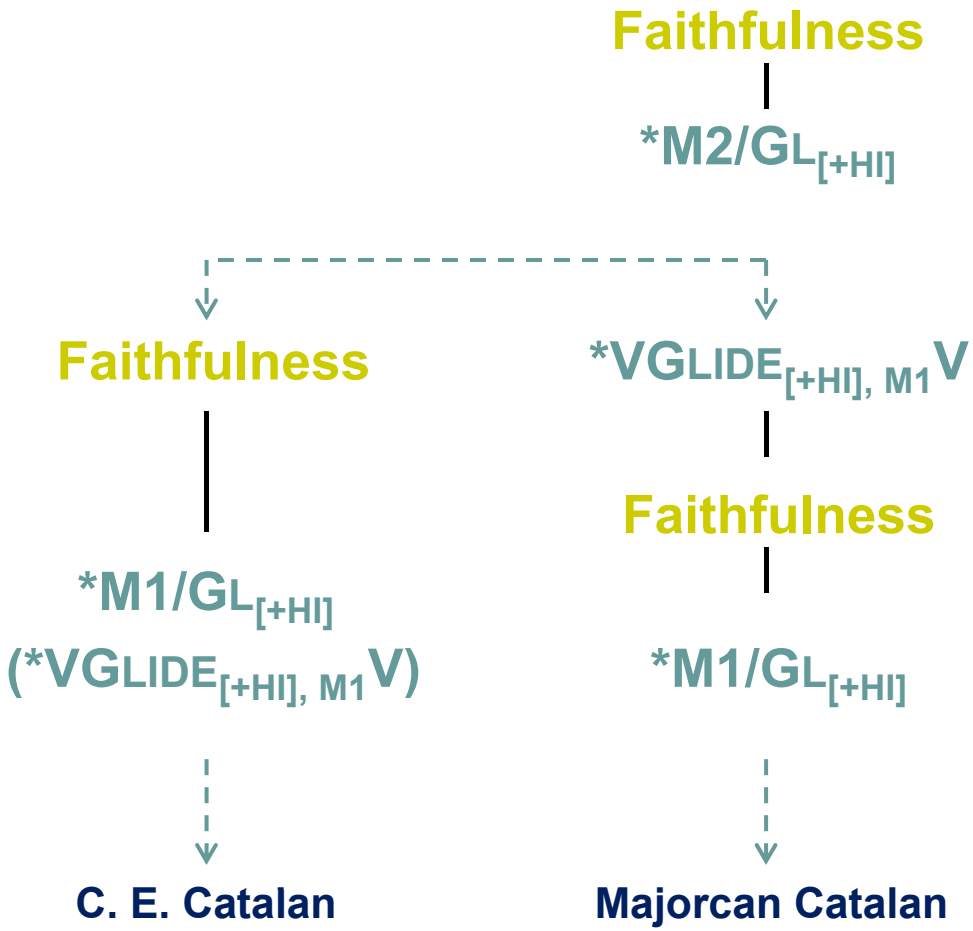
Conclusions



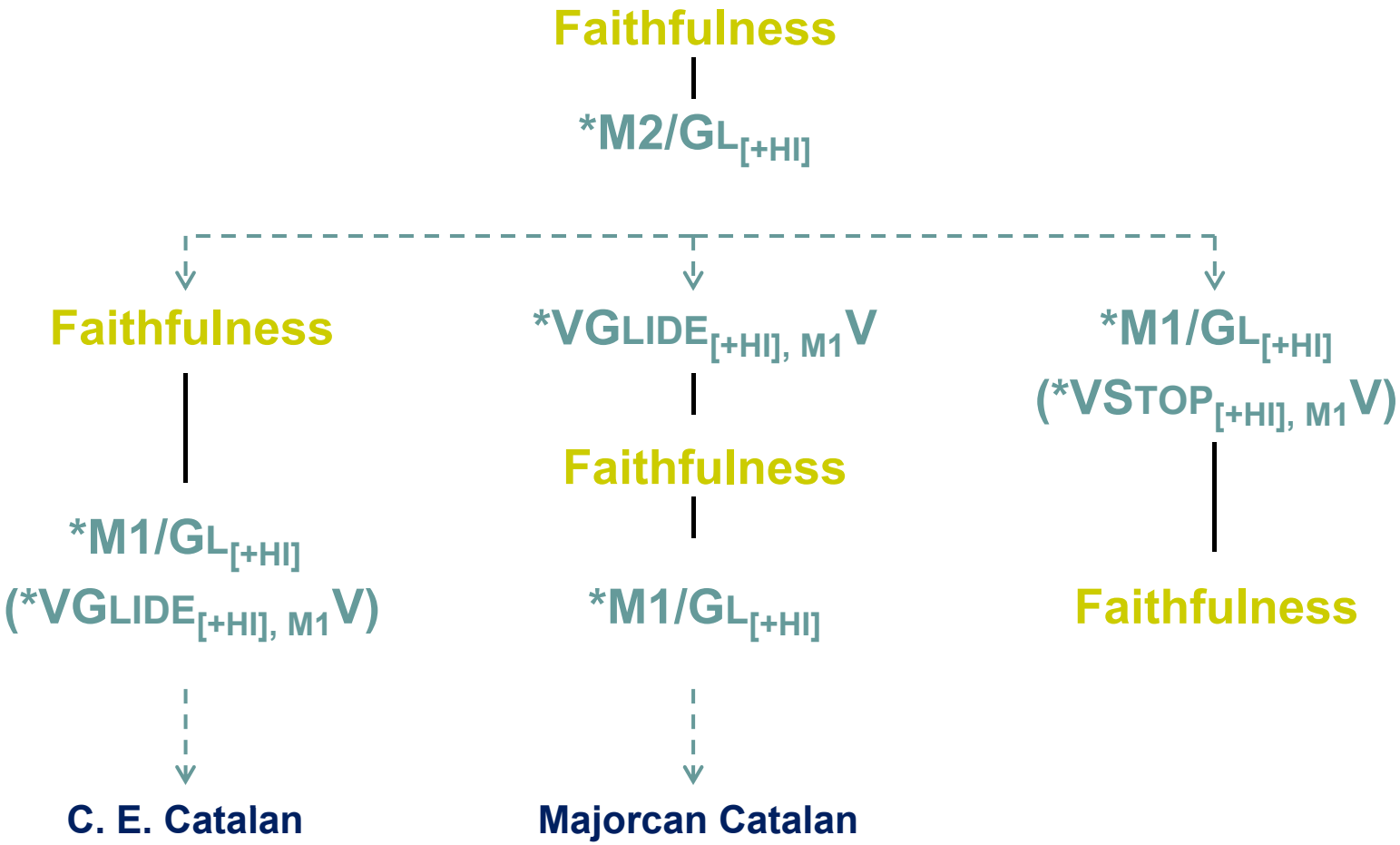
Conclusions



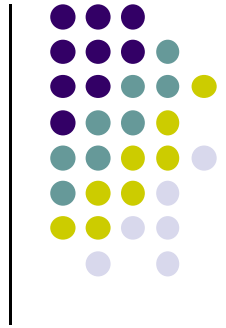
Conclusions

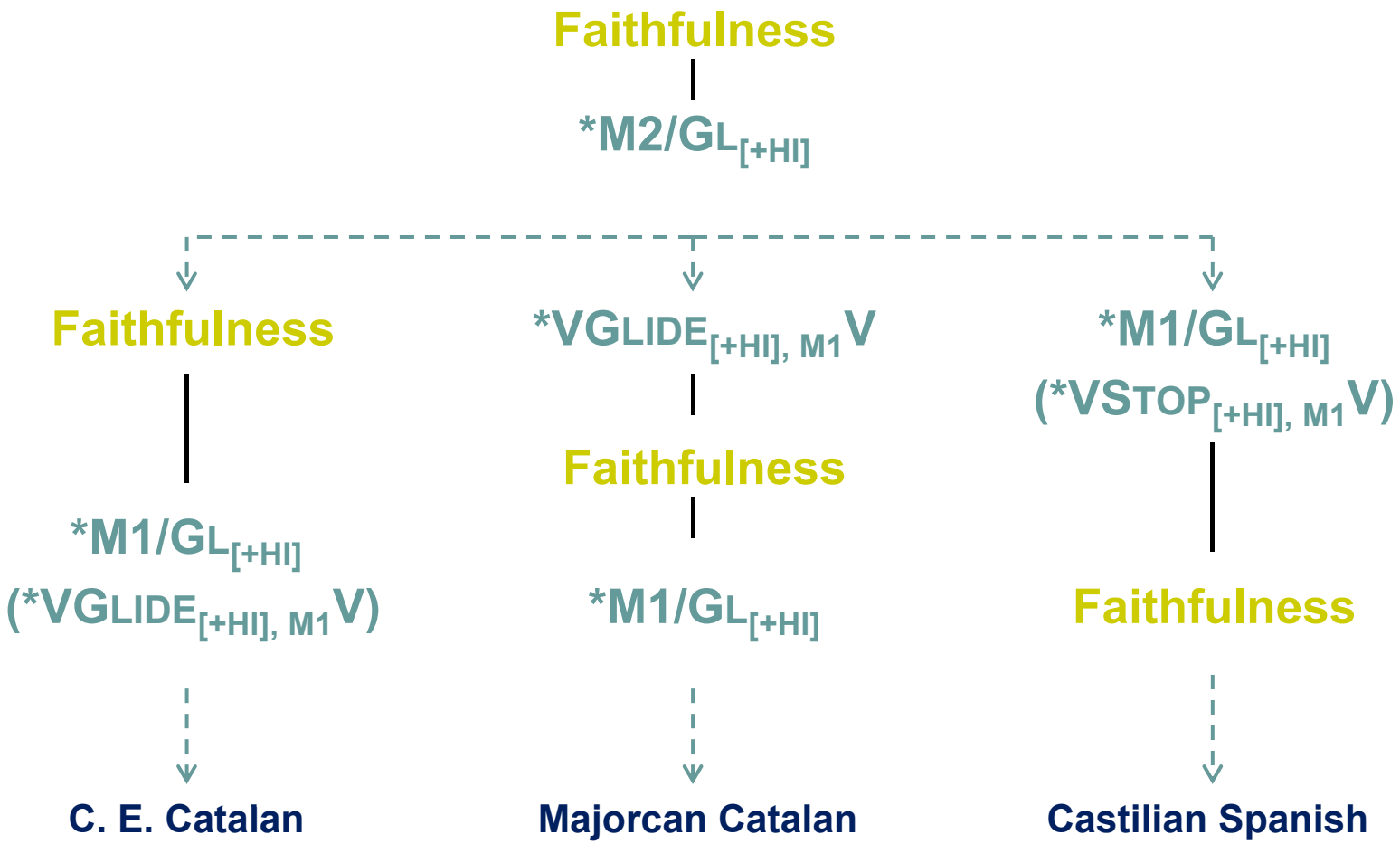


Conclusions

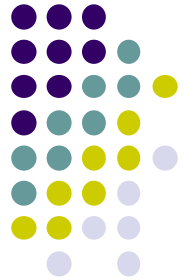


Conclusions





Conclusions



- The **split margin hierarchy** (Baertsch 2002) motivates most of the variation that Catalan & Spanish display:
  - More sonorous segments are preferred in M2
  - Less sonorous segments are preferred in M1

Conclusions

- We must consider, though, **segmental strings** to incorporate specific requirements affecting intervocalic onsets.
- The behavior of /j/ in Majorcan Catalan shows that the **intervocalic position** is not a structural version of M2, but a **position with specific demands**; in this case, a lower degree of stricture than M2.

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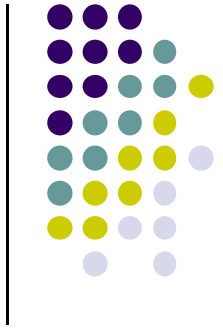

Et ça [ɟi] est. Merci pour votre attention!

Presentation soon available at:
http://www.ub.edu/GEVAD/

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