Assignment #2: process application in Woleaian
Data from Sohn (1971)[1]
Due **Friday, Jan. 27** (put a hard copy in my mailbox, Campbell 3125)

Instructions for write-up
- First, discuss the issues for rule application that arise in the data below, given Sohn's three rules. You should consider iterativity, directionality, and anything else that strikes you.

  - *a-a* dissimilation: $V \rightarrow [-low] / \_\_ C_0 \begin{bmatrix} -cons \\ +low \end{bmatrix}$

  - final-*a* raising, $\begin{bmatrix} V \\ -long \end{bmatrix} \rightarrow [-low] / \_\_ \{=,\#\}$. The = boundary occurs in reduplication.

  - harmony: $V \rightarrow [-low] / \begin{bmatrix} -cons \\ +hi \end{bmatrix} C_0 \_\_ C_0 \begin{bmatrix} -cons \\ +hi \end{bmatrix}$. Note that this rule contains no (=).

- Then, develop an OT analysis of the [a]~[e] alternations.
- Finally, there are some problematic forms at the end of the data. If your analysis can accommodate them, great! But if not (mine can't without getting very ugly), just discuss the issues that they raise, for both the rule analysis and your OT analysis.

General notes and tips [see also below in the data]
- I've given Sohn's underlying forms, but you should feel free to challenge them.
- I'm giving you the real surface form, where final vowels undergo all kinds of reduction, in case it provides some inspiration for a better solution than what I came up with. But you only need to analyze the "intermediate" form, which suppresses various word-final vowel erosions.
- Sohn says: "[ü] and [wü] are in free variation. The motivation for setting up w will not be elaborated here." You can ignore the /w/→Ø changes.

Transcription notes (I copied Sohn's transcriptions, which are non-IPA)
- capital letters (I, E, etc.) are voiceless vowels.
- ü is a high central vowel. Judging from Sohn 1975, I think it's [+round]
- ė is a mid central vowel. Judging from Sohn 1975, I think it's [+round].
- j is a glide (i.e., IPA [j])
- g̶ seems to be IPA [ɣ]

Possessed forms of nouns
- Ignore the /c/ → [š] change, here and throughout.

	underlying	intermediate	surface	underlying	intermediate	surface
	'eye'			'drinking object'		
X	1. /mata/	mate	matE			
my X	2. /mata+i/	metai	metaj	3. /wülüma+i/	ülümei	ülümej
your (sg) X	4. /mata+mu/	metamu	metamU	5. /wülüma+mu/	ülümemu	ülümemU
his/her/its X	6. /mata+la/	metale	metalE	7. /wülüma+la/	ülümale	ülümalE
our (incl) X	8. /mata+ca/	metaše	metašE	9. /wülüma+ca/	ülümaše	ülümašE
our (excl) X	10. /mata+mami/	matemami	matemamI	11. /wülüma+mami/	ülümemami	ülümemamI
your (pl) X	12. /mata+mii/	metami:	metami	13. /wülüma+mii/	ülümemi:	ülümemi

[1]Sohn, Ho-min. 1972. a̱-raising in Woleaian. University of Hawaii *Working Papers in Linguistics* 3: 15-36.
I've also consulted Sohn's 1975 *Woleaian Reference Grammar*. Where the two sources disagreed on a transcription or underlying form, I went with Sohn 1975, particularly with respect to final vowels.

'2' things
- "?" after the UR means I was guessing.
- I assume there's a voiceless vowel at the end of '2 flat pieces', but I don't know which one.

underlying	intermediate	surface		
14. /ruwa+xofeti/ ?	ruwaɠofeti	ruwaɠofetI	'2 pieces'	
15. /ruwa+mʷėü/ ?	ruwamʷėü	ruwamʷėü	'2 groups'	
16. /ruwa+ali/ ?	ruwa:li	ruwa:lI	'2 skinny things'	you don't have to account for /aa/ → [a:]
17. /ruwa+tabo/	ruwetabo	ruwetabO	'2 halves'	
18. /ruwa+ŋafa/	ruweŋafe	ruweŋafE	'2 arm-lengths'	
19. /ruwa+fawü/	ruwefaü	ruwefaü	'2 round things'	
20. /ruwa+fija/	ruwefije	ruwefijE	'2 handfuls'	
21. /ruwa+tip*V*/ ?	ruwetip*V*	ruwetip*V*	'2 flat pieces'	the quality of the final V is unknown
22. /ruwa+wülü/	ruweülü	ruweülÜ	'2 handfuls of leaves'	

Reduplicated words
- /x/ becomes [ɠ] between two voiced vowels.[2] You can ignore that, here and throughout.

underlying	intermediate	surface	
23. /parasa/	perase	perasE	'switch'
24. /parasa=rasa/	peraserase	peraserasE	'splash-intransitive'
25. /ka=kaŋi+i/	kekaŋi:	kekaŋi	'to be eating it'
26. /mʷara=mʷara/	mʷaremʷare	mʷaremʷarE	'lei'
27. /mʷara=mʷara+li/	mʷaremʷerali	mʷaremʷeralI	'lei of'
28. /xa+mʷara=mʷara/	xemʷaremʷare	xemʷaremʷarE	'to put leis on'
29. /xa+mʷara=mʷara+a/	xemʷaremʷera:	xemʷaremʷera	'to put the lei on him'
30. /lawü=lawü/	laülaü	laülaü	'to deliver babies'
31. /fitija=tija/	fitijetije	fitijetijE	'to marry each other'
32. /tapaŋi+a/	tepaŋie	tepaŋi	'to help it'
33. /ta=tapaŋi+a/	tetepaŋie	tetepaŋi	'to be helping'

Causatives
- Sohn discusses the variant [xareŋereŋalI] (in **bold** below) as problematic. Also [xapelepelalI] and [xatepetepalI], which don't have variants. You'll have to decide what to do about them.

underlying	intermediate	surface	
34. /xa+bʷu:toxo+a/ ?	xabʷu:toɠoe	xabʷu:toɠo	'to make him go'
35. /xa+temʷa:üwė+a/	xatemʷa:üwėe	xatemʷa:üwė	'to make him sick'
36. /xa+laxo+a/	xelaɠoe	xelaɠo	'to make him come'
37. /xa+mmʷacü+a/	xe+mmʷašue	xe+mmʷašü	'to hold him'
38. /raŋa=raŋa/	raŋeraŋe	raŋeraŋE	'yellow'
39. /xa+raŋa=raŋa/	xeraŋeraŋe	xeraŋeraŋE	'make yellow'
40. /xa+raŋa=raŋa+a/	xeraŋereŋa:	xeraŋereŋa	'make it yellow'
41. /xa+pala=pala/ ?	xepalepale	xepalepalE	'sarong'

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[2] Although actually, Sohn transcribes this one as [x].

42. /tapaɲi+a/	tepaɲie	tepaɲi	'to help it'
43. /ta=tapaɲi+a/	tetepaɲie	tetepaɲi	'to be helping'
44. /xa+tapa=tapa/	xetapetape	xetapetapE	'to support'
45. /xa+tapa=tapa+a/	xetapetepa:	xetapetepa	'to support it'

Miscellaneous—check that your analysis so far can handle all of these

- In (54) and (55), Sohn says the = might not be there synchronically. Your choice; it might not matter to your analysis.

underlying	*intermediate*	*surface*	
46. /marama/	merame	meramE	'moon'
47. /marama+li/	maremali	maremalI	'moon of'
48. /wera=wera/	werewere	werewerE	'thunder'
49. /wera=wera+li/	wereworali	wereweralI	'thunder of'
50. /paabʷija/	pa:bʷije	pa:bʷijE	'pig'
51. /bʷuxuwa/	bʷuɢuwe	bʷuɢuwE	'knee'
52. /waxa/	waxe	waxE	'vein'
53. /jalüsa/	jalüse	jalüsE	'sideburns'
54. /jaremata/ or /jara=mata/	jaremate	jarematE	'person'
55. /jaremeta+li/ or /jara=mata+li/	jaremetali	jaremetalI	'person of'
56. /jafara/	jefare	jefarE	'shoulder'
57. /jafara+i/	jaferai	jaferaj	'my shoulder'
58. /jafara+mami/	jefaremami	jefaremamI	'our shoulders'
59. /jala/	jale	jalE	'road'
60. /matawa/	metawe	metawE	'sea'
61. /metaxo/	metaxo	metaxO	'to be afraid'
62. /weri+xamami/	werixemami	werixemamI	'see us (excl)'
63. /teraa/	tera:	tera	'adze'
64. /maɲaaxo/	meɲa:xo	meɲa:xO	'clothes'
65. /xaraɲapa/	xareɲape	xareɲapE	'bonito'
66. /le+ssaxa+li#laɲi/	lesseɢalileɲi	lesseɢanneɲI[3]	'in the middle of the sky'

Problematic cases—if your analysis doesn't capture them, discuss why

underlying	*intermediate*	*surface*	
67. /raxi=raxi/	raɢirexi	raɢirexI	'to line up'
68. /jala=lapa/	jelalape	jeɲɲapE[4]	'road'
69. /xa+raɲa=raɲa+li/	xeraɲereɲali ~ xareɲereɲali	xeraɲereɲalI ~ xareɲereɲalI	'making yellow of'
70. /xa+pala=pala+li/ ?	xapelepelali	xapelepelalI	'sarong of'
71. /xa+tapa=tapa+li/	xatepetepali	xatepetepalI	'supporting of'

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[3] The /i/ deletes by a rule that deletes a vowel between identical laterals, nasals, or fricatives. Then there's also a prohibition against [ll], so you get [nn] instead.
[4] The second /a/ deletes by a rule that deletes a vowel between identical laterals, nasals, or fricatives. Then there's also a prohibition against [ll], so you get [nn] instead.