

## Assignment #4: Hakha Lai and process application

Due Nov. 1

Data from Hyman & VanBik<sup>1</sup>

### Directions

- Develop a rule-based analysis to account for the alternations in **tone**.
  - You can incorporate constraints as blockers or triggerers of rules if you like, or not—your choice.
- Discuss issues of *rule application* if there are any cases where your rule’s structural description matches more than one part of the form that the rule’s trying to apply to.
  - Does the rule apply simultaneously to all potential targets?
  - Left-to-right or right-to-left?
- If there are cases where a rule is applicable to its own output, discuss what happens
  - Does the rule apply iteratively or not?
- If any of your rules are actually rule schemata (containing abbreviatory conventions), and there are cases where more than one of the rules into which some schema expands could apply to a form, discuss what happens.
  - Do all the subrules apply simultaneously, or is there ordering?
  - If there’s ordering, what’s the order, and is it disjunctive or conjunctive?
- Make sure to show all steps in every derivation (e.g., show each iteration of a rule as a separate step).
- Depending on how you formulate your rules, you might not actually run into all of these issues—but I suspect/hope you’ll run into at least some.
- Don’t develop a full OT analysis. But, take two instances of the issues above and discuss they it would fare under an OT analysis.
  - For example, if one of your rules applies iteratively you could give a tableau for a relevant form to show that this is inevitable in the OT analysis.
  - Or, if one of your rules applies non-iteratively you could give a failed tableau for a relevant form to show that this can’t be captured straightforwardly in an OT analysis.

### Notes and tips

- The data in 1-50 contain all the information you need to formulate your rules and determine the underlying representations.
  - Then, 51-63 illustrate how those rules *apply* in more-complicated situations.
- The data here are restricted to “smooth” syllables (with one exception—see next point), which are syllables that have a long vowel or end in a sonorant consonant
  - Smooth syllables can bear only three tones in this language: low (à), rising (ǎ), and falling (â).
- The only non-smooth syllable shown is the morpheme *ka* ‘my’, which is toneless (its pitch is determined by its environment). You don’t need to analyze this morpheme’s tone.
- You can use the features [high start] and [high finish], and treat them as properties of vowels:

vowel with low tone	à	[-hi start]	[-hi finish]
vowel with rising tone	ǎ	[-hi start]	[+hi finish]
vowel with falling tone	â	[+hi start]	[-hi finish]

---

<sup>1</sup> I can give you the bibliographic information after the assignment is due.

**Data**

1. kân	‘our’
2. hmâ:	‘wound’
3. ka hmâ:	‘my wound’
4. zû:	‘beer’
5. ka zû:	‘my beer’
6. lûŋ	‘heart’
7. ka lûŋ	‘my heart’
8. lâw	‘field’
9. ka lâw	‘my field’
10. tlâ:ŋ	‘mountain’
11. ka tlâ:ŋ	‘my mountain’
12. râ:l	‘enemy’
13. ka râ:l	‘my enemy’
14. kê:	‘leg’
15. ka kê:	‘my leg’
16. ʔô:	‘voice’
17. ka ʔô:	‘my voice’
18. hrôm	‘throat’
19. ka hrôm	‘my throat’
20. tsâl	‘forehead’
21. ka tsâl	‘my forehead’
22. kô:j	‘friend’
23. ka kô:j	‘my friend’
24. thlâ:n	‘grave’
25. ka thlâ:n	‘my grave’
26. tsâ:n	‘time’
27. ka tsâ:n	‘my time’
28. zâ:n	‘night’
29. ka zâ:n	‘my night’
30. sâ:	‘animal’
31. ka sâ:	‘my animal’
32. hnì:	‘skirt’
33. ka hnì:	‘my skirt’
34. ràŋ	‘horse’
35. ka ràŋ	‘my horse’
36. kâl	‘kidney’
37. ka kâl	‘my kidney’
38. kò:m	‘corn’
39. ka kò:m	‘my corn’
40. bò:r	‘bunch’
41. ka bò:r	‘my bunch’

42. ka tlâ:ŋ zù:	‘my mountain beer’
43. ka tlâ:ŋ tsǎ:n	‘my mountain time’
44. ka tlâ:ŋ sà:	‘my mountain animal’
45. ka thlǎ:n zû:	‘my grave beer’
46. ka thlǎ:n tsân	‘my grave time’
47. ka thlǎ:n sà:	‘my grave animal’
48. ka kò:m zù:	‘my corn beer’
49. ka kò:m tsǎ:n	‘my corn time’
50. ka kò:m sà:	‘my corn animal’
51. ka kò:j rǎŋ	‘my friend’s horse’
52. ka kǒ:j zâ:n rǎŋ	‘my friend’s night horse’
53. kô:j zâ:n tsân	‘friend’s night time’
54. ka kǒ:j zâ:n tsân	‘my friend’s night time’
55. ka kǒ:j zâ:n tsân rǎŋ	‘my friend’s night-time horse’
56. zâ:n tsân	‘night time’
57. kô:j hrôm	‘friend’s throat’
58. kân tlâ:ŋ zù:	‘our mountain beer’
59. râ:l làw hmâ:	‘enemy field time’ (prob. was supposed to be ‘enemy field wound’)
60. ka zǎ:n tsân kô:j	‘my night-time friend’
61. kô:j hmâ:	‘friend’s wound’
62. ka kǒ:j hmâ:	‘my friend’s wound’
63. ka kǒ:j kê: hmâ:	‘my friend’s leg wound’