

### Class 13: More issues in process application: multi-site optionality

**Overview:** What kinds of variation do we expect when there are multiple places/ways for an *optional* process to apply to a single form?

Cases taken from Kaplan 2011, Riggle & Wilson 2005, Vaux 2008. See those papers for various approaches to multi-site optionality.

#### 1. Warao: global optionality

- Language isolate of Venezuela, Guyana, and Suriname
- 28,000 speakers (Herrman 2002).
- 2015 movie, *Dauna. Lo que lleva el río* (*Gone with the River*), was in Spanish and Warao



- Data from Osborn 1966.
- Little raw data, but Osborn is very definite about the generalization:
 

“/p/ has allophones [p b]. The voiced allophone [b] is heard more frequently than the voiceless [p] in most words. In every word, except for a few words noted below, alternation between [b] and [p] is presumably possible, since many alternations of this order have been heard. Thus in /paro+parera/ *weak*, both the initial and medial phoneme /p/ is heard as [b] generally, and as [p] infrequently. In words like the one cited, with two or more occurrences of /p/, **the allophones are consistently [b] or [p] for each utterance of the word.** If the first occurrence of /p/ in the word is [b], the following occurrence(s) will be [b]. If the first occurrence is [p], the following occurrence(s) will be [p]. The following are examples of words with two occurrences of /p/: poto+poto *soft*, apaupute *he will put them*, kapa+kapa *kind of banana*.” (p. 109)
- I.e., [paro-parera] ~ [baro-barera], but not \*[paro-barera] or \*[baro-parera].
- Also, for a non-reduplicative case, [hapisapa] ~ [habisaba] ‘other side’

<sup>1</sup>[aldianews.com/articles/culture/film-television/two-oscar-entries-latin-america-center-indigenous-stories-languages](http://aldianews.com/articles/culture/film-television/two-oscar-entries-latin-america-center-indigenous-stories-languages)

? How might we try to capture this variation in OT? SPE?

	hapisapa				
☞ <i>a</i>	hapisapa				
<i>b</i>	hapisaba				
<i>c</i>	habisapa				
☞ <i>d</i>	habisaba				

## 2. Another global case

- Eastern Andalusian
  - Variety of Spanish spoken in part of Southern Spain
  - Maybe around 2.8 million speakers (Haro & Hajek 2022)



Photographer Javier Moyano documenting the inhabitants of his home city, Málaga



La Mari, singer-songwriter

- Kaplan 2012: Eastern Andalusian metaphony reflects global variation
- Word-final /s/ laxifies preceding V, then usually deletes

(on the face of it, that looks like counterbleeding, but Kaplan cites Jiménez & Lloret's analysis as reassociation of [spread glottis] from /s/ to V—we can think of this as **coalescence**.)

spelling (assume reflects underlying /s/)	pronunciation	
<i>mes</i>	mé	'month'
<i>tos</i>	tó	'cough'
<i>mis</i>	mí	'my (pl.)'
<i>tus</i>	tó	'your (pl.)'



<sup>2</sup> [www.atlasofhumanity.com/andalusia](http://www.atlasofhumanity.com/andalusia)

<sup>3</sup> [commons.wikimedia.org/wiki/File:Chambao14.jpg](https://commons.wikimedia.org/wiki/File:Chambao14.jpg)

- Laxness spreads to preceding stressed V, if non-high:  
*lejos*            lɛ́hɔ    ‘far’  
*tesis*            tɛ́sɪ    ‘thesis’
- If other Vs intervene, they optionally participate too, **all-or-none**:  
*treboles*        tréβolɛ ~ tréβɔɛ    ‘clovers’  
*cómetelos*      kómetelɔ ~ kómetɛɔ    ‘eat them (for you)!’
- Similarly, non-high Vs before the stress optionally laxify, **all-or-none**:  
*cotillones*      kotizónɛ ~ kɔtizónɛ    ‘cotillions’  
*monederos*     monedéɾɔ ~ mɔnɛðéɾɔ    ‘purses’
- Finally, the pretonic Vs optionally lax only if the post-tonic ones do (all-or-none? We need a longer word):  
*recógelos*       rekóhɛɔ ~ rekóhɛɔ ~ rɛkóhɛɔ                    ‘pick them’

### 3. Local optionality—also hard to find good cases (besides French; see below)

- Vaux reports, for English *marketability*: (but see Derrick & Gick 2014: if you look at the phonetics, there’s a lot more to this):

[,maɪkətʰəˈbɪlətʰi] ~ [,maɪkərəˈbɪləri] ~ [,maɪkətʰəˈbɪləri] ~ [,maɪkərəˈbɪlətʰi]

? Can any of our ideas for SPE+variation get this? OT+variation ideas?



	,maɪkətəˈbɪləti				
☞ a	,maɪkətʰəˈbɪlətʰi				
☞ b	,maɪkərəˈbɪləri				
☞ c	,maɪkətʰəˈbɪləri				
☞ d	,maɪkərəˈbɪlətʰi				

#### 4. Vata: iterative optionality

- Kru (and therefore Niger-Congo) language of southern Côte d'Ivoire with 98,8000 speakers
  - Part of the Dida language group
- Vata is spoken in and around the city of Divo in Côte d'Ivoire<sup>4</sup>



5



6

*Rachel Keke, labor leader elected to France's National Assembly in 2022, is originally from Côte d'Ivoire and of Dida ethnicity*

*parade in Divo*

- Data taken from Kaplan 2009; originally from Kaye 1982.
- The language has ATR harmony: [+ATR]: [i, u, e, o, ʌ]    [−ATR]: [ɪ, ʊ, ɛ, ɔ, a]
- [+ATR] optionally spreads to the final syllable of a preceding word:
 

/ò nɪ sáká pì/ →    ò nɪ sáká pì    ~    ò nɪ sáká pì       'he didn't cook rice'  
 − − − +    →    − − − +    ~    − − − +    +
- If all the words are monosyllabic, this is potentially self-feeding. There are various options, all possible...
 

/ò ká zā pī/ →    ò ká zā pī    ~    ò ká zā pī    ~    ò ká zā pī    ~    ò ká zā pī    'he will cook food'  
 − − − +    →    − − − +    ~    − − + +    ~    − + + +    ~    + + + +

? Can we get this one?

− − − +				
<i>a</i> − − − +				
<i>b</i> − − + +				
<i>c</i> − + + +				
<i>d</i> + + + +				

<sup>4</sup> Thank you to Hannah Sande (p.c.) for help with this

<sup>5</sup> [rachelkeke.fr/](http://rachelkeke.fr/)

<sup>6</sup> [news.abidjan.net/photos/542901-divo-parade-de-cloture-de-campagne-avec-amede-kouakou](http://news.abidjan.net/photos/542901-divo-parade-de-cloture-de-campagne-avec-amede-kouakou)

(Personally I see this through a processing lens: as soon as the speaker accesses the fact that there is an upcoming [+ATR] vowel and any intervening words are monosyllabic, then harmony can start applying. But how far ahead we are able to access the phonological content of upcoming words varies a lot, so a candidate like (d) won't always be possible because of how far ahead it has to look) See the Production Planning Hypothesis: (Wagner 2012; Kilbourn-Ceron 2017)



## 5. Hypercorrection in Dominican Spanish: unique-target optionality

- Data from Bradley 2006. See also Núñez-Cedeño 1994, Bullock & Toribio 2010.
  - Aka *hablar fisno*
  - There is a *lot* going on here **sociolinguistically**: this can be part of a person's everyday speech, but can also be sarcastic or mocking
- /s/ typically absent in a syllable coda:

<i>Popular Dominican Spanish</i>	<i>Conservative Spanish</i>	
se.co	se.co	'dry'
ca.so	ca.so	'case'
e.tú.pi.do	es.tú.pi.do	'stupid'
do	dos	'two' (p. 3)

- Hypercorrection can insert a coda [s]:<sup>7</sup>

<i>Hypercorrected</i>	<i>Conservative</i>	
in.vis.tado	in.vi.ta.do	'guest'
co.mos	co.mo	'like'
e.tús.pi.do	es.tú.pi.do	'stupid'
de.des	des.de	'since' (p. 4)

- And there can be variation of where the [s] is inserted:

<i>Hypercorrected</i>	<i>Conservative</i>	
as.bo.ga.do ~ a.bos.ga.do ~ a.bo.gasdo ~ a.bo.ga.dos	a.bo.ga.do	'lawyer' (p. 4)

- But, supposedly **there can only be one inserted s**:<sup>8</sup> \*as.bo.ga.dos, etc.
- This claim is not much documented or discussed in the literature. Bradley cites personal communication with Núñez-Cedeño, the main describer of the phenomenon.

? Any ideas, for each theory?

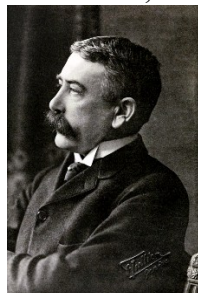
<sup>7</sup> though not before an otherwise intervocalic tap or trill, which would be phonotactically illegal, and not if it would create a closed penult in a word with antepenultimate stress.

<sup>8</sup> See p. 24 for discussion of an apparent counterexample given by Harris.



## 6. Optionality and self-bleeding: French schwa-deletion

Indo-European language from France and surroundings with around 80 million L1 speakers worldwide, maybe another ~200 million proficient L2 speakers.



Ferdinand de Saussure  
linguist



Alain Mabankou, writer  
Most famous current UCLA  
humanities prof??



Laura Cassin, philologist, philosopher  
One of the more linguistic members  
of the Académie Française

- There's a big literature on this; Dell 1970 is a good place to start, and next I'd recommend Kaplan 2016, Bayles, Kaplan & Kaplan 2016, Smith & Pater 2020
- /ə/ optionally deletes, except when it would create a bad consonant cluster.

/suvənir/	→	[suvənir] ~ [suvnir]	'to remember'
/pasəra/	→	[pasəra] ~ [pasra]	'will pass'
/parvənir/	→	[parvənir] * [parvnir]	'to reach' ([rv] bad coda, [vn] bad onset)
/sufləra/	→	[sufləra] * [suflra]	'will blow' ([VflrV] unsyllabifiable)
/ãri dəve partir/	→	[ãri dəve partir] ~ [ãri dve partir]	'Henri had to go'
/ʒak dəve partir/	→	[ʒak dəve partir] * [ʒak dve partir]	'Jacques had to go' (*[kdv])

? What does basic SPE predict for this form (pretend the rule is obligatory): /ty dəvəne/ 'you were becoming'

? Actual result is (supposedly) [ty dəvəne] ~ [ty dvəne]<sup>9</sup> ~ [ty dəvne], but \*[ty dvne]—discuss.



<sup>9</sup> Some speakers have said they don't like this one...



## 7. If time—Anderson 1974's solution

- Find all segments eligible for the rule and circle them.
- For each circled segment, underline the smallest environment that lets the segment meet the rule's structural description.
- If the rule is optional, you may uncircle some of the eligible segments and de-underline their environments.
- If any circled segment is contained in some other circled segment's underlined environment, uncircle (and de-underline the environments of) as few segments as possible to get rid of these overlaps.
- Now apply the rule simultaneously to the remaining circled segments.

(Of course, circling and underlining themselves have no theoretical status—this is just a convenient way to say “identify targets and environments”)

- ? What does Anderson's proposal predict for French /ty vudre kə sə kə lə bədo/<sup>10</sup> ‘you would like that what the beadle...’?

/ty vudre kə sə kə lə bədo/

- ? Does Anderson's proposal help with the non-optional cases we saw Klamath? Kikuyu?

- Recall Klamath: In /...q̥lq.../, deglottalization self-bleeds: [...q̥lq ...]
- Recall Southern Kikuyu: In /nekakaakeroma/, spirantization of /k/ when next consonant is a voiceless stop self-counterbleeds: [neyayaakeroma]

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<sup>10</sup> I got this from an online appendix to David Odden's *Introducing Phonology* (2005: Cambridge UP): [www.ling.ohio-state.edu/~odden/IntroducingPhonology/Theory%20Discussion.html](http://www.ling.ohio-state.edu/~odden/IntroducingPhonology/Theory%20Discussion.html)

**8. Work with a neighbor to fill in this table, without looking back through the handout**

idea from class today	example
variation between two rankings → all “sites” in an utterance do either one thing or the other	all <i>ps</i> or all <i>bs</i>



<p><b>Next time:</b> Process interaction—beyond (counter){f,bl}eeding</p>
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