

Assignment #4: Malayalam

Due Friday, Nov. 12

The data below illustrate some alternations in Malayalam. Your job is to use the tools of **lexical phonology** to account for why some of the alternations don't apply in certain morphological contexts.

- You can use **rules or OT**; your choice.
- Either way, you'll have to make a proposal about how many **levels** there are in the lexical component of Malayalam phonology, decide which morphological operations belong to which level, and decide which rules apply at which level(s) of the lexical phonology, or in the postlexical phonology.

Etymology:

- Malayalam is a Dravidian language but has been heavily influenced by Sanskrit.
- I've marked words as D (Dravidian origin) or S (Sanskrit origin) whenever the source gave that information, and otherwise as X (sometimes that information is phonologically relevant, sometimes not). In some cases D could mean that the word is treated by the language as Dravidian even if it actually came from Sanskrit, and vice versa.
- In the cases where the etymology is not given, you may assume that D and S words behave the same, except where I made notes like “('pig' must be D)”.
- You may assume that lexical entries can be marked [+D, -S] or [-D,+S], and that, at least until the postlexical level (where such features are thought to be erased), rules or constraints refer to those features.

Be sure to discuss...

- At what stage in the derivation can or must morphological bracketing and/or abstract features like [D] and [S] be erased? (Remember that once information is gone, it's gone—it can't come back later in the derivation.)
- Do the lexical rules show any non-derived-environment blocking (NDEB)?
 - If so, in a rule analysis you can just stipulate that the strict cycle condition is correct (see Nov. 4 handout for definition).
 - If so, in an OT analysis you can similarly stipulate that (some? all? all at the lexical level?) markedness constraints don't apply if they are already violated in the input (this follows a proposal of McCarthy for “comparative markedness”).

A lot of the rules will look kind of similar. Avoid having very similar rules when you can, but don't worry if your solution still includes some.

Data are from Mohanan (bibliographic info available later if you want). Some consonant allophony is not indicated. As always, the order in which you present your solution doesn't have to reflect the order in which the data are presented.

Please don't be alarmed by the large number of words! They're there to show each pattern repeatedly, not because every word requires its own analysis.

Data

1. In order for some of the data to make sense, you will first need an analysis of the following schwa/zero alternations. Analyze the glide/zero alternations also, for contrast. I am writing spaces or hyphens on either side of the glides so as to avoid committing to any morphological affiliation, but the glides do not represent a distinct morpheme—they are inserted in a phonologically predictable environment.

Note: Even though they don't form a natural class, [m] and [n] are the only consonants that are allowed to be word-final (on the surface) in this language.

<i>word</i>			<i>phrase</i>		<i>modifier-head</i>	
1. ewiṭe	where					
2. waaḷə	sword		3. waaḷ ewiṭe	Where is the sword?		
4. muurtṭakuutṭi	sharpened		5. waaḷə muurtṭakuutṭi	sharpened the sword		
6. waḷa	bangle		7. waḷa j ewiṭe	Where is the bangle?		
8. uraṅṅi	slept					
9. maaṣə	teacher		10. maaṣ uraṅṅi	The teacher slept.		
11. wanni	came		12. maaṣə wanni	teacher came		
13. ḍaasi	servant		14. ḍaasi j uraṅṅi	The servant slept.		
15. aana	elephant					
16. kuzi	hole				17. kuzi-j-aana	insect sp. (lit. hole-elephant)
18. ṭookkə	gun					
19. ṭikku	Tickoo					

2. Some differences between D and S stems.

<i>word</i>			<i>modifier-head compound</i>		
20. r ¹ aṭi	Rati (name)				
21. jakṣi	yakshi (demoness)				
22. b ^h aar ¹ ja	wife				
23. waḍ ^h u	bride				
24. manuṣjan	man				
25. puṣṭakam	book				
26. puṣpam	flower				
27. mar ¹ am	tree, wood				
28. jakṣan	yaksha (demon)				
29. kuttṭi	child	D	30. r ¹ aṭi-kkuttṭi	X-D	Ratikutti (name); ignore the [ṭ]/[t] difference—probably a mistake
31. paala	pala tree	D	32. jakṣi-ppaala	X-D	the pala tree in which yakshi lives
33. wiiṭə	house	D	34. b ^h aar ¹ ja-wiiṭə	X-D	wife's house

35. kur ^ʃ an̄ḡə	monkey	D	36. manuṣja-kkur ^ʃ an̄ḡə	X-D	human monkey/ape
37. taajam	paint	D	38. puṣṭaka-ttaajam	X-D	paint for books
39. kuṭam	pitcher	D	40. puṣpa-kkuṭam	X-D	pitcher of/for flowers
			41. mar ^ʃ a-kkuṭam	X-D	wooden pitcher
42. kutir ^ʃ a	horse	D	43. mar ^ʃ a-kkuṭir ^ʃ a	X-D	wooden horse
44. paatt̄ə	song	D	45. jakṣa-ppaatt̄ə	X-D	yaksha's song
46. deewi	goddess	S	47. r ^ʃ at̄ii-deewi	X-S	goddess Rati
48. paadam	foot	S	49. jakṣii-paadam	X-S	yakshi's foot
50. gr ^ʃ əham	house	S	51. b ^ʃ aar ^ʃ jaa-gr ^ʃ əham	X-S	wife's house
			52. wad ^ʃ uu-gr ^ʃ əham	X-S	bride's house
53. kaṅṭ ^ʃ am	neck	S	54. manuṣja-kaṅṭ ^ʃ am	X-S	human neck
55. tar ^ʃ iṭam	story	S	56. puṣṭaka-tar ^ʃ iṭam	X-S	history of books
57. kumb ^ʃ am	pitcher	S	58. puṣpa-kumb ^ʃ am	X-S	pitcher of/for flowers
			59. mar ^ʃ a-kumb ^ʃ am	X-S	wooden pitcher
60. taar ^ʃ a	Tara (name)				
61. kaanṭan	husband	S	62. taar ^ʃ aa-kaanṭan	X-S	Tara's husband
63. ṭii	fire				
64. katta	lump	D	65. ṭii-kkatta	X-D	lump of fire
66. naalam	flame	D	67. ṭii-naalam	X-D	flame of fire
68. swarṇam	gold				
69. pazam	fruit	D	70. swarṇa-ppazam	X-D	fruit of gold
71. maza	rain	D	72. swarṇa-maza	X-D	rain of gold
73. kar ^ʃ i	charcoal				
74. kuutṭaan	dish	D	75. kar ^ʃ i-kkuutṭaan	X-D	coal dish
76. laḍḍu	sweet	D	77. kari-laḍḍu	X-D	charcoal sweet (don't worry about the [r]/[rʃ] —maybe it's a typo)
78. muuṭram	urine				
79. s ^ʃ an̄ka	suspicion	D	80. muuṭra-s ^ʃ an̄ka	X-D	desire to urinate
81. suuṭi	needle	D	82. swarṇa-suuṭi	X-D	golden needle
83. poṭi	powder				

84. malar ^{jə}	popped rice		85. malar-ppoṭi	X-D	powdered popped rice (don't worry about the [r]/[r^j])
86. pakalə	day				
87. kinaawə	dream	D	88. pakal-kkinaawə	X-D	day dream
89. aa ə	man				
90. kuuttam	group	D	91. aa -kkuuttam	X-D	crowd
92. wirakə	firewood				
93. kol ji	twig	D	94. wirakə-kol ji	X-D	log for firewood
95. kaṭukə	mustard				
96. paatram	vessel	D	97. kaṭukə-paatram	X-D	vessel for mustard
98. kaaṭə	ear				
99. kuṭṭə	piercing	D	100. kaaṭə-kuṭṭə	X-D	piercing of the ear
101. taṅṅala	chain	D	102. mar ^{jə} -ttaṅṅala	X-D	wooden chain; cf. 27

3. Malayalam also has multiply headed compounds that have a coordinative meaning. Carefully compare the coordinative compounds below to the modifier-head compounds below and those already seen above; some of the differences are subtle.

<i>word</i>			<i>coordinative compound</i>			<i>modifier-head compound</i>		
103. att ^h an	father							
104. amma	mother		105. att ^h an-amma-maar ^{jə}	X-X-sf	parents (maar ^{jə} : plural)			
106. kinnar ^j an	kinnara	S						
107. gaṇḍ ^h arwwan	gandharwa	S	108. jakṣa-kinnar ^{jə} - gaṇḍ ^h arww-aadi-ka ə	S-S-S-sf-sf	yakshas (cf. 28), kinnaras, gandharwas, etc. (demons) (aadi = 'etc.', ka = plural) ignore what happens at end of 'gandharwa'—requires rules not illustrated elsewhere			
109. ulacca	pounding stick							
110. par ^j iṭa	shield		111. waa -ulacca-par ^j iṭa-ka ə	X-X-X-sf	sword (cf. 2), pounding stick & shield			
			112. ulacca-waa ə-par ^j iṭa-ka ə	X-X-X-sf	pounding stick, sword & shield ('sword' must be D)			
113. ṭala	head	D				114. waa -ṭṭala	X-D	sword point (lit. sword-head)
115. wjaṭjaasam	difference							

116. penḡə	woman					117. pen-kutti	X-D	girl (cf. 29) ¹
118. aənə	man		119. aənə-penḡə-wjatjaasam	X-X-X	difference between men & women	120. aən-kutti	X-D	boy (cf. 29)
121. ʔajir ¹ ə	yogurt							
122. wenḡa	butter							
123. warggam	group							
124. paalə	milk		125. paalə-ʔajir ¹ ə-wenḡa-warggam	X-X-X-X	the class of milk, yogurt & butter ('group' must be D)	126. paal-ppaatram	X-D	vessel for milk (cf. 96)
127. tempə	copper					128. tempə-paatram	X-D	copper vessel
129. kaattə	breeze							
130. kuḡir ¹ ə	cold					131. kuḡir-kaattə	X-X	cool breeze ('breeze' must be S)
132. meeni	body							
133. ʔajir ¹ ə	tender leaf		134. ʔajir ¹ ə-meeni-kaḡə	X-X-sf	tender leaves & bodies	135. ʔajir-meeni-kaḡə	X-X-sf	tender body
						136. wirakə-kolḡi	X-X	twig for firewood, cf. 93, 92
						137. kaatə-kuttə	X-X	piercing of the ear cf.98, 99
138. petḡi	box							
139. patḡaajam	grain bin	D	140. petḡi-patḡaajan-ḡaḡə	X-D-sf	boxes and grain bins	141. petḡi-ppatḡaajan-ḡaḡə	X-D-sf	grain bins used as boxes
		D	142. aana-kuḡir ¹ a-kaḡə	X-D-sf	elephants and horses, cf. 15, 42	143. aana-kkuḡir ¹ a	X-D	horse that is like an elephant, cf. 15, 42
144. eli	rat							
145. paḡḡi	pig							
146. per ¹ ittaazi	bandicoot	D	147. eli-paḡḡi-per ¹ ittaazi	X-X-D	rat, pig and bandicoot ('pig' must be D)			
148. suk ^h am	pleasure							
149. dukk ^h am	sorrow		150. suk ^h a-dukk ^h aḡ-ḡaḡə	X-X-sf	pleasure and pain ('sorrow' must be D)			
151. mrəgam	animal							

¹ You have limited data on what happens to nasal-obstruent clusters where the nasal doesn't delete (#123, 126, 148, 149, 158, 163, 228, 232, maybe a couple of others). So feel free to formulate fairly arbitrary-seeming rules (*ŋk* does this, *mk* does that...), and focus on capturing the differences between different types of morpheme boundary.

152. sambanḍ ^h am	contact		153. manusja-mrəga-sambanḍ ^h am	X-X-X	interaction between man & animal, cf. 24 ('animal' must be D)		
154. kaanṭan	Kantan	S	155. ʔaar ^j aa-kaanṭan-maar ^j ə	X-S-sf	Tara and Kantan, cf. 60		
156. baalica	girl						
157. baalan	boy	S	158. baalicaa-baalan-maar ^j ə	X-S-sf	boys and girls		
159. b ^h artṭaawə	husband	S	160. b ^h aar ^j jaa-b ^h artṭaak-kan-maar ^j ə	X-S-sf-sf	husband and wife, cf. 22 (ignore the assimilations of the [w] from 'husband' and the [ʔ] from the suffix [kaʔ])		

4. Some more phrasal data. Check that your analysis generates them correctly.

<i>word</i>		<i>phrase</i>	
161. manusjan	man		
162. mar ^j ittu	died	163. manusjan mar ^j ittu	The man died.
164. kaṭam	debt		
165. konṭə	with		
166. muṭin ^j n ^j u	destroyed	167. kaṭam konṭə muṭin ^j n ^j u	We are destroyed with debt.
168. gamittu	went	169. ʔaar ^j a gamittu	Tara went
170. kaar ^j aṇam	reason	171. b ^h aar ^j a kaar ^j aṇam	because of the wife
172. naṭi	actress		
173. praart ^h ittu	prayed	174. naṭi praart ^h ittu	actress prayed