

Tone and WH-Questions in Fukuoka Dialects

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Workshop on Japanese Prosody
University of Massachusetts, Amherst
January 22, 1999

The data given are from two dialects of Fukuoka city:
• Hakata (Hayata 1985)
• Fukuoka (Hayata 1985; Kubo 1989 et seq.)

I. The phenomenon: "High plateau" tone contour in WH-questions and related structures (First observed by Hayata (1985); further investigated by Kubo (1989 et seq.))

A. Basic facts about tone: (Hakata examples, from Hayata (1985))

- The tonal system is similar to that of Tôkyô (cf. Hayata 1985).

- (1) Word with lexical accent inoti 'life' /inóti/
 • Note: like Tôkyô, location of pitch accent is contrastive for nouns only
- (2) Word without lexical accent atama 'head' /atama/
 • Note: unlike Tôkyô, verbs and adjectives *must* have pitch accent

(3) Accents within larger phrases

- (a) { gohan } 'rice' /góhan/
(b) { tabeta } 'ate' /tabeta/ (⇒ obligatory penult accent in verbs)
(c) { gohan tabeta } 'ate rice/a meal' (only leftmost accent surfaces in MiP)
(d) ~ { gohan } { tabeta }

(4) Tonal phonology (following analysis of Tôkyô by Poser 1984, Pierrehumbert & Beckman 1988):

- (a) Pitch accent is H*+L
(b) There is a phrasal H- that results in the apparent (L)HHHH... contour for unaccented phrases
(c) Only one accent per MiP
(d) There is "initial lowering" at the MiP level

(5) Phrasal tone specifications: Apparently, the same as in Tôkyô

(_{%L} IP (_{H-} MaP (_{L% H-} MiP) (_{L% H-} MiP))) (Pierrehumbert & Beckman 1988)

¹Many thanks to Lisa Selkirk, and also to Tomoyuki Kubo and the members of the UMass Phonology Group, for comments and discussion. Further thanks to Tomoyuki Kubo for a great deal of technological and logistical support as well. This is still research in progress; all errors and inadequacies are my responsibility, and comments are welcome.

B. WH-questions and the H-plateau

• First, some data:

- (6) Compare the following utterances (from Kubo (1989)):
 [Lines drawn above and below utterances represent pitch. Underlying accents are marked (for reference) even in cases where they do not surface as pitch accents.]
- (a) *Declarative* Ore kyōnen Kyōoto itta ze. *I last.year Kyoto went EMPH*
 'I went to Kyoto last year.'
- (b) *YNQ*² Omae kyōnen Kyōoto itta tō-ya? *you last.year Kyoto went COMP?*
 'Did you go to Kyoto last year?'
- (c) *WHQ* Dare-ga kyōnen Kyōoto itta to-ya? *who last.year K. went COMP?*
 'Who went to Kyoto last year?'

• The expected pitch-accents on *kyōnen*, *Kyōoto* do not appear in the WH-question.

(7) Very long WH-questions

- (a) Itu omae kono.mae ore-no syookai.sita onna to atte deeto site kootya nonda to.ya?
when you [this.before I-NOM introduced] woman with meet date have tea drank COMP
 'When did you meet up with the woman I introduced you to that time and have a date and drink tea?'
 (Hayata 1985; informant is Kubo)
- (b) Itu omae wazawaza ore-ga kuroo-site Kyooto kara katte kita yatuhasi kutte-simoota to.ya?
when you deliberately [I-NOM pains-taking Kyoto from buy came] yatsuhashi ate-up COMP
 'When did you deliberately eat up those yatsuhashi that I painstakingly brought back from Kyoto?'
 (Kubo 1989)

(8) Varying the word order (Kubo 1989):

- (a) Itu Kyōoto iku ya? *when Kyoto go COMP*
 'When are (you) going to Kyoto?'
- (b) Kyōoto itu iku ya? *Kyoto when go COMP*
 'Kyoto -- when are (you) going (there)?'

(9) Embedded WH-questions (Kubo 1996):

- (a) [-WH] matrix clause, [+WH] embedded clause: H-plateau extends only over *embedded question*
 [Itu añta-ga Kōobe iku 'ka] wasurēta.
 [*when you-NOM Kobe go WH-COMP*] *forgot*
 '(I) forgot [when you're going to Kobe].'
- (b) [+WH] matrix clause, [+WH] embedded clause: H-plateau extends over *whole clause*
Dare-ga [itu Kōobe iku 'ka] sittōo?
who-NOM [when Kobe go WH-COMP] knows
 'Who knows [when (you/we/they...) are going to Kobe]?'

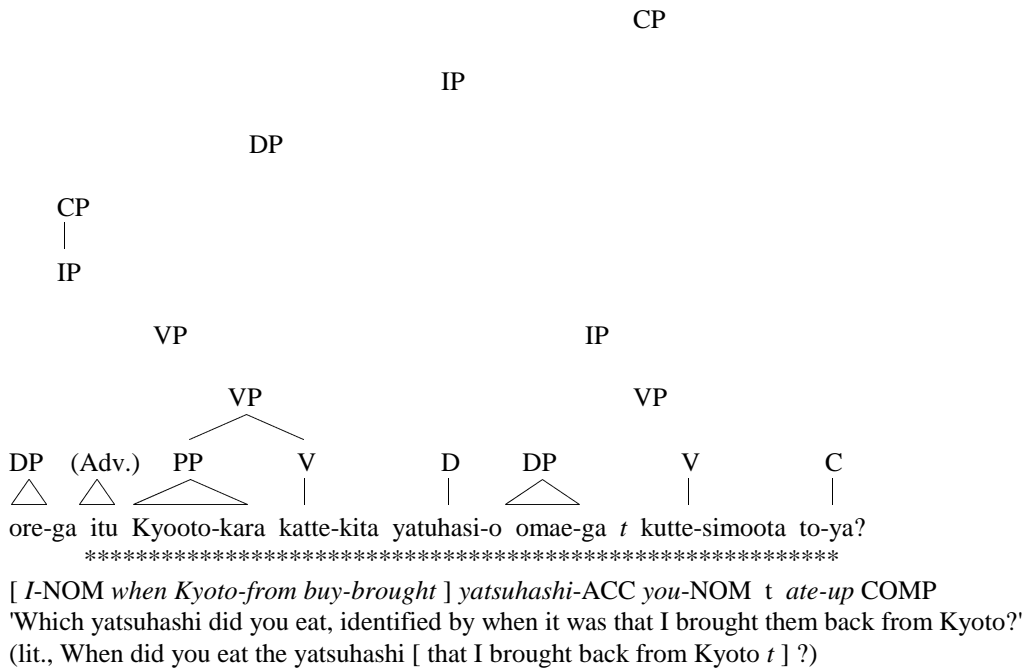
²The usual requirement that verbs have penultimate accent is suspended before the COMP-like particle *to*.

(16) One idea (cf. Truckenbrodt 1995 for WRAP constraints):
 WRAP-WH Elements with the same WH-feature must be contained in the same MiP.

(17) Another possibility: An extension of "prosodic deletion under Focus" (Truckenbrodt 1995)?

$\begin{array}{c} \text{foc} \\ \{ W W W W \} \{ W W W W \} \{ W W W \} \\ \Downarrow \\ \text{foc} \\ \{ W W W W \} \{ W W W W W W W \} \end{array}$	<p>Suppose there is a constraint ALIGN-R(<i>foc</i>). One way to improve performance on this constraint is to delete intervening levels of prosodic structure.</p>
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(18) An impossibility: There is no way to identify the H-plateau region as a syntactic constituent.



(19) Unresolved issue: How is the prosody able to "see" WH-features or WH-chains?

III. Empirical investigation

(20) Questions under consideration:

- (a) Do younger Fukuoka dialect speakers still have the H-plateau in WH-questions?
- (b) Is the Hayata/Kubo analysis of the tonal structure of WH-questions correct?

(21) If the H-plateau is an unaccented MiP, it should have a *gradual downtrend equivalent in slope* to something that is known to be an unaccented MiP.

A. Experimental design and materials

- (22) The following classes of utterances were tested. Each contained utterances of length 4-12 moras.
- (a) WU: WH-questions containing only unaccented words
 - (b) WA: WH-questions containing accented words
 - (c) SU: YN-questions (etc.) containing only unaccented words
 - (d) SA: YN-questions (etc.) containing accented words
 - (e) N: NPs of the structure *N no N no...*
- *Note:* The W and S sentences were matched in terms of structure and lexical items.

- (23) Recordings were made during June and July of 1998:
- Three informants, all Kyushu University undergraduates ("informants 4, 5, 6")
 - Utterances were presented in a different random order for each informant
 - Each utterance was presented once and was read two times by informants

B. Results and discussion

- Do young people have the H-plateau?

- (24) WU utterances in unaccented context = 10 x 3 informants = 30 utterances
WA utterances in unaccented context = 10 x 3 informants = 30 utterances
Number of utterances with accents present: 2 (1 each from informants 5 and 6)

- (25) WU utterances in accented context = 10 x 3 informants = 30 utterances
WA utterances in accented context = 10 x 3 informants = 30 utterances
Number of utterances with non-context accents present: 3 (all from informant 5)

- (26) Anomalies from the accented-context sets

Note: The accented WH-Comp *kai-na* has two possible accents: *'kai-na* or *kái-na*.

WU: (a) *dare-ga niwa ni óru kai-na.* (*expect* *orú kai-na ~ oru kái-na*)
who-NOM garden in be COMP

(b) *dare-ga ayame eránda kai-na.* (*expect* *erandá kai-na ~ eranda kái-na*)
who-NOM irises chose COMP
(Informant produced this form on first repetition only)

WA: (c) *dogena onna-ga miéru kai-na.* (*expect* *mierú kai-na ~ mieru kái-na*)
what.kind woman-NOM be.visible COMP

- In all three cases, what is happening is that the *word* preceding the COMP receives its expected (non-WH) accentuation. Pre-accenting at word, rather than syllable, level?
 - This informant shows this pattern with *kai-na* in some non-WH cases as well.
- (27) Conclusion: Generally speaking, these informants still have the H-plateau in WH-questions.

- Is the H-plateau an unaccented MiP?
- (28) No instrumental results are yet available
Impressionistically: Sounds like this is probably the case.
- (29) Predicted results of downtrend slope comparison tests:
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|------------------|--|
| (a) WA = WU | All WH-questions of equivalent length should have the same slope, whether they contain any lexically accented words or not |
| (b) WA = WU = SU | WH-questions should have the same slope as unaccented utterances |
| (c) WA, WU ≠ SA | WH-questions should differ from ordinary accented utterances |
- (30) A sample comparison
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|--------------|---|
| (a) wa12a1/6 | <u>dare-ga</u> ano iró-ba erandá <u>kai-na</u> .
<i>who-NOM that color-ACC chose COMP</i>
'Who chose that color, I wonder.' |
| (b) ba12a1/6 | <u>áya-ga</u> ano iró-ba erandá <u>kai-na</u> .
<i>Aya-NOM that color-ACC chose COMP</i>
'Did Aya choose that color, I wonder.' |

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