Elliptic *Do So* in Japanese【Main Session, Syntax, Japanese】

Synopsis: I argue that Japanese *soo-s* 'do so' can involve ellipsis, being best analyzed by the derivational theory of ellipsis (Aelbrecht 2010). Specifically, I show that Japanese *do so* exhibits a certain asymmetry regarding extraction out of its domain (✗ overt Ā vs. ✓ overt A & unpronounced Ā), supporting the claim that derivational deletion targets only phonological but not formal features of material within ellipsis sites (Abels 2012, Park 2016). Furthermore, I demonstrate that the ellipsis analysis of Japanese *do so* has consequences for the availability of pseudogapping in Japanese and the domain of *do so* replacement.

Long-distance Scrambling: Japanese VP-domains can be replaced by *soo*-s 'do so' (Nakau 1973, a.o.).

(1) Taroo-wa John-o home-ta. Hanako-mo soo-si-ta.
Taro-TOP John-ACC praise-PST Hanako-also so-do-PST
'Taro praised John. Hanako also did so.'

The first crucial observation is that long-distance scrambling, which exhibits a subjacency effect (Saito 1985) and uniformly counts as Ā-movement, e.g. due to the inability to create a new binding relation (Tada 1990, Saito 1992, a.o.), is banned out of a *do so* domain. Consider (2).

(2) a. Rubii$_1$-o Taroo-wa [$_{CP}$ Hanako-ga t_1 nusun-da to] danteisi-ta.
ruby-ACC Taro-TOP Hanako-NOM steal-PST C conclude-PST
(Lit.) 'A ruby$_1$, Taro concluded [$_{CP}$ that Hanako stole t_1].'
b. *Daiamondo$_2$-o Ziroo-wa soo-si-ta.
diamond-ACC Ziro-TOP so-do-PST
(Lit.) 'A diamond$_2$, Ziro did so.'

With (2a) as its antecedent, (2b), where *diamondo* 'diamond' has been extracted out of a *do so* domain via long-distance scrambling, is ungrammatical (it is independently possible for Japanese *do so* to include an embedded CP within its domain, so what matters here is in fact extraction). This indicates that long-distance scrambling, in other words overt Ā-movement, is disallowed out of a Japanese *do so* site.

Passive: In contrast to long-distance scrambling, movement involved in passive, which counts as overt A-movement (cf. Ishizuka 2010), is allowed out of a *do so* domain as in (3).

(3) a. Akai nanika$_1$-ga dono heya-ni-mo t_1 ok-are-ta-no-wa sit-te-ita-ga,
red something-NOM every room-in-MO put-PASS-PST-NML-TOP know-PROG-PST-though
'Although I knew that something red was put in every room, ...' ∃»∀; ∀»∃
b. Aoi nanika-ga soo-s-are-ta-no-wa sira-nakat-ta.
blue something-NOM so-do-PASS-PST-NML-TOP know-NEG-PST
(Lit.) 'I didn't know that something blue was done so.' ∃»∀; ∀»∃

With (3a) as its antecedent, (3b), where *aoi nanika* 'something blue' is outside out of a *do so* domain, is grammatical. Important for us here is that not only (3a) (adapted from Yatsushiro 1999) but also (3b) allows an inverse scope reading: the passive subject can be interpreted in a lower position than the adverbial locative phrase *dono heya-ni-mo* 'in every room' within the *do so* domain. This shows that the passive subject has in fact been extracted out of the domain in question.

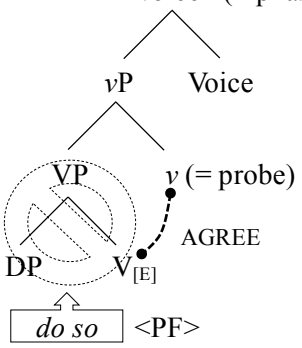
Null Operator: Comparative deletion in Japanese has been claimed to involve null operator (Op) movement since it exhibits a subjacency effect (cf. Kikuchi 1987). Given this, consider (4).

(4) a. [Op$_1$ Taroo-ga murini t_1 tabe-ta yori(mo)] Mary$_i$-ga ooku-no
Taro-NOM by.overstraining.oneself eat-PST than Mary-NOM many-GEN
keeki-o tabe-te-ita-no-wa sit-te-ita-ga,
cake-ACC eat-PROG-PST-NML-TOP know-PROG-PST-though
(Lit.) 'I knew that Mary$_i$ ate more cakes [than Op$_1$ Taro ate t_1 by overstraining himself]'
b. [Op$_2$ Ziroo-ga soo-si-ta yori(mo)] kanozyo$_i$-ga ooku-no
Ziro-NOM so-do-PST than she-NOM many-GEN
keeki-o tabe-te-ita-no-wa sira-nakat-ta.
cake-ACC eat-PROG-PST-NML-TOP know-NEG-PST
(Lit.) 'I didn't know that she$_i$ ate more cakes [than Op$_2$ Ziro did so].'

With (4a) as its antecedent, (4b), where Op has been extracted out of a *do so* domain, is grammatical, which indicates that Op-movement is possible out of the domain in question.

Analysis: I argue that the extraction pattern out of a Japanese *do so* site is best explained under the derivational deletion theory of ellipsis, proposing (5): ❶ VP domains are split into VoiceP, *v*P, and VP with VoiceP being a phase (Legate 2012); ❷ Japanese *do so* can involve VP-ellipsis with the elided VP part being replaced by the 'pro-form' *soo-s* at PF; ❸ Ellipsis here is a deletion operation that deprives material within ellipsis sites of only phonological but not formal features (Abels 2012, Park 2016); ❹ V is equipped with [E]-feature (Merchant 2001), which marks its own projection (VP, here) for ellipsis (Aelbrecht and Harwood 2015); ❺ The [E]-feature on V is activated via an appropriate AGREE relation between V and *v* (I assume Aelbrecht's 2010 implementation, where deletion takes place once the probe (*v*, here) enters the derivation). ❺ is motivated by the fact that *do so* in Japanese is licensed by agentivity

(5)



(cf. Tanaka 2016; see also Nakau 1973, Shibatani 1978) as follows.

(6) Taroo-ga *netu-o/urawaza-o dasi-ta-ato,
Taro-NOM fever-ACC/secret.trick-ACC show-PST-after
watasi-mo soo-si-ta.
I-also so-do-PST
'After Taro *ran a fever / showed a secret trick, I also did so.'

(6) is ungrammatical if the antecedent VP of *do so* is a non-agentive predicate, i.e. *ran a fever*. Assuming that *v* is the locus of agentivity (cf. Harley 2017), I argue that *v* licenses VP-ellipsis involved in Japanese *do so*. The extraction pattern out of a Japanese *do so* site now falls into place. First, overt Ā-movement is banned out of it, cf. (2b), since deletion applies before the phase head, i.e. Voice, enters the derivation as in (7): nothing can be pronounced once it is deleted.

(7) a. $[_{vP}\ [_{VP}\ [_{CP}$ diamond ... $]\ \mathbb{V}_{[E]}]\ v]$ b. ✗ $[_{VoiceP}$ **diamond$_1$** $[\ldots [_{vP}\ [_{VP}\ [_{CP}$ diamond$_1$ ... $]\ \mathbb{V}_{[E]}]\ v]$ Voice$]]$
DELETION AGREE (*diamond* has been deleted so it cannot be pronounced)

Second, overt A-movement is allowed out of a *do so* site, cf. (3b), since such movement can target a lower position than the phase head, e.g. *v*P, unlike Ā-movement. Specifically, I assume with Aelbrecht (2010) and Baltin (2012) that A-movement is allowed even without feature-checking (e.g. Case) in *v*P.

(8) ✓ $[_{vP}$ **$[_{NP}$ sth blue$]_1$** $[_{VP}\ [_{PP}$ in every room$]\ [_{V'}\ [_{NP}$ sth blue$]_1\ \mathbb{V}_{[E]}]]\ v]$ (Movement and deletion
DELETION AGREE happen simultaneously)

Third, Op-movement is possible out of a *do so* site, cf. (4b), since formal features are immune to deletion so that Op, which involves no phonological features in the first place, can target the phase head, i.e. Voice, even after deletion applies to the matrix VP as in (9).

(9) a. $[_{vP}\ [_{VP}\ [_{CP}\ \mathbb{O}p$ ... $]\ \mathbb{V}_{[E]}]\ v]$ b. ✓ $[_{VoiceP}$ **Op$_1$** $[\ldots [_{vP}\ [_{VP}\ [_{CP}\ \mathbb{O}p_1$ ... $]\ \mathbb{V}_{[E]}]\ v]$ Voice$]]$
DELETION AGREE (Op-movement is possible since formal features are intact)

Consequence I (VP-ellipsis & Pseudogapping): The possibility of certain types of extraction out of a Japanese *do so* site indicates that it can involve VP-ellipsis and cannot be uniformly pro-form: pro-form is syntacticlly atomic, thus uniformly disallowing extraction out of its domain (cf. Johnson 2001). That Japanese *do so* can involve VP-ellipsis lets us capture Tateishi's (1994) generalization: direct objects can occur outside of a *do so* site only when they are contrastively focused (cf. Mihara 2004) as follows.

(10) Taroo-ga musuko$_i$-o home-ta-ato, {*Ziroo-mo kare$_i$-o / Ziroo-wa MUSUME-o} soo-si-ta.
Taro-NOM son-ACC praise-PST-after Ziro-also he-ACC / Ziro-TOP daughter-ACC so-do-PST
(Lit.) 'After Taro praised son$_i$, {Ziro also did so *him$_i$ / Ziro did so DAUGHTER}.

Importantly, English pseudogapping, e.g. (11a), which is standardly analyzed as involving extraction + VP-ellipsis as in (11b) (cf. Jayaseelan 1990, Lasnik 1995, 1999), is also subject to a similar condition: its remnant must be contrastively focused as in (12) (cf. Levin 1978, Jayaseelan 1990).

(11) a. Mary hasn't dated Bill, but Sue has Hally. b. ..., but Sue has Hally$_1$ ~~[$_{VP}$ dated t$_1$]~~

(12) John invited him$_i$ more often than Bill did *him$_i$ /HIM$_j$.

Thus, if both Japanese *do so* and English pseudogapping involve VP-ellipsis, Tateishi's generalization can be attributed to whatever accounts for the contrastiveness requirement on remnants of English pseudogapping, supporting the claim that pseudogapping is operative in Japanese (Funakoshi 2016).

Consequence II (Domain of *Do So*): Hoji (1990) argues that Japanese *do so* does not involve (VP-)ellipsis, showing that it can include negation within its domain as in (14) unlike VP-ellipsis in (13).

(13) Since I don't buy anything made in Japan anymore, you {*should too / shouldn't either}.

(14) Taroo-ga kuruma-o kiniro-ni nura-nakat-ta-node, Ziro-mo soo-si-ta.
Taro-NOM car-ACC gold paint-NEG-PST-because Ziro-also so-do-PST
(Lit.) 'Because Taro did not paint the car gold, Ziro did so too.'

Though negation is not attached to the verb in the second conjunct of (14), it can mean that Ziro did not paint the car gold either. Then, the current prediction is that if something is extracted out of a *do so* domain, the domain in question becomes not able to include negation because it must involve VP-ellipsis (i.e. no pro-form option). The prediction is borne out, e.g. as in the passive *do so* in (15).

(15) Kitanai kabin-ga shatyoo-no heya-ni ok-are-nakat-ta-no-wa rikai-deki-ru-ga,
dirty vase-NOM president-GEN room-in put-PASS-NEG-PST-NML-TOP understand-can-PRES
kireina kabin-ga soo-s-are*(-nakat)-ta-no-wa rikai-deki-na-i.
beautiful vase-NOM so-do-PASS*(-NEG)-PST-NML-TOP understand-can-NEG-PRES
(Lit.) 'I can understand that the dirty vase was not put in the president's room, but I cannot understand that the beautiful vase was *(not) done so.'

Here, negation must be on the verb, indicating that certain types of Japanese *do so* can in fact involve VP-ellipsis (n.b. negation becomes obligatory in the comparative deletion and pseudogapping cases as well).

Selected References: Abels, K. 2012. *Phases: An essay on cyclicity in syntax*. Berlin: de Gruyter. Aelbrecht, L. 2010. *The syntactic licensing of ellipsis*. Amsterdam: John Benjamins. Tateishi, K. 1994. The syntax of 'subjects'. UMass diss.