

## Assignment #5: Lexical Phonology in Spanish

### Instructions

- Develop an analysis with OT or rules (your choice), using Lexical Phonology, of the phenomena below (nasal place, lateral place, [s]~[h] alternations, [j]~[ʝ] alternations, [r] ~ [r̄] alternations).
- This means you'll need to decide which morphology belongs to which level, and which process applies at which level.
  - We made a little progress on this in class already.

### Data note

- Main source is Harris 1983. Additional data from Baković 2000, Shepherd 2003, Editors of The American Heritage Dictionaries 1986, Wiktionary (wiktionary.org), and the *Diccionario del español de México* (dem.colmex.mx).
- The data here are from a composite, idealized dialect that has all 5 phenomena and applies them in a uniform way, and conserves certain contrasts that most dialects don't have.

### Tips

- Start by thinking about putting morphological operations and phonological operations on an equal footing: figure out what orderings you need based on (counter){f,bl}eeding, etc., that you observe.
- Then, explain this ordering by assigning morphology and phonology to levels.
- Keep in mind that the output of the lexical component is a single word, so multi-word phrases don't get put together till after the lexical component.
- Also keep in mind that even if an utterance is only one word long, it still passes through the postlexical component.

### A. Place of articulation of nasals

- In some positions, there is a 3-way contrast among nasals:

1.	má.t-a	2.	ká.m-a
	bush- <i>fem</i>		bed- <i>fem</i>
3.	ná.t-a	4.	ká.n-a
	cream- <i>fem</i>		grey.hair- <i>fem</i>
5.	ɲá.t-a	6.	ká.ɲ-a
	snub.nosed- <i>fem</i>		cane- <i>fem</i>
7.	no words like	8.	no words like
	*ɲá.t-a		*ká.ɲ-a

- Within a morpheme, only certain sequences of *nasal+C* are allowed:

- |     |                                     |               |   |
|-----|-------------------------------------|---------------|---|
| 9.  | kám.p-o<br>countryside- <i>masc</i> | no words like | *káj.po<br>*kán.bo etc.                                 |
| 10. | kám.bj-o<br>change- <i>masc</i>     |               |   |
| 11. | kwán.to<br>how.much                 | no words like | *kwáj.to<br>*kwám.to etc.                               |
| 12. | kwán.do<br>when                     |               |   |
| 13. | kán.s-o<br>tire- <i>1sg.pres</i>    |               |   |
| 14. | en.lá.θe<br>bond                    |               |   |
| 15. | ón.r-a<br>honor- <i>fem</i>         |               |   |
| 16. | rán.tʃ̄-o<br>ranch- <i>masc</i>     |               | [n] is post-alveolar (has same place features as [tʃ̄]) |
| 17. | áj.k-a<br>haunch- <i>fem</i>        | no words like | *án.ka<br>*ám.ka etc.                                   |
| 18. | gáj.g-a<br>sandgrouse- <i>fem</i>   |               |   |
| 19. | a.xéj.x-o<br>wormwood- <i>masc</i>  |               |   |

- What about morpheme-final nasals? When not followed by anything, they are always [ŋ]. But when another sound does follow, we see various interesting things happen:

- |     |  |
|-----|--|
| 20. | eŋ.#tʃ̄í.le<br>in Chile                      |
| 21. | e.ŋ#a.γóh.t-o<br>in August- <i>masc</i>      |
| 22. | siŋ.#di.né.r-o<br>without money- <i>masc</i> |

- |                      |   |                                     |   |   |
|----------------------|---|-------------------------------------|---|---|
|                      |   |                                     |   | 23. u.η#e.le.fán.te<br>a elephant   |
|                      |   |                                     |   | 24. taη.#frí.-o<br>so cold- <i>masc</i>   |
|                      |   |                                     |   | 25. koη.#lé.t̃je<br>with milke  |
|                      |   |                                     |   | 26. e.η#á.γw-a-h<br>in water- <i>fem-pl</i><br>cf.<br>e.ná.γw-a-h<br>petticoat- <i>fem-pl</i> |
| 27. páη<br>bread     | 28. pa.n-a.ðe.rí-a<br>bakery- <i>fem</i>          | 29. pá.n-eh<br>bread- <i>pl</i>     | 30. el.#páη.#eh.#rí.k-o<br>the bread is tasty- <i>masc</i>                  |   |
|                      | pa.n-i.fi.ka.-ðó.r-a<br>bread-make-er- <i>fem</i> |                                     | páη.#de.#trí.γ-o<br>bread of wheat- <i>masc</i>                             |   |
| 31. ko.múη<br>common | 32. ko.mu.n-ál<br>common-al                       | 33. ko.mú.n-eh<br>common- <i>pl</i> | 34. lo.#ko.mú.η#eh...<br>the common[thing] is ...                           |   |
|                      | ko.mu.n-íh.m-o<br>common-ism- <i>masc</i>         |                                     | lo.#ko.mú.η#si.γ-e...<br>the common[thing]<br>continue- <i>3sg.pres</i> ... |   |
| 35. ra.món<br>Ramón  | 36. ra.mó.n-a<br>Ramón- <i>fem</i> (Ramona)       |                                     | 37. ra.mó.η#en.tr-ó<br>Ramón enter- <i>3sg.past</i>                         |   |
|                      |   |                                     | ra.mó.η#dí.θ-e<br>Ramón say- <i>3sg.pres</i>                                |   |
| 38. dóη<br>Mr        | 39. dó.η-a<br>Mr- <i>fem</i> (Ms)                 |                                     | 40. dó.η#a.le.xán.dr-o<br>Mr Alejandro- <i>masc</i>                         |   |
|                      |   |                                     | dóη.#pé.ðr-o<br>Mr Pedro- <i>masc</i>                                       |   |

41.	deh.ðéŋ disdain	42.	deh.ðé.ŋ-eh disdain-2sg.pres.subj	43.	deh.ðé.n-eh disdain-pl	44.	deh.ðé.ŋ#i.#a.ro.γán.θj-a disdain and arrogance-fem
			deh.de.ŋ-ár/r disdain-infinitive				
			deh.de.ŋ-ó.s-o disdain-ful-masc				
	(no unaffixed form exists)	45.	re.ŋ-ír/r quarrel-infinitive				
			rí.ŋ-a quarrel-fem				
			ren.-θí.λ-a quarrel-diminutive-fem				
46.	a.ðáj Adam	47.	a.ðá.m-íh.m-o Adam-ism-masc	48.	a.ðá.n-eh Adam-pl	49.	a.ðá.ŋ#i.#é.β-a Adam and Eve-fem
			a.ðá.m-i.k-o Adam-ic-masc				a.ðáj#bwél.βe Adam return-3sg.pres
50.	a.réŋ harem	51.	a.re.m-íh.t-i.k-o harem-ist-ic-masc	52.	a.ré.n-eh harem-pl	53.	a.ré.ŋ#eŋ.#tur.kía harem in Turkey
							a.réŋ.#del.#pa.lá.θjo harem of the palace

**B. Laterals**

- Here are some similar data on [l] and [ʎ]. They contrast in some environments:

54.	lá.m-a	55.	ʎá.m-a
	slime- <i>fem</i>		llama- <i>fem</i>
56.	le.g-ár/r	57.	ʎe.g-ár/r
	hand.down- <i>infinitive</i>		arrive- <i>infinitive</i>
58.	ka.l-ár/r	59.	ka.ʎ-ár/r
	soak- <i>infinitive</i>		be.quiet- <i>infinitive</i>
60.	pó.l-o	61.	pó.ʎ-o
	pole- <i>masc</i>		chicken- <i>masc</i>

- But the contrast is neutralized in some environments, where they alternate with each other:

(no  
 unsuffixed  
 form  
 exists)

62. bé.ʎ-o  
 pretty-*masc*

be.ʎ-é.θ-a  
 pretty-ness-*fem*

bel.-dáð  
 pretty-ness

63.	don.θél	64.	don.θé.ʎ-a	65.	don.θé.l-eh	66.	don.θé.l#eh.t-á.βa
	lad		lad- <i>fem</i>		lad- <i>pl</i>		lad be-3sg. <i>imperf</i>

don.θé.ʎ-a-h  
 lad-*fem-pl*

67.	él	68.	é.ʎ-a	69.	él#éh
	he		he- <i>fem</i>		he be-3sg. <i>pres</i>

**You don't have to explain why the plural is sometimes [-h] and sometimes [-eh].**

**C. [s] ~ [h] alternations**

- [s] and [h] don't contrast—they are allophones of the same phoneme. Here's some data on their distribution:

70.	sá.l-a room- <i>fem</i>	71.	no words like *há.la
72.	só.p-a soup- <i>fem</i>	73.	no words like *hó.pa
74.	ká.s-a house- <i>fem</i>	75.	no words like *ká.h-a
76.	a.sá-r/r roast- <i>infinitive</i>	77.	no words like *a.há-r/r
78.	*més	79.	méh month
80.	*tós	81.	tóh cough

- Here's some data showing alternations between them.

82.	méh month	83.	mé.s-eh month- <i>pl</i>	84.	el#.mé.h#eh the month be- <i>3sg.pres</i>	
					el#.méh.#prók.si.m-o the month next- <i>masc</i>	
85.	tóh cough	to.s-ér/r cough- <i>infinitive</i>	86.	tó.s-eh cough- <i>pl</i>	87.	to.h#eh.ta.θjo.n-ál cough season-al
					toh#sé.k-o cough dry- <i>masc</i>	
	88.	tjé.n-e have- <i>3sg.pres</i>	89.		90.	tjé.ne.#sá.la-h have- <i>3sg.pres</i> room- <i>pl</i>
		tjé.n-eh have- <i>2sg.pres</i>				tjé.n-e.h#á.la-h have- <i>2sg.pres</i> wing- <i>pl</i>

#### D. [j] ~ [ʝ] alternations

- [j] and [ʝ] don't contrast—they are allophones of the same phoneme. Here's some data showing alternations between them and their basic distribution.

91. jó.ð-o iodine- <i>masc</i>	92. no words like *jó.ð-o
93. a.jér/r yesterday	94. no words like *a.jér/r
95. no words like *óʝ	96. ój today
97. kre.-jén.do believe-ing- <i>masc</i>	98. ko.m-jén.d-o eat-ing- <i>masc</i>
99. le.-jó read-3sg. <i>past</i>	100. ko.m-jó eat-3sg. <i>past</i>

- Alternations with more morphology (sorry, no good source examples of derivational morphology):

101. kom.bój convoy	102. kom.bó.ʝ-eh convoy- <i>pl</i>	103. el.#kom.bó.j#eh ... the convoy be-3sg. <i>pres</i> ...  el.#kom.bój#sí.ɣ-e the convoy continue-3sg. <i>pres</i>
104. bwéj steer	105. bwé.ʝ-eh steer- <i>pl</i>	106. el.#bwé.j#eh ... the steer be-3sg. <i>pres</i> ...  el.#bwéj#βjé.ne the steer come-3sg. <i>pres</i>
107. léj law	108. lé.ʝ-eh law- <i>pl</i>	109. la.#lé.j#eh the law be-3sg. <i>pres</i>  la.#léj#del.#món.te the law of.the mountain
110. áj have.3sg. <i>pres</i>		111. a.j#ú.n-a have.3sg. <i>pres</i> one- <i>fem</i> cf. a.ʝú.n-a fast-3sg. <i>pres</i>

**E. [r] ~ [r̥] alternations**

- [r] and [r̥] contrast, but in some environments only one is possible, and in some environments there is only free variation between the two (no contrast):

	<i>contrast</i>	<i>only [r]</i>	<i>only [r̥]</i>	<i>only free variation</i>
112.	fó.r-o forum- <i>masc</i>	113. rá.pi.d-o fast- <i>masc</i>	114. prá.ð-o meadow- <i>masc</i>	115. sa.l-ír, sa.l-ír exit- <i>infinitive</i>
116.	fó.r-o lining- <i>masc</i>	117. rá.t-o rat- <i>masc</i>	118. brá.β-o bold- <i>masc</i>	119. már.teh, már.teh Tuesday
120.	ká.r-o dear- <i>masc</i>	121. ré.t-o dare- <i>masc</i>	122. frá.h.k-o bottle- <i>masc</i>	123. már, már sea
124.	ká.r-o cart- <i>masc</i>	125. rí.t-o rite- <i>masc</i>	126. trá.p-o rag- <i>masc</i>	127. ár.p-a, ár.p-a harp- <i>fem</i>
128.	θé.ro zero	129. ró.t-o broken- <i>masc</i>	130. drá.ma drama	131. ár.βol, ár.βol tree
132.	θé.r-o hill- <i>masc</i>	133. rú.t-a highway- <i>fem</i>	134. grá.t-o grateful- <i>masc</i>	135. gár.fj-o, gár.fj-o hook- <i>masc</i>
136.	pé.ro but	137. ón.r-a honor- <i>fem</i>	138. krá.ter/r̥ crater	139. ár.m-a, ár.m-a weapon- <i>fem</i>
140.	pé.r-o dog- <i>masc</i>	141. en.rí.ke Enrique		142. ár.te, ár.te art
143.	mí.r-a target- <i>fem</i>	144. al.re.ðe.ðór/r̥ around		145. ár.ð-e, ár.ð-e burn- <i>3sg.pres</i>
146.	mí.r-a myrrh- <i>fem</i>	147. ih.ra.él Israel		148. fár.s-a, fár.s-a farce- <i>fem</i>
				149. sár.n-a, sár.n-a roe- <i>fem</i>
				150. kár.loh, kár.loh Carlos
				151. már.tʃ̥-a, már.tʃ̥-a march- <i>fem</i>
				152. ár.k-o, ár.k-o weapon- <i>masc</i>



153. lár.ɣ-o, lár.ɣ-o  
long-*masc*

154. sar.xén.t-o,  
sar.xén.t-o  
sergeant-*masc*

- Here's some data on alternations

155. a.mór/r      156. a.mo.r-ó.s-o      157. a.mó.r-eh      158. el.#amó.r#eh...  
love                      love-ous-*masc*                      love-*pl*                      the love be.3sg.*pres*

a.mo.r-í.o  
'love affair'

159. rá.t-a  
rat-*fem*

160. la.#rá.t-a  
the rat-*fem*

161. tó.r-o      162. to.r-é.r-o  
bull-*masc*                      'bullfighter'

163. tó.re      164. to.r-é.r-o  
tower                      'lighthouse keeper'

165. már/r      166. ma.r-í.n-a      má.r-eh      167. már/r.#βér/r.ðe  
sea                      navy-?-*fem*                      sea-*plura*                      sea green

mar-é-a  
'tide'

már/r.#traŋ.kí.l-o  
sea tranquil-*masc*

má.r#a.θúl (\*má.r#a.θúl)  
sea blue

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