

Ultimate Pied-Piping in Japanese
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In this talk I would like to show that there are cases in which entire sentences are pied-piped, which has received little attention although clausal pied-piping has been extensively discussed. To give one example, intervention effects are unobserved in *nan-CL-no NP* ‘How many-CL-Gen NP’ questions in Japanese. Consider the following questions:

- (1) a. ??Ken-ka Mary-ga nani-o yomimasita ka?
-or -Nom what-Acc read Q
‘What did Ken or Mary read?’
b. Ken-ka Mary-ga nan-satu-no hon-o yomimasita ka?
-or -Nom how-CL-Gen book-Acc read Q
‘How many books did Ken or Mary read?’
- (2) a. *Mary-sika nani-o yomimasendesita ka?
-only what-Acc read.not Q
‘What did only Mary read?’
b. Mary-sika nan-satu-no hon-o yomimasendesita ka?
-only how-CL-Gen book-Acc read.not Q
‘How many books did only Mary read?’

Examples *a* above show that interveners such as disjunction *ka* and an NPI *sika* cannot precede *wh*-expressions, which is called intervention effects. However, if *nan-CL-no NP* is employed, intervention effects are now unobserved.

Although there are several ways to explain this phenomenon (cf. Tomioka (2007)), this presentation will show that syntactic accounts such as Hagstrom (1998) and Morita (2009) will nicely account for it. Specifically, this talk assumes that intervention effects in Japanese arise when Agree between C and a *wh*-expression is blocked by an intervener. Then the talk will claim that intervention effects are unobserved in *nan-CL-no NP* questions because the entire interrogative sentences can be pied-piped, in which case the (nuclear) scope of question and the scope of restriction coincide. I will call this phenomenon ultimate pied-piping in the talk.

As one piece of evidence, if *ittai* ‘the hell or in the world’ is placed before *nan-CL-no NP*, intervention effects are observed as follows:

- (3) a. ??Ken-ka Mary-ga ittai nan-satu-no hon-o yomimasita ka?
-or -Nom the hell how-CL-Gen book-Acc read Q
‘How many books did Ken or Mary read?’
b. ittai Ken-ka Mary-ga nan-satu-no hon-o yomimasita ka?
- (4) a. ??Mary-sika ittai nan-satu-no hon-o yomimasendesita ka?
-only the.hell how-CL-Gen book-Acc read.not Q
‘How many books did only Mary read?’
b. ittai Mary-sika nan-satu-no hon-o yomimasendesita ka?

According to Pesetsky (1987), *ittai* must precede (or c-command) a phrase which goes through (covert) *wh*-movement. In (3)*a* and (4)*a*, *ittai* allows the movement of the *wh*-expression alone, but this movement will be subject to the intervention effect, where *ka* ‘or’ and *sika* ‘only’ serve as interveners. On the other hand, pied-piping of the entire sentences, which will nullify the intervention effect, is prevented because of *ittai*. This

is why (3)*a* and (4)*a* are ungrammatical. In contrast, (3)*b* and (4)*b* are grammatical because *ittai* can c-command the entire sentences, and hence, pied-piping of the whole sentences are allowed.

The big question is why *nan-CL-no NP* allows ultimate pied-piping whereas other *wh*-expressions do not. It is a standard assumption that a raised material functions as the restriction of a *wh*-operator, and the semantic content of that material is presupposed. If so, in the case of *wh*-expressions such as *dare* ‘who’ and *nani* ‘what’, it is redundant to raise the entire question. The following two semantic representations show that pied-piping of the entire sentence does not add any semantic effect:

(5) a. $\lambda p \exists x [\text{Ken or Mary read thing}(x) \ \& \ p = \text{Ken or Mary read thing}(x)]$

b. $\lambda p \exists x [\text{thing}(x) \ \& \ p = \text{Ken or Mary read } x]$

Ultimate pied-piping is applied in (5)*a* while only *nani* ‘what’ is raised in (5)*b*. (5)*a* is nonsensical because it means something like ‘Among things Ken or Mary read, what did Ken or Mary read?’ Since it is semantically anomalous or vacuous, ultimate pied-piping is disallowed in (1)*a* or (2)*a*.

On the other hand, questions such as (1)*b* can be derived in two ways:

(6) a. $\lambda p \exists n \exists^n x [\text{Ken or Mary read thing}(x) \ \& \ p = \text{Ken or Mary read thing}(x)]$

b. $\lambda p \exists n \exists^n x [\text{thing}(x) \ \& \ p = \text{Ken or Mary read } x]$

(For the sake of simplicity, ‘ $\exists^n x$ ’ means that there are *n* instances of *x*.) In (6)*b*, only the *wh*-expression is raised. It is semantically fine, but its derivation is blocked due to intervention effects. In contrast, ultimate pied-piping is applied in (6)*a*. In this case, however, no semantic anomaly arises because it is possible and semantically non-redundant to ask ‘Among things Ken or Mary read, how many did Ken or Mary read? (namely, how many are they?)’ Accordingly, ultimate pied-piping is possible in *nan-CL-no NP* questions, and intervention effects are circumvented in (1)*b* and (2)*b*.

This talk will also present cases where ultimate pied-piping is possible even with another type of *wh*-expressions such as indirect questions, and discuss why that is the case.

If the present claim is correct, it will give further support to the syntactic account of the intervention effect rather than the pragmatic one. Furthermore, the present claim will not only support Chomsky’s (1995) copy theory but also add an important consequence in that some redundant (semantic) content can exist in more than one copy, and will argue against Arregi (2003), who holds that clausal pied-piping has no semantic effect whatsoever.

References

- Arregi, Karlos (2003) “Clausal Pied-Piping,” *Natural Language Semantics* 11, 115-143.
- Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge, Massachusetts.
- Hagstrom, Paul Alan (1998) *Decomposing Questions*, doctoral dissertation, MIT.
- Morita, Hisashi (2009) “Covert Pied-Piping in Japanese *Wh*-questions,” *English Linguistics* 21, 21-41.
- Pesetsky, David (1987) “*Wh*-in-situ: Movement and Unselective Binding,” in E.J. Reuland and A. ter Meulen (eds.), *The Representation of (In)definiteness*, MIT press, Cambridge, Massachusetts.
- Tomioka, Satoshi (2007) “Pragmatics of LF intervention effects: Japanese and Korean interrogatives,” *Journal of Pragmatics* 39, 1570-1590.