Excorporation and V-V compound ellipsis in Japanese
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Synopsis: Japanese abounds in V-V compounds (e.g. *omoi-dasu* 'think-take = remember'), and the first verb stem in a V-V compound can be elided when two V-V compounds are combined by the conjunctive particle *to* 'and'. (1a) is an example of V-V compound ellipsis, and (1b) is the non-elided counterpart.

(1) a. [*kare-ga   watasi-o* [[*omoi-**dasu** no*]   *to*   [____-***dasa-nai*** *no*] *to*]]-*de-wa*   *ootigai   da.*
           he-NOM I-ACC   think-take NM and   -take-NEG NM and -DE-TOP different COP
           'It makes a big difference whether he remembers me or not.'

     b. [*kare-ga   watasi-o* [[*omoi-**dasu** no*]   *to*   [*omoi-**dasa-nai*** *no*] *to*]]-*de-wa*   *ootigai   da.*
           he-NOM I-ACC   think-take NM and think-take-NEG NM and -DE-TOP different COP
           'It makes a big difference whether he remembers me or not.'

In (1a), the first V *omou* 'think' is not present in the second conjunct, but the sentence receives the same interpretation as (1b). In other words, *dasa-nai* in (1a) is interpreted as if it is *omoi-dasa-nai*, even though the first V is not present at the surface. By investigating this type of V-V compound ellipsis, this paper argues that V-V compound ellipsis in (1a) is an example of Gapping construction (Johnson 2014), and provides new evidence that excorporation out of a complex head is possible in some cases (Roberts 1991).

V-V compound ellipsis = Gapping: We argue that (1a) is analyzed as Gapping construction. In several respects, V-V compound ellipsis behaves like Gapping construction (Johnson 2014). **Firstly**, an elided part appears only in the second conjunct. V-V compound ellipsis is not allowed in the first conjunct, as in (2).

(2) *[*kare-ga   watasi-o* [[____-***dasu*** *no*] *to*   [*omoi-**dasa**-nai* *no*] *to*]]-*de-wa*   *ootigai   da.*
      he-NOM I-ACC   -take NM and think-take-NEG NM and -DE-TOP different COP

Secondly, V-V compound ellipsis is available only when two V-V compounds are coordinated by the conjunctive particle *to* 'and' or the disjunctive particle *ka* 'or'. (3) is an example of V-V compound ellipsis with the disjunctive particle (cf. Yatabe 2001). Like (1a), *dasa-nai* in the second conjunct is interpreted as *omoi-dasa-nai*, even though the first V is not present at the surface.

(3) [*kare-ga   watasi-o* [[*omoi-dasu*] *ka* [____-***dasa**-nai*] *ka*]]-*ga*   *mondai da.*
      he-NOM I-ACC   think-take or   ___-take-NEG or -NOM problem COP
      'The problem is whether he remembers me or not.'

On the other hand, when two V-V compounds are coordinated by an element other than these particles, V-V compound ellipsis becomes unavailable, as shown in (4).

(4)?**namae-o* [*omoi-**das**-oo*   *to sita no*] *ni* [____-***das**-e-nai*   *no*]-*wa*   *kuyasii*
      name-ACC think-take-MOD C did NM but ___-take-can-NEG NM -TOP frustrating.
      'It is frustrating when I tried to remember a name but I couldn't.'

Thirdly, V-V compound ellipsis cannot be derived by simple phonological reduction or PF-deletion (Hartmann 2000). This line of approach will predict that (5B) is felicitous as an answer to (5A), just like (5B′), contrary to the fact. (5B) is infelicitous as an answer for (5A) because the predicate is interpreted as the simplex verb *dasu* 'take', but not as *omoi-dasu* 'think-take = remember'.

(5) A. ***omoi-das**-e-ru?*   B. #***das**-e-nai.*   B′. ***omoi-das**-e-nai.*
       think-take-can-PRES   take-can-NEG   think-take-can-NEG
       'Can you remember (it)?'   'I cannot take (it) out.'   'I cannot remember (it).'

The infelicity of (5B) shows that the presence of a linguistic antecedent is not enough to license the ellipsis of the first V. It seems difficult to capture the infelicity of (5B) under the simple PF-deletion analysis. It is also important to notice that what is elided in (1a) is a verb stem, and little has been reported on the existence of a null verb stem in Japanese, in contrast to null pronouns. **Finally**, it is difficult to analyze (1a) by assuming across-the-board movement of the first V. This is because the elided part *omoi* 'think' cannot be a target of syntactic operation. Kageyama (1982, 1993) argue that Japanese V-V compounds can be classified into two types: syntactic compounds and lexical compounds. Lexical compounds are formed

in the lexicon, and syntax does not have access to the internal structure of a lexical compound. For instance, *soo* substitution can be applied to the first V of a syntactic V-V compound, as shown in (6a). However, lexical V-V compounds are incompatible with *soo* substitution, as in (6b).

(6) a. *Mary-ga* **naki-tsutzuke,** *John-mo* [*soo si*]-***tsuzuke-ta.***
Mary-NOM cry-continue   John-also so do -continue-PAST
Lit. 'Mary continued to cry and John continued to do so, too.'   [Syntactic V-V Compounds]

    b. *Mary-ga   *watasi-o* **omoi-dasi,** *John-mo* [*soo si*]-***dasi-ta.***
Mary-NOM I-ACC   think-take John-also so do -take-PAST
'Mary remembered me, and John did so, too.'   [Lexical V-V Compounds]

Suppose that in order to receive the correct interpretation at LF, *soo* requires an antecedent, like *do so* anaphora in English (Hallman 2004). Whatever accounts for the nature of *soo* replacement, a replaced position must be accessible during the syntactic derivation. This means that *soo* cannot be part of lexically fixed words (cf. Anaphoric Island Constraint proposed by Postal 1969). *omoi-dasu* 'think-take = remember' is a lexical V-V compound, according to Kageyama's test, as in (6b). Therefore, the first V in (1a) cannot undergo across-the-board movement, and we need another way to derive V-V compound ellipsis.

Analysis: Based on the data above, we pursue a VP-ellipsis analysis of Gapping (Sag 1976, Jayaseelan 1990, a.o.). Specifically, we propose that V-V compound ellipsis is derived from head movement of the second V to a higher functional head, followed by PF-deletion of a remnant VP, as illustrated in (7).

(7) $[_{nP}$ ... $[_{TP} [_{VP}$ OBJ $[_V$ V$_1$-~~V$_2$~~ $]]$ V$_2$-T $]$ ... NM $]$ & $[_{nP}$ ... $[_{Neg}$ ~~$[_{VP}$ OBJ $[_V$ V$_1$-V$_2$ $]]$~~ V$_2$-NEG $]$ ... NM $]$

In (7), the nominalizer takes a clausal, and two nominalized clauses are coordinated. Within a nominalized clause, the second V of a V-V compound undergoes head movement, and then the remnant VP is elided in the second conjunct. Notice that all of Kageyama's tests for the distinction between lexical and syntactic compounds only show that the first V in a lexical V-V compound is syntactically opaque. As for the second V, there is no evidence that it is also syntactically opaque. In contrast to the across-the-board movement analysis, the present analysis makes use of a syntactic movement of the second V in a V-V compound.

Head excorporation: Under the present analysis, excorporation out of a V-V compound is crucial to derive V-V compound ellipsis. The proposal predicts that when head excorporation is independently blocked, V-V compound ellipsis becomes unavailable. This prediction is borne out, as shown in (8).

(8) *[*kare-ga* *watasi-no tanzyoobi-o*   [[*omoi-***das***-e-nai*   *no*] *to* [___-***dasi***-*mo si-nai*   *no*]
he-NOM I-GEN   birthday-ACC   think-take-can-NEG NM and ___-take-also do-NEG NM

to]]-*de-wa*   *ootigai*   *da.*
and -DE-TOP different COP

'It makes a big difference whether he can't remember my birthday or even doesn't try to remember it.'

In (8), the scalar additive particle *-mo* intervenes between negation and the V-V compound, and it blocks head movement of the second V of the V-V compound. As a result, *su* 'do' is inserted to function as a morphological host of negation, similarly to *do*-support in English. In this case, V-V compound ellipsis is not allowed, in contrast to (1a). The unacceptability of (8) can be captured under the present analysis.

Importantly, Gapping in English cannot elide a part of a word (e.g. **Carly is overpaid and Will* *under~~paid~~*. (Johnson 2014)). The difference between English Gapping and V-V compound ellipsis in Japanese may be reduced to a difference in the optionality of head movement. As an agglutinative language, Japanese generally shows verbal agglutination unless there is an element which blocks head movement. On the other hand, it is not clear whether English verbs always undergo syntactic head movement (Bobaljik 1995, Lasnik 2003, a.o.). This is a potential difference between these languages. The present analysis can associate the optionality of syntactic head movement with the availability of word-part ellipsis, and provides another piece of evidence for excorporation out of a complex head (Roberts 1991, Koopman 1994).

Selected references: **Johnson. 2014.** *Gapping*. Ms. University of Massachusetts at Amherst. **Roberts. 1991.** Excorporation and minimality. *Linguistic Inquiry* 22.