INTONATION AND FOCUS IN WEST GREENLANDIC

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1 West Greenlandic intonation

West Greenlandic
- Spoken on the west coast of Greenland (ca. 45,000 speakers)
- Basis of the written language
- Used in official contexts (school, church, TV, radio)

Intonation
- No stress, lexical pitch-accents or tone
- Intonation is entirely shaped by boundary tones
- Most tones bear HLH or HL tones, but also raised-high, LH, words without tonal contour and final lowering are reported (cf. Rischel 1974, Fortescue 1984 Nagano-Madsen 1993)
- The data of this study shows HL, HLH, words without contour, and LH tones. Examples are given below for the sentences Anaanaga nataarnamik igavoq “My mother cooks a halibut” and Nanna inuusamik sanavoq “Nanna makes a doll”

![Waveform and Intonation]

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<th>igavoq</th>
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2 Empirical basis

- Recordings with 4 female speakers
- 321 sentences (ca. 80 per speaker)
- standard (SOV) word order
- Recorded as answers in question-answer-pairs
- Basic sentences are illustrated below

Nanna$_S$ angajuminut$_{IO}$ inuusamik$_{DO}$ sanavoq$_V$
N.ABS older.sister-ALL doll-INSTR make-INTR-3SG
“Nanna makes a doll for her older sister.”

Aanaga$_S$ Aviajamut$_{IO}$ ulimmik$_{DO}$ nuersaavoq$_V$
Grandmother-my.ABS A.-ALL shawl-INSTR knit-INTR-3SG
“My grandmother knits a shawl for Aviaja.”

Anaanaga$_S$ angaanmut$_{IO}$ nataarnamik$_{DO}$ igavoq$_V$
mother-my.ABS uncle-my.ALL halibut-INSTR cook-INTR-3SG
“My mother cooks a halibut for my uncle.”

Variation
1. Lexical items: 3 sentences (illustrated above)
2. Sentence length
   a. S V
   b. S DO V
   c. S IO DO V
3. Incorporation of the direct object
   e.g.
   Nanna inuusamik sanavoq vs. Nanna inuusa-lior-poq
   N.ABS doll-INSTR make-INTR-3SG N.ABS doll-make-INTR-3SG
   “Nanna makes a doll.” “Nanna makes a doll.”
4. Focus type
   a. Broad focus
   b. Narrow information focus
   c. Narrow corrective focus
5. Focus location
   a. On the subject
   b. On the indirect object
   c. On the direct object

Analysis
- Recording and analysis in Praat (Boersma & Weenik 2007)
- Smoothed and time-normalised pitch (script by Xu 1999, 2005)
- Automatic measurement of pitch maxima, minima and span
- Normalisation of relative to the speaker’s individual pitch range
- Manual and automatic identification of pitch contours

Formula used for normalising pitch data

\[
y = \frac{x - R_2}{R_1 - R_2}
\]

with \( y \) = the normalised value, \( x \) = the original value, \( R_1 \) = the average highest value for a speaker and \( R_2 \) = the average lowest value for a speaker.
3 Focus realisation

- Syntax: Each deviation from the standard word order will be interpreted as pragmatically marked

  Piniartup puisi pisaraa. (Neutral word order)
  “The hunter-ERG caught the seal-ABS”

  Puisi piniartup pisaraa. (Obj = topic)

  Piniartup pisaraa puisi. (Obj = focus)

  (adapted from Fortescue 1984:181)

- Morphology: The focused constituent can be marked by a clitic like the demonstrative –una (cf. Fortescue 2003)

- Intonation: Focus is marked by variation in the realisation of the tonal contour and by pitch range

  Tonal contour
  - Narrow focus increases the number of HLH realisations
  - No significant contrast between broad focus and given information
  - Variation between the focus types, focussed constituents and speakers

  Pitch range
  - A difference is made between span and register (cf. Gussenhoven 2004) as illustrated below

  


Example below:
- Focus on the direct object increases the span and raises the register
- Subject focus increases the span and lowers the register of the postfocal domains
- No significant effect of focus on the indirect object


Variation between the focus types
- Broad focus is usually marked by a higher register
- Narrow focus (information focus and corrective focus) leads to an increased span
- Information focus induces higher maxima, corrective focus results in lower minima
Variation between the speakers
- The pictures below show four speakers’ realisations of the sentence *Aanaga ulimmik nuersaavoq* “My grandmother knits a shawl” (with information focus on the subject)

4 Summary
Focus realisation in West Greenlandic intonation
- Tonal contours: Focus induces a higher percentage of HLH realizations
- Pitch range: Focus is marked by an increased span and/or higher register
- Variation between focus types, focussed constituents and speakers

5 References