## Prosodic phrasing and vowel harmony in Anum

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As many other Kwa-languages, Anum employs a pattern of [ATR] vowel harmony at the level of the word. The two harmonic sets of vowels are given in (1). In addition, Anum has a pattern of between-word vowel harmony: If a [+ATR] word follows a [-ATR] word the [+ATR] feature spreads regressively onto the adjacent vowel and turns its [-ATR] specification into [+ATR]. This regressive [+ATR] vowel harmony between words (RVH) appears to be a process common in other Kwa-languages as well such as in Akan (Dolphyne 1988; Kügler 2015) or Nawuri (Casali 2002). For Akan, Kügler (2015) showed that RVH is a phrase-based process: it applies within non-maximal φ-phrases and is blocked at maximal φ-phrase boundaries. This study investigates RVH in Anum in more detail. Some impressionistic data on Anum vowel harmony (Obeng 1995) may suggest that RVH could possibly also be analysed as a phrase-based process. However, the domain of application appears to differ between Anum and Akan and we will explore how RVH relates to prosodic phrasing in Anum.

The Anum data shows RVH between a subject and a verb (2), which was one of the contexts where RVH was blocked in Akan (3). We investigate the process of RVH in Anum in more detail varying the size of constituents and the complexity of sentence structures beyond simple SV-sentences (e.g. some examples in (4)) showing that RVH takes place within a DP, between objects and a verb, between a verb and a subject, and between objects. We will argue that the basic analysis of prosodic phrasing in Akan as argued for in Kügler (2015) also holds for Anum: RVH is a phrase-based process which applies within or across a non-maximal  $\varphi$ -phrase.

The crucial difference between Akan and Anum is the subject-verb domain. We assume that this difference is an effect of a different syntactic structure of the two languages. For Akan, the prosodic analysis of RVH assumes that a subject occupies a position outside the VP, possibly it occupies SpecTP. For Anum, we would suggest that a subject belongs to the VP (it presumably may occupy the SpecvP position). We analyse prosodic structure formation along the lines of match constraints at the syntax-phonology interface (Selkirk 2011). For Anum, match constraints would predict a prosodic domain which comprises the subject together with the verb and its complements (cf. (2b) and (4a/b)). Time adverbials would be phrased separately, and the prediction is that RVH is blocked between a time adverbial and a preceding object, which is in fact the case (5).

From a typological perspective, Akan and Anum belong to different branches of the Kwa language family (Kropp Dakubu 1988): Anum belongs to the Guang branch while Akan belongs to the Tano branch. This typological difference may explain the difference in syntactic structure and hence account for the different prosodic structure formation. The assumption of a different syntactic structure is further supported by elicited syntactic data having a subject as a focus (6), as a topic (7) or in an all-new sentence (8). For some Kwa languages subjects would be expected to require a resumptive pronoun in case of subject focus and VP-focus (Skopeteas et al. 2019). For Anum we observe a pattern where the subject appears to be in its base position within the VP (7) since no resumptive pronoun is required. Both in case of focus or in case of an all-new context, the subject moves to a syntactic position outside the VP and hence requires a resumptive pronoun in the matrix clause. This independent syntactic evidence supports the assumption of subjects in Akan syntax that leads to a prosodic structure formation that differs from Akan and that accounts for the data on RHV. We will hence argue for RVH in Anum to be a phrase-based process.

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(1) a. [+ATR]: /i, e, u, o/
b. [-ATR]: /ι, ε, υ, ο, a/ (Obeng 1995; Ofori 2013)
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- (2) a. kwamı + dzi → kwami dzi
  'Kwame' 'eat' 'Kwame eats.' (Obeng 1995)
  - b. (kwami dzi)φ
- (3) a. àdàmfò dí kùbé friend eat coconut 'A friend etas a coconut.' (Akan, Kügler 2015:188)
  - b. (àdàmfù)φ (dí kùbé)φ
- (4) a. kwămí téènté á ædzì /kwămí/ name tall DET eat 'The tall Kwame eats.'
  - b. kwami + so + kokosi → kwami so kokosi.
     'Kwame' 'collect' 'coconut' 'Kwame collects coconuts.'
  - c. koto + bebree → kotu bebree 'hat' 'many' 'many hats'
  - d. kwămí téènté ámè dzì kókósì /ámè/
    name tall new eat coconut 'New tall Kwame eats coconut.'
- (5) kwămí téènté sò kókósì blòblò dúdú \*[... blòblò dúdú] name tall buy coconut sweet Monday 'Tall Kwame buy ten sweet coconuts on Monday.'
- (6) a. Who is standing on the table?
  - b. alebi ne a.yeli okplo a so child FOC PRO.stand table DET on 'It is child that stands on the table.'
- (7) a. What did the child do?
  - b. alebi yeli əkplə a so child stand table DET on 'Child stands on the table.'
- (8) a. What is going on?
  - b. alebi a a.yeli okplo a so child DET PRO.stand table DET on 'The child stands on the table.'

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