Introduction
Somali as a “tonal/pitch accent language”

• Armstrong (1934): Somali is primarily a tone language vs. Klingengheben (1949): the accentual nature of the pitch contours

• **Hyman (1981):** Somali = a “tonal accent language”
  • the underlying forms have neither accent nor tone
  • accents (“*”) assigned to the penultimate or final V by morphological rules
  • after the application of accent shift and deleting rules, the surviving accents receive invariant high tones (“H”)

Do tonal accent languages really exist?

• In recent papers, authors (e.g. Gussenhoven 2004, Hyman 2007, Van der Hulst 2012) have discussed the suitability of a category of ‘tonal or pitch accent languages’

• Hyman (2007) and Van der Hulst (2012) call into question the tonal accent analysis of Somali, along with that of other languages, such as Japanese or Basque, for instance.

• Though these authors defend opposite views about Somali
Van der Hulst (2012): Somali is accentual

• Cf. Hyman (1981:194): “Rather than having a process accent → tone → pitch, it is possible to go directly from the accent specifications to the pitch integers [=heights] themselves.”

➢ only * at the phonological level, whose acoustic correlate is pitch

• This accounts for the distributional restrictions of the high pitches:
  • at most 1 accent per word
  • on the final or penultimate vowel only

• However some Somali word categories may have no prominence at all
Hyman (2007): Somali is a restricted tone system

• Somali is not an accentual system:
  • ‘obligatoriness’ is a core property of accent
  • the mora (= V) is the tone bearing unit in Somali vs. the syllable in stress systems

• Somali is a restricted tone system in which:
  • the high pitches are the phonetic realizations of H tones
  • the culminative and non-obligatory Hs could be grammatically conditioned boundary H% tones

• More generally, pitch accent is not a coherent notion, but rather, a “pick and choose” among the properties that characterize prototypical tone vs. prototypical accent.

→ “no language should be analyzed with pitch-accent. A tonal analysis is always possible” (p. 661)
Aims of the presentation

• To test Hyman (2007)’s recommendation and propose a tonal analysis of Somali

• By analyzing the intriguing tonal alternations that affect most word categories and especially nouns

• Tone features are needed to explain the varying pitch patterns that characterize Ns and other word categories in Somali

• Accent are unable to capture these pitch variations and should be removed from the phonological representation of words
Data and outline of the presentation


• Plan:
  1. High tone assignment rules
  2. Plural of the declension 1-4 nouns and the nominative case
  3. The tonal shifts in the declension 6/7
Part 1.

High tone assignment rules
Noun declensions and cases

• The 7 declension system of Orwin (1995) and Saeed (1999), which relies on gender, plural formation and case marking

• 4 cases influence the pitch patterns of the Ns, Adjs and Dets:
  1. the vocative (VOC)
  2. the nominative (NOM)
  3. the genitive (GEN)
  4. the absolutive (ABS): ‘default’ case

• NOM and GEN (tonal and segmental): on the last element of a DetP
  • wasír-k-a  arrimá-h-a  dibád-d-u  ‘the foreign minister.NOM’
    minister-the-ABS  matters-the-ABS  abroad-the-NOM

• The ‘premodifier’ form (PREM): ABS báre [−PREM] ~ bará-ha [+PREM]
The singular forms of D1-5 nouns

• A tonal contrast between feminine and masculine Ns:
  • Fem.: a **final** H pitch
    • inán ‘girl.D1.fsg’
    • beér ‘garden.D1.fsg’
  • Masc.: a **penultimate** one
    • ínan ‘boy.D2.msg’
    • béer ‘liver.D2.msg’

• Hyman (1981), Banti (1988): a final or penultimate * assigned by rule according to gender and declension

• In a tonal approach: a final or penultimate H tone
The singular forms of D1-5 nouns

• Does gender really govern the location of the H tone?

<table>
<thead>
<tr>
<th>Nominative</th>
<th>Genitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fem.  inan-i ‘girl-NOM’</td>
<td>dhár naag-eéd ‘clothes woman-GEN’</td>
</tr>
<tr>
<td>Masc.  inan ‘boy’</td>
<td>dhár wiil ‘clothes boy’</td>
</tr>
</tbody>
</table>

- in fem. Ns, the H tone is assigned to the penultimate V as it is in masc. Ns

• The existence of an empty V position influencing the location of the H is corroborated by the fact NOM -i occurs with ADJs and intoned DETs, which also bear a final H regardless of the gender
  • ABS búug culús ‘book.D2.msg new’ → NOM búug culus-i
  • ABS búug-geér ‘book-that’ → NOM búug-geer-i
Location of H

• This analysis implies that the **penultimate** – or **only** – μ is the default location for H; H is penultimate in:
  • **adverbs**: maánta ‘today’, máya ‘no’,…
  • the **WH word** yáa ‘who’
  • **focus particles** wáa, báa, ayáa
  • **numerals** up to ‘8’ (fem. Ns): lába ‘2’, siddéed ‘8’
  • **verbs**: ‘(to) bring (it)’: kéen IMP.sg., keén-i INF, keen-áan SUBJ.Pr.3pl

• If H is **final**, it can be shown that there is:
  • a one-V suffix that bears a H tone: ‘(to) stand up’ joog-só IMP.sg., joog-sán INF, keen-ó SUBJ.Pr.1/3sg., keen-á REST.Pr. 1/3sg.,
  • an empty [CV] the existence of which is revealed by the NOM -i and GEN -VVd,
• Exceptions(?) DET-**k/t-ií/-eé/Poss**: sií/soó; sagaál ‘9’
Assignment of H

• At the lexical level some morphemes are assigned:
  • *no* H tone, such as INF -i (*keén-i*), IMP pl. -a (*keén-a*), DET -k/t-a,...
  • *vs.* a H tone to the **only** or **penultimate** µ: lexical roots (*ínan*, *kéen*, *jóog*...) and other inflectional (cf. IMP -só, SUBJ -áan/ó,...) or derivational morphemes
  • concatenated intoned morphemes: the last tone deletes the preceding ones

\[
\begin{array}{c|c}
\text{joog-s-an} & \text{H} \\
\text{M} & \text{H} \\
\end{array}
\text{ vs. }
\begin{array}{c|c}
\text{keen-i} & \text{H} \\
\end{array}
\]

• A **unique** assignment rule for **all** categories of words, part of the **vocabulary entry** of the morphemes (cf. also Lecarme 2002);
  • *vs.* Hyman (1981), Banti (1984/88); Lampitelli (2013)

• the H tone undergoes further modifications during sentence derivation which can only be captured by a tonal approach
Part 2.
The plural of the D1-4 nouns and the nominative case
D1-4 plural forms: data


- Godon (1998), Lampitelli (2013): a unique underlying form

- Similar pitch patterns: a 3-way pitch contrast (cf. also Andrzejewski 1964) between:
  1. a L: [bahallò] in NOM
  2. a H: [nimán] in [+PREM] and FOC
  3. a M/Ø [bahallo] in [-PREM]

- vs. 2-way contrast in the singular Ns:
  1. a L: [inanì] ‘girls’ in NOM
  2. a H: [inan] elsewhere
D1-4 plural forms: proposal

• The D1-4 plural suffix is marked by a **latent H tone**, which remains *unassociated* in ABS[-PREM]:
  - $H_{\text{latent}}$ deletes the preceding one (cf. **HAR**)  
  - unspecified/mid $F_0$ at the acoustic level

• $H_{\text{latent}}$ *associates* with -*o* in FOC/PREM

• Alternating analysis: a *toneless* -*o* and a H *inserted* in FOC/PREM? But:
  - toneless INF -*i* (**keén-i**) and IMP pl. -*a* (**keén-a**) maintain the H on the root vs. pl. bahal-lo: no H emerges on the root in the ABS case
  - some words *never* display any H, even in FOC/PREM: SUBJ/OBJ pronouns (e.g. aan ‘I’, i ‘me’,...) and DET -*k/-t-u/a* ‘the’ ➔ no underlying H tone

• A latent tone interacting with other tone features: the first evidence for a tonal approach
The nominative case

• Acoustic data (often a declining $F_0$) $\rightarrow$ a morphemic low tone $L_{\text{NOM}}$
  • that associates with the end of the last element of a DetP
  • deletes the preceding H as the other final tones do in a word

• $L_{\text{NOM}}$ and -i are likely to be both the phonological exponents of a NOM morphological feature anchoring to the end of a DetP

➤ The nominative pitch pattern results from an interaction between *tone features* only; an accentual approach is unable to capture the pitch contrasts observed in D1-4 Ns
Part 3.
The tonal shifts in declensions 6 and 7
The declensions 6 and 7

- Two large classes of Ns with particular morphological features
  while Somali sg. Ns usually end with a C or an epenthetic -i (as *CC#, e.g. ábti ‘uncle.D2.msg’, dúgsi ‘school.D2.msg’,...)

- in singular, D6-7 Ns end in a V:
  - -o in D6 (hooy-ó ‘mother.D6.fsg’)
  - -e in D7 (bar-é ‘teacher.D7.msg’)

- in plural, specific suffixes are added:
  - -óyin in D6 (hooyo-óyin ‘mothers.mpl’)
  - -yaál in D7 (bara-yaál ‘teachers.fpl’)

N.B. -e/o → a / _ C
The D6/7: specific pitch patterns

- NOM: a **penultimate** H (Kulmiye), not a low pitch as in the other Ds
- ABS: a **penultimate** or **final** H, whereas H in the other Ds is **invariant** in this context:
  - H is always **final** in the PREM form (bará-) and when **object** of the verb (Kulmiyé), even before a pause (at the end of the sentence)
  - H may be **penultimate** or **final** in **isolation** and when **focalized** (contrast)

- How to account for these tonal patterns? ➔ **specific * patterns for D6/7 Ns and/or * shifting rules** (e.g. *°→°*). ➔ **Descriptive adequacy but the causes of D6/7 tonal alternations are not determined.**
A proposal

- D6/7 Ns have two underlying H tones
- but for reasons discussed later, the H of -e/o does not delete the preceding H, (as does the H of the plural suffixes for ex.)
- NOM: \( L_{\text{NOM}} \) deletes the first H leftwards, i.e. the H of -e/o, as it does in the other declensions, but the H of the stem remains
  - the NOM phonetic HL pattern is not only generated, but the NOM case is also reduced to a unique and hence more understandable process – ‘\( L_{\text{NOM}} \) deletes the first H leftwards’ – applying to all NOM Ns
Tonal alternations in the ABS contexts

• If the D6/7 penultimate H in NOM results from the association of a L tone, then the penultimate H appearing in other contexts might also be due to an observable L.

• This is just what happens in certain ABS contexts:
  • Le Gac (2001, 2003): contrastive focus in Somali can be followed – as in many other languages – by a L tone that reaches the bottom of speaker pitch range; I will name it L_{EMPH} and consider it as an intonation morpheme.
  • In isolation, D6/7 Ns are reported to exhibit either a final or a penultimate H: in the latter case, L_{FOC} is likely to be chosen by the speaker to express some emphasis and is associated with the -e/o suffix.
Remaining questions

• Why does the H of -e/o not disassociate the preceding H(s), while other suffixed Hs do?
• How is the final and unique phonetic H tone derived in the PREM or ABS forms?
The structure of Ns

• Following Lampitelli (2013), Ns have the following syntactic structure:

\[
[[[[ \text{Root} ] n ]_n \text{Th} ]_n \text{Num} ]_{\text{NumP}}
\]

• \text{n}: a nominalizing functional head; \text{Num}: the functional head for number

• \text{Th}: a \textit{thematic} node \textit{adjoined} to the functional head \text{n} (cf. the theme vowel in Latin for instance in Embick and R. Noyer 2007)

• Tonal information is part of vocabulary entries (Cf. Part 1) \rightarrow roots have a H, while functional nodes may be assigned a (latent) H or not

• + a general rule of tone deletion: the H of the last functional head deletes the preceding Hs

• \text{qor-áal ‘writ-er.D2.msg’} = \[[[[qo^{\text{X}}r]_{\text{Root}} -a^{\text{H}}\text{al} ]_n \emptyset \text{Th} ]_n \emptyset \text{Num} ]_{\text{NumP}}

• \text{qor-aal-lo ‘writ-er-s.D2.fpl’} = \[[[[qo^{\text{X}}r]_{\text{Root}} -a^{\text{X}}\text{al} ]_n \emptyset \text{Th} ]_n -\text{Co}^{(\text{H})} \text{Num} ]_{\text{NumP}}
D6/7-e/o suffixes

• D7 -é often described as an agentive/instrumental suffix (cf. bár ‘to teach’ +é → baré ‘teacher’), BUT:
  • suffixed to an N-l- stem ➔ ‘owner of N’: dukaan-l-é ‘shop owner’, waran-l-é ‘spearman’
  • suffixed to Ns without verbal and independent roots: aabbé ‘father’, cambé ‘mango’,
    cukané ‘plant sp.’, hongorré ‘hot wind’, tusé ‘table’, tuxlé ‘gossip’…

• D6 -ó abundantly found with any kind of stem:
  • suffixed to V3 stems: cariiqsashó ‘provocation’ (<cariiqsó ‘provoke’), duceysashó ‘act of
    praying for oneself’ (<duceysó ‘pray for oneself’), dhifashó ‘pulling, snatching’ (<dhifó)
  • suffixed to Ns without verbal and independent roots: biyó ‘water’, caanó ‘milk’, hooyó
    ‘mother’, bowdó ‘thigh’, qaaxó ‘wind pipe’,…
  • suffixed to nominalizing morphemes such as -nîm- ‘the state of N’(dóqon
    ‘fool.D2.msg’ → doqonnimó ‘foolishness’), -toóy- ‘N-dom/hood’ (bóqor ‘king.D2.msg’ →
    boqortooyó ‘kingdom’); -dárr- ‘mis-N, lack of N’ (ayáan ‘fortune. msg’ → ayaandarró
    ‘misfortune’)
  • finally, borrowed words ending with -o/a in the original language, usually Italian,
    regularly belong to D6: baastó ‘pasta’, boostó ‘post office’, Maayó ‘may’,…
D6/7-\textit{e/o} as exponents of the Th node

- \textit{e/o} have no meaning \textit{per se}, are correlated to gender for Ns only (cf. Latin)
  - agentive meaning is to be interpreted as a mere byproduct induced by the concatenation of a verbal root with \textit{-e}.

- Representations for D6/7 singular Ns:
  - D7 sg. \textit{baré} ‘teacher’: \[ [ [ [ [ \text{ba}^{H}r ] ] _{\text{Root}} ] ] _{n} ] _{n} \text{-e}^{H}_{\text{Th}} ] _{n} ] _{n} \emptyset ] _{n} ] _{n} \emptyset ] _{n} ] _{Num} ] _{NumP} \]
  - D6 sg. \textit{doqonnimó} ‘foolishness’: \[ [ [ [ [ \text{do}^{X}qon ] ] _{\text{Root}} ] ] _{n} ] _{n} \text{-ni}^{H}m ] _{n} ] _{n} \text{-o}^{H}_{\text{Th}} ] _{n} ] _{n} \emptyset ] _{n} ] _{Num} ] _{NumP} \]
  - Th is not a functional head $\rightarrow$ H of \textit{-e/o} does not delete the preceding Hs; H of the root (\textit{ba}^{H}r) or the nominalizing suffix (\textit{-ni}^{H}m-) may remain

- In plural, \textit{-yaál/óyin} suffixes are inserted in the \textbf{Num head} position and delete preceding tones as expected:
  - D7 pl. \textit{barayaál} ‘teachers’: \[ [ [ [ [ \text{ba}^{X}r ] ] _{\text{Root}} ] ] _{n} ] _{n} \text{-e}^{X}_{\text{Th}} ] _{n} ] _{n} \text{-yaa}^{H}l ] _{n} ] _{n} \emptyset ] _{n} ] _{n} \emptyset ] _{Num} ] _{NumP} \]
  - D6 pl. \textit{boqortooyoóyin} ‘kingdoms’: \[ [ [ [ [ \text{bo}^{X}qor ] ] _{\text{Root}} ] ] _{n} ] _{n} \text{-too}^{X}y ] _{n} ] _{n} \text{-o}^{X}_{\text{Th}} ] _{n} ] _{n} \text{-o}^{H}yin ] _{n} ] _{n} \emptyset ] _{n} ] _{Num} ] _{NumP} \]
Deriving the phonetic final H in D6/7

- **Phase theory** (Chomsky 2001, 2008; Kratzer & Selkirk 2007; Adger 2007; Selkirk, 2009):
  - syntactic derivation is ‘chunked’ into phases. Phases = vP, headed by ‘little v’, and the CP, headed by the C, + DetP headed by Det (Adger 2007)
  - Within a phase, lexical material is inserted and constituents may move up to higher phase-internal syntactic positions
  - At the end of a phase, the complement of the phrasal head is spelled out = it is given a phonological form

- In DetP phase, the Hs of the functional heads n and Num deletes the preceding Hs (Det is phrased apart)
- the H of the Th node and the penultimate one are retained in subsequent phases (vP and CP), in which L NOM and L EMPH are inserted.
- the final D6/7 H shows up within the very last spellout domain, it derives from an OCP-like constraint prohibiting two Hs in the same spellout domain in a DetP phase.

Kratzer & Selkirk 2007:104
Thank you for your attention!
References


