

"Production and Perception of Prosody-Scope Correlation in Wh-interrogatives"

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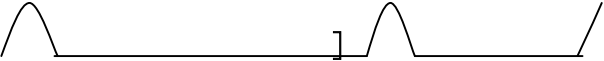
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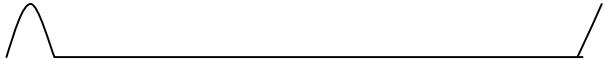
Literature has observed prosody-scope correlation in Wh-questions in Tokyo Japanese (Deguchi & Kitagawa 2002, Ishihara 2003, among others), whereby the domain of the Wh-scope correlates with that of focus prosody — subordinate Wh-scope with local focus prosody (Local FPD) as informally illustrated in (1a) and matrix Wh-scope with Global FPD as in (1b).

(1)

hokenzyo-wa [kanzyatati-ga nani-o tabeta-ka] tasikametandesuka?

health.dept.TOP patients-NOM **what**-ACC ate-**COMP**_{Wh} confirmed-**COMP**_{Wh}

a. Subordinate scope: [] (Local FPD)

b. Matrix scope: [] (Global FPD)

While it was claimed that grammar should ensure this phonetic-semantic correlations, it has been also pointed out that there exists more than one extra-grammatical factor that imposes a bias toward the sentence processing that leads to a strong preference for the combination of subordinate scope and Local FPD as in (1a) (Kitagawa & Fodor 2003 (K&F), Kitagawa 2005). In this talk, we will attempt to evaluate both of these grammatical and processing hypotheses based upon the results of our experiments involving both production and perception of Wh-focus prosody.

Our study began with a production study using 11 potentially ambiguous Wh-questions accompanied by two versions of a preceding context, each designed to permit a distinct scope reading. Target sentences were recorded by both the experimenter and a native speaker who accepts both the (wide and narrow) scope readings but is not cognizant of the purported prosody-scope correlation. The phonetic analysis on the collected utterances suggests that the speakers' intention about the Wh-scope was reflected in the relevant F0 correlates, mainly in the F0 height of the matrix verb, and also in some durational cues.

We then investigated whether the prosody-scope correlation produced by these speakers is actually utilized by hearers. In a comprehension study with 28 subjects using the utterances recorded in our production study, the proportion of matrix interpretation significantly increased when the speaker exhibited wider focus intonation (Global FPD), but nevertheless, results indicate an overwhelming preference for the embedded reading in spite of prosodic manipulation (cf. Hirotsu 2004). It, therefore, does not conform to F&K's claim that processing guided by Global FPD is usually strong enough to overcome pragmatic and other handicaps imposed on the matrix Wh-scope interpretation.

In order to further determine whether focus intonation prosody produced by speakers are processed by hearers utilizing the same set of phonetic cues, our multivariate analyses examined exactly which factor(s) contributed to the speaker's intention and the hearers' decision about the wh-scope. The results are quite surprising in that the factor(s) that contributed to the speakers' intention and the hearers' interpretation are not coincident. Our next goal will be to investigate the nature of this mismatch between speakers and hearers in the use of actual cues to interpret the prosodic structure.

References:

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