

## $\mu$ -Suffixes and $\mu$ -Circumfixes in Dinka

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**Background:** The Western Nilotic language Dinka (Andersen 1995) has two types of vowel-length changing morphology. Whereas centrifugal derivation (CF) and 3sg agreement systematically lengthen the vowel of their morphological base by 1  $\mu$  (short/1-moraic vowels get long/2-moraic, long/2-moraic vowels get extra-long/3-moraic), the benefactive derivation (BEN) imposes 2-moraicity on short and long base vowels alike:

(1)

|         | Basic | Centrifugal | 3sg    | Benefactive |        |
|---------|-------|-------------|--------|-------------|--------|
| 1 $\mu$ | wèc   | wé:c        | wè:c   | wé:c        | ‘kick’ |
| 2 $\mu$ | lè:r  | lè:r:r      | lè:r:r | lè:r        | ‘roll’ |

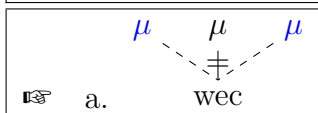
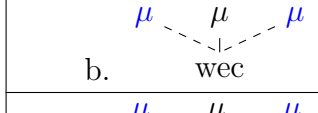
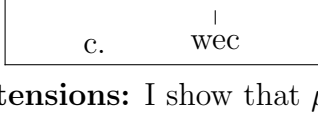
Flack (2007) claims that these data provide definite evidence for morpheme-specific markedness constraints (Pater 2000, 2006). Both patterns derive from  $\mu$ -affixation, but the BEN- $\mu$  triggers a markedness constraint blocking 3-moraic outputs while 3sg/CF don’t.

**Analysis:** I show that all Dinka data follow from a contiguity requirement in a Colored-Containment-theoretic (van Oostendorp 2005) approach to  $\mu$ -affixation (Zimmermann and Trommer 2011) under the assumption that 3sg/CF are moraic suffixes whereas the BEN is a circumfix consisting of a  $\mu$ -prefix and a  $\mu$ -suffix. I adopt the approach to affixation of Bye & Svenonius (2010), where morphemes may consist of different exponents with distinct linearization requirements. BEN consists of one  $\mu$ -exponent (the  $\mu$ -prefix) which is prefixed to the first  $\mu$  of the base and one  $\mu$ -exponent suffixed to the last  $\mu$  of the base (the  $\mu$ -suffix). Crucially, I assume that different exponents of a single morpheme have the same morphological color and are subject to the CONTIGUITY constraint in (2):

- (2) MCONTIGUITY $_{\mu}$ : Assign \* to every phonetic  $\mu$   $M_1$  intervening between two phonetic  $\mu$ ’s  $M_2, M_3$ , and  $\text{Color}(M_2) = \text{Color}(M_3) \neq \text{Color}(M_1)$

If MCONT $_{\mu}$  and  $\mu \rightarrow \bullet$  (requiring that every  $\mu$  dominates some segment underlyingly or in phonetic representation) dominate all relevant faithfulness constraints (3), the association between a base V and its mora(s) necessarily become phonetically invisible because this is the only possibility (apart from line-crossing configurations) to associate both components of the  $\mu$ -circumfix and to satisfy MCONT $_{\mu}$ . On the other hand, 3sg/CF which each consist of a single  $\mu$ -suffix result in simple augmentation of the base V because attaching a single colored  $\mu$  to a V vacuously fulfills MCONT $_{\mu}$ .

(3)

| Input: = (3-c)   | MCONT $_{\mu}$ | $\mu \rightarrow \bullet$ | MAX | DEP |
|--|----------------|---------------------------|-----|-----|
| a.  |                |                           | *   | **  |
| b.  | *!             |                           |     | **  |
| c.  |                | *!*                       |     |     |

**Extensions:** I show that  $\mu$ -affixation in Dinka is subject to a further general restriction which blocks association of a vocalic root node to  $\mu$ ’s of more than two colors, deriving the fact that 3sg morphology may not further augment BEN forms. Finally, I argue that the floating circumfix + contiguity approach extends to other cases of apparent morphologized featural overwriting such as tone-dominant affixes in Hausa (Inkelas and Zoll 2007) and apophony in Berber (Bye 2009).