

Class 12: 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’

¹aldianews.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				
☞ a	hapisapa				
b	hapisaba				
c	habisapa				
☞ d	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.)

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.)'



² www.atlasofhumanity.com/andalusia

³ commons.wikimedia.org/wiki/File:Chambao14.jpg

- Laxness spreads to preceding stressed V, if non-high:
lejos *léħɔ* ‘far’
tesis *tɛsɪ* ‘thesis’
- If other Vs intervene, they participate too, **all-or-none**:
treboles *trɛβolɛ* ~ *trɛβɔɛ* ‘clovers’
cómetelos *kómetelɔ* ~ *kómetɛɔ* ‘eat them (for you)!’
- Similarly, non-high Vs before the stress can laxify, **all-or-none**:
cotillones *kotizónɛ* ~ *kɔtizónɛ* ‘cotillions’
monederos *monedéɾɔ* ~ *mɔnɛðéɾɔ* ‘purses’
- Finally, the pretonic Vs 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):
 $[,maɪkət^hə'bɪlət^hɪ] \sim [,maɪkərə'bɪləɾɪ] \sim [,maɪkət^hə'bɪləɾɪ] \sim [,maɪkərə'bɪlət^hɪ]$

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



	$[,maɪkət^hə'bɪlət^hɪ]$				
☞ a	$[,maɪkət^hə'bɪlət^hɪ]$				
☞ b	$[,maɪkərə'bɪləɾɪ]$				
☞ c	$[,maɪkət^hə'bɪləɾɪ]$				
☞ d	$[,maɪkərə'bɪlət^hɪ]$				

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'Ivoire⁴



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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, ʌ]
- [+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?

− − − +				
☞ a − − − +				
☞ b − − + +				
☞ c − + + +				
☞ d + + + +				

⁴ Thank you to Hannah Sande (p.c.) for help with this

⁵ rachelkeke.fr/

⁶ 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]:⁷

<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, apparently there can only be one inserted s:⁸ *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?

⁷ 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.

⁸ 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 67.8 million speakers worldwide.

- 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.

/suvəniʁ/	→	[suvəniʁ] ~ [suvniʁ]	'to remember'
/pasəʁa/	→	[pasəʁa] ~ [pasʁa]	'will pass'
/paʁvəniʁ/	→	[paʁvəniʁ] * [paʁvniʁ]	'to reach' ([ʁv] bad coda, [vn] bad onset)
/sufləʁa/	→	[sufləʁa] * [sufʁa]	'will blow' ([VfʁV] unsyllabifiable)
/ɑ̃ʁi dəvə paʁtiʁ/	→	[ɑ̃ʁi dəvə paʁtiʁ] ~ [ɑ̃ʁi dve paʁtiʁ]	'Henri had to go'
/ʒak dəvə paʁtiʁ/	→	[ʒak dəvə paʁtiʁ] * [ʒak dve paʁtiʁ]	'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]⁹ ~ [ty dəvne], but *[ty dvne]—discuss.



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”)

⁹ Some speakers have said they don't like this one...

- ? What does Anderson's proposal predict for French /ty vudre kə sə kə lə bədo/¹⁰ '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 /...q̣lq.../, deglottalization self-bleeds: [...q̣lq ...]
- Recall Southern Kikuyu: In /nekakaakeroma/, spirantization of /k/ when next consonant is a voiceless stop self-counterbleeds: [neyayaakeroma]

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

I've gotten you started with the top row

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>

¹⁰ 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

Next time: Process interaction—beyond (counter){f,bl}eeding

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