Prosody– a source of word-order microparameters

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How does human language (HL) differ from animal communication (AC)?

- HL abilities are divided into narrow and broad language faculties. The narrow language faculty (the computational system) consists of grammar and syntax and in particular recursion. It is the only uniquely human component of the faculty of language.
- The broad language faculty involves externalization and includes perceptual and cognitive abilities (the sensory-motor system, a conceptual-intentional system) that are not specific to language and are shared with non-human animals (Hauser, Chomsky and Fitch 2002).
- According to Berwick and Chomsky 2011, a.o., displacement is constrained by the computational system (merge) and the PF externalization system is responsible for at least microvariation.

Relevance of microvariation in Scandinavian Object Shift

- The central aim of this project is to demonstrate that the optionality of object shift in Scandinavian languages is driven by the occurrence of tone distinctions in those dialects which allow it. This is significant in that it shows that PF is responsible for microvariation in word order. If this is the case, the claim that word order is necessarily determined by the computational system is put into question.

Background:
Properties of Scandinavian object shift

Depends on verb movement
(Holmberg's 1986 generalization):

1a   Peter mødte ikke Marie.   *Danish*
           Peter met   not Marie
           'Peter didn't meet Marie.'

 b   Peter mødte ham ikke.
           Peter met   him not

2a   Peter har ikke mødt ham.
           Peter has not met him

 b   …at Peter ikke mødte ham.
            that Peter not   met   him

The problem with Holmberg's generalization:

- No obvious way of linking the occurrence of one rule to the occurrence of another.

1. Syntactic accounts: Bobaljik 2002, Nilsen 2003, Fox&Pesetsky 2005, Åfarli 1997, 2010, Vogel 2006, Vikner 2012.

2. Information Structure/interpretation: Holmberg 1999, Chomsky 2001, Diesing&Jelinek 1995, E-S&Strahov 2004, Josefsson 2010, Anderssen&Bentzen 2012, Andréasson 2012.

3. Accounts involving prosodic features Hellan 1994, Erteschik-Shir 2005a,b, Hosono 2010, Josefsson, 2012.

The issue at hand: Microvariation I

- Standard Danish: Object Shift is obligatory

- Swedish, certain South Danish dialects: Object shift is optional

  1a   Mannen såg den inte. (Swedish)
  man-the saw it   not
  'The man didn't see it.'

  b   Mannen såg inte den.
  Man-the saw not it

  c   Mannen såg inte Peter.
  Man-the saw not Peter.

➢   What explains this dialectical divergence?

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Basic assumption: Weak pronouns must PI

- Weak pronouns must form a prosodic unit with a legitimate host. In the shifted word order the pronoun is prosodically incorporated or cliticized into a verbal or nominal host as shown in the Danish (1)a and b:

  1a   Jeg mødte+ham ikke

          I   met   him not

    b   Hvorfor mødte Peter+ham ikke

          why   met Peter   him not

          'Why didn't Peter meet him.'

- Adverbs do not provide proper hosts for PI:

  2   *Jeg mødte ikke ham.

          I   met   not him

Microvation II = Source of microvariation I

- Allowing the adverb to provide a host in those languages or dialects in which OS is optional would be a stipulation.

- What is proposed here is that the prosodic incorporation of a pronoun into an element which does not provide a legitimate host (such as an adverb) requires a different mechanism to license incorporation.

- This mechanism is the occurrence of a tonal accent that allows the formation of one prosodic word. This prosodic word is formed in a similar way as Swedish compounds such as *båt-hus* (boat-house) which also form one prosodic word with a single tonal accent (Hellan 2005; Riad 2008).

Microvariation II: Scandinavian Tones

- Most dialects of Swedish and Norwegian, as well as some Southern Danish dialects, distinguish two accents or tones: tone 1 and tone 2.

- These accents differentiate (two-syllable) word pairs in these languages:

Swedish: (from Riad)			word	focus
anden = the duck	→ Tone 1		HL*	L*H (L%)
anden = the ghost	→ Tone 2		H*L	H*LH (L%)

Ærø Danish (≈ Scanian, Riad, pers. com.):

alder ['a:lər] = age	→ Tone 1		H*	H* (L%)
aldrig ['a:lər] = never	→ Tone 2		L*H	L*H (L%)

Prosodic words

- According to Selkirk 1996, weak object pronouns are affixal clitics which do not themselves have the status of prosodic words. The prosodic unit formed by incorporation of a weak object pronoun into the verb would form a new prosodic word (ω = prosodic word)

  1 $((\text{mødte})_\omega \; {}'\text{am})_\omega$

  met   him

- It is impossible to incorporate a weak pronoun into an adverb since adverbs do not host clitics (broad use of 'clitic').

  2 $*((\text{ikke})_\omega \; {}'\text{am})_\omega$

The Prosodic Word Group (PWG) Vigario 2010

- PWG is a unit between the prosodic word and the prosodic phrase. It groups compound-like expressions but does not play a role in the prosodic organization of clitics.

- One property of PWGs is that they need not be isomorphic to morphosyntactic constituents and may be subject to size restrictions. ➔

- This would allow for the adverb+pronoun unit to form a PWG even though it does not form a syntactic constituent, yet it would also allow for a PWG formed from V+adverb+pronoun. In principle what is included in such a prosodic unit may depend on the length of the elements involved.

Tonal effects, Myrberg&Riad 2013

- Minimal prosodic word: One stress

- Maximal prosodic word: One accent unit (Tone 1 or 2)

➢ According to Myrberg and Riad, ωmax corresponds to Vigario's PWG.

We derive the following properties:

- ωmax need not be a syntactic constituent

- The elements of ωmax are united by the assignment of a single tone.

Tonal effects, Riad 2013 - ωmin

(ja ^{1}($^|$**ga.ve.ne**)$_{\omega min}$) $_{\omega max}$ ^{1}(bre.vet)$_\omega$

I   gave-her   letter-the

- Tone of first element determines tone of ωmin:

^{1}($^|$ gav)$_\omega$ + ^{2}($^|$ henne)$_\omega$ ➜ ^{1}($^|$**ga.ve.ne**)$_{\omega min}$)

- Whereas stressed pronouns have independent tone (e.g., *henne* = tone 2), unstressed, weak pronouns, according to Riad, are not independent prosodic words and must incorporate. The syllabification ga.ve.ne indicates that we are looking at a single **ωmin**, containing only one stress.

Our Proposal:

- Adverb+weak pronoun form a **ωmax**.

- We assume that ωmin = syntactic constituents, but that **ωmax need not be**.

- The availability of tone licenses such prosodic word formation:

- Tone of first element also determines tone of ωmax:

$$^2(^|\text{inte})_\omega + {^2}(^|\text{henne})_\omega \rightarrow {^2}(^|\textbf{in.te.ne})_{\omega max})$$

        not   her

Danish dialects

DIALEKT-OMRÅDER I DANMARK
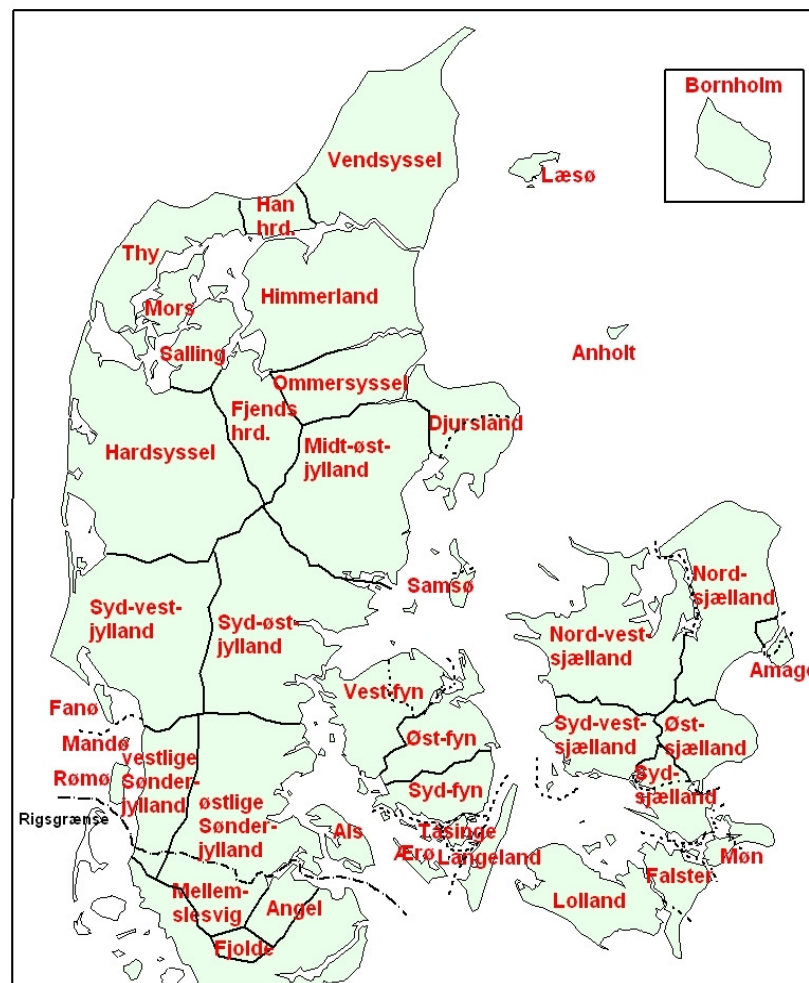
stød-line→

2 tones →

The South Danish dialect of Ærø

- Ærø Danish instantiates a dialect with both tonal distinctions and optional object shift and therefore provides a strong case in favor of the current project. Tonal distinctions are limited to certain south Danish dialects which vary greatly in the way the tones are instantiated.

- The prediction concerning the particular tone to be found on the sequence of adverb(s)+pronoun(s) is again that the tone of the unit depends on the tone of the first element.

- Initial observations look promising with the tone on the adverb+pronoun sequence exhibiting the tone of the adverb.

Ærø tones

- tone 1 rises until the stressed syllable and then descends, whereas tone 2 has an initial descending tone followed by a rise at the end of the word. The descending tone is more pronounced in tone 1 and the rising tone is more pronounced in tone 2. (Kroman 1947, dialekt.dk)

    http://dialekt.ku.dk/dialektkort/

Word tone – *Ærø*

- Tone 1

alder [ˈaːlər] (age)
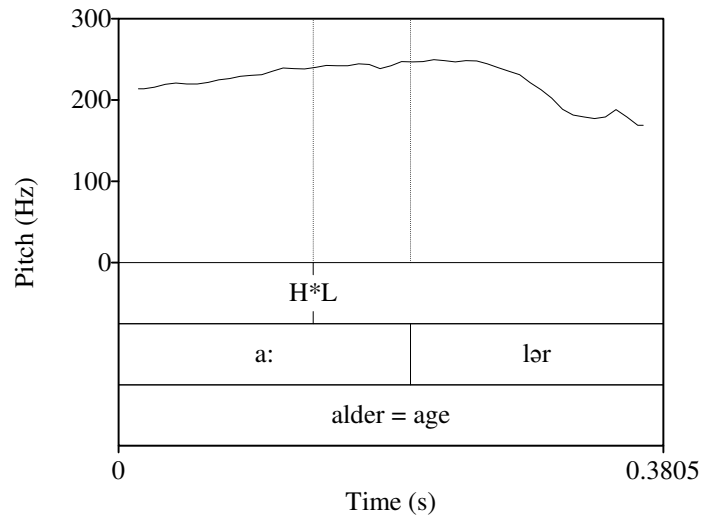
- Tone 2

aldrig [ˈaːlər] (never)
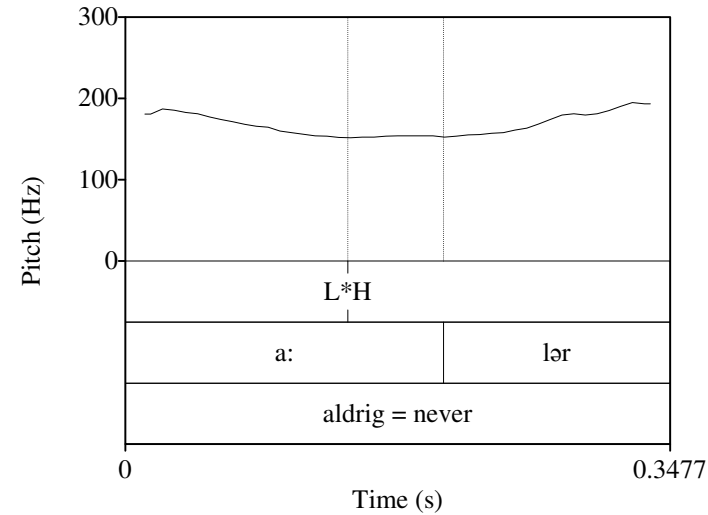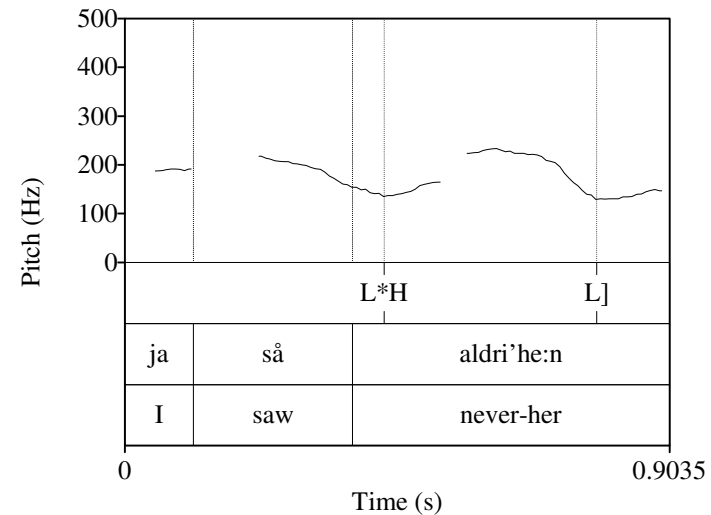
ωmin formation

V-1+pron = tone 1:
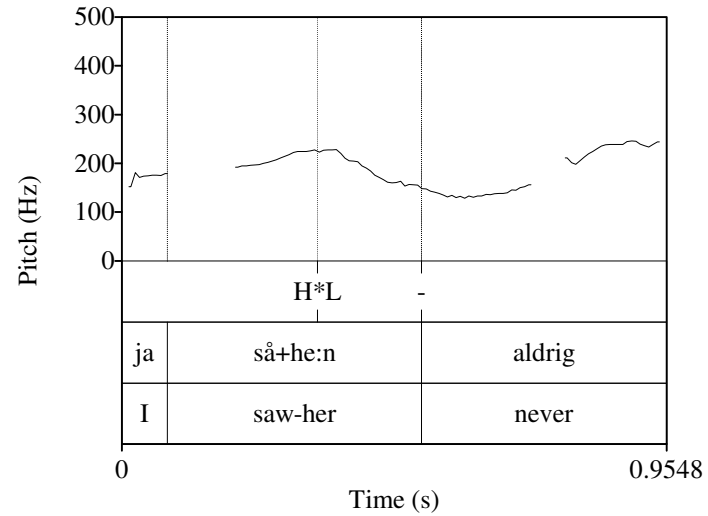
N-2+pron = tone 2:
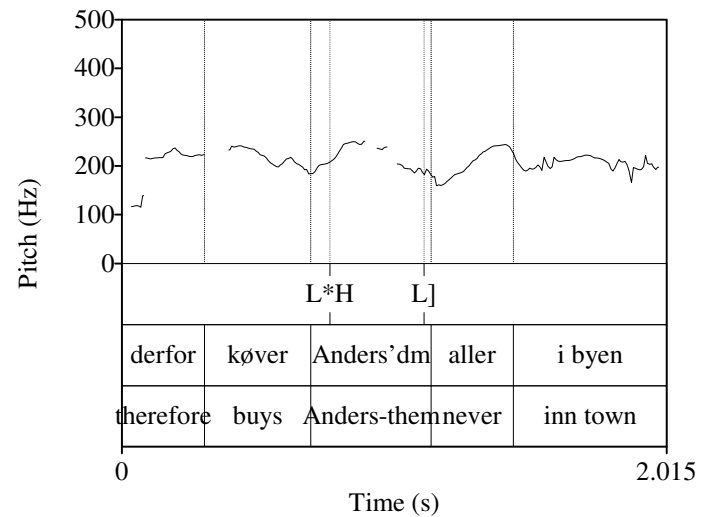
ωmax formation

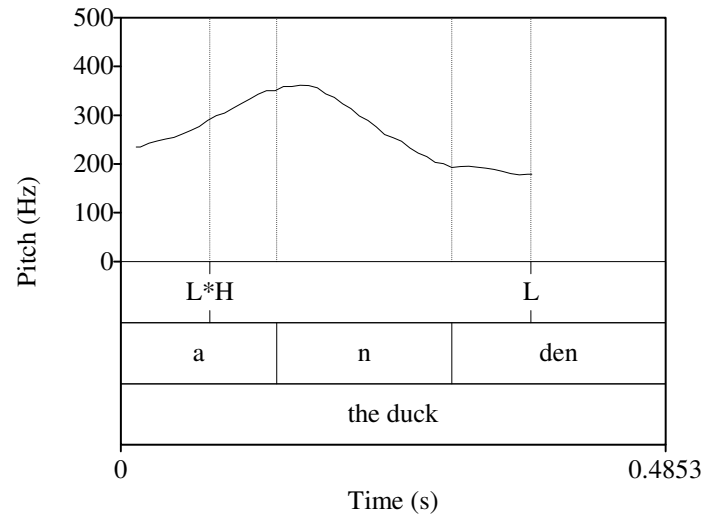Adv-1+ pron = tone 1
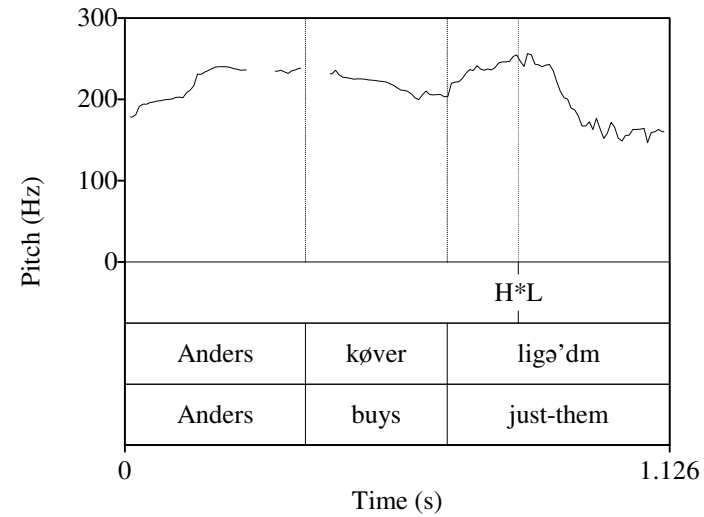
Adv-2+ pron = tone 2

Comments on the data

- All three Ærø informants reversed most of the test sentences with OS and rendered them with the object following the adverb. This was consistently the case with the adverb *not* ('ikke' in standard Danish, 'it' in the Ærø dialect) but not with the longer adverbs e.g., 'aldrig' (*never*). It seems that the number of syllables in the adverb is at stake here.
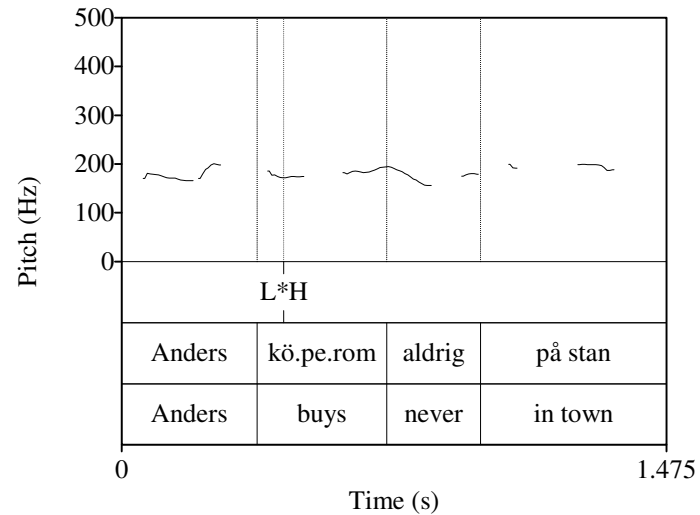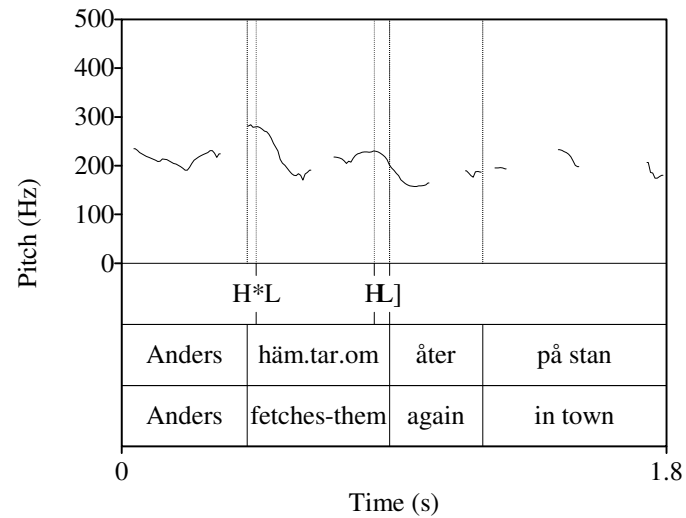
Swedish Tones

anden – Tone 1

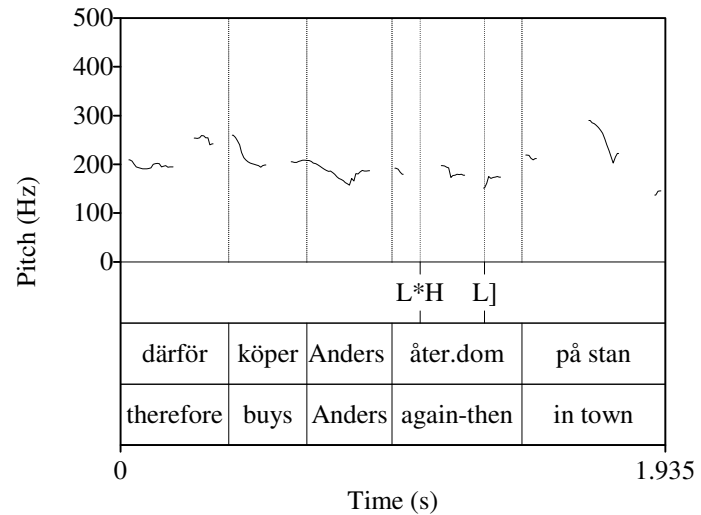anden – Tone 2
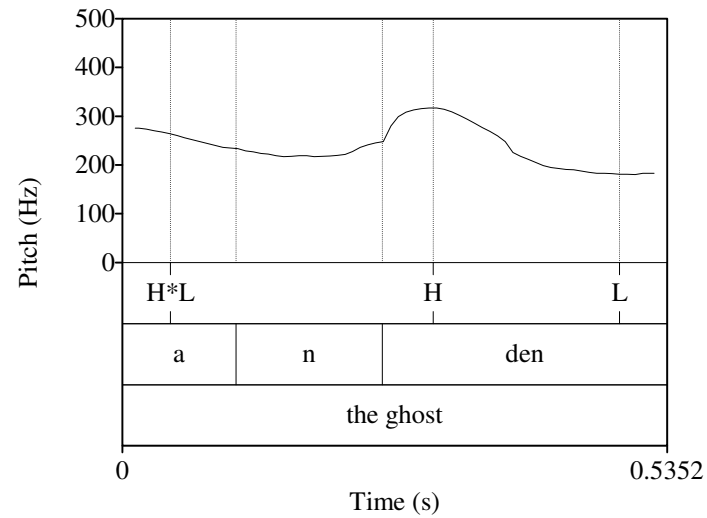
Swedish ωmin formation

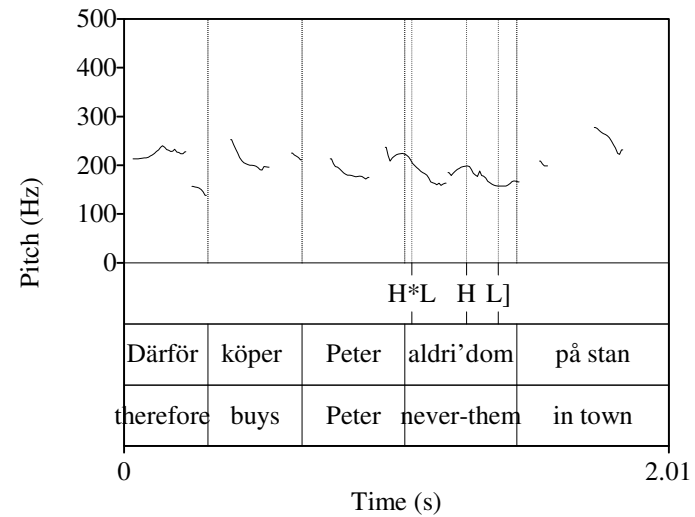**V-1+pron = tone 1:**

V-2+pron = tone 2:

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Swedish ωmax formation

Adv-1+ pron = tone 1

Adv-2+ pron = tone 2

Sum

- Our initial prosodic analysis of object-shifted and non-object-shifted sentences in Swedish and Ærøese shows that the weak pronouns in both orders are tonally incorporated into their hosts.

➢ We argue that the formation of a a ωmax [adverb+pronoun] requires a tonal accent.

BUT: The existence of tonal accent does not necessarily force optional OS.

Further Research questions

1. An investigation of the correlation in other languages and dialects. (e.g., Norwegian, other South Danish dialects).

2. Finland Swedish and Falster Danish have been claimed not to have OS and also no accentual distinctions contra our prediction. These claims should be verified (several instances of OS and no instances of adv+pronoun are to be found on dialekt.dk for Falster) and the prosody involved in these dialects should be examined.

3. Övdalian, a Swedish dialect spoken in the north western part of Dalecarlia, also does not instantiate object shift but does exhibit tonal distinctions. This does not falsify our claim.

4. Acquisition

- It has been observed by Basbøll 1986 and Pedersen 1993, who also cites Hansen 1976 for this observation, that drunk people rarely perform OS of weak pronouns and that children at an early stage of acquiring Danish also do not perform OS. The early preference for the non-shifted order has been attested by Josefsson for Swedish and also analyzed in Anderssen, Bentzen and Rodina 2011.

- A study correlating such data with the acquisition of prosody as well as the actual prosody pronounced at early stages would be of great significance to a better understanding of the role of prosody in acquisition as well as the role of prosody in determining word order, the main topic of this proposal.

Conclusion

- What drives the variation in word order is the microparametric prosodic properties of each dialect.

- Supports the view that OS is a prosodically driven process and therefore also provides evidence against syntactic accounts of OS which cannot account for the covariation of prosodic properties and the optionality of OS presented here.