

"Wh-scope Puzzles"

[1] **Background:** Deguchi and Kitagawa (2002) (**D&K**) and Ishihara (2002) (**IH**) argued that the Subjacency effects in Japanese disappear when the sentence is accompanied by an appropriate emphatic prosodic pattern, which also indicates the scope domain of the Wh-in-situ, as in (1). **<EG (1) here>** The same prosodic pattern is required even when a Wh-question involves a declarative "non-island" — (2) sounds quite awkward when the post-focus reduction ends at the end of the subordinate clause **<EG (2)>**, while it sounds perfect when it is accompanied by a prosodic pattern similar to (1). The prosodic pattern as in (1), in other words, is the *normal* prosody for the matrix scope interpretations of all subordinate Wh-phrases, rather than being an exotic prosodic pattern that exceptionally overrides the Subjacency constraint. D&K and IH both claim that a type of focus feature associated with COMP induces this emphatic prosody. D&K further argued that multiple-Wh questions require the combination of more than one instance of this emphatic prosodic pattern (= their "complex" emphatic prosody) to yield a pair-wise interpretation, and that such a prosodic pattern also neutralizes the "additional Wh-effect," as can be seen from the acceptability of both (3a) (= an additional Wh outside the island) and (3b) (= both Whs within the island). **<EG (3a-b)>**

[2] **Mysteries:** Many other puzzling scope phenomena come to be observed anew when we reanalyze Wh-questions in Japanese with such emphatic prosody applied. This paper takes up some of these phenomena and attempt to account for them. **First**, as illustrated by (4a), multiple Wh-questions are generally well-formed when they are assigned "complex" emphatic prosody and the Wh-phrases come to be interpreted as paired foci, exhibiting synchronized scope. **<EG (4a) and (3a-b)>** When one of the Whs appears as a non-focus as in (4b), however, scope of the focus Wh (*WH*) and a non-focus Wh (*wh*) cannot be synchronized and the sentence becomes unacceptable. **<EG (4b)>** This anti-scope-synchronization requirement on *WH* and *wh* can be confirmed by the well-formedness of (4c), in which *WH* and *wh* are allowed to take distinct scope (*WH* = matrix, *wh* = subordinate). **<EG (4c)>** **Second**, in both (5a-b), *DAre* shows up as *WH* in the subordinate clause and *MARy* shows up as a non-Wh focus/contrast item (*F*) in the matrix. **<EG (5a-b)>** The sentence is interpretable, however, in (5a) (= interrogative CP embedded) but not in (5b) (= declarative CP embedded). This means that *WH* and *F* are not interpretable when they are forced to take the same scope. We observe, in other words, another case of anti-scope-synchronization effect, this time between *WH* and *F*.

[3] **Proposals and Arguments:** We propose the following scope-determining (or association) mechanism for Wh-questions and a focus construction in Japanese (and possibly in other languages). First, the scope of each type of NPs (*WH*, *wh* and *F*) is determined when they undergo unselective licensing by (or agreement with) a specific formal feature introduced under COMP, as described in (6). (cf. Reinhart (1997) for a possible semantic consequence of this analysis.) **<EG (6)>** Second, more than one of these features can be introduced under a single COMP, although some of such combinations are prohibited when lexical features would be selected *redundantly*. COMPs, therefore, may have feature specification as in (7a) but not in (7b). **<EG (7a-b)>** The proposed mechanism allows us to capture the two anti-scope-synchronization phenomena observed above. *WH* and *wh* cannot share scope ((4b)) because [*Fwh*] and [*wh*] cannot be simultaneously introduced under a single COMP. Multiple Wh-foci as in (4a), on the other hand, is possible because of the unselective nature of [*Fwh*]. (4c) is also grammatical because *WH* and *wh* are separately licensed by the matrix [*Fwh*] and the subordinate [*wh*], respectively. The contrast in (5) arises because *WH* and *F* are forced to be licensed by a single COMP with the prohibited feature specification [*F, Fwh*] in (5b), while they can be licensed separately by a COMP with [*Fwh*] (subordinate) and a COMP with [*F*] (matrix), respectively, in (5a). The possibility of the combination of *F* (*John*) and *wh* (*nani*) in (8) also illustrates that a single COMP may be specified with [*F*] and [*wh*] simultaneously, as the proposed mechanism predicts. **<EG (8)>** [4]

Further Motivation: The proposed mechanism also accounts for the puzzles concerning what Takahashi (1993: 664) reports as the superiority effect induced by the long-distance scrambling of a Wh-phrase as in (9a). (*-ga* 'NOM' was changed to *-wa* 'TOP' to make the information structure more natural.) **<EG (9a)>** Along with the judgment indicated in (9a), Takahashi also reports that "heavy stress" on *dare-ni* makes the sentence acceptable. (p. 665, fn. 6) We can straightforwardly capture both these acceptability judgments —(9a) is a case of anti-scope synchronization involving *WH* and *wh*, and (9b) is a case of legitimate unselective licensing of multiple-Wh-foci accompanied by complex emphatic prosody. **<EG (9b)>** The paper will also discuss a case of obligatory scope-synchronization, certain restrictions imposed on the matrix COMP with [*wh*], and some intervention effects caused by *wh*, among other things.

Examples:

- (1) (**BOLD CAPITALS** = emphatic accent, = post-focus pitch reduction, ↑ = final interrogative rise)

John-wa [Mary-ga **NA**ni-o era'nda-*ka*] i'mademo siritaga'tteiru-**no**↑
 -TOP -NOM what-ACC chose-COMP_{WHETHER} even.now want.to.know-COMP_{WH}
 'With respect to **what**₁ does John still want to know [**whether** Mary chose **it**₁]?'

- (2) (# = awkward with the indicated prosody, *ITALIC CAPITALS* followed by ' = unreduced accent)

#John-wa [Mary-ga **NA**ni-o era'nda-*to*] I'mademo omo'tteiru-no↑?
 -TOP -NOM what-ACC chose -COMP_{THAT} even.now think-COMP_{WH}
 'What does John still think [**that** Mary selected]?'

- (3) a. John-wa [Mary-ga NAni-o katta-*kado'oka*] DAre-ni tazu'neta-*no*↑
 John-TOP Mary-NOM what-ACC bought-COMP_{WHETHER} who-DAT asked-COMP_{WH}
 'What₁ did John ask **whom** [*whether* Mary bought **t**₁]?'

b. John-wa [DAre-ga NAni-o katta'-*ka'dooka*] to'm-ni tazu'neta-*no*↑
 who-NOM what-ACC -COMP_{WHETHER} Tom-DAT -COMP_{WH}
 'What₁ did John ask Tom [*whether who* bought **t**₁]?'

- (4) a. **DA**re-ga **NA**ni-o katta-**no**? 'Who bought what?'
 who-NOM what-ACC bought-COMP_{WH}

b. #**DA**re-ga *na'ni*-o katta-**no**?

c. John-wa [**DA**re-ga *na'ni*-o katta-*ka*] sonnani siritaga'tteiru-**no**?
 -TOP who-NOM what-ACC bought-COMP_{WH} that.much want.to.know-COMP_{WH}
 'With respect to **who** does John want to know so eagerly [**what** she bought]?'

- (5) a. John-wa [**DA**re-ga ku'ru-*ka*] **MA**ry-ni siraseta-**no**↑
 -TOP who-NOM come-COMP_{WH} -DAT informed-Q
 'Was it **MARY** that John informed who will come?'

b. #John-wa [**DA**re-ga ku'ru-*to*] **MA**ry-ni siraseta-**no**↑
 -TOP who-NOM come-COMP_{THAT} -DAT informed-COMP_{WH}

- (6) a. **wh**-feature: Unselectively licenses a *non-focus Wh*-in-situ (= *wh*)
 b. **F**-feature: Licenses a *non-Wh focus* item (= *F*)
 c. **WH** (= **Fwh**)-feature: Unselectively licenses a *focus Wh*-in-situ (= *WH*)

- (7) a. Possible: COMP [wh], COMP [F], COMP [Fwh], COMP [F, wh]
 b. Impossible: *COMP [**F**, **Fwh**], *COMP [**Fwh**, **wh**]

- (8) Zyaa **JO**hn-wa *na'ni*-o eranda-no↑? 'Then, what did **JOHN** select?'
 then -CONTR what-ACC selected-COMP_{WH}

- (9) a. ??**NA**ni₁-o John-wa *da're*-ni [Mary-ga t₁ tabeta-to] itta-**no**?
 what-ACC -TOP who-DAT -NOM ate-COMP_{THAT} said-COMP_{WH}
 b. **NA**ni₁-o John-wa **DA**re-ni [Mary-ga t₁ tabeta-to] itta-**no**?
 'With respect to what did John tell whom that Mary ate it?'

References:

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