Local interactions in the prosodic structure of Ndebele verbs

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**Disyllabic minimality requirement**

1. Minimality effects in the passive stem
   a. \( \{ i - [ phwa ] \} \rightarrow \{ i - [ phiwa ] \} \) ‘it is given’
   b. \( \{ i - [ phekwa ] \} \rightarrow \{ i - [ phekwa ] \} \) ‘it is cooked’

2. Minimality effects in the participle stem
   a. \( \{ e - [ ph ] \} \rightarrow \{ e - [ sipha ] \} \) ‘as he was giving’
   b. \( \{ e - [ pheka ] \} \rightarrow \{ e - [ sipheka ] \} \) ‘as he was cooking’

3. No minimality effects in the active stem
   \( \{ u - [ ph ] \} \rightarrow \{ u - [ phi ] \} \) \( \rightarrow \) monosyllabic stem

**Example derivation: Passive stem**

1. PrCA in passive voice:
   Mood
   \( \{ /phi\{\{m\}\} \} \) MinFoot
   Voice
   Mood
   V
   Voice
   st
   the augmenting allomorph

2. Allomorph selection in Voice
   \( /phi\{\{m\}\} \) MinFoot
   Voice
   Mood
   V
   Voice
   st

3. After adding the exponent of Mood\( \rightarrow \):
   a. \( \text{ph} \{ u, n \} \rightarrow \text{ph}, \text{wa} \)
   b. \( \text{phe}, \text{ku} \rightarrow \text{phec}, \text{kwa} \)

**Minimality as allomorphy ~ Domain variability**

1. No PrCA in active voice:
   Mood
   \( \{ /pha\{\{n\}\} \} \) MinFoot
   Voice
   Mood
   V
   Voice
   st

2. No PrCA in perfect aspect:
   Mood
   \( \{ /phe\{\{n\}\} \} \) MinFoot
   Voice
   Mood
   V
   Voice
   st

**Proposal: Prosodically Conditioned Allomorphy**

1. PrCA domains:
   - T
   - Asp
   - AgrO
   - Voice

2. Minimality domain for allomorphy in Asp
3. Minimality domain for allomorphy in AgrO
4. Minimality domain for allomorphy in Voice

5. Domain variability corollary:
   A constituent X is a minimality domain if its head is subject to PrCA.

**Cyclicity ~ Upward bleeding**

1. Upward bleeding: An augmenting allomorph in a lower head bleeds augmenting allomorphs in higher heads, but not vice versa.

**Against pre-defined minimality domains**

1. A PDomain\( \rightarrow \)MinFoot analysis:
   - Minimal in passive stem: PStem\( \rightarrow \)MinFoot
   - Minimal in participial stem: PMacroStem\( \rightarrow \)MinFoot

2. No global interactions:
   a. \( * a - [ ph ] \{ m \} \rightarrow [ ph ] - [ w ] \)
   b. \( * a - [ ph ] \{ m \} \rightarrow [ phe ] - [ kwa ] \)

3. Resolution of minimality is morpheme-specific
   - Downing: minimality violations trigger epenthesis
   - BUT: There is no single resolution strategy for minimality violations. AgrO: epenthese /u/ Voice\( \rightarrow \)epenthese /s/ Asp\( \rightarrow \)epenthese /m/
   - \( \rightarrow \) Non-uniform resolutions of minimality are unsurprising when viewed as allomorphy: idiosyncrasies of exponents

4. Correlation: minimality domains \( \sim \) morphosyntactic features
   - PDomain\( \rightarrow \)MinFoot-analysis is too strong; PStem must be disyllabic only in the passive, PMacroStem \( \rightarrow \) only in the progressive.
   - Stipulation: which domain is “activated” by which morphosyntactic feature.
   - Under the allomorphy analysis, no such stipulations are needed.

5. Conclusion: (References on the handout)
   - Word-internal minimality effects are Prosodically Conditioned Allomorphy
   - Minimality domains need not be stipulated: they fall out from the syntactic position of the morpheme subject to PrCA.
   - Upward bleeding and domain variability are predicted.

*Prosodic domains fall out directly from the syntax (Wagner 2005, Pak 2008)*
*Terminal nodes are subject to cyclic spell-out (Embick 2010, Svenonius 2012)*
*PrCA: a morpheme is paired with a set of exponents, and phonological computation immediately determines which allomorph is selected.*

**MinFoot ~ STRUCTURE**

- MinFoot: a minimality constraint penalizing forms smaller than a foot
- STRUCTURE: a markedness constraint penalizing segmental complexity

*References on the handout*