Linear Disorder in Bantu Reduplication

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Many Bantu languages have a process of (partial) verb stem reduplication, yielding a stem compound (Downing 2000, 2003, Hyman, Inkelas & Sibanda, in press, Inkelas & Zoll 2005) with the meaning of doing the action of the verb here and there or from time to time. A common position for the reduplicative morpheme (RED, underlined) to occur is immediately preceding the morphological stem, as shown in (1a) and (2a). As shown in (1b) and (2b), in some languages RED is misaligned with vowel-initial stems:

(1) Hehe (Odden & Odden 1985)
 (a) *C-initial stems*
    kú-ceénga   kú-<u>ceenga</u>-ceénga   'to build'
    kú-teléka   kú-<u>teleka</u>-teléka   'to cook for'
 (b) *V-initial stems – exfixing*
    kw-íimbíla   <u>kw-íimbila</u>-kw-iimbíla   'to sing'
    kw-áaka   <u>kw-áaka</u>-kw-aáka   'to burn'

(2) Xhosa (Cassimjee 1994)
 (a) *C-initial stems*
    ukú-phátha   ukú-<u>phathá</u>-phatha   'to touch'
    ukú-sebénza   ukú-<u>sebe</u>-sebénza   'to work'
 (b) *V-initial stems – infixing*
    ukw-álátha   ukw-á<u>lathá</u>-latha   'to point at'
    uk-óphúla   uk-ó<u>phulá</u>-phula   'to break'

Indeed, as shown in (3), one can find both infixation and exfixation, as well as onset epenthesis, in the same language with vowel-initial stems, depending on the length of the stem and the nature of the prefixes to the stem:

(3) Natal Zulu (Downing elicitation notes)
(a) *V-initial – exfixing*
    s-ô:se   <u>sosa</u>-s-ô:se   'roast it!'
(b) *V-initial – infixing*
    u-ya-s-ósela   u-ya-s-o<u>selá</u>-sela 'you are roasting for us'
(c) *V-initial – Onset epenthesis*
    úk-ó:sa   úk-<u>ósá</u>-*y*o:sa   'to roast'

Bantu verbal reduplication provides, then, a fertile testing ground for two recent approaches within the OT framework to prosodic morpheme ordering critiqued in Yu (2007). In the first of these, the morpheme readjustment approach (McCarthy & Prince 1995, Lubowicz, in press), the infixing position of RED in (2) and (3) would be accounted for by proposing that it is prefixed to the morphological stem, forced inside vowel-initial stems to satisfy some well-formedness constraint penalizing vowel hiatus between the RED and the stem. In contrast, in the other approach, dubbed the Prosodic Subcategorization approach (Downing

1998, 1999, Yu 2007, McCarthy & Prince 1986), the infixing position of RED can be accounted for by proposing that it is prefixed to a (morpho-) prosodic constituent, in this case, the Prosodic Stem, which must begin with an Onset.

I will argue in this talk that the Prosodic Subcategorization approach provides a better account for the range of misalignments one finds between RED and the morphological stem in Bantu languages than the morphological readjustment approach. First, it satisfies consistency of exponence (Pyle 1972, McCarthy & Prince 1993), as there is no adjustment of morphological affiliation between the input and output of either RED or the surrounding morphemes. Second, this approach correctly predicts that the Prosodic Stem which forms the base for reduplication can be the domain for other phonological processes. In the morphological readjustment approach, this is unexpected, as the string following an infix has no formal status. Finally, this approach allows us to define a constraint grammar which easily accounts for why different strategies can be chosen, both across languages and within the same language, for satisfying a Prosodic Subcategorization constraint on RED's position. Existing morphological readjustment accounts of infixing and exfixing cannot.