C-4

Why Scrambling and Argument Ellipsis?: Two Asymmetries between Japanese and English

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Abstract

The aim of this paper is to reconsider the nature of scrambling and Argument Ellipsis in Japanese in terms of the recent discussion on the elimination of the argument structure, and to consider why English lacks these two grammars. I will argue that the source of these two differences between the pertinent two languages lies in the way they introduce argument DPs into the verbal structure. I will propose that in Japanese, arguments are introduced by a case head K that is a nominal suffix. Then, I will further contend, following Nomura (2016), that KPs are semantically combined with the verb via Predicate Modification. This explains why Japanese, not English, has the two grammatical operations in question, capturing the cross-linguistic generalization given by Otaki (2014) concerning the agglutinative case morphology and the availability of Argument Ellipsis.

1 Introduction

The aim of this paper is to reconsider the nature of scrambling and Argument Ellipsis in Japanese through the lens of the recent discussion on the elimination of the argument structure (Lohndal 2014, and references therein), and to consider why English lacks these two grammars. As we will see, these two differences between the pertinent two languages is explained by the way they introduce argument DPs into the verbal structure.

2 Eliminating the argument structure

A textbook discussion on how verbs encode their arguments dictates that they introduce arguments, not merely the Agent argument but also the Theme one. Consider (1), where we have an example of the transitive verb.

(1) a. Jimi burned his guitar.
b. $\lambda e \in D_s$[burn(Jimi)(his.guitar)(e)]

Postulating the event argument (e) is a matter of course since we cannot otherwise obtain the meaning where an adverb modifies its associated verb. Thus, the sentence "Jim burned his guitar beautifully" can be considered to have the meaning in (2).

(2) λe[burn(Jimi)(his.guitar)(e) $\wedge$ beautiful(e)]

However, Agent and Theme are different in quite a few respects as pointed by Kratzer (1996, 2003) and Marantz (1984) among others. Although I will not review the history of pertinent researches on the separation of Agent from the verb, it is now widely accepted in the generative literature and brings us various consequences not only for semantics but also for syntax and morphology.[1] Given this, Agent is introduced by an independent syntactic head, Voice, so (1a) is structured as in (3a) and its semantic denotation is (3b).

[1]For instance, the layered verbal domain gives us enough space to host various transitive/intransitive or voice-related morphemes observed in many languages. In this respect, Japanese is rich in the inventory of such verbal morphemes/suffixes as discussed by Volpe (2005) and Wurmbrand and Shimamura (2017).

(3) a. [$_{\text{VoiceP}}$ Jimi [$_{\text{Voice}'}$ Voice^0 [$_{\text{VP}}$ burned his guitar]]]
b. λe[Agent(Jimi)(e) $\wedge$ burn(his.guitar)(e)]

Then, the question is whether the full thematic separation is possible, namely, whether Theme should be severed from the verb. If the answer is positive, the resulting semantics is Neo-Davidsonian, hence (4).

(4) λe[Agent(Jimi)(e) $\wedge$ Theme(his.guitar)(e) $\wedge$ burn(e)]

One testing ground (among others) to choose (4) over (3b) is to see the mereological (part-whole) relation among events (LaTerza 2014, 2015, Lohndal 2014, Schein 1993, 2003, Taylor 1985). For instance, consider:

(5) a. Gracefully, Sally ate each crisp quickly. (LaTerza 2014, 53; originally from Taylor 1985)
b. $\exists E$[gracefully(E) $\wedge$ Agent(Sally)(E) $\wedge$ eat(E) $\wedge$ $\forall x$: crisp(x)[$\exists E' \leq E$[Theme(E', x) $\wedge$ quickly(E')]] (LaTerza 2014, 54)

(5a) can be uttered to depict the situation where at one sitting, Sally ate an entire bag of chips gracefully, and as for each individual crisp, it was eaten quickly. Therefore, we have two independent concepts of events: "the totality of events E which correspond to those events that culminate in the eating of the entire bag, and also sub-events of E, each of which is such that a single crisp is eaten quickly" (LaTerza 2014, 53). This construal is obtained in (5b), where we have the mereological relation $E' \leq E$. Importantly, $E' \leq E$ is immediately scoped over by the universal quantifier associated with *each*, distributing sub-events to each crisp, so that each crisp is interpreted as a Theme in some events of E, which are quick. The logical form (5b) should not be available if we have the Theme argument encoded on the verb *eat*. I refer the readers to works by other authors mentioned above to see more discussion on the mereological relation of events, only pointing out that the same observation holds in Japanese as in (6); the situation is such that Taro ate each individual crisp quickly, and the manner of eating up a bag of chips was funny.

(6) Omosirookasiku, Taroo-ga sorezore-no poteti-o subayaku tabe-ta.
funnily Taro-NOM each-GEN chip-ACC quickly eat-PAST
'Funnily, Taro ate each crisp quickly.'

Given the above, I conclude that the argument structure of verbs should be eliminated, and assume that all the verbs in Japanese are monadic predicates only selecting an event argument.[2]

3 Proposal: Semantically meaningful Kase

Lohndal (2014) proposes (for English) that the Theme argument is introduced by F, a functional head which is part of the verbal spine like v and Voice. Therefore, the structure of a typical transitive verb is:

(7) [$_{\text{VoiceP}}$ DP$_{Agt}$ [$_{\text{Voice}'}$ Voice [$_{\text{FP}}$ DP$_{Th}$ [$_{\text{F}'}$ F [$_{\text{VP}}$ V]]]]]

However, I will go for another strategy to introduce arguments (Agent, Theme and other thematic roles like Goal etc.) in Japanese. Specifically, I propose:

(8) a. Case particles head their own projections, KP. The K head denotes a thematic relation, a function from a set of individuals to that of events, hence $\langle e, st \rangle$ (cf. LaTerza 2015, Nomura 2016).
b. KP is semantically a set of events, so that V, which is also a set of events, and KP are combined via Predicate Modification (PM) for the type of $\langle st \rangle$.

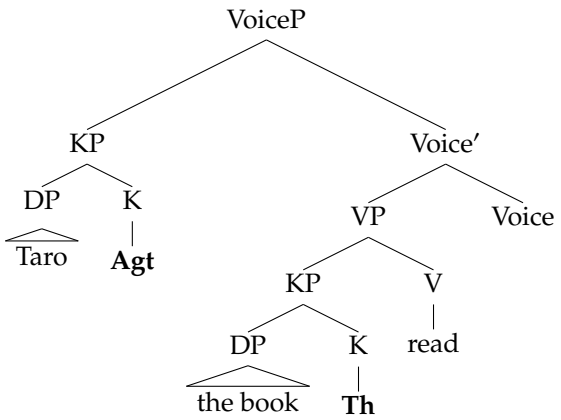
With (8) at hand, let us build the verbal phrase for a sentence like (9); the structure is (10).

(9) Taroo-ga sono hon-o yon-da.
Taro-NOM that book-ACC read-PAST

[2]The full thematic separation under discussion is not a matter of lexicon. If so, verbs still select a Theme argument, but the semantic representation is still Neo-Davidsonian (cf. Parsons 1990). Rather, the project is to advocate the elimination of the argument structure for the syntactic component; see Lohndal (2014) and references therein.

'Taro read the book.'

(10)



Here, I assume that Voice is a sort of expletive voice in the sense of Schäfer (2008). In fact, there are constructions in Japanese where a typical transitive verb does not introduce an Agent argument. For example, Akimoto (2018) shows that in cases like (11), the verb is transitive, but the subject is not an agent.

(11) Yuuro-ga ne-o age-ta.
Euro-NOM value-ACC raise-PAST
'The value of Euro went up.' (Akimoto 2018, 191)

Akimoto calls this sort of construction Inanimate Possessor Transitives, and the nominative subject and the accusative object must be in an inalienable possessor relation. Details aside, he contends that this possessor relation licenses the subject, and Voice, even though transitive, lacks agentivity, which is an expletive Voice.[3] Given this, I assume that Voice in Japanese does nothing thematically, so its *raison d'être* is morphological (and for other syntactic operations such as attracting a derived subject via the EPP-feature).[4]

4 Why Scrambling in Japanese (but not in English)?

As is known, Japanese has scrambling, by which the linear order of the subject and the object can be switched as in (12).

(12) Sono hon-o Taroo-ga yon-da.
that book-ACC Taro-NOM read-PAST
Lit. 'The book Taro read.'

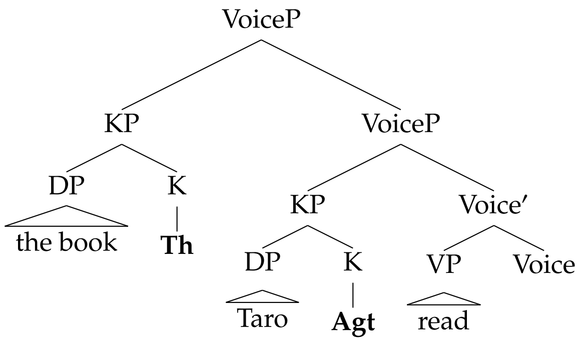
The literal translation in English is not a case of topicalization. This language simply lacks scrambling, since moving the object to the sentence-initial position in English necessarily results in a difference in the discourse level (i.e. topicalization), compared to its unmoved counterpart. This does not hold in Japanese. We interpret (9) and (12) as propositionally equivalent. For instance, they can both be all-focused, answering e.g. 'What happened yesterday?'.

Then, why does Japanese allow scrambling whereas English does not? The answer is simple: since Japanese has K(P) in its grammar and the semantic mode of merging KPs with the verb is PM, the object KP can be base-generated above the subject KP. Therefore, (12) has the following structure:

[3]The verb stem *age* can be decomposed into *ag* and *e*, and the latter signifies transitivity and alternates with *a*, an intransitive suffix. Thus, *age* means 'raise' whereas *aga* means 'rise'.

[4]Regarding the passive morpheme *-rare*, I assume with Ishizuka (2010) that it also appears in Voice, and that it never introduces its own (Agent) argument.

(13)



In (13), the object is adjoined to VoiceP, from which it can be moved further. This solves one potential problem discussed by Richards (2008): (clause-internal) scrambling can change scope and feed into a new binding relation, so it can be an instance of A-movement (Saito 1985, 1992). However, if it involves such a movement, it may violate Relativized Minimality (RM) (Rizzi 1990), since the object argument flies over the subject.

(14) $[_{\text{VoiceP}}\ \text{DP}_{Th1}\ \text{DP}_{Agt} \ldots t_1\ \text{V} \ldots$
(arrow from t_1 to DP_{Th1}, marked *)

However, we can eschew this issue, since what is apparently moved is in fact base-generated where it appears. At this juncture, note that scrambling in (12) can also be derived via movement. If such the case, the pertinent movement is regarded as a case of A′-movement, hence not problematic for RM. Also, the movement trace is of type $\langle st \rangle$, a higher type trace, so the moved/scrambled object will be automatically reconstructed at the semantic component.[5] In this connection, Japanese also has long-distance (LD) scrambling, and it must be semantically vacuous (i.e. always reconstructed) (Saito 1992). This then means under the proposed system that it must be derived via movement. Again, this is straightforwardly accounted for. This is because in order for a KP to be base-generated, it must share its eventuality with that of the verb that hosts it. In case of LD scrambling, the embedded object KP's eventuality is not identical to that of the matrix predicate (in most cases, an attitude predicate). Thus, LD scrambling always reconstructs; see Shimamura (2020) for more details.

Now, let us consider why English lacks scrambling. For this, I assume in line with Lohndal (2014) that the functional items that introduce Agent and Theme are verbal heads, viz. Voice and F; see (7) above. Therefore, once these heads are merged, they must introduce their own arguments. Thus, the difference between English and Japanese regarding scrambling resides in the categorial status of Voice/F vs. that of K. In Japanese, K is a nominal suffix by assumption, so it is first merged with its argument DP. In contrast, Voice and F are verbal suffixes, and they are correspondingly merged to V before introducing DPs, elucidating the (relatively) fixed

[5] One may advocate the only-movement analysis of scrambling in terms of Condition C violation. For instance, Saito (1992) gives (i).

(i) ??[Taroo$_i$-no syasin-o]$_1$ kare$_i$-ga zibun-no heya-ni t_1 kazattei-ru (koto)
Taro-GEN picture-ACC he-NOM self-GEN room-in display-PRES fact
Lit. '[Taro's$_i$ picture]$_1$, he$_i$ displays t_1 in his$_i$ room.' (based on Saito 1992, 91)

However, he also gives (ii), where the deviancy is not so robust as that of (i):

(ii) ?[Masao$_i$-no sensei-o]$_1$ kare$_i$-ga t_1 syookaisi-ta] (koto)
Masao-GEN teacher-ACC he-NOM introduce-PAST fact
Lit. '[Masao's$_i$ teacher]$_1$, he$_i$ introduced t_1 (to the audience).' (based on Saito 1992, 113)

Therefore, the relevant judgment is not so stable. In addition, even (i) becomes much better if we set up an appropriate context. For instance, observe (iii), which I think is perfectly grammatical.

(iii) [[Taroo$_i$-no syasin-o]$_1$ hokorasigeni [zikoai-ga tuyoi] kare$_i$-ga zibun-no heya-ni t_1 kazattei-ru koto]-wa odorokidewa-nai.
Taro-GEN picture-ACC proudly self.love-nom strong.COP.PRES he-NOM self-GEN room-in display-PRES fact-TOP surprising-NEG.COP.PRES
Lit. '[That [Taro's$_i$ picture]$_1$ he$_i$, who has a strong narcissism, displays t_1 proudly in his$_i$ room] is not surprising.'

The status of Condition C being a grammatical/syntactic principle is still controversial, and Schlenker (2005) puts forth a pragmatic account of it. Thus, I do not regard Saito's (1992) argument based on Condition C as so convincing.

SVO order of English.

5 Why Argument Ellipsis in Japanese (but not in English)?

Japanese is known to be one of the languages that can elide arguments via Argument Ellipsis (AE) (Oku 1998, Otaki 2014, Saito 2007, Sakamoto 2019, Takahashi 2008 among many others). For instance, AE allows what is called "quantificational reading".

(15) a. Taroo-wa san-nin-no on'nanoko-ni at-ta.
Taro-TOP three-CL-GEN girl-DAT meet-PAST
'Taro met three girls.'
b. Ziroo-mo *e* at-ta.
Jiro-also meet-PAST
Lit. 'Jiro also met *e*.'

In (15b), the empty object *e* allows the following two readings: one is such that Jiro met the same three girls as Taro met, and the other is such that Jiro met a set of three girls different from those who Taro met. The latter interpretation is not possible if *e* is a *pro*. This is impossible in English, so the question is why. Relevant to this, Otaki (2014) provides an interesting generalization in (17)

(16) Only languages that exhibit non-fusional, agglutinating case morphology (namely, K) allow Argument Ellipsis. (cf. Otaki 2014, 11)

Also relevant here is the analysis of AE by Sakamoto (2019) and his related works. He argues, based on his observation of the dichotomy of covert vs. overt extraction, that AE is an LF-copy operation. Details aside, I follow him in this respect. If his analysis is on the right track, the *e* position in (15b) is empty in the overt syntax, and it is filled covertly by copying the antecedent nominal. Schematically, we have:

(17) **At LF**
Taro met [three girls]. Jiro also met *e*.
LF-copy

The strategy delineated in (17), however, has (at least) one potential problem. That is, we have to assume a covert placeholder that is to be replaced at LF, if we assume the argument structure. However, the proposed analysis dispenses with it, so the object KP is absent overtly in (15b), and the antecedent object KP in (15a) is copied to (15b) at LF. Thus, the availability of K, again, explains why Japanese, not English, allows AE. In English, Voice/F is overtly merged with the verb, so that argument DPs selected by Voice/F must be overtly introduced, too.

6 Some remaining issues

The analysis proposed above provides a new way to understand the difference in Japanese (or languages with K) and English (or other European languages). However, there are some potential problems that need to be discussed, and here, I will take up two of them. One is the issue of overgeneration or undergeneration.[6] Since verbs do not select their arguments, those verbs that are normally regarded as transitive can appear without a Theme argument out of blue (i.e. not an AE context). One possible way to avoid this state of affairs is to assume that it is not a matter of the grammar but what the C-I interface is concerned with (Lohndal 2014). The C-I interface, by consulting the encyclopedic knowledge of the world, dictates that verbs like *kill* is deviant without a Theme argument. Also, sentences like **John slept his home* is interpretationally illicit since the event of sleeping does not semantically match up with a Theme argument. Therefore, not all syntactically possible constructions can be meaningfully interpreted, just like famous *Colorless green ideas sleep furiously.* Another

[6] I have been working on this topic as a joint work with Hideharu Tanaka, and the Definedness Condition below is due to him.

strategy may be to resort to the notion of the Definedness Condition (cf. Kratzer 1996). That is, we can postulate the Definedness Condition of *kill* and *sleep* as follows:

(18) a. $[\![\text{kick}]\!](e)$ is defined iff $\exists\theta[\theta(e) = \text{Theme}(e)]$
b. $[\![\text{sleep}]\!](e)$ is defined iff $\neg\exists\theta[\theta(e) = \text{Theme}(e)]$

This correctly excludes cases like **John slept his home* as in (19).

(19) $*\lambda e[\text{Agent}(e) = \text{John} \wedge \text{Theme}(e) = \text{his home} \wedge \text{sleep}(e)]$
This is against the Definedness Condition on the root V *sleep*.

One may say that this is just a move that will lead to the resurrection of the argument structure, but note that this is a formal implementation of the C-I/encyclopedia approach discussed above.

Another issue is concerned with case morphology. As is obvious, the proposed system is neither compatible with the standard Chomsky-style Agree analysis (Chomsky 2000) nor the morphological case analysis advocated by Bobaljik (2008) and Marantz (1992) among others. Probably, we need something that resorts to the thematic hierarchy. That is, accusative case is assigned to a Theme KP if it has a clausemate Agent KP. Under this analysis, the direction of c-command does not matter, but the combination of Agent and Theme is important. Thus, if in an unaccusative verb, a Theme KP will be Spelled-Out in nominative case since the highest thematic role Agent is absent, so the second highest Theme promotes to the sole nominative argument. Of course, this approach must be supplemented by the notion of the inherent/lexical case, which should be excluded from the case calculation just like the morphological case analysis. Therefore, with the presence of a dative (Experiencer) argument, its clausemate Theme will get nominative case in lieu of accusative case. Then, what about a nominative object with a nominative subject? Admittedly, the case assignment system needs a more careful consideration.

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