

Wh-intonation and Information Structure in South Kyeongsang Korean, Fukuoka Japanese and Tokyo Japanese

This paper aims to explore the syntax-phonology interface by taking information structure into account. In Tokyo Japanese (TJ), a correlation has been observed between intonation and the semantic scope of wh-questions (*wh-intonation*): the F0 peak of a wh-element is boosted and F0 of the materials between the wh-element and the question particle is reduced. This phenomenon is illustrated in (1) and (2) (Ishihara 2004: 82-84). The wh-elements appear in **bold**, and the semantic scope of wh-phrases and the intonation domains are indicated by arrows and shading, respectively.

- (1) Direct wh-question: [Wh ___ Comp_[-WH]] ___ Q_[+WH]
 Naoya-wa [Mari-ga **nani-o** nonda-to] imademo omotteru-no?
 Naoya-Top Mari-Nom what-Acc drank-Comp_[-WH] even.now think-Q_[+WH]
 ‘What does Naoya still think that Mari drank?’
- (2) Indirect wh-question: [Wh ___ Comp_[+WH]] ___ Q_[-WH]
 Naoya-wa [Mari-ga **nani-o** nonda-ka] imademo oboeteru-ø?
 Naoya-Top Mari-Nom what-Acc drank-Comp_[+WH] even.now remember-Q_[-WH]
 ‘Does Naoya still remember what Mari drank?’

Different claims have been made regarding the domain of the *wh-intonation* when a wh-element scrambles out of the embedded clause: While Ishihara (2002) and Kitagawa and Fodor (2003) observe that F0 reduction occurs until the embedded complementizer (3a), Ishihara (2004, 2005) claims that it continues to the end of the matrix clause (3b) with the subordinated wh-scope (*wh-scope* and intonation mismatch).

- (3) Indirect wh-question with scrambling: Wh_i ___ [___ t_i ___ Comp_[+WH]] ___ Q_[-WH]
 a. Ishihara (2002), Kitagawa and Fodor (2003)
nani-o Naoya-wa [Mari-ga nonda-ka] imademo oboeteru-ø?
 what-Acc Naoya-Top Mari-Nom drank-Comp_[+WH] even.now remember-Q_[-WH]
 b. Ishihara (2004, 2005): mismatch
nani-o Naoya-wa [Mari-ga nonda-ka] imademo oboeteru-ø?

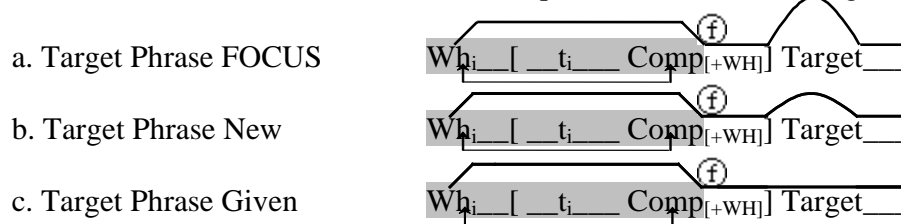
We can resolve this issue by looking at closely related languages, South Kyeongsang Korean (SKK) and Fukuoka Japanese (FJ), where a prosodic contour is assigned to mark the domain of wh-scope as in TJ. However, the characteristics of the wh-scope marking are different in these languages: it surfaces as a high flat prosodic contour, not as F0 reduction (Kubo 1993). Thus, these languages are promising cases to test the domain of *wh-intonation* since *wh-intonation* and the intonation pattern induced by information structural properties: while discourse-given materials are realized with reduced F0 just as in TJ, *wh-intonation* is associated with a high flat F0. Based on experimental evidence from SKK and FJ, this paper shows, that the pitch reduction on the material following the embedded clause in (3b) is caused by information structural properties –specifically, discourse-Givenness– as an effect independent from *wh-intonation*.

- (3b') reduction by wh- reduction by Givenness
nani-o Naoya-wa [Mari-ga nonda-ka] imademo oboeteru-ø?

I argue both (3a) and (3b) are possible, but in different contexts.

The argument is based on evidence from an experiment conducted controlling for information structural properties, which were not controlled for in previous studies. Three different contexts where the target phrase is Focused, New or Given, were provided. Both wh-phrase in-situ and scrambled constructions were tested in the contexts. As shown in the F0 fall \textcircled{f} in (4a), (4b) and (4c), the experimental evidence shows that even when a wh-element is scrambled out of the embedded clause, the domain of *wh-intonation* terminates with the embedded complementizer contrary to Ishihara (2004, 2005).

(4) Schematic F0 contours of indirect wh-questions with scrambling in SKK



Furthermore, pitch reset or reduction of the material immediately following the embedded clause depends not on the scrambled wh-phrase, but on the information structural status of that material. It appears that, in TJ, two different phenomena – *wh-intonation* and intonation by Givenness–have not been distinguished, because they are realized identically as F0 reduction. This led to the mistaken conclusion that the domain of *wh-intonation* with wh-scrambling is the matrix clause as in (3b). The experimental results in the present study indicate that F0 of (3b) results from the two different phenomena, as shown in (3b’).

These results not only resolve the issue, but also show that earlier proposal (Ishihara 2004, 2005), cannot capture the full set of data. Alternatively, I propose a model on the basis of the operation Agree with some modifications of the feature inventory in Kitagawa (2004)’s Agreement model. The model proposed here is able to account the fact that the correlation between syntax and prosodic marking is maintained regardless of scrambling. Further, in understanding the nature of the syntax-phonology interface, it is crucial to distinguish wh-intonation from intonation conditioned by information structural properties (contrastive Focus *vs.* New *vs.* Given).

Selected References

- Ishihara, S. (2002), Invisible but audible wh-scope marking: Wh-constructions and deaccenting in Japanese. In *Proceedings of WCCFL 21*, ed. Line Mikkelsen and Chris Potts, 180–193.
- Ishihara, S. (2005), Prosody-Scope Match and Mismatch in Tokyo Japanese Wh-questions, *English Linguistics* 22.2.
- Kitagawa, Y and Fodor, J.D. (2003), Default Prosody Explains Neglected Syntactic Analyses of Japanese, *Japanese/Korean Linguistics* 12, 267-279.
- Kitagawa, Y. (2004), Wh-scope puzzles, paper presented at *NELS 35*, University of Connecticut, Storrs.
- Kubo, T. (1993), Flat High Pitch and the scope of Wh-words, *Study of languages and cultures of Asia and Africa* 22, Tokyo university of Foreign studies.