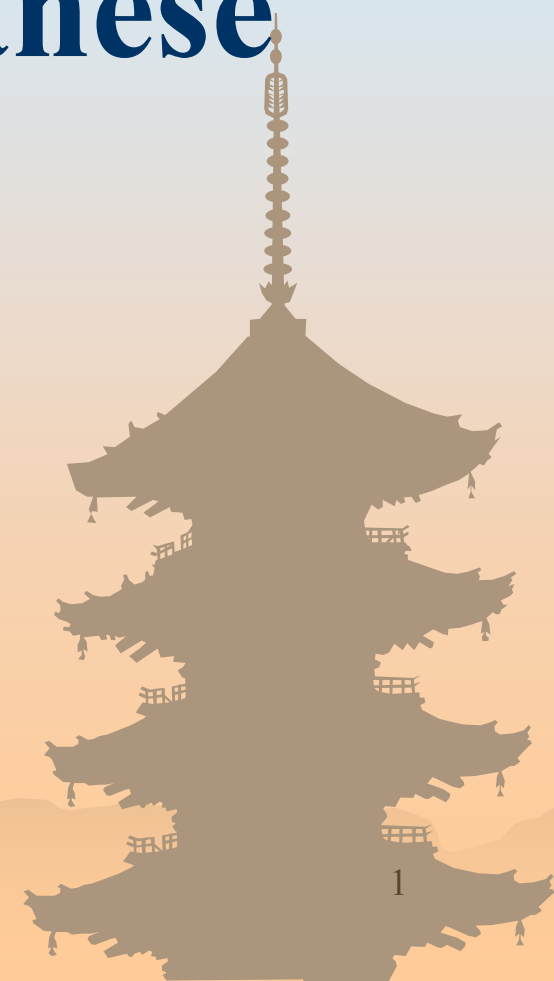


Prosodic Domain of Wh-questions in Japanese

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09/14/07

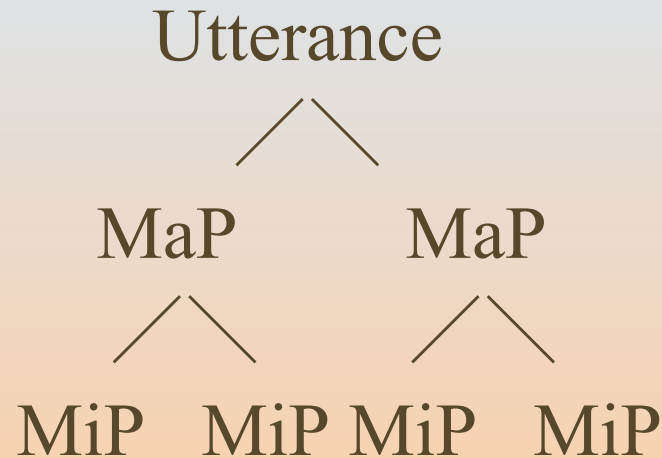


Main Questions

- ❁ How does focus (Wh) affect intonation in Tokyo Japanese?
- ❁ Does the prosodic Wh domain coincide with any particular prosodic phrase, as is assumed in the literature?
- ❁ Downstep into Wh-domain (Kubozono)
 - Is downstep blocked when a Wh domain starts?
- ❁ Downstep out of Wh-domain (Kitagawa & Yoshida)
 - Is downstep delimited by the right edge of the Wh domain? Or does it continue out of the Wh domain?

1. Intonation structure of Japanese

Prosodic Structure



‘MaP’=Major Phrase (=Intermediate Phrase)

‘MiP’=minor phrase (=accentual phrase)

Definition

- ❁ **Major Phrase (MaP)** =domain of **downstep** (Poser 1984), pitch range is **reset** when a new MaP starts (P&B 1988).
- ❁ **minor phrase (MiP)** =domain of **initial rise**, domain where at most one **lexical accent** can be realized.
- ❁ **downstep**=lowering (& narrowing) of pitch range, triggered by lexical accent (Poser 1984)
- ❁ **lexical accent**: a property given to individual words

‘Accented’ vs. ‘Unaccented’

❁ Accented words (A)

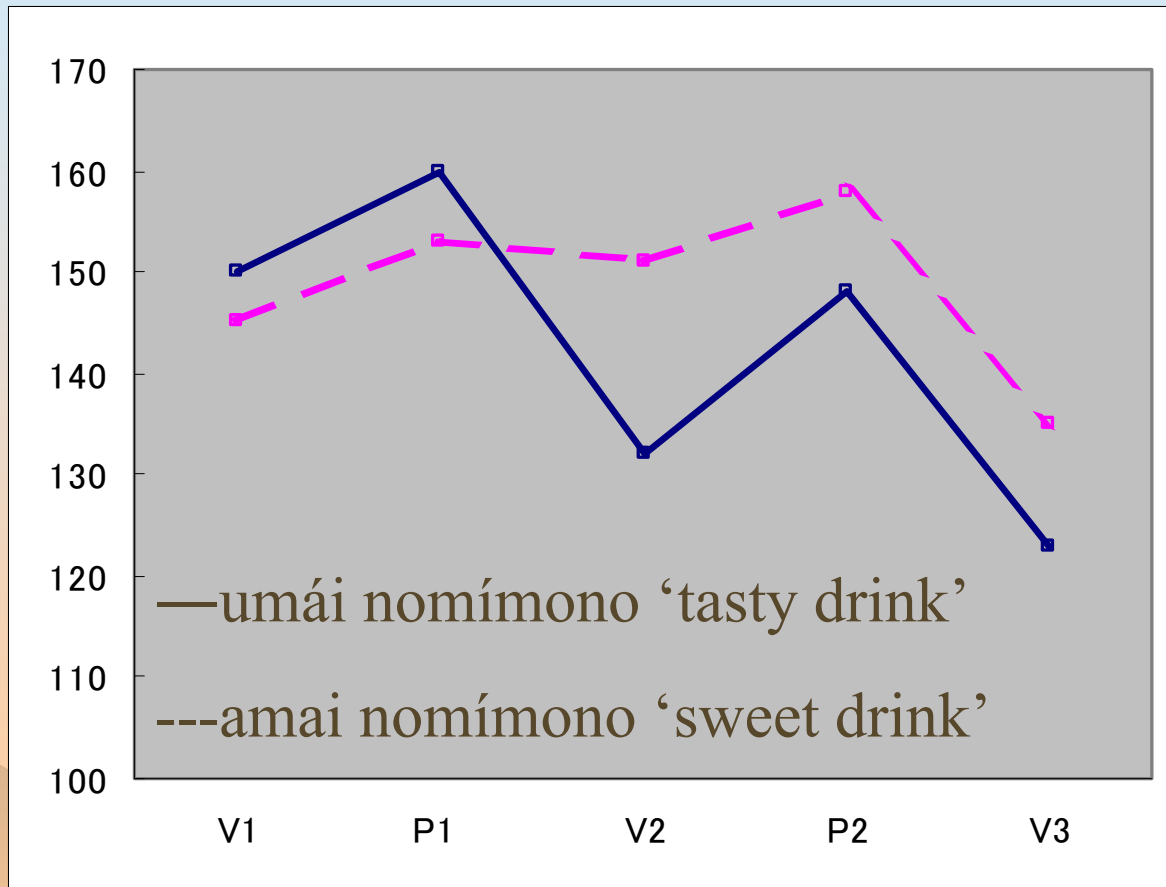
kyóoto ‘Kyoto’, kóobe ‘Kobe’, nagásaki
‘Nagasaki’, náoko ‘Naoko’, dóitu ‘Germany’,
umái ‘tasty’, haréru ‘to clear’

❁ Unaccented words (U)

tookyoo ‘Tokyo’, oosaka ‘Osaka’, hirosima
‘Hiroshima’, naomi ‘Naomi’, amerika ‘America’,
amai ‘sweet’, hareru ‘to swell up’

Accentual Boost and Downstep in Tokyo

Poser (1984), Kubozono (1988)



Three definitions of downstep

- ❁ **Paradigmatic approach** (Poser, P&B, Kubozono):
A MiP is realized at a lower pitch level when following an accented MiP than when following an unaccented one.
- ❁ **Syntagmatic approach** (Nagahara):
A MiP is realized at a lower pitch level than its preceding (accented) MiP. [visual inspection of a single pitch contour]
- ❁ **Top-down approach** (Selkirk & Tateishi):
A MaP boundary is placed at the left-edge of XP (e.g., a VP boundary)



2. Focus and intonation in the literature

- ❁ Corrective or contrastive focus:
 - It is not *John* but *Bob* that went to Berlin.
 - I don't like *cookies* but I like *biscuits*.
 - Are there sweet beans like there are in Japan?
--In America there are *beans*, but there aren't *sweet beans*.
- ❁ Intrinsic (lexical) focus:
 - *Who* went to Berlin?
 - *When* did you go there?
 - Negative Polarity Item (NPI)



Poser (1984)

- ❁ Test sentences

a. amai aóí kudámono ‘sweet, blue fruit’

b. umái aóí kudámono ‘tasty, blue fruit’

c. amai AÓI kudámono ‘sweet, BLUE fruit’

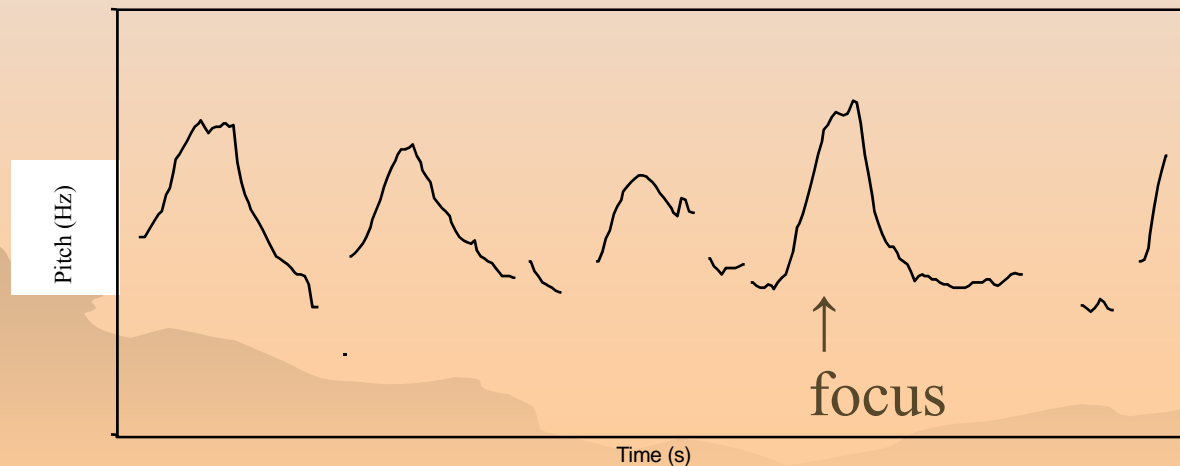
d. umái AÓI kudámono ‘tasty, BLUE fruit’

- ❁ *aóí* is lower in (d) than in (c) with a difference that is ‘only marginally significant’ (T=1.98, p=0.03) (Poser 1984: 301).

- ❁ Focus does not block downstep; it does not introduce a MaP boundary.

Pierrehumbert & Beckman (1988)

- ❁ P&B (1988:19-20): “Focus blocked propagation of catathesis (=downstep)...focus caused the introduction of a prosodic boundary, at which the pitch range was reset. We will call this level of phrasing the intermediate phrase” (=Major Phrase).



3. Experiment on “Downstep into Wh-domain”

- ❁ Test sentences (lexical, intrinsic focus)

*anáta-wa X-de Y-to **NÁni-o** mimásita-ka?*

‘you-TOPIC **place-in person-with what-AC** see-PAST-Q?’

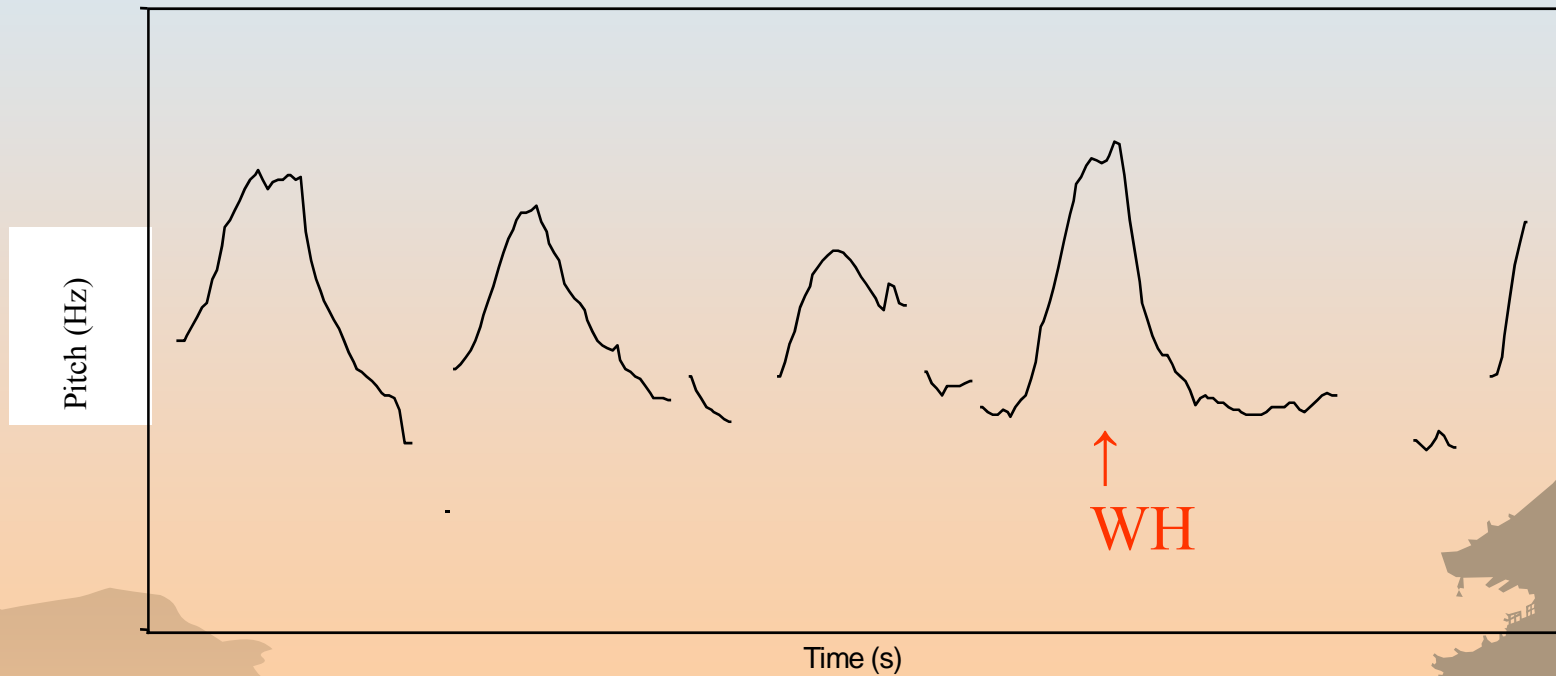
=‘What did you see with Y in X?’

- ❁ [AA-WH] *aómori-de náoko-to náni-o...* 青森で直子と
- ❁ [AU-WH] *aómori-de naomi-to náni-o...* 青森で直美と
- ❁ [UA-WH] *oomori-de náoko-to náni-o...* 大森で直子と
- ❁ [UU-WH] *oomori-de naomi-to náni-o...* 大森で直美と

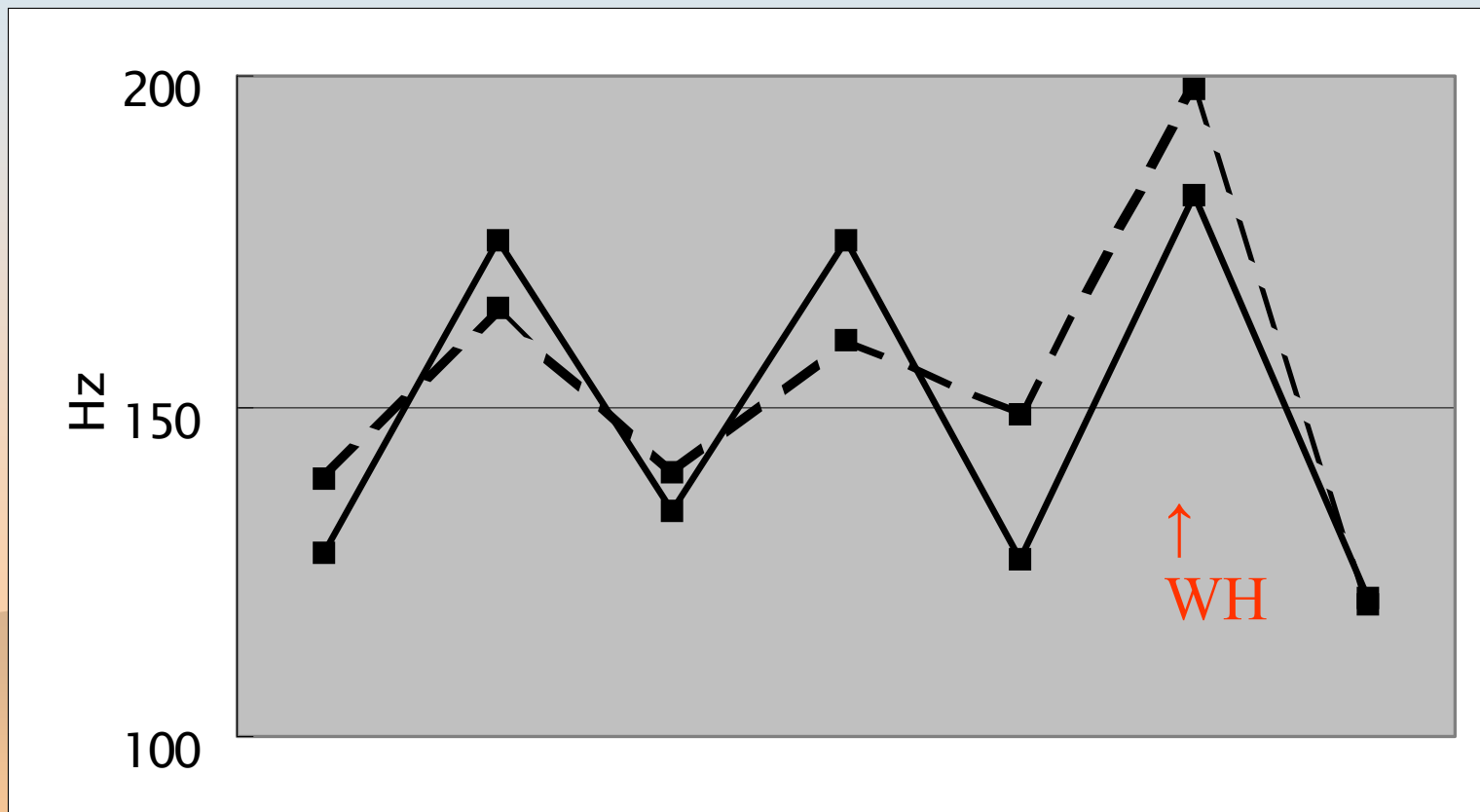
- ❁ Subjects: 16 native (9 male and 7 female) speakers of Tokyo Japanese
- ❁ 4 test sentences: mixed up with other sentences
- ❁ 11 repetitions, first token discarded



AA what



[AA-what] (solid line) vs.
[UU-what] (dashed line)



T test

- ❁ F0 peak of *náni-o* ‘what’

[AA-**what**] < [UU-**what**]

- All subjects except two showed a lower F0 peak for WH in [AA-**what**] than in [UU-**what**].
- 9 subjects out of 14 showed a significant difference at .05 or .01.

Results

- ❁ Syntagmatic aspect:

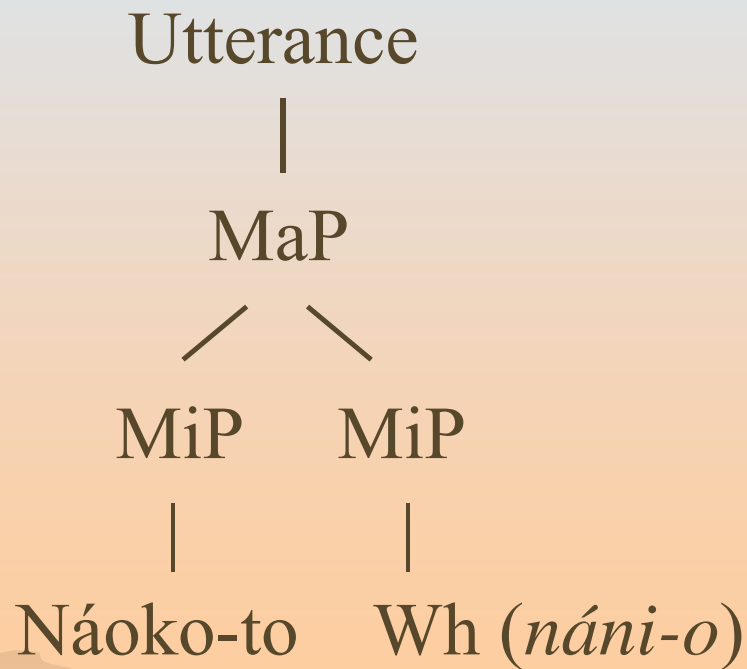
Wh is higher than its preceding element(s).

- ❁ Paradigmatic aspect:

Wh is lower when it follows [AA] than when it follows [UU]. *Wh does not block downstep; it does not reset the pitch range (contra P&B 1988) !*

Paradox

Wh is lowered by the preceding MiP but is higher than that.



Similar paradox

(Kubozono 1988, 1989, 1992)

❁ [AA**AA**]

[[[náoko-no] [**áni-no**]] [[**aóí**] [erímaki]]]

‘(I saw) Naoko's **brother's blue** muffler’

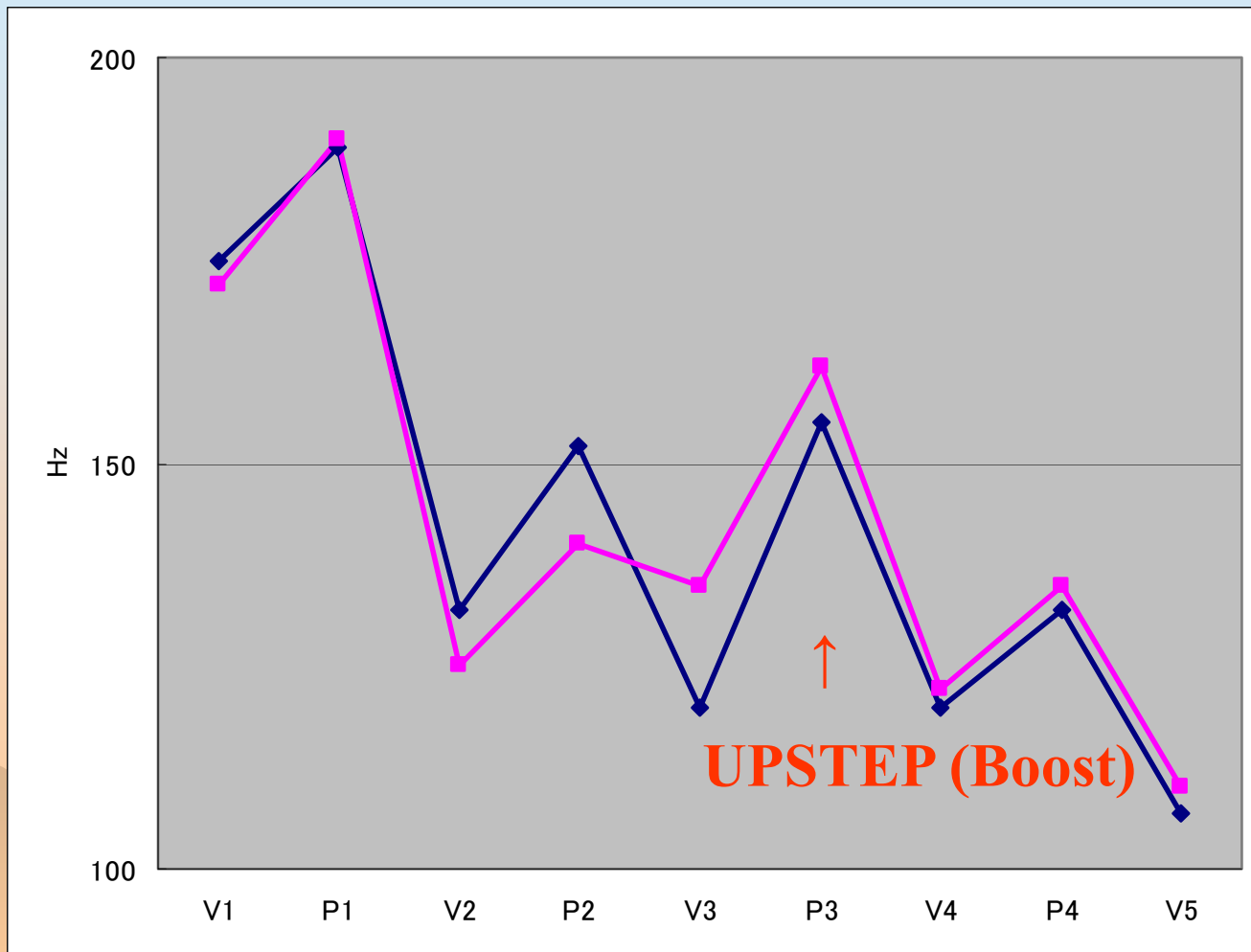
❁ [AU**AA**]

[[[náoko-no] [**ane-no**]] [[**aóí**] [erímaki]]]

‘(I saw) Naoko's **sister's blue** muffler’

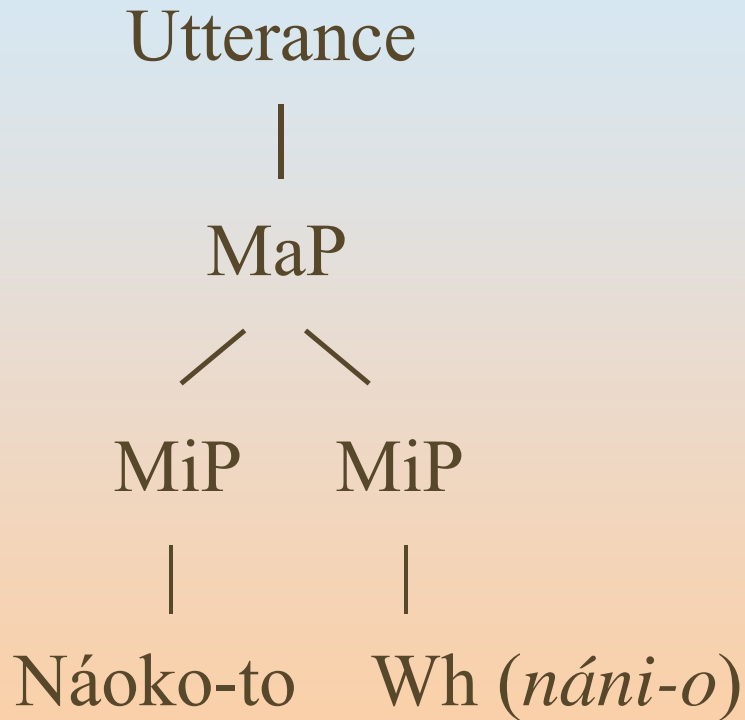


[AAAA] vs. [AUAA]



Independent UPSTEP

Focus raises pitch (range)



↑
FOCUS (boost)

4. Discussion & Conclusion

- ❁ Downstep is not blocked by Wh element (focus). It is not blocked at what looks like a major syntactic boundary.
- ❁ Therefore, a MaP boundary is not generally introduced before the focused element (Wh).
- ❁ Instead, some complex events induced by Wh-focus are taking place *within* the MaP which contains this Wh-focus.

Conclusion (cont'd)

- ❁ There may be another prosodic level/category between MaP and MiP, but this is not certain.
- ❁ It is not certain, either, whether effects of focus (and syntax) on intonation are to be captured in terms of prosodic phrasing, as is usually assumed in the literature.
- ❁ Focus prosody may be independent of intonational phrasing, as suggested by S. Ishihara (2005) and Kitagawa (2005).

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