Topic: Distinction between dominant (i.e. fully neutralizing) vs. non-dominant grammatical tone

Dominant tone asymmetry: Dominant tone is only inwards, i.e. it can only neutralize morphs realizing structure more deeply embedded within morphosyntactic hierarchical structure

Prima facie cases of outward dominance are always bounded (affecting only a single tone-bearing unit, or morph) – i.e. outward tone neutralization is myopic

Roadmap:

• §1 Dominant vs. non-dominant grammatical tone
• §2 Dominant tone is inward only
• §3 Cases of outward neutralization
• §4 Ramifications for theory
• §5 Summary

1 Dominant vs. non-dominant grammatical tone

GRAMMATICAL TONE

• (i) a non-general tone alternation triggered in a restricted context (or class of contexts), which
• (ii) targets a non-restricted class of morphemes, words, or constructions, and as such
• (iii) functions to signal linguistic meaning and/or linguistic structure

NON-DOMINANT GRAMMATICAL TONE

• Simple concatenation of grammatical tones with a target’s tones (e.g. simple floating tones)
• Replacement, deletion, or non-application of grammatical tone or target’s tone is strictly due to general phonological grammar (i.e. phonological markedness)

DOMINANT GRAMMATICAL TONE (term from accent/stress literature, e.g. Kiparsky 1973…)

• REPLACIVE subtype: The automatic replacement/overwriting of the target’s tones, revalued by a grammatical tone pattern, without regard to phonological markedness
• SUBTRACTIVE subtype: The automatic deletion of the target’s tones, without revaluation by a grammatical tone pattern (and also without regard to phonological markedness)

Kalabari [i j n] (Ijoid: Nigeria – Harry & Hyman 2014): Exhibits both types

<table>
<thead>
<tr>
<th>Dominant grammatical tone</th>
<th>Non-dominant grammatical tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schema</td>
<td>N ASSOCIATIVE</td>
</tr>
<tr>
<td>a. H.H ⇒ H.L</td>
<td>námá ⇒ túbó hámá</td>
</tr>
<tr>
<td>b. L.L ⇒ H.L</td>
<td>pûlò</td>
</tr>
<tr>
<td>c. H.L ⇒ H.L</td>
<td>bélè ⇒ túbó bélè</td>
</tr>
<tr>
<td>d. L.H ⇒ H.L</td>
<td>gârî ⇒ túbó gârî</td>
</tr>
<tr>
<td>e. H.'H ⇒ H.L</td>
<td>bârâ ⇒ túbó bárâ</td>
</tr>
</tbody>
</table>
The DOMINANT TONE ASYMMETRY (Rolle 2018, building on much previous literature)²

- Dominant tone only targets material which is hierarchically lower, i.e. morphologically inward / syntactically downward
- Non-dominant tone can target in all directions, i.e. morphologically inward or outward / syntactically downward or upward

Schema of the dominant tone asymmetry

<table>
<thead>
<tr>
<th>Type</th>
<th>Grammatical context (target in bold)</th>
<th>Non-dominant</th>
<th>Dominant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inward</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Affixation</td>
<td>AFFIX ←Ⓣ [ROOT]</td>
<td>✓ Yes</td>
<td>✓ Yes</td>
</tr>
<tr>
<td></td>
<td>AFFIXOUT ←Ⓣ [AFFIXIN [ROOT]]</td>
<td>✓ Yes</td>
<td>✓ Yes</td>
</tr>
<tr>
<td>b. Compound</td>
<td>NOUN ←Ⓣ [NOUNHEAD]</td>
<td>✓ Yes</td>
<td>✓ Yes</td>
</tr>
<tr>
<td>c. Modification</td>
<td>MOD ←Ⓣ [NOUN]</td>
<td>✓ Yes</td>
<td>✓ Yes</td>
</tr>
<tr>
<td>d. Verb phrase</td>
<td>OBJECT ←Ⓣ [VERB]</td>
<td>✓ Yes</td>
<td>✓ Yes</td>
</tr>
<tr>
<td>Outward</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Affixation</td>
<td>AFFIX ←Ⓣ [ROOT]</td>
<td>✓ Yes</td>
<td>* No</td>
</tr>
<tr>
<td>f. Compound</td>
<td>NOUN ←Ⓣ [NOUNHEAD]</td>
<td>✓ Yes</td>
<td>* No</td>
</tr>
<tr>
<td>g. Modification</td>
<td>MOD ←Ⓣ [NOUN]</td>
<td>✓ Yes</td>
<td>* No</td>
</tr>
<tr>
<td>h. Verb phrase</td>
<td>OBJECT ←Ⓣ [VERB]</td>
<td>✓ Yes</td>
<td>* No</td>
</tr>
</tbody>
</table>

- The abstract Ⓡ stands for the starting point of the relevant grammatical tone pattern
- Neutral between Ⓡ as part of the underlying representation of a triggering morpheme (i.e. AUXILIARY GRAMMATICAL TONE) vs. Ⓡ as the independent realization of some abstract morpheme between the trigger and target (i.e. AUTONOMOUS GRAMMATICAL TONE)
2 Dominant tone is inward only

2.1 Izon noun phrases

(12) Izon [iːjɛ] (Ijoid: Nigeria – Rolle 2021) – Pre-nominal modifiers neutralize the tones inward, e.g. possessive pronoun inɛƗ H ‘my’ whose floating tones (circled) associate to the noun

- /inɛƗ H námá/ → inɛ nàmá ‘my meat’
- /inɛƗ H bùrù/ → inɛ bùrú ‘my yam’
- /inɛƗ H inki/ → inɛ inkí ‘my ink’
- /inɛƗ H ingó/ → inɛ ingó ‘my fish trap’

(13) Izon – Any modifiers between the outermost modifier and the noun are replaced

- inɛƗ H gbẹẹkì bùrù → inɛ gbẹẹkì bùrú ‘my short yam’
- inɛƗ H tánà dìbá bùrù → inɛ tánà díbá bùrú ‘my three big yams’
- inɛƗ H tánà dìbá kúlúkúlú bùrù → inɛ tánà díbá kúlúkúlú bùrú ‘my three big black yams’

(14) Izon – In contrast, post-nominal modifiers are neither targets nor triggers of such tone changes

- Pre-N: Mod1 Mod2 Noun
  inɛƗ H tánà bùrù → inɛ tánà bùrú ‘my three yams’

- Post-N: Mod1 Noun Mod2
  inɛƗ H bùrù bì → inɛ bùrú bì (Cf. *inɛ bùrù bì)

(15) Post-nominal modifiers include definite/specificity markers (bì DEF, mọ DEF.PL, Ɨ SPEC) and quantifiers (bèì ‘some’, mọ sè ‘all the’), which cross-linguistically appear in outermost positions
2.2 Orungu clauses

(16) Orungu dialect of Myeni [mye] (Bantu: Gabon – Ambouroue 2007; Maniacky & Ambouroue 2014)

- Imperative: Non-dominant high
  ṛ́ɣ-śá- hàwàn áŋkà yó ɪŋkòlò → ṛ́ɣ hàwán áŋkà yó ɪŋkòlò
  ‘leave the children alone tonight!’ (Maniacky & Ambouroue 2014:252)

- Negative imperative: Dominant high showing clause-level unbounded spread
  à- ṛ́ɣ- áwàná áŋkà yó ɪŋkòlò → à- ṛ́ɣ áwán áŋkà yó ɪŋkòlò
  ‘don’t leave the children alone tonight!’ (Maniacky & Ambouroue 2014:257)

- Negative present: Dominant low showing clause-level unbounded spread
  3S-T-NEG-leave-FV children alone tonight
  ‘s/he does not leave the children alone tonight’ (Maniacky & Ambouroue 2014:257)

(17) Orungu – Dominant tone cannot cross a clause boundary rightward

- à-é-ř̀-yàmb-á ōwènjá nà ɪmpùndù, ōŋwáná wíñó
  3S-T-NEG-talk-FV all day long child this
  → [ę́-é-ř̀-kàmb-á ōwènjà nà ɪmpùndù, ōŋwáná wíñó]
  ‘he does not talk all day long, this child’ (Maniacky & Ambouroue 2014:256)

(18) Orungu – Dominant tone is restricted by the syntactic structure which fed it

- Dominant tone from a negative head (structurally high) can neutralize tone of inner suffixes, verb roots, objects, and adverbs
- Dominant tone cannot spread rightward to (structurally higher) right-dislocated phrases
- Dominant tone cannot spread leftward to (structurally higher) outer prefixes or the subject

3 Cases of outward neutralization

3.1 Inner tense/aspect/mood/polarity (TAMP) to outer agreement

(19) Structure: AGR [ TAMP [ ROOT ] ]

- Tone of outwardly-located subject AGR prefix is neutralized in the context of certain inwardly-located tense/aspect/mood/polarity (TAMP) marking
- Odden & Bickmore (2014:8,fn3): “In many Bantu languages, there is a well-known alternation in the tone of subject prefixes where subordinate clause forms systematically neutralize the H/L distinction in favor of H”
- Examples include Cameroonian Bantu languages Eton [eto] (van de Velde 2008) and Bakweri [bri] (Marlo & Odden 2007, 2014)

(20) However, the most relevant cases are ones where neutralization goes to the dominant value (H) in one context, but to the non-dominant value (L, or Ø) in another context

- Liko [lik] (Bantu: Democratic Republic of the Congo – de Wit 2015)
- Gà [gaa] (Kwa: Ghana – Paster 2000, 2003; Kropp Dakubu 2008; Zimmermann 2022)
(21) Cilungu – H/Ø tone contrast with subject AGR prefixes (e.g. PRES. PROG. ku-...-a) (Bickmore 2007)

<table>
<thead>
<tr>
<th>AGR Form</th>
<th>‘... be falling’</th>
<th>Surface</th>
<th>AGR Form</th>
<th>‘... be falling’</th>
<th>Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>1S</td>
<td>í-ku-pón-a</td>
<td>‘I ...’</td>
<td>[nkúpóná]</td>
<td>CL7</td>
<td>cf-ku-pón-a</td>
</tr>
<tr>
<td>2S</td>
<td>ú-ku-pón-a</td>
<td>‘you ...’</td>
<td>[úkúpóná]</td>
<td>CL8</td>
<td>ví-ku-pón-a</td>
</tr>
<tr>
<td>1P</td>
<td>tú-ku-pón-a</td>
<td>‘we ...’</td>
<td>[túkúpóná]</td>
<td>CL9</td>
<td>i-ku-pón-a</td>
</tr>
<tr>
<td>CL1</td>
<td>a-ku-pón-a</td>
<td>‘he/she ...’</td>
<td>[ákúpóná]</td>
<td>CL11</td>
<td>lú-ku-pón-a</td>
</tr>
<tr>
<td>CL2</td>
<td>yá-ku-pón-a</td>
<td>‘they ...’</td>
<td>[yákúpóná]</td>
<td>CL12</td>
<td>ká-ku-pón-a</td>
</tr>
<tr>
<td>CL3</td>
<td>ú-ku-pón-a</td>
<td>‘it (CL3) ...’</td>
<td>[úkúpóná]</td>
<td>CL13</td>
<td>tú-ku-pón-a</td>
</tr>
<tr>
<td>CL4</td>
<td>i-ku-pón-a</td>
<td>‘they (CL4) ...’</td>
<td>[íkúpóná]</td>
<td>CL14</td>
<td>ú-ku-pón-a</td>
</tr>
<tr>
<td>CL5</td>
<td>If-ku-pón-a</td>
<td>‘it (CL5) ...’</td>
<td>[Ifkúpóná]</td>
<td>CL15</td>
<td>kú-ku-pón-a</td>
</tr>
<tr>
<td>CL6</td>
<td>yá-ku-pón-a</td>
<td>‘they (CL6) ...’</td>
<td>[yákúpóná]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(22) Cilungu – AGR H/Ø is neutralized to H in INCEPTIVE (INCP)

- yá-ɓaa-sukilil-a → yá-á-sukilil-à
  3P-INCP-accompany-FV ‘and then they started to accompany’ (B14:42)
- a-ɓaa-sukilil-a → á-á-sukilil-à
  3S-INCP-accompany-FV ‘and then he/she started to accompany’ (B07)

(23) Cilungu – AGR H/Ø is neutralized to H in SUBJUNCTIVE (SBJV)

- tú-ɓ-sukilil-é → tú-sukilil-é
  1P-SBJV-accompany-FV ‘that we accompany’ (B07)
- a-ɓ-sukilil-é → á-sukilil-é
  3S-SBJV-accompany-FV ‘that he/she accompany’ (B07)

(24) Cilungu – AGR H/Ø is neutralized to L in NEGATIVE (NEG)

- tú-ɓ-tá-páapaatik-il-é → tú-tá-páapaat-ïlk-é
  1P-NEG-flatten-PERF-FV ‘we haven’t flattened’ (B14:50)
- a-ɓ-tá-páapaatik-il-é → á-tá-páapaat-ïlk-é
  3S-NEG-flatten-PERF-FV ‘he/she hasn’t flattened’ (B14:50)

(25) Cilungu – AGR H/Ø is neutralized to L in POTENTIAL (POT)

- yá-ɓ-ngá-sópolol-á → yàá-ngá-sópolol-à
  3P-POT-unite-FV ‘they can untie’ (B14:44)
- a-ɓ-ngá-sópolol-á → áa-ngá-sópolol-á
  3S-POT-unite-FV ‘he/she can untie’ (B07)

(26) Cilungu – However, no overwriting of anything other than AGR prefixes (Cf. Orungu above)

- f-ɓ-ɓ-ngá-aa-zíik-a → f-ɓ-ngá-á-zíik-a
  REL.Cl8-Cl8-POT-PERS-bury-FV ‘those (CL8) who can keep burying’ (B07)
- á-la-é tú-ɓ-tá-á-lim-á → á-l-é tú-tá-á-lim-á
  AFX-COP-FV 1P-NEG-REM-farm-FV ‘we will not have farmed’ (B07)
- á-máa-la-a tú-ɓaa-lim-á → á-máa-l-à tw-áá-lim-á
  AFX-IMM-COP-FV 1P-INC-PERT-FV ‘if we do farm’ (B07)
- tú-ɓ-tá-ngá-zíik-á → tú-táa-ngá-zíik-á
  1P-NEG-POT-bury-FV ‘they cannot bury’ (B07)
3.2 Inner modified to outer modifier

(27) Dominant grammatical tone plays a prominent role in the Mande family where it is referred to as ‘tonal compactness’ (la compacité tonale – Green 2018; Green & Konoshenko 2022; inter alia)


<table>
<thead>
<tr>
<th>N2 (head)</th>
<th>N1 (mod)</th>
<th>/LH/</th>
<th>/HL/</th>
<th>/HH/</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘thing’</td>
<td>(e.g. /sèé/)</td>
<td>dégé séé</td>
<td>yéhé xɔri</td>
<td>tʊɡɪ yéé</td>
</tr>
<tr>
<td>‘bone, pit’</td>
<td>(e.g. /xɔrì/)</td>
<td>dɔxɔ séé</td>
<td>gɛmɛ xɔrì</td>
<td>mǎålɛ kábɛ</td>
</tr>
<tr>
<td>‘food’</td>
<td>(e.g. /gɛmɛ/)</td>
<td>‘fish’</td>
<td>‘fish bone’</td>
<td>‘palm wine’</td>
</tr>
<tr>
<td>‘pebble’</td>
<td>(e.g. /gɛmɛ/)</td>
<td>‘food’</td>
<td>‘fish bone’</td>
<td>‘palm wine’</td>
</tr>
<tr>
<td>‘rice harvester’</td>
<td>(e.g. /gɛmɛ/)</td>
<td>‘food’</td>
<td>‘fish bone’</td>
<td>‘palm wine’</td>
</tr>
<tr>
<td>‘ambrosia’</td>
<td>(e.g. /gɛmɛ/)</td>
<td>‘food’</td>
<td>‘fish bone’</td>
<td>‘palm wine’</td>
</tr>
</tbody>
</table>

(29) Susu – Tone also neutralized of outward conjoint adjectives (Green, Anderson, & Obeng 2013:76-77)

<table>
<thead>
<tr>
<th>Noun</th>
<th>Adjective</th>
<th>/dí/</th>
<th>/lámɔáá/</th>
<th>/yɔrɛ/</th>
<th>/gbégbɛ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘little’</td>
<td>/bɔlɛ dì/</td>
<td>tülü lámmàá</td>
<td>bɔlɛ yɔrɛ</td>
<td>kábɛ yɛ́ gbɛgbɛ</td>
<td></td>
</tr>
<tr>
<td>‘small’</td>
<td>/kùlɛ dì/</td>
<td>gìnɛ lámmàá</td>
<td>kùlɛ yɔrɛ</td>
<td>xámɛ yɛ́ gbɛgbɛ</td>
<td></td>
</tr>
<tr>
<td>‘tiny’</td>
<td>/sɛ́gbɔ dì/</td>
<td>kɛ́rɪ lámmàá</td>
<td>sɛ́gbɔ yɔrɛ</td>
<td>sflɔ yɛ́ gbɛgbɛ</td>
<td></td>
</tr>
<tr>
<td>‘many’</td>
<td>/sɛ́gbɔ dì/</td>
<td>kɛ́rɪ lámmàá</td>
<td>sɛ́gbɔ yɔrɛ</td>
<td>sflɔ yɛ́ gbɛgbɛ</td>
<td></td>
</tr>
</tbody>
</table>

(30) Susu – Cf. however, lack of neutralizing with disjoint adjectives (Green, Anderson, & Obeng 2013:75)

<table>
<thead>
<tr>
<th>Noun</th>
<th>Adjective</th>
<th>/gbó/</th>
<th>/xúrì/</th>
<th>/bɛlɛbɛlɛ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘many’</td>
<td>/pɛ́nɛ gbɔ/</td>
<td>bɔlɛ xúrì</td>
<td>tülü bɛlɛbɛlɛ</td>
<td></td>
</tr>
<tr>
<td>‘small’</td>
<td>/kùlɛ gbɔ yɛ́tɛ xúrì/</td>
<td>gìnɛ bɛlɛbɛlɛ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘big’</td>
<td>/sɛ́gbɔ sflɔ xúrì/</td>
<td>kɛ́rɪ bɛlɛbɛlɛ</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(31) Susu – Schema of tonal behavior of conjoint vs. disjoint adjectives

<table>
<thead>
<tr>
<th>NOUN</th>
<th>ADJ</th>
<th>Conjoint adjectives</th>
<th>Disjoint adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>/HH/</td>
<td>/HL/</td>
<td>/LH/</td>
<td>/HL/</td>
</tr>
<tr>
<td>HH</td>
<td>LL</td>
<td>HH</td>
<td>LL</td>
</tr>
<tr>
<td>HH</td>
<td>LL</td>
<td>HH</td>
<td>LL</td>
</tr>
<tr>
<td>HH</td>
<td>LL</td>
<td>HH</td>
<td>LL</td>
</tr>
</tbody>
</table>
(32) Susu – Other noun phrase structures also do not show any neutralization

- Inalienable possession  
  [ń bààbá]  ‘my father’  
  (Touré 2004:26)

- Inalienable possession  
  [fààtù nándén]  ‘Fatou’s stepmother’  
  (Touré 2004:27)

- Alienable possession  
  [ń má dònmmáá]  ‘my shirt’  
  (Touré 2004:25)

- Alienable possession  
  [wôtôô xà kàsáárèè]  ‘the car’s accidents’  
  (Touré 2004:26)

- Numerals  
  [kêmé kérén]  ‘one hundred’  
  (Touré 2004:55)

- Numerals  
  [wùlù kérén]  ‘one thousand’  
  (Touré 2004:55)

- Numerals  
  [kêmé firín]  ‘two hundred’  
  (Touré 2004:55)

- Numerals  
  [wùlù firín]  ‘two thousand’  
  (Touré 2004:55)

- Numerals  
  [kêmé sàxàn]  ‘three hundred’  
  (Touré 2004:55)

- Numerals  
  [kêmé náání]  ‘four hundred’  
  (Touré 2004:55)

- Other modifiers  
  [néé yóó nè]  ‘each year’  
  (Touré 1994:132)

- Other modifiers  
  [bànxí yóó]  ‘no house’  
  (Touré 2004:47)

- Other modifiers  
  [júbà ǹdé]  ‘another pouch’  
  (Touré 2004:39)

- Other modifiers  
  [wôtôô bîrìn]  ‘a total car, excellent car’  
  (Touré 2004:46)

- Other modifiers  
  [fààtù yêtê]  ‘Fatou herself’  
  (Touré 2004:41)

- Other modifiers  
  [dònmmáá yérí]  ‘how many shirts’  
  (Touré 2004:101)

(33) Response 1 to the conjoint adjectives in [NOUN ADJECTIVE] constructions

- Conjoint adjective is head (e.g. dí ‘little’ as diminutive head; gbégbé ‘many’ as ‘a lot of’)

- Fits in with proposals that (certain) adjectives have head properties (Hyman, Jenks, & Makasso 2013 for Basáá [bas]; Branan 2023 for Makonde [kde]; literature on ‘dependency reversals’ generally3)

(34) Support in other Mande languages

- Mende [mën] (Innes 1961, 1967; inter alia): Phrases like nyá pó nyàndé ‘pretty girl’ with tonal neutralization of the adjective /nyàndé/ can be equally translated as ‘girl prettiness’ or ‘girlish beauty’, “for example in describing a man who is handsome in a somewhat effeminate way” (Innes 1961:103-105)

- Bambara [bâm] (Bird 1966; Courtenay 1974; Diakite 2018; inter alia): Glosses of bilé as ‘red’ or ‘redness’, kôr’s as ‘old’ or ‘old age’, finmán as ‘black’ or ‘black one’, etc.

(35) Response 2: Conjoint adjectives are true counter-examples

- Dom. tone asymmetry does not hold in innermost kernel next to lexical head, where adjectives canonically appear in Mande (Mountford 1983:24), and cross-linguistically (Greenberg 1963; Abels & Neeleman 2012; inter alia)

3.3 Empirical prediction: A counter-example like Faux-Chichewa below doesn’t exist

(36) Zimmermann (2022): “At least the examples of anticyclic [mutation] I am aware of are always local in involving adjacent morphemes”

(37) What would a great example of outward dominance look like?

- An inner affix assigns a dominant tone pattern to the entire word, and applies not just to immediately adjacent morphs (or one class of morphs)

- Scoping over and neutralizing inner root tone, outer affixal tone, and outer grammatical tone
(38) Chichewa [nya]: Contrast between toneless (Ø) and high roots (H) (Bantu: Malawi – Downing & Mtenje 2017)
• Ø yang’ an-a → yang’an-a [yàng’ àn-a] ‘look!’
• H namiz[H]-a → namiz[a] [nàmìz-a] ‘deceive!’

(39) Chichewa – Root contrast neutralized in context of intensive suffix -its ‘a lot’
• Ø yang’an-its[H]-a → yang’an-its[a] ‘look a lot!’
• H namiz[H]-its[H]-a → namiz-its[a] ‘deceive a lot!’

(40) Chichewa – TAMP tone assigned idiosyncratically to initial, penult, or final mora of stem
• Ø ndi-ku[H]-yang’an-a → ndi-ku[yàng’an-a] ‘I am looking at’
• H a-ku[H]-namiz[H]-a → a-ku[nàmìz-a] ‘they are deceiving’

(41) The tone of -its does not neutralize outer TAMP tone (whether underlying or grammatical)
• -its[H] a-ku[H]-namiz[H]-its[H]-a → a-ku[nàmìz-its-a] ‘…deceiving a lot’

(42) Faux-Chichewa (not attested) – OUTWARD DOMINANCE from intensive -its neutralizing all tone

<table>
<thead>
<tr>
<th>GT</th>
<th>TAMP</th>
<th>Ø root</th>
<th>H root</th>
<th>Cf. Faux-Chichewa: Neutralizing intensive forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Ø IMPERATIVE</td>
<td>yang’an-a</td>
<td>namiz[a]</td>
<td>namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>PERFORMATIVE</td>
<td>ndi-a-yang’an-a</td>
<td>ndi-a-namiz[a]</td>
<td>ndi-a-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>PERMISSIVE</td>
<td>ndi-nga-yang’an-a</td>
<td>ndi-nga-namiz[a]</td>
<td>ndi-nga-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>b. Ø NEAR FUTURE</td>
<td>ndi-yang’an-a</td>
<td>ndi-namiz[a]</td>
<td>ndi-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>DISTANT FUTURE</td>
<td>ndi-dzá-yang’an-a</td>
<td>ndi-dzá-namiz[a]</td>
<td>ndi-dzá-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>SIMPLE PAST</td>
<td>ndi-ná-yang’an-a</td>
<td>ndi-ná-namiz[a]</td>
<td>ndi-ná-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>c. init INFINITE</td>
<td>ku-yang’an-a</td>
<td>ku-namiz[a]</td>
<td>ku-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>PRESENT PROG.</td>
<td>ndi-ku-yang’an-a</td>
<td>ndi-ku-namiz[a]</td>
<td>ndi-ku-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>RECENT PAST</td>
<td>ndi-na-yang’an-a</td>
<td>ndi-na-namiz[a]</td>
<td>ndi-na-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>PAST HAB. (a)</td>
<td>ndi-má-yang’an-a</td>
<td>ndi-má-namiz[a]</td>
<td>ndi-má-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>SEQ PERFECT</td>
<td>ndi-á-yang’an-a</td>
<td>ndi-á-namiz[a]</td>
<td>ndi-á-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>d. fin SUBJUNCTIVE</td>
<td>ndi-yang’an-a</td>
<td>ndi-namiz[a]</td>
<td>ndi-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>e. pen PAST HAB. (b)</td>
<td>ndi-nká-yang’an-a</td>
<td>ndi-nká-namiz[a]</td>
<td>ndi-nká-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>CONTINUOUS</td>
<td>ndi-báa-yang’an-a</td>
<td>ndi-báa-namiz[a]</td>
<td>ndi-báa-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>NECESSITIVE</td>
<td>ndi-dzí-yang’an-a</td>
<td>ndi-dzí-namiz[a]</td>
<td>ndi-dzí-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>REMOTE PAST</td>
<td>ndi-náa-yang’an-a</td>
<td>ndi-náa-namiz[a]</td>
<td>ndi-náa-namiz-its[a]</td>
<td></td>
</tr>
<tr>
<td>PRESENT HAB.</td>
<td>ndi-má-yang’an-a</td>
<td>ndi-má-namiz[a]</td>
<td>ndi-má-namiz-its[a]</td>
<td></td>
</tr>
</tbody>
</table>

4 Ramifications for theory

(43) Recap: Tone neutralization profiles based on directionality properties

<table>
<thead>
<tr>
<th>Property</th>
<th>INWARD</th>
<th>OUTWARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Boundedness</td>
<td>Bounded or unbounded (i.e. dominant)</td>
<td>Bounded (e.g. can affect all inward morphs)</td>
</tr>
<tr>
<td>b. Restrictedness</td>
<td>Not restricted to one morph class</td>
<td>Can be restricted to one class (i.e. anything inward is subject)</td>
</tr>
<tr>
<td>c. Motivation</td>
<td>Not due to phonological markedness</td>
<td>May involve markedness</td>
</tr>
<tr>
<td>d. Interpretation</td>
<td>Floating tone</td>
<td>Floating tone</td>
</tr>
</tbody>
</table>
How do we guarantee the myopia of outward tone neutralization?

Part 1: The tone
- All grammatical tone is substantive, i.e. involves addition of phonological structure like floating tone
- Neutralization inward or outward may result from phonological markedness (i.e. the restrictions a language places on two different tones being placed on a single host)

Part 2: The neutralization
- Unbounded neutralization with dominant grammatical tone is not due to phonological markedness, but rather comes from a SUBTRACTIVE MORPHOLOGY mechanism
- We can call this morpho-phonological mechanism /NEUT/ as a placeholder
- The fact that /NEUT/ only affects inward material can be captured if it is a CYCLIC EXPONENT which, when it is inserted in the structure, automatically triggers phonological evaluation

/NEUT/ as constraint ranking (Cophonology)

/NEUT/ as a defective tonal root node (e.g. Phantom (virtual) Structure – Rolle & Lionnet 2020)

Theoretical challenge: Directly connect the special representation (or constraint ranking) of /NEUT/ with the requirement that it automatically trigger phonological evaluation, a connection without which outward dominance would be possible to derive

Summary

Contrast between dominant (i.e. fully neutralizing) vs. non-dominant grammatical tone

Dominant tone asymmetry: Dominant tone is only inwards, i.e. it can only neutralize morphs realizing structure more deeply embedded within morphosyntactic hierarchical structure

Prima facie cases of outward dominance are always bounded (affecting only a single tone-bearing unit, or morph) – i.e. outward tone neutralization is myopic

Are myopia effects unified, or unifiable?
- The directionality restriction of dominant grammatical tone does not necessarily entail that other components of grammar (e.g. syntax, morphology) are restricted in the same way, though this may indeed be the case

References
- See my website (www.nicholasrolle.com)
7 Appendix A: More outward neutralization

(54) In addition to Liko and Gã below, other cases of outward neutralization (and potential counter-examples of the dominant tone asymmetry) include:

- Shanghainese [wuu] (Sinitic: China) – Tone of lexical root replaces tone of functional enclitics (Chen 2000; Zhang & Meng 2016; inter alia; Rolle 2018:100-102 for discussion)
- Jalkunan [bxl] (Mande: Burkina Faso) – Floating tone associated with certain lexical roots replaces tone of modifiers in noun phrases (Heath 2017a; Rolle 2018:237-244 for discussion)
- Nobii [fia] (Nubian: Egypt) – In a noun compound, the modifying noun’s tones are neutralized while the head noun’s tones are preserved (Werner 1987)
- Tiranige [tde] (Dogon: Mali) – In certain [NOUN MODIFIER] constructions, the tone of the modifier is neutralized (Heath 2017b)
- Shimakonde [kde] (Bantu: Mozambique) – In [NP AND NP] coordination, adjectives may replace tone of noun it modifies as well that of noun it does not modify (Liphola 2005; Rolle & Hyman 2019)

7.1 Gã

(55) Gã – Prefixal TAMP morphology

- /mí-ŋ-chà/ → [mí-ң-chá]
  1s-PROG-dig ‘I am digging’ (Paster 2000:59)
- /mí-á-chà/ → [m-á-chá]
  1s-FUT-dig ‘I will dig’ (Paster 2000:65)
- /mí-ŋ-chà/ → [mí-chá]
  1s-PERF-dig ‘I have dug’ (Paster 2000:7)

(56) Gã – Suffixal TAMP morphology

- /mí-ŋ-nù-ɔ/ → [mí-nù-ɔ]
  1s-HAB-drink-HAB ‘I drink’ (HAB.) (Paster 2000:61)
- /mí-ŋ-chà-ŋ-kò/ → [mí-ң-chá-kɔ]
  1s-PERF-dig-NEG-NEG.PERF ‘I have not dug’ (Paster 2000:7)
- /mí-ŋ-chà-ŋ-ŋ/ → [mí-ң-chá-ң]
  1s-NEG-dig-NEG-NEG.FUT ‘I will not dig’ (Paster 2000:69)

(57) Gã – Tone neutralization of outer subject AGR prefix by inner TAMP tone (Paster 2003:28-30)

<table>
<thead>
<tr>
<th>Habitual</th>
<th>Subordinate</th>
<th>Simple past (Aorist)</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘X sing (HAB.)’</td>
<td>‘that X sing’</td>
<td>‘X cultivated’</td>
</tr>
<tr>
<td>1s H mĩ-</td>
<td>mĩ-ŋ-lá-ɔ</td>
<td>mĩ-ң-lá → mĩ-lá → mĩ-dũ → mĩ-ŋ-dũ</td>
</tr>
<tr>
<td>2s ɔ o-</td>
<td>o-ŋ-lá-ɔ</td>
<td>o-ŋ-lá → o-lá → o-ŋ-dũ → o-dũ</td>
</tr>
<tr>
<td>3s ɔ e-</td>
<td>e-ŋ-lá-ɔ</td>
<td>e-ŋ-lá → e-lá → e-ŋ-dũ → e-dũ</td>
</tr>
<tr>
<td>1p ɔ wo-</td>
<td>wo-ŋ-lá-ɔ</td>
<td>wo-ŋ-lá → wo-lá → wo-ŋ-dũ → wo-dũ</td>
</tr>
<tr>
<td>2p ɔ nyɛ-</td>
<td>nyɛ-ŋ-lá-ɔ</td>
<td>nyɛ-ŋ-lá → nyɛ-lá → nyɛ-ŋ-dũ → nyɛ-dũ</td>
</tr>
</tbody>
</table>
7.2 Liko

7.2.1 Underlying tone contrast on subject AGR prefixes

(60) Liko – Underlying tone contrast on subject AGR prefixes (De Wit 2015:297)

<table>
<thead>
<tr>
<th>AGR</th>
<th>TAMP</th>
<th>Verb structure</th>
<th>Ø /na-/ 1s</th>
<th>H /bá-/ 3p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>anterior L-/H- L-H</td>
<td>nó-pík-í</td>
<td>bó-pík-í</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inchoative L-/H- L-L-L</td>
<td>ná-ná-pík-á</td>
<td>bá-na-pík-á</td>
</tr>
<tr>
<td></td>
<td></td>
<td>past (spec.) H- H-H</td>
<td>ná-pík-á</td>
<td>bá-pík-í</td>
</tr>
<tr>
<td></td>
<td></td>
<td>subjunctive H- H-L-L</td>
<td>ná-pík-í</td>
<td>bá-pík-í</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neg. future H- H-L-L=L</td>
<td>ná-ká-pík-í=gò</td>
<td>bá-ká-pík-í=gò</td>
</tr>
<tr>
<td></td>
<td></td>
<td>past H- H-L-L=L</td>
<td>ná-ká-pík-á=gò</td>
<td>bá-ká-pík-á=gò</td>
</tr>
<tr>
<td>c. L</td>
<td>Aff.</td>
<td>L- L-L-H</td>
<td>ná-ká-pík-á</td>
<td>bá-ká-pík-á</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neg. subjunctive L- L-L-L H=L</td>
<td>ná-kó-pík-ô-ní ‘tɔ=˘gò</td>
<td>bá-kó-pík-ô-ní ‘tɔ=˘gò</td>
</tr>
</tbody>
</table>

7.2.2 Contexts which preserve vs. neutralize tone on subject AGR

(61) Liko – Contexts which preserve vs. neutralize tone on subject AGR (De Wit 2015:313-314 – /pik-/ ‘sway’)

8 Appendix B: Outward-looking phonologically-conditioned suppletion in Cilungu

8.1 Rolle & Bickmore (2022): Outward-sensitivity in phonologically-conditioned suppletion (rare!)

(62) The grammatical tone suppletive allomorph of inner perfect (aspect) and recent past (tense) is sensitive to the tone value of the outer subject AGR prefix (agreement)

(63) Allomorphy with recent past: á-cf...il-e co-occurs with either grammatical tone H² or H⁴

- High-toned subject agreement marker selects tense tone H²
  
  `tí-á-ci-sòpolol-il-e‘ we recently untied’

- Toneless subject agreement marker selects tense tone H²
  
  `ú-á-ci-sòpolol-il-e‘ he/she recently untied’

(64) However, this suppletive allomorphy requires morphosyntactic locality

- Allomorphy is blocked when negation syntactically intervenes between the trigger (agreement) and the target (tense/aspect)

- Literature suggests a syntactic hierarchy: AGR > NEG > TENSE > ASPECT

8.2 Myopia? Outward-looking phonologically conditioned allomorphy requires syntactic adjacency
9 Endnotes


3 Van de Velde 2012 cites a similar example from Eton (van de Velde 2008), and ties this to the typological literature such as Malchukov’s 2000 ‘dependency reversal in noun-attribute constructions’ and Ross’ 1998 ‘possessive-like attribute constructions’.