

"Prosody in Wh-questions"

[1] **Introduction:** First, we argue that in order to make syntactic tests for scope interpretation of wh-questions in Japanese **repeatable**, we must take prosody into consideration. Second, we propose that focused wh-phrases undergo some formal process at LF, which is distinct from any version of wh-movement proposed in the literature. To begin with, we adopt Selkirk-Tateishi's (1988) view of the downstep of lexical accents in Japanese as in (1): the pitch of each and every lexical accent gradually declines toward the end of the utterance with the pitch level reset at the onset of each 'major phrase.' (Lexical accents are indicated by capitalization, and higher pitch levels by larger fonts.) In addition, we assume the existence of **Emphatic Prosody** (henceforth **EPD**) associated with a focused item in Japanese, which consists of a sharply raised pitch of the first high tone of a focused item, **plus** an abrupt drop to low pitch, which is prolonged until the next EPD or, as we will see, the end of the scopal domain of the focused item is encountered. cf. Bolinger ('65), Jackendoff ('72) & Ishihara ('00). Compare (1) and (2). In (2), EPD is indicated by a bold-face large-font capital followed by ↓__↓. (We **indicate the lexical accents of only relevant items**, disregarding those that do not concern us.) [2] **Prosody and Wh-scope:** Observe now the contrast between (3a) and (3b). They involve an identical wh-question, but only (3a) is accompanied by EPD and interpretable, while (3b) sounds quite odd and fails to provide any plausible interpretation. (**Warning:** Elimination of the lexical accents of the two predicates *nusunda* and *omotteiru* in (3a) and their retention in (3b) are crucial to detect the contrast. No emphatic pitch is intended in any of the lexical accents in (3b).) This contrast indicates that **EPD is obligatory in a wh-question in Japanese**. This point can be further confirmed since the sentence becomes interpretable even without EPD when a wh-phrase is eliminated from (3b), as can be seen in (1) (with a question intonation added at the end). If one regards a linguistic expression as paired PF and LF, the observations here suggest that the interpretation of a wh-question based upon its LF cannot be correctly obtained without associating this LF with a specific and appropriate PF. In fact, we know of no acceptable prosody other than that in (3a) associated with this sentence. Let us summarize below some of our topics. [3] **Subjacency:** Consider (4), which has been reported in the literature as an example to demonstrate the subjacency effects in Japanese wh-questions out of a wh-island. A sentence like this is often reported to involve 'variation of acceptability among speakers' and/or 'subtlety of judgment.' We now reanalyze (4) as in (4'a-c), associating it with various prosodic patterns. When EPD is extended to the end of CP₁ as in (4'a), we can interpret the sentence as a matrix wh-question without any problem. No subjacency effects in fact are detected. Let us emphasize here that we are NOT adding any unusual prosody to the sentence in (4'a) since, as we saw in (3), even a wh-phrase embedded in a 'non-island' must be accompanied by the same EPD. On the contrary, when this obligatory EPD fails to be assigned and the lexical accent of the matrix predicate is retained as in (4'b), the sentence sounds quite odd and provides no sensible interpretation. If one simply asks oneself (or an informant) whether the wh-phrase *nani* within the wh-island can take the matrix scope with this prosody, the answer obviously must be in the negative. This could be the source of 'clearly degraded' status of (4) detected by some speakers. Finally, when EPD is extended only to the end of CP₂ as in (4'c), slight complication arises. For those speakers who interpret *-kadooka* strictly as *whether*, (4'c) cannot constitute any well-formed question while for those who can use *-kadooka* on a par with the [+WH] COMP *-ka*, the sentence is grammatical as a yes/no question embedding an indirect wh-question. Thus, we have every reason to conjecture that the varied and unstable detection of subjacency effects in Japanese wh-questions reported in the literature may actually stem from the language users' unconscious and arbitrary assignment of (or failure to assign) EPD to sentences like (4). [4] **Superiority:** First, we find that two prosodic patterns as in (5a) and (5b) are possible with multiple wh-questions in Japanese. In (5a), both wh-phrases receive an emphatic pitch in a single instance of EPD and the sentence is interpreted as a matrix wh-question asking for a 'paired' answer. In (5b), on the other hand, only the first wh-phrase receives an emphatic pitch and the second wh-phrase is included in the prolonged deaccented portion. This prosodic pattern also yields a 'pairing' question but of a specific kind -- the deaccented wh-phrase secondarily inquires about a choice out of a presupposed list. A wh-phrase like *dore* 'which' as the deaccented wh-phrase therefore makes the sentence of this kind most natural. What is interesting and crucial here is that a similar sentence with multiple wh-phrases sounds quite awkward when EPD starts with the second rather than the first wh-phrase as in (5c). (**Warning:** No emphatic pitch on the first wh-phrase *doitu*, which would assimilate (5c) to (5a).) We claim that the contrast between (5b) and (5c) is the superiority effect arising from the obligatory association of the focused wh-phrase

with some formal feature introduced under a higher functional projection. We in fact consider that EPD is a PF-reflex of this formal association at LF. Other topics: Scrambling as wh-movement (Takahashi('93)) and antisuperiority (Watanabe('92)).

Data:

- (1) [JOhn-wa [MAry-ga oKAsi-o nuSUnda-to] oMotteiru]
 -TOP -NOM sweets-ACC stole-that think
 'John thinks that Mary stole the sweets.'
- (2) [John-wa [MA↓ry-ga okasi-o nusunda-to] omotteiru↓]
 'It is Mary that John thinks stole the sweets.'
- (3) a. JOhn-wa [MAry-ga NA↓ni-o nusunda-to] omotteiru↓-nO↑?
 what-ACC Q(UESTION)
 b. #JOhn-wa [MAry-ga NAni-o nuSUnda-to] oMotteiru-nO↑?
- (4) (?~??)John-wa [Mary-ga nani-o katta kadooka] siritagatte-iru-no?
 -TOP -NOM what-ACC bought whether wants.to.know-Q
 'What₁ does John want to know [whether Mary bought t₁]?'
- (4') a. [_{CP1} John-wa [_{CP2} Mary-ga NA↓ni-o katta kadooka] siritagat-teiru↓-nO↑]
 b. #[_{CP1} JOhn-wa [_{CP2} MAry-ga NAni-o katTA kaDOOka] siRITAGAt-teiru-nO↑]
 c. %[_{CP1} John-wa [_{CP2} Mary-ga NA↓ni-o katta kadooka↓] _γsiRITAGAt-teiru-nO↑^N]
- (5) a. [_{CP1} kimi-wa [_{CP2} DAre-ga NA↓ni-o nusunda-to] omotteiru↓-nO↑]?
 you-TOP who-NOM what-ACC stole-that think-Q
 b. [_{CP1} kimi-wa [_{CP2} DA↓re-ga dore-o nusunda-to] omotteiru↓-nO↑]?
 who-NOM which-ACC
 c. #[_{CP1} kimi-wa [_{CP2} doitu-ga NA↓ni-o nusunda-to] omotteiru↓-nO↑]?
 which.brat-NOM what-ACC

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