MANDE TONAL RECONSTRUCTION:
MAKING SENSE OF TONAL ASYMMETRIES
BETWEEN WORD CLASSES AND WORD SHAPES

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Asymmetries in the tone patterns available for words of different categories and shapes

- light (single TBU: monomoraic, monosyllabic) stems vs. heavy stems
- verbs vs. nouns vs. other

These asymmetries are usually in terms of subset inclusion relations (i.e. restrictions on the tone patterns available) rather than set intersection or set disjunction.

- light (single TBU: monomoraic, monosyllabic) stems vs. heavy stems
- verbs vs. nouns vs. other
- all L pattern
Guinean Kpelle
(WM; Konoshenko 2018)

- **TBU = μ**
- **2 tone levels:** L, H
- **underived stems** distributed among 6 tone classes: H, L^H, HL, LHL, L, LH
- **1μ stems** can be H, L or L^H.
  - e.g. monomoraic **functional morphemes** functional morphemes: ɓé ‘here’, ɓà ‘on’, dî^H 3SG.BASE
- **1μ verbs & nouns** can be only H, e.g. yá ‘(n) water’ and kó ‘(v) fight’
Soninke
(WM; Creissels & Urmanchieva 2018)

- TBU = \( \sigma \)
- 2 tone levels: L, H
- 1\( \sigma \) stems can be H, L and \( ^LH \), but not HL (or LH).
- 1\( \sigma \) verbs & nouns can be only H or \( ^LH \)
- more generally, verbs, nouns & adjectives must have at least one H
Dzuun (WM; Solomiac 2007)

- **TBU = μ**
- **3 tone levels**: L, M, H
- **1μ stems** can be H, M, M^H, L and L^H.
- **1μ nouns** can be H, M, M^H, L or L^H
- **1μ verbs** can be only H, M^H or L^H
Such tonal asymmetries offer an invaluable **window on the history** of tone systems that have them.

I will take **Tura** (SEM; Côte d’Ivoire) as an illustration of how tonal asymmetries can be fruitfully exploited for purposes of tonal reconstruction with some far-reaching implications for the tonal reconstruction of Mande as a whole.
- **Inventory & combinatorics:**
  - TBU = μ
  - 4 tone levels: B (“bottom”) ả, L ả, H ả, T (“top”) ả́
  - 1μ stems can be B, L, H, T.
  - 2μ stems are predominantly (N) / obligatory (V) flat (monotonal). 2μ N can sometimes have falling and rarely rising contours.
Stem shapes & word categories:

- **major** stem shapes → nouns & verbs: CV, CVV, CVLV.
- **minor** stem shapes → nouns: CV(L)(V)ŋ, CVVV
- **minor** stem shapes → functional morphemes: V, VV, Vŋ

Stem weight:

- In **synchronic processes**, morae tend to be preserved
- **Diachronically**, 2μ maximality constraint vs. faithful preservation of the weight of 1μ and 2μ stems
‘My elder brother has not given it yet’.

→ ń dűdűdű nu bè
The **full 4 tone level range** is exploited only on 2\(\mu\) nominal stems and on 1\(\mu\) personal pronominal stems (STAMPs)

- **1\(\mu\) N stems** can be T, H and B
- **1\(\mu\) PP stems** can be T and B
- **1\(\mu\) V stems** can be T and H

**HYP:** 1\(\mu\) V stems faithfully reflect the **original 2-level tone system** with the present T < *H and H < *L, while the present L and B also both go back to *L.
- **HYP**: In 1µ stems:
  - *H > T
  - *L > H, L, B

- We need to show that H, L, B in 1µ stems derive from one *L
L has a **clearly secondary status** in the system, as it is only possible on a limited number of 1µ functional stems

e.g. lè FOC, żà CONTR, (y)à 3SG.PRF

**tonal sandhi**: µ H, L, B > L / _ final pause → T vs. L
(except: (i) H < *T, (ii) B / B _ final pause)

In a 4-tone level system, we have at least 3 cases where **the opposition** is actually **binary**, viz. T vs. non-T:

- T vs. H in 1µ V stems
- T vs. B in 1µ PP stems
- T vs. L for lexical H before a final pause.

What is the status of the **B tone** in 1µ stems, especially nouns?
### B Tone in 1μ Stems

<table>
<thead>
<tr>
<th>unique stems</th>
<th>B</th>
<th>H</th>
<th>T</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>13</td>
<td>35</td>
<td>30</td>
<td>78</td>
</tr>
<tr>
<td>V</td>
<td>0</td>
<td>29</td>
<td>22</td>
<td>51</td>
</tr>
<tr>
<td>PP</td>
<td>7</td>
<td>0</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>modifiers</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>other</td>
<td>13</td>
<td>16</td>
<td>22</td>
<td>51</td>
</tr>
<tr>
<td>total</td>
<td>36</td>
<td>82</td>
<td>80</td>
<td>198</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>unique stems</th>
<th>B</th>
<th>H</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>36%</td>
<td>43%</td>
<td>38%</td>
</tr>
<tr>
<td>V</td>
<td>0%</td>
<td>35%</td>
<td>28%</td>
</tr>
<tr>
<td>PP</td>
<td>19%</td>
<td>0%</td>
<td>6%</td>
</tr>
<tr>
<td>modifiers</td>
<td>8%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>other</td>
<td>36%</td>
<td>20%</td>
<td>28%</td>
</tr>
<tr>
<td>total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
- **B tone** is also a grammatical replacive tone in [N1 N2] head-marked possessive construction, where N1 is a (non-specific) modifier and N2 is the head (in its **Construct Form** marked by B tone).

- A very high proportion of B tone 1μ nouns are transparent borrowings and CF → B tone should not be reconstructed.
A very high proportion of B tone 1\(\mu\) nouns are transparent borrowings and CF → B tone should not be reconstructed.

B tone is also a grammatical replacive tone in some verb forms.

B tone is likely to have entered the system primarily through the evolution of the tone of the 3SG.NS pronoun *\(\hat{a}\), which has also been the source of the tone of the CF marker.

The role of the B tone in the system was later reinforced by borrowings.

Compare Dwyer (1973), who argues for SWM that most new tone patterns entered the system through the grammatical tone in [NN] modifying constructions (compounds).
- **2μ stems** are predominantly (N)/obligatory (V) flat

- Only **2μ Ns** can be all B.

- A high proportion of all B **2μ Ns** are probable borrowings and CF, as well as proper names → all B tone pattern in **2μ Ns** should not be reconstructed.
2μ stems with flat tone patterns other than all B can primarily be reconstructed as follows:

- TT < *HH
- HH < *HL
- LL < *LH

But the reconstruction is more complicated than in 1μ stems…
### Regular Correspondences in N & V in DMT

<table>
<thead>
<tr>
<th></th>
<th>Tura (4 levels)</th>
<th>Dan-Gw (5 levels)</th>
<th>G. Mano (3 levels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*H</td>
<td>T</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td></td>
<td>*dó ‘go’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*L</td>
<td>H</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td></td>
<td>*pà ‘fill’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*HH</td>
<td>TT</td>
<td>T</td>
<td>HH</td>
</tr>
<tr>
<td></td>
<td>*táá ‘walk’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*HL</td>
<td>HH</td>
<td>?M</td>
<td>?M(M)</td>
</tr>
<tr>
<td></td>
<td>*dǒ̀ ‘cough’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*LH</td>
<td>LL</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>*kòó ‘hand, arm’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Some irregularities:

- ***yíi ‘water’**: Tura yí, Dan-Gw yí, Mano yí but Tura has regular yí-yè ‘wet’ (-yè NMLZ)
- ***yáá ‘eye’**: Tura yá, Dan-Gw yá, Mano nèe but Tura has regular yááá ‘sight’
Even such exuberant tone systems as that of the languages of the DMT group with their 3-5 tone levels can be safely brought back to an earlier 2-level tone system.

Most likely, the emergence of new tone levels in DMT postdates the split of the DMT group.

Given that the same can also be argued for the tone systems of WM languages which are usually much more modest (cf. Dwyer 1994 on Bobo), **Proto Mande** can be equally safely reconstructed with just two tone levels.
Proto-Mande TBU = μ (it distinguished between CV and CVː stems)

1μ CV stems could be only L or H, while 2μ CVː stems could also have contours, at least LH

In Proto-Mande, *personal pronouns* of all persons were *L.

In Tura, non-subject personal pronouns are 1μ stems with H, L or B tone all reflecting *L.