

This problem comes from Halle and Clements (1983). I updated the transcription.

In a well-written essay, provide a phonological analysis (either rule-based or OT) of the vowel alternations in Okpe. Please make sure that you are clear about:

1. the word-formation processes,
2. the underlying and surface vowel inventory,
3. the features you are assuming for the vowels, and
4. whether all glides are derived or not.

As usual, make sure you justify all underlying representations. Also, I advise that you present your analysis incrementally: present *some* data (not all of it at once), motivate URs, present an analysis, illustrate with derivations, move on to the next set of data and repeat, then show how the pieces introduced so far fit together, and repeat, repeat, repeat until you are finished.

Finally, feel free to relate the content of your write-up to the two readings given (Kaye, 1980; Bakovic *et al.*, 2020).

Halle and Clements write “The following forms illustrate vowel alternations in Okpe. Nasality, which is distinctive in this language, is not indicated in our examples.” As far as I can tell, the spaces are meaningless. So feel free to treat the forms as a single phonological domain (such as a word).

|    | gloss          | imperative | 3sg. past | 2sg. past | infinitive | 1pl. incl.<br>contin. |
|----|----------------|------------|-----------|-----------|------------|-----------------------|
| A. | 1. ‘pull’      | ti         | o tiri    | wi tiri   | etjo       | e tje                 |
|    | 2. ‘do’        | ru         | o ruru    | wi ruru   | erwo       | e rwe                 |
|    | 3. ‘bury’      | si         | o siri    | wi siri   | esjo       | e sje                 |
|    | 4. ‘fan’       | zu         | o zuru    | wi zuru   | ezwo       | e zwe                 |
| B. | 5. ‘buy’       | dɛ         | ɔ dɛre    | we dɛre   | ɛdɛ        | a dɛ                  |
|    | 6. ‘drink’     | da         | ɔ dare    | we dare   | ɛda        | a da                  |
|    | 7. ‘dig’       | tɔ         | ɔ tɔre    | we tɔre   | ɛtɔ        | a tɔ                  |
|    | 8. ‘run’       | zɛ         | ɔ zɛre    | we zɛre   | ɛzɛ        | a zɛ                  |
| C. | 9. ‘fill’      | se         | o seri    | wi seri   | ese        | e se                  |
|    | 10. ‘steal’    | so         | o sori    | wi sori   | eso        | e so                  |
|    | 11. ‘defecate’ | ne         | o neri    | wi neri   | ene        | e ne                  |
|    | 12. ‘rot’      | gbo        | o gbori   | wi gbori  | egbo       | e gbo                 |
| D. | 13. ‘eat’      | re         | ɔ rere    | we rere   | ɛrjɔ       | a rja                 |
|    | 14. ‘sing’     | so         | ɔ soro    | we soro   | ɛswɔ       | a swa                 |
|    | 15. ‘refuse’   | te         | ɔ tere    | we tere   | ɛtjɔ       | a tja                 |
|    | 16. ‘come’     | rhe        | ɔ rhere   | we rhere  | ɛrhjɔ      | a rhja                |

They also say “Further forms of the continuative include [o tje] (3sg.), [wi tje] (2sg.), etc.”

## References

- Bakovic, Eric, Jeffrey Heinz, and Jonathan Rawski. 2020. Phonological abstraction in the mental lexicon. In *Oxford Handbook of the Mental Lexicon*, edited by Lila Gleitman, Anna Papafragou, and John Trueswell. Oxford University Press. Under review.
- Halle, Morris, and G. N. Clements. 1983. *Problem Book in Phonology*. Cambridge, MA: MIT Press.
- Kaye, Jonathan. 1980. The mystery of the tenth vowel. *Journal of Linguistic research* 1:1–14.