An analysis of ATR harmony in Alur

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Like many other Western Nilotic languages, Alur has a complex ATR harmony pattern, which was described by Kutsch Lojenga (1991) but has not previously been analyzed. In Alur, harmony is described as depending on the interaction of a number of factors: whether the root is a noun or a verb, whether the suffix is of form V or CV, whether the trigger is in the root or suffix, and whether the potential target vowel is low or not. In this paper, I analyze the Alur harmony pattern, showing that both nouns and verbs behave fundamentally the same way, and that the complexities arise from a combination of domains, directionality, distance, and re-pairing, all of which are well-known phonological factors in the harmony literature.

First, ATR V suffixes in Alur always trigger harmony to RTR roots ((1a) vs. (1b) for verbs; (2a) vs. (2b) for nouns), while ATR CV suffixes trigger harmony only in nouns (2c), not in verbs (1c). (All data in this paper comes from Kutsch Lojenga (1991).) I argue that this distinction is due to domains: similar to what was argued for the closely related language Lango by Pulleyblank (2001), I suggest that the domain of Alur harmony is a syllable-binary foot aligned to the left edge of the root. In nouns, which are of form CVC, both V and CV suffixes fall within this domain of harmony. In contrast, in verbs, which are of form CVCV, where the final root vowel gets elided with a V suffix, only V suffixes can be incorporated into the harmony domain.

(1) (a) ɛ́-nɛ̀n-á   '3SG-saw-1SG'   (2) (a) tʃɔ̀ng-á   'knee-1SG'
    (b) ɛ́-nɛ̀n-í   '3SG-saw-2SG'   (b) tʃɔ̀ng-í   'knee-2SG'
    (c) ɛ́-nɛ̀nɔ̀-wú   '3SG-saw-2PL'   (c) tʃɔ̀ng-wú   'knee-2PL'

Despite being in the domain of harmony, RTR CV suffixes do not undergo harmony with ATR noun roots (3c), even though RTR V suffixes do ((3a) vs. (3b)). I analyze this effect as being due to distance and directionality. I propose that the NC sequences written by Kutsch Lojenga (1991) behave phonologically as prenasalized stops. As such, with V suffixes, there are no codas, while with CV suffixes, the root-final C is a coda. While regressive harmony in Alur is exceptionless within the foot, I suggest that progressive harmony cannot cross a mora. Similar moraic distance effects have been documented in related languages (e.g. Lango; Archangeli & Pulleyblank 1994)

(3) (a) lìmb-é   'cheek-3SG'
    (b) tʃɔ̀ng-ɛ́   'knee-3SG'
    (c) lìmb-gí   'cheek-3PL'

Finally, [a] in roots undergoes harmony in the presence of an ATR suffix ((4a) vs. (4b)), but [a] in suffixes does not (4c). Again, I analyze this fact as an effect of a stronger tendency for regressive than progressive harmony. Alur does not have an ATR low vowel, so harmony of [a] requires re-pairing (harmonizing by changing an additional feature); regressive harmony is strong enough to overcome the additional feature change, while progressive harmony is not.

(4) (a) wàŋ-á   'eye-1SG'
    (b) wèŋ-í   'eye-2SG'
    (c) lìmb-á   'cheek-1SG'

Overall, the complex Alur harmony pattern emerges simply through the interaction of straightforward phonological factors: a foot domain, stronger regressive than progressive harmony, a distance effect, and a re-pairing versus neutrality effect. I formalize this analysis in Optimality Theory and discuss the broader implications.

References

Archangeli, Diana, & Douglas Pulleyblank. 1994. *Grounded Phonology*. Cambridge, Massachusetts: MIT Press.

Kutsch Lojenga, Constance. 1991. Vowel harmony in Alur: On the crossroads of two systems. In *Proceedings of the Third Nilo-Saharan Linguistics Colloquium*, Franz Rottland and Lucia N. Omondi (eds.), 131.141. Hamburg: Dietrich Reimer.

Pulleyblank, Douglas. 2001. Nothing follows: harmony & disharmony. Northwest Linguistics Conference, University of British Columbia.