WH-prosody and compound accent

Kubo, Tomoyuki
Faculty of Humanities, Kyushu University : Professor

WH-prosody and compound accent [1]

Tomoyuki KUBO

0. Introduction

In the Fukuoka dialect of Japanese, flat high pitch spreads between WH-words and their associated complementizers. Similar phenomenon is observed in the Gyeongsang-do dialects of Korean, as Kubo (1994) pointed out.

Among previous studies, Hayata (1985: 14) first pointed out the phenomenon of accent deletion in the Fukuoka dialect, beginning from a WH-word and ending before a complementizer *ka*, but without mentioning syntactic structure. Kubo (1989) et seq proposed a phonological rule that deletes all of the accents (fall in pitch) and minor phrase boundaries between a WH-word and the associated complementizer. Smith (2011) proposed WRAP-C analysis, which leads to wrapping the [WH … C] structure in a single minor phrase.

This paper proposes a 'compound analysis', which attributes the flat high pitch

of [WH X C] structure to its status as a phonological compound: [WH X #C] can be analyzed as a phonological compound, where the former part [WH X] is characterized by flat high pitch, as is the case in ordinary compounds: e.g., {**ma'**do}[2] 'window' + {ga**rasu**} 'glass' ➔ {ma**do#ga'**rasu} 'window-glass'.

1. WH-prosody 1

Some examples of WH- and non-WH-prosody of the Fukuoka dialect are given in (1) below.

(1) a. {kyu**usyuuda'**igaku} 'Kyushu University'

　　b. {ko**ko'**-ga} {kyu**usyuuda'**igaku}↑ 'Is this Kyushu University?'
　　　 here-NOM

　　c. {do**ko-ga kyuusyuudaigaku-Ø**}↑ 'Where is Kyushu University?'
　　　 where-NOM　　　　　　　　　-C[+wh]

　　d. {do**ko-ga kyuusyuudaigaku-'**ka} {wa**kar-a'**N}
　　　 where-NOM　　　　　　　　　-C[+wh]　know-NEG
　　　 'I don't know where Kyushu University is. '

　　e. {da**re$_1$-ga doko$_2$-ga　kyuusyuudaigaku-ka$_2$ siQ-too-to-Ø$_1$**}↑
　　　 who$_1$-NOM where2-NOM　　　-C$_2$[+wh]　know-PERF-NRZ-C$_1$[+wh]
　　　 'Who knows where Kyushu University is?'

{kyu**usyuuda'**igaku} 'Kyushu University' is a compound of **kyu'**usyuu 'Kyushu' + da**igaku** 'university'. Accent ' (fall in pitch) appears in (1a, b). In (1c-e), flat high pitch (bold letters) spreads between WH-words and their associated complementizers. If the associated complementizer is null as in (1c), then the entire [WH … C] span is realized as a single unaccented minor phrase. Otherwise, i.e., in the case of an embedded WH-sentence, a default accent is assigned to the penultimate mora of the [WH … C]. In the construction [WH1 … [WH2 … C2] …

---

[2] The data of the Fukuoka dialect are given by phonemic representation.

C1], as in (1e), WH-word with wider scope, i.e., WH1 takes precedence. Thus, the flat high pitch of [WH1 … C1] overrides [WH2 … C2], and a single unaccented minor phrase {WH1 … WH2 … C2 … C1} is formed.

Kubo (2001, 2005) proposed the rules (2a, b) below, to explain the data in (1c-e).

(2) a. Make a minor phrase from WH with its left-end and the associated complementizer with its right-end, as in {$_{MiP}$ WH X C}.

b. If C is not phonologically null, assign a penultimate accent to the minor phrase.

N.B. In the construction [WH1 … [WH2 … C2] … C1], WH-word with wider scope, i.e., WH1 takes precedence [3].

2.WH-prosody 2

Some examples of multiple WH-construction are given in (3) below, which need further formalization.

(3) a. {da**re$_1$-ga kyoneN**} ‖ {do**ko$_1$-no kuni-kara kita hito-to**

who$_1$-NOM last.year   where$_1$-GEN country-from came person-with

keQkoN sita-to-Ø$_1$}↑

married-NZR-C$_1$[+wh]

'Who married, last year, the person who came from which country?'

b. {da**re$_1$-ga**} ‖ [{**kyo'**neN} {do**ko$_1$-no kuni-kara kita hito-to**

who$_1$-NOM last.year   where$_1$-GEN country-from came person-with

keQkoN sita-to-Ø$_1$}↑

married-NZR-C$_1$[+wh]

'Who married the person who came last year from which country?'

In (3a, b), each of the WH-words *dare* and *doko* make a minor phrase. In addition to

---

[3] This precedence of WH1 can be attributed to a more general device like 'multiple spell-out'.

those WH-minor phrases, in (3b), *kyonen* makes its own minor phrase. To explain the data in (3a, b), the following reset rule (4) is necessary.

(4) Reset:

In a multiple WH-construction [WHi X WHj Y C], if X exclusively forms a constituent with WHj, as in [WHi [X WHj] Y C]], reset pitch at the left edge of X.

In other words, in the construction [WH1 …[X WH2] C], as in (3a, b), a WH-word that is nearer to C, i.e., WH2 takes precedence. Thus, the flat high pitch of [WH1 …] is reset before X.

In non-multiple-WH constructions, however, no reset occurs, as in (5) and (6) below. In (5a, b), the constituency of *kyonen* is irrelevant to WH-prosody, which is a complete contrast to the constituency of *kyonen* in (3a, b).

(5) a. {da**re-ga kyoneN [tyuugoku-kara kita hito]-to keQkoN sita-to-Ø**}↑

who-NOM   last.year   China-from   came person-with   married-NZR-C[+WH]

'Who married, last year, the person who came from China?'

b. {da**re-ga [kyoneN tyuuguku-kara kita hito]-to keQkoN sita-to-Ø**}↑

who-NOM   last.year   China-from   came person-with   married-NZR-C[+WH]

'Who married the person who came from China last year?'

(6) a. {da**re-ga kyoneN keQkoN sita-to-Ø**}↑

who-NOM   last.year   married-NZR-C[+wh]

'Who married last year?'

b. {do**ko-no kuni-kara kita hito-to keQkoN sita-to-Ø**}↑

where-GEN   country-from   came person-with   married-NZR-C[+wh]

'From which country did the person come who he/she married?'

c. {da**re-ga keQkoN sita-to-Ø**}↑

who-NOM   married-NZR-C[+WH]

'Who married?'

d. {**kyo'**neN}{do**ko-no kuni-kara kita hito-to keQkoN sita-to-Ø**}↑

last year   where-GEN   country-from   came person-with   married-NZR-C[+WH]

'From which country did the person come who he/she married last year?'

3.Compound analysis

3.1. Compound accent rule and lexical information of some lexical items

Examples of ordinary compounds are given in (7) below.

(7) a. {**ma'**do} 'window' + {ga**rasu**} 'glass'   ➔ {ma**do#ga'**rasu} 'window-glass'

 b. {**a'**me} 'rain' + {o**toko'**} 'man' ➔ {a**me#o'**toko} 'rain-bringer'

 c. {**wa'iN**} 'wine' + {**re'**Qdo} 'red' ➔ {wa**iN#re'**Qdo} 'red wine color'

 d. {**wa'iN**} 'wine' + {i**ro'**} 'color' ➔ {wa**iN#iro**} 'wine color'

 e. {**ki'**-ta}[4] 'came' + {ra**si'** i} 'it seems …' ➔ {ki**ta#rasi'**i}[5] 'It seems that he/she came.'

 f. {se**Nse'e**} 'teacher' + {ra**si'** i} 'it seems …' ➔ {se**Nsee#rasi'**i}[6] 'It seems that he/she is a teacher.'

---

[4] Verbs and adjectives have no underlying accentual distinction in this dialect, and default accent is assigned.

[5] {**ki'**-ta}{ra**si'** i}, a sequence of words, is also grammatical.

[6] {se**Nse'e**}{ra**si'** i}, a sequence of words, is also grammatical.

Compound accent rule is schematically formalized as in (8) below.

(8) compound accent rule: [A' # B'] ➔ [A # B']

Accent in A is lost without exception. Accent in B is intact in some cases, and in other cases, determined by its lexical information on compound accent, as in (9) below.

(9) a. If B has more than two morae, and B has a word-internal accent (fall in pitch), the accent is realized; e.g., **re'**Qdo in (7c), ra**si'** i in (7e, f).

   b. If B has more than two morae, and B does not have a word-internal accent (fall in pitch), accent is assigned immediately after the first mora of B; e.g., ga**rasu** in (7a), o**toko'** in (7b).

   c. In other cases, i.e. in mono-moraic and bimoraic nouns, accent in B is determined by its lexical information on compound accent; e.g., i**ro'** in (7d).

In the case of (9c), lexical information on compound accent is specified as in (10) below.

(10) /iro'/: <u>compound accent: /iro/</u>

3.2. Compound analysis

Compound analysis attributes the flat high pitch of [WH X C] structure to its status as a phonological compound: [WH X #C] can be analyzed as a phonological compound, where the former part [WH X] is characterized by flat high pitch, as is the case in ordinary compounds. Some examples are given in (11) below.

(11) a. /Ø/: {da**re-ga kita#Ø**}↑ 'Who came?'

   b. /'ka/: {da**re-ga kita#'**ka} {wa**kara'**-N}. 'I don't know who came.'

   c. /kaina/: {da**re-ga kita#ka'**ina}. 'I wonder who came.'

      Cf. /'kaina/: {sa**kura#'**kaina}. 'I wonder whether it is a cherry or not.'

   d. /'yara/: {da**re-ga kita#'**yara} 'I wonder who came.'

6

In (11), the underlined part is the former part of big compounds and flat high pitch is realized according to compound accent rule (8). In the latter part, lexical information on compound accent is realized in each C[+WH]. For example, /kaina/ has a WH-feature and is subcategorized as [WH X #___] COMPOUND, i.e., /kaina/ makes a compound together with [WH X]. In that case, compound accent /ka'ina/ is realized according to the lexical information. Examples of [+WH] complementizers are given in (12) below, with their subcategorization schemata and their accentual information. All of these are clitics, and can be attached to non-WH items, in which case default pre-accent is realized, e.g., sa**kura**'-ga 'cherry-NOM', sa**kura**'kaina 'I wonder whether it is a cherry or not'.

(12) a. /Ø/：C[+WH]

        subcategorization: [WH X #___] COMPOUND

   b. /ka/：C[+WH]

        subcategorization: [WH X #___] COMPOUND

   c. /kaina/ 'I wonder …' : C[+WH]

        subcategorization: [WH X #___] COMPOUND,

        <u>compound accent: ka'ina]</u> COMPOUND

   d. /yara/ 'I wonder …' : C[+WH]

        subcategorization: [WH X #___] COMPOUND

   e. /mo/ 'also' : C[+WH]

        subcategorization: [WH X #___] COMPOUND

4. Concluding remarks

This paper proposed a compound analysis of WH-prosody observed in the Fukuoka dialect of Japanese. Given this analysis, we can eliminate WH-specific deletion rule in (2a), and explain why flat high pitch appears from WH-words to the associated C.

References

Hayata, Teruhiro (1985) *Hakatahougen no akusento • keitairon* [*Accent and Morphology of the Hakata dialect*]. Fukuoka: Kyushu University Press.

Kubo, Tomoyuki (1989) Fukuoka-si hougen no, dare • nani nado no gimonsi o hukumu bun no pitti-pataan [The pitch patterns of sentences containing WH-words in the Fukuoka City dialect]. *Kokugogaku* 156, left 1-12.

Kubo, Tomoyuki (1990a) Fukuoka-si hougen no gimonsi hyougen no akusento kisoku [Accent rules for WH expressions in the Fukuoka dialect.] *Kyushu University Papers in Linguistics (KUPL)* 11, 103–118.

Kubo, Tomoyuki (1990b) Fukuoka-si hougen no toi-kaesi gimonsi-gimonbun (WH-echo) no pitti-pataan [The pitch patterns of WH-echo sentences in the Fukuoka City dialect]. *Bungaku Kenkyuu* 87, 153–179.

Kubo, Tomoyuki (1994) Gimonsi no sukoopu o arawasu takaku tairana pitti ---Tyousengo Pusan-hougen • Jinju-hougen ni tuite no houkoku [Flat High Pitch and the scope of Wh-words] *Asian and African linguistics* 22: 93-108. Tokyo: Institute of Languages and Cultures of Asia and Africa.

Kubo, Tomoyuki (2001) Fukuoka hougen ni okeru tougoron to on'inron no kyoukai ryouiki [Syntax-phonology interface in the Fukuoka dialect]. *Journal of the Phonetic Society of Japan* 5-3: 27–32.

Kubo, Tomoyuki (2005) Syntax-phonology interfaces in Busan Korean and Fukuoka Japanese. In: Shigeki Kaji ed., *Proceedings of 4th International Symposium. Cross-linguistic Studies of Tonal Phenomena: Historical Development, Tone-syntax Interface, and Descriptive Studies*. 195-209. Tokyo: Institute of Languages and Cultures of Asia and Africa.

Kubo, Tomoyuki (2010) Fukuoka hougen ni okeru dousi • keiyousi to gimonsi-gimonbun no akusento ni kansuru oboegaki [Accent in verbs, adjectives, and WH-questions of the Fukuoka dialect]. *Bungaku Kenkyuu* 107, 157–183.

Smith, Jennifer L. (2011) [+wh] complementizers drive phonological phrasing in Fukuoka Japanese. *Natural Language and Linguistic Theory* 29-2: 545-559.