



The Layered Structure of Syntactic V-V Compounds in Japanese

Kishimoto, Hideki

(Citation)

神戸言語学論叢, 9:1-22

(Issue Date)

2014-03

(Resource Type)

departmental bulletin paper

(Version)

Version of Record

(JaLCD0I)

<https://doi.org/10.24546/81005927>

(URL)

<https://hdl.handle.net/20.500.14094/81005927>



THE LAYERED STRUCTURE OF SYNTACTIC V-V COMPOUNDS IN JAPANESE

Hideki Kishimoto

Kobe University

1. INTRODUCTION

In this paper, I argue that syntactic compound verbs are partitioned into at least four classes, which can be distinguished according to the structural organization of the complement clauses projected from the lower main verbs. Basing my discussion on adjunct modification, I argue that the raising class of syntactic V-V compound constructions has a complement structure where all verbal projections are available, whereas the control class is divided into three subclasses, which involve three different degrees of embedding, i.e. $VP_{(ins)}$ -complementation, InchP-complementation, and VP-complementation.

The facts of adjunct modification suggest that syntactic V-V compounds of the control type lack PRO in their complement clauses. Nevertheless, the syntactic V-V compounds display phenomena characteristic of control constructions. I argue that the control properties should come from the fact that the upper verbs select thematic subjects. The discussion will also bring to light some new syntactic V-V compound constructions where most adjuncts are not allowed to appear in the embedded clauses.

The discussion proceeds as follows. In section 2, I will discuss the facts of adjunct modification in the four classes of syntactic V-V compound constructions, and argue that four distinct complement structures can be posited for them. In section 3, I will provide an account for why the two types of control constructions, i.e. constructions with and without PRO, show unitary behavior with regard to diagnostics used for distinguishing raising and control structures. Section 4 is the conclusion.

2. ADJUNCT MODIFICATION

Syntactic V-V compound constructions are often assumed to involve complementation syntactically (e.g. Shibatani 1973, 1978, Kageyama 1993, Koizumi 1999, Kishimoto 2009, Fukuda 2012). The exact analyses differ from one proposal to another, but the consensus about their syntactic structures is that the first verb (i.e. the main verb) is embedded under the second verb. Nevertheless, there has not been much discussion about the structural organization of the embedded clauses in syntactic V-V compound constructions. In the following discussion, I show that at least four different types of embedding are possible. I suggest that the raising class of syntactic V-V compound constructions should have a complement structure equipped with all verbal projections, while the control class of syntactic V-V compound constructions is further divided into three subclasses, all of which contain a less than full set of verbal projections. I show that

the syntactic behavior of various types of adjuncts provides evidence for the proposal.

2.1. Control Constructions

In this section, I show that Japanese has at least three classes of control constructions having different layers of verbal projections in their complement clauses. I suggest that syntactic V-V compound constructions falling into the control class lack PRO, rather than form control construal where PRO in the lower clause is controlled by the thematic subject of the upper verb. I argue that the control constructions have a configuration where the thematic subject selected by the upper verb also counts as the subject of the lower verb. Some representative examples are given in (1).

- (1) a. *Ken-wa posutaa-o insatu-si-sokone-ta.*
 Ken-TOP poster-ACC print-fail-PAST
 ‘Ken failed to print the poster.’
 b. *Ken-wa posutaa-o insatu-si-wasure-ta.*
 Ken-TOP poster-ACC print-forget-PAST
 ‘Ken forgot to print the poster.’
 c. *Ken-wa posutaa-o insatu-si-nokosi-ta.*
 Ken-TOP poster-ACC print-remain-PAST
 ‘Ken left posters unprinted.’

Kageyama (1993) shows that compound verbs are categorized as syntactic ones, if they allow a VN-*suru* predicate as their first verb. In all kinds of control classes in (1), the VN-*suru* predicate can appear as the first verb, which suggests that the compound verbs should form syntactic V-V compounds. The control constructions in (1) have distinct thematic relations; (1a) involves an agentive subject, and (1b) and (1c) experiencer subjects (i.e. non-agentive subjects). There are a number of control predicates patterning with *sokoneru* ‘fail’ and control predicates patterning with *wasureru* ‘forget’. A list of such predicates is given in (2a-b).

- (2) a. *sokonau* ‘fail’, *naosu* ‘fix’, *owaru* ‘stop’, *oeru* ‘finish’, *tukusu* ‘exhaust’
 b. *wasureru* ‘forget’, *akiru* ‘be bored’, *sobireru* ‘fail’
 c. *nokosu* ‘remain’

To my knowledge, *nokosu* ‘remain’ is the sole member of the third class of control verb. The three classes of control constructions in (1) show distinct behavior with regard to adjunct modification.

Japanese has several different types of adjuncts, and they can be assumed to appear in distinct syntactic positions. For the purpose of illustrating that the control constructions in (1) show distinct syntactic behavior with regard to adjunct modification, I will look into agent-oriented adverbs (e.g. *yorokonde* ‘willingly’, *iyaiya/sibusibu* ‘unwillingly’, *wazato* ‘deliberately’), manner adverbs (e.g. *suityoku-ni* ‘vertically’, *massugu-ni* ‘straight’), and instrumental PPs (e.g. *zyoogi-de* ‘with the ruler’). I will also make use of one special type of locative adjunct such as *ekimae-de* (*no enzetu*) ‘(speech) in front of the station’, which involves extraction from within a nominal. These adjuncts are licensed by distinct projections, depending on the meanings they carry (Zubizarretta 1987, Radford 2009), and their syntactic behavior can be best described by positing distinct

syntactic structures for the lower main verbs, which differ depending on the nature of the upper control verbs.

2.1.1. Sokoneru and Wasureru

Let us first look at the control construction constructed from the control verb *sokoneru* ‘fail’. The examples in (3) show how the syntactic compound verb construction with *sokoneru* behaves in regard to adverbial modification. Some adjuncts can modify the embedded verb, but others cannot.

- (3) a. *Ken-wa* [(**yorokonde*) *hasiri*]-*sokone-ta*.
 Ken-TOP willingly run-fail-PAST
 ‘Ken failed to run (willingly).’
 b. *Ken-wa* [(*zyoogi-de/suityoku-ni*) *sen-o hiki*]-*sokone-ta*.
 Ken-TOP ruler-with/vertically line-ACC draw-fail-PAST
 ‘Ken failed to draw a line (with the ruler/vertically).’
 c. *Sityoo-wa* [(*ekimae-de*) *enzetu-o si*]-*sokone-ta*.
 mayor-TOP station.front-at speech-ACC do-fail-PAST
 ‘The mayor failed to make a speech (in front of the station).’

The agent-oriented adverb *yorokonde* in (3a) cannot be taken to modify the embedded clause. Thus, the interpretation that Ken failed to do the act of running willingly is not available for (3a).¹ In contrast, *zyoogi-de* and *suityoku-ni* can modify the complement clause, so the interpretation where Ken failed to draw a line with the ruler or vertically is available for (3b). In (3c), the locative PP *ekimae-de* can also modify the embedded clause, so that this sentence can be interpreted as meaning that the mayor failed to make a speech in front of the station.

Syntactic V-V compounds formed on *wasureru* display behavior different from those based on *sokoneru*.²

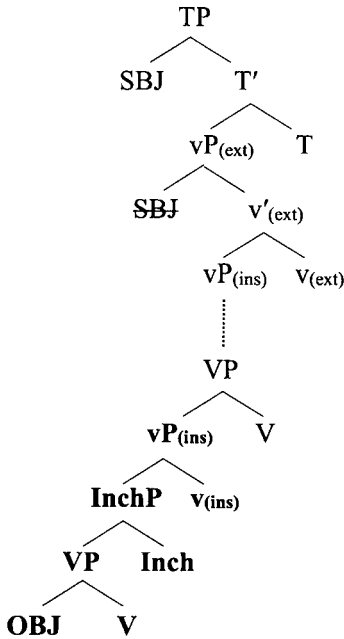
- (4) a. *Ken-wa* [(**yorokonde*) *hasiri*]-*wasure-ta*.
 Ken-TOP willingly run-forget-PAST
 ‘Ken forgot to run (willingly).’
 b. *Ken-wa* [(**zyoogi-de*/**suityoku-ni*) *sen-o hiki*]-*wasure-ta*.
 Ken-TOP ruler-with/vertically line-ACC draw-forget-PAST
 ‘Ken forgot to draw a line (with the ruler/vertically).’
 c. *Sityoo-wa* [(*ekimae-de*) *enzetu-o si*]-*wasure-ta*.
 mayor-TOP station.front-at speech-ACC do-forget-PAST
 ‘The mayor forgot to make a speech (in front of the station).’

In (4a), the agent-oriented adverb cannot be associated with the embedded verb, and thus (4a) does not mean that Ken forgot about taking an action of running willingly. Interestingly, when the second verb *sokoneru* in (3) is replaced by *wasureru* ‘forget’, the instrumental PP *zyoogi-de* and the manner adverb *suityoku-ni* cannot take embedded scope. Thus, (4b) cannot mean that Ken forgot about drawing a line with the ruler or vertically. On the other hand, (4c) can mean that the mayor forgot about making a speech in front of the station’, because the locative adjunct *ekimae-de* can take embedded scope.

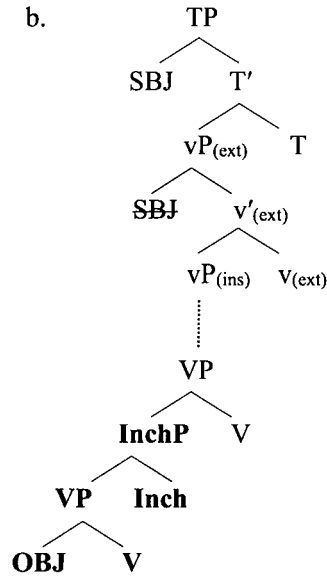
The syntactic behavior of the adjuncts *zyoogi-de*, *suityoku-ni* and *ekimae-de* suggests

that the two classes of syntactic V-V compounds should involve different degrees of embedding. In light of this fact, I propose that the control constructions formed from *sokoneru* and *wasureru* have the configurations in (5a) and (5b) (Projections associated with the complement clauses, i.e. the main verbs, are indicated in bold type).

(5) a.



b.



I assume that a projection (named AktP) exists between vP and VP that specifies whether a process is denoted by the predicate (see e.g. Larson 1988, Chomsky 1995, Ritter and Rosen 1998, 2000, Travis 1994, 2000, Ramchand 2008).³ Moreover, I posit the projection (named InchP) that specifies the initiation of an event described by the verb, and I argue that this projection constitutes an adjunction site for the locative adjunct extracted from a verbal noun in object position.

Projections to which adjuncts are adjoined should differ depending on the meaning they express. Manner adverbs specify how the events described by the verbs take place, independently of agency, so I assume that manner adverbs are adjoined to AktP. The type of locative PP that involves extraction from a verbal noun should be adjoined to InchP, as I will discuss below. Agent-oriented adverbs are related to agent or experiencer arguments, so that they can be assumed to be adjoined to vP. Instrumental PPs are also usable only when some agentivity is expressed by the associated verbs, but the projection should be distinct from the one with which an external argument is merged. (The former is labeled vP_(ins) and the latter, vP_(ext)).

Note that both agent-oriented adverbs and instrumental PPs are allowed to take embedded scope in some control constructions.

- (6) a. *Watasi-wa [(yorokonde) hasiri]-takat-ta.*
 1.sg-TOP willingly run-want-PAST
 'I wanted to run (willingly).'

- b. *Watasi-wa* [(*zyoogi-de/suityoku-ni*) *sen-o* *hiki*]-*ta-i*.
 1.sg-TOP ruler-with/vertically line-ACC draw-want-PRES
 ‘I want to draw a line (with the ruler/vertically).’
- c. *Watasi-wa* [(*ekimae-de*) *enzetu-o* *si*]-*ta-i*.
 1.sg-TOP station.front-at speech-ACC do-want-PAST
 ‘I want to make a speech (in front of the station).’

There is good reason to believe that the desiderative predicate *tai* ‘want’ takes a control structure as its complement (see section 3). If the examples in (6a-c) are compared with those in (3a-c), it should be clear that in the control construction constructed from *sokoneru*, the projection licensing instrumental PPs, but not the projection licensing agent-oriented adverbs, exists in the complement clause.⁴

Under the present analysis, syntactic V-V compounds with *sokoneru* have the structure in (5a). In (5a), $vP_{(ext)}$ -projection is not available in the complement structure, so that agent-oriented adverbs cannot be used to modify the clause projected from the lower verb. On the other hand, an instrumental PP, a manner adverb, and a locative PP are allowed to be added to the complement clause in the presence of $vP_{(ins)}$, AktP, and InchP. In contrast, syntactic compound verbs with *wasureru* involves only the embedding of InchP and VP, as in (5b). Since the $vP_{(ins)}$ projection is not included in the complement structure, an instrument PP cannot be adjoined to the complement clause. Similarly, a manner adverb cannot be adjoined there, since the embedded structure lacks AktP. By contrast, a locative PP like *ekimae-de* ‘in front of the station’ can be added to the lower clause, because it has the InchP projection.

Notably, both control constructions in (5a) and (5b) lack $vP_{(ext)}$ in the complement clauses, which suggests that controlled PRO cannot appear in the lower Spec-vP. (PRO is assigned an agent or experiencer role by $v_{(ext)}$, and thus has an agentive interpretation). In the control constructions based on *sokoneru* and *wasureru*, PRO is not present, but still, both the subject of the lower verb and the subject of the upper verb are interpreted to refer to the same individual. I submit that the relevant interpretation is obtained as a result of the two verbs sharing the same thematic subject. I suggest that this subject sharing is made available because no intervening vP exists between the vP comprising the subject of the upper verb and the lower VP.⁵

Instrumental PPs and manner adverbs pattern together in the two classes of control constructions. Nevertheless, under the present account, they are treated differently. This treatment is reasonable, in view of the fact that they display distinct behavior in pseudo-cleft sentences where vP is placed in focused position. The examples in (7) illustrate how an instrumental PP behaves in the pseudo-cleft construction.

- (7) a. [*Ken-ga* *si-ta*] *no wa* [(*zyoogi-de* *sen-o* *hiku*)] *koto da*.
 Ken-NOM do-PAST that TOP ruler-with line-ACC draw fact COP
 ‘What Ken did was draw a line with the ruler.’
- b. [*Ken-ga* *zyoogi-de* *si-ta*] *no wa* [(*sen-o* *hiku*)] *koto da*.
 Ken-NOM ruler-with do-PAST that TOP line-ACC draw fact COP
 ‘What Ken did with the ruler was draw a line.’

As seen in (7), the instrumental PP *zyoogi-de* can be placed either in the antecedent clause representing presupposition or in clause-final focus position. The same behavior is

observed for agent-oriented adverbs.

- (8) a. [*Ken-ga si-ta*] *no wa [yorokonde hasiru] koto da.*
 Ken-NOM do-PAST that TOP willingly run fact COP
 ‘What Ken did was run willingly.’
 b. [*Ken-ga yorokonde si-ta*] *no wa [hasiru] koto da.*
 Ken-NOM willingly do-PAST that TOP run fact COP
 ‘What Ken did willingly was run.’

The facts of the instrumental PP *zyoogi-de* ‘with the ruler’ follow straightforwardly if it is adjoined to $vP_{(ins)}$. In (7a), the $vP_{(ins)}$ or $vP_{(ext)}$ projection including the instrumental PP is positioned in the cleft-focus position, and in (7b), the lower segment of $vP_{(ins)}$, excluding the instrumental PP, is positioned in the cleft-focus position. Since this type of pseudo-clefting targets vP or a segment of vP , which expresses some kind of agentivity, the sentences in (7) are acceptable. In contrast, the manner adverb *suityoku-ni* can only appear in cleft-focus position, as shown in (9).

- (9) a. [*Ken-ga si-ta*] *no wa [suityoku-ni sen-o hiku] koto da.*
 Ken-NOM do-PAST that TOP vertically line-ACC draw fact COP
 ‘What Ken did was draw a line vertically.’
 b. * [*Ken-ga suityoku-ni si-ta*] *no wa [sen-o hiku] koto da.*
 Ken-NOM vertically do-PAST that TOP line-ACC draw fact COP
 ‘What Ken did vertically was draw a line.’

This fact also falls out naturally, given the assumption that pseudo-clefting can target vP , but not the lower projections, while the manner verb being adjoined to $AktP$ located lower than vP . The manner adverb can occur in focus position, because vP , which includes $AktP$, can be placed there. By contrast, the manner adverb cannot be placed in the antecedent presupposition clause, since $vP_{(ins)}$ or $vP_{(ext)}$ cannot be placed in focus position while excluding $AktP$. Given that instrumental PPs and manner adverbs behave differently in regard to vP -clefting, it is reasonable to say that they are adjoined to distinct syntactic projections.

Moreover, (4c) is a case where a locative adjunct is adjoined to the $InchP$. It appears that locative adjuncts are often adjoined to a projection above $InchP$, as in (10).

- (10) *Ken-wa [(*kituen-situ-de) tabako-o sui]-wasure-ta.*
 Ken-TOP smoking-room-in cigarette-ACC smoke-forget-PAST
 ‘Ken forgot to smoke a cigarette (in the smoking room).’

In (10), the locative adjunct is not understood to modify the complement clause where the main verb appears. This fact suggests that the locative adjunct in (10) should be adjoined to a position higher than $InchP$, perhaps to $vP_{(ins)}$, with the result that it cannot take embedded scope.⁶ Arguably, the adjunction for the PP in (4c) is made possible via extraction from the verbal noun *enzetu* ‘speech’, because (4c) can have a variant like (11), where the locative PP is located inside the verbal noun.

- (11) *Sityoo-wa [ekimae-de-no enzetu]-o wasure-ta.*
 mayor-TOP station.front-at-GEN speech-ACC forget-PAST
 ‘The mayor forgot about a speech in front of the station.’

The verbal noun *enzetu* denotes an event, so that the locative adjunct *ekimae-de* can appear inside the verbal noun, marked with genitive case. This suggests that if a locative PP is originated from within a verbal noun in object position, it can be adjoined to the InchP projection.⁷ (Since a *de*-marked locative PP can occur only with a non-stative verb, I assume that it cannot be adjoined to VP, which is used just to name the kind of event.) A locative adjunct is not allowed to appear inside an object when it does not denote an event, as seen in (12).

- (12) **Ken-wa [kituen-situ-de-no tabako]-o wasure-ta.*
 Ken-TOP smoking-room-in-GEN cigarette-ACC forget-PAST
 ‘Ken forgot about cigarettes in the smoking room.’

In (12), *tabako* ‘cigarette’ does not denote an event, so that this DP cannot accommodate a locative PP specifying a place where an event takes place. In (10), the locative PP cannot be adjoined to InchP, because it is not extracted from the object. The locative adjunct can only be adjoined to a higher projection than VP, perhaps to $vP_{(ins)}$. Accordingly, (10) cannot have the intended interpretation where the locative adjunct takes embedded scope, and can only be used to specify the location of the event denoted by a larger verbal complex vP . Apparently, the reason why the locative PP *kituen-situ-de* ‘in the smoking room’ cannot appear in the clause embedded under the verb *wasureru* is that when adjuncts are externally (or directly) merged to verbal projections, InchP does not serve as an adjunction site.

Furthermore, this class of control construction resists many kinds of adjuncts, as exemplified in (13).

- (13) a. *Ken-wa [kabe-o (*akai penki-de) nuri]-wasure-ta.*
 Ken-TOP wall-ACC red paint-with smear-forget-PAST
 ‘Ken forgot smearing the wall (with red paint).’
 b. *Ken-wa [(*hadasi-de) aruki]-wasure-ta.*
 Ken-TOP barefoot-with walk-forget-PAST
 ‘Ken forgot walking (bare foot).’
 c. *Ken-wa [kabin-o (*konagona-ni) wari]-wasure-ta.*
 Ken-TOP vase-ACC pieces-into break-forget-PAST
 ‘Ken forgot breaking the vase (into pieces).’

As discussed in Kishimoto (2002), a locative alternation verb like *nuru* ‘paint’ takes a material PP marked with *de*, which serves as an adjunct (see also Jackendoff 1990, which treats this type of expression as a *with*-adjunct). Subject oriented depictives and resultatives are also adjuncts (Shibagaki 2013). These expressions are not usable to modify the lower clauses in the control construction whose second verb is *wasureru*, suggesting that they should be adjoined to projections above InchP.

By contrast, arguments selected by the lower main predicate are allowed to appear in the complement clause taken by the control verb *wasureru*. Thus, the underlined

expressions in (14) can be interpreted as taking embedded scope.

- (14) a. *Ken-wa [kabe-ni akai penki-o nuri]-wasure-ta.*
 Ken-TOP wall-LOC red paint-ACC smear-forget-PAST
 ‘Ken forgot smearing red paint on the wall.’
 b. *Ken-wa [kaban-ni tegami-o ire]-wasure-ta.*
 Ken-TOP bag-LOC letter-ACC put-forget-PAST
 ‘Ken forgot to put a letter in the bag.’
 c. *Ken-wa [kabin-o konagona-ni si]-wasure-ta.*
 Ken-TOP vase-ACC pieces-into make-forget-PAST
 ‘Ken forgot to make the vase into pieces.’

Example (14a) is the material object variant of the locative alternation construction, taking two internal arguments, i.e. locative and theme. In (14c), the surface case array of *kabin* and *konagona-ni* is the same as that of (13c), but in (14c), *konagona-ni* serves as complement to the causative verb *suru* ‘make’. All of these examples are acceptable on the intended interpretations.⁸ This fact follows if the complement comprises the VP projection, which is necessary for these arguments to appear.

Interestingly, in the syntactic V-V compound construction formed from *wasureru*, it is possible to have a floating quantifier associated with a direct object, as in (15).

- (15) a. *Ken-wa [ni-tuu-no tegami-o dasi]-wasure-ta.*
 Ken-TOP two-CL-GEN letter-ACC post-forget-PAST
 ‘Ken forgot to post two letters.’
 b. *Ken-wa [tegami-o ni-tuu dasi]-wasure-ta.*
 Ken-TOP letter-ACC two-CL post-forget-PAST
 ‘Ken forgot to post two letters.’

This fact is naturally expected, if the floating quantifier starts out from inside its host nominal. Here, it is reasonable to hypothesize that in (15b), the floating quantifier is understood to take embedded scope, since it is originated from within the object *tegami* ‘letter’.

Furthermore, although instrumental PPs, manner adverbs, and resultatives are not usable for modifying the complement clause projected from the main verb in the control construction with *wasureru*, this subordinate clause can be modified by these adjuncts when the main verb is further embedded under a verb like *naosu* ‘repeat’.

- (16) a. *Ken-wa [[sono sen-o (zyoogi-de/massugu-ni) hiki]-naosi]-wasure-ta.*
 Ken-TOP that line-ACC ruler-with/straight draw-repeat-forget-PAST
 ‘Ken forgot to redraw that line (with the rule/straight).’
 b. *Ken-wa [tukue-o (pikapika-ni) migaki]-naosi]-wasure-ta.*
 Ken-TOP desk-ACC glitter-DAT polish-repeat-forget-PAST
 (lit.) ‘Ken forgot to repolish the desk (to glitter).’

The verb *naosu* is a control predicate that takes $vP_{(ins)}$ complement structure. The well-formedness of the examples in (16) is expected, since *naosu* can take $vP_{(ins)}$ as its complement, which allows adjunction of $vP_{(ins)}$ - and $AktP$ -related adjuncts.

- (17) [TP V] Inch] Akt] v_(ins)] V] Inch] V] Inch] Akt] v_(ins)] v_(ext)] T]
- hiki*
naosi
wasure
ta

The data in (16) illustrate that insofar as the $vP_{(ins)}$ projection is available inside the subordinate clause, it is possible for $vP_{(ins)}$ - and AktP-related adjuncts to modify the embedded clause.

Before concluding this section, one remark is in order. Kageyama (1993) notes that control verbs are divided into two types. He claims that the applicability of direct passivization on control verbs is determined by the syntactic structures of the complement clauses; passivizable control verbs involve V'-complement structure (without PRO), and unpassivable ones, VP-complement structure (with PRO) (see also Nishigauchi 1993). Note, however, that control verbs falling into the *sokoneru*-class include both passivizable and unpassivable verbs, as seen in (18).

- (18) a. *Kare-wa kono hon-o {yomi-naosi-ta/yomi-sokone-ta}.*
 he-TOP this book-ACC read-repeat-PAST/read-fail-PAST
 'He {repeated/failed to do} the act of reading the book.'
- b. *Kono hon-wa yomi-naos-are-ta.*
 This book-TOP read-repeat-PAST
 (lit.) 'This book was repeated to read.'
- c. **Kono hon-wa yomi-sokone-rare-ta.*
 This book-TOP read-fail-PAST
 (lit.) 'This book was failed to read.'

According to Kageyama, the passivization of the control verb *sokoneru* 'fail' should be blocked by PRO residing in its complement clause. But note that if both *naosu* and *sokoneru* belong to the *sokoneru*-class, the layered structures of their embedded clauses do not differ. In particular, the control construction falling into the *sokoneru*-class does not include $vP_{(ext)}$ as its complement structure, which suggests that PRO does not appear in the complement clause. In Kageyama's analysis, both *nasou* and *sokoneru* should be categorized as passivizable verbs, but this is not in keeping with the fact, which suggests that the passivizability of control verbs should not have a direct correlation with the type of their complement clause.

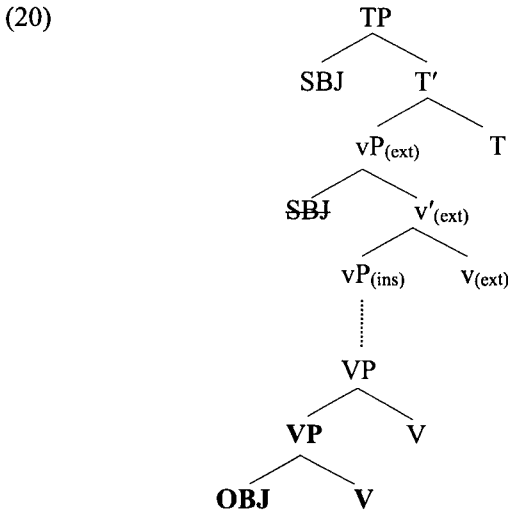
2.1.2. Nokosu

Let us now turn to the syntactic V-V compound construction with *nokosu* 'remain'. This class of control construction displays yet another pattern of adverbial modification.

- (19) a. *Ken-wa [(*)yorokonde) gohan-o tabe]-nokosi-ta.*
 Ken-TOP willingly rice-ACC eat-remain-PAST
 'Ken left rice uneaten (willingly).'
- b. *Ken-wa [sen-o (*zyoogi-de/*sutyoku-ni) hiki]-nokosi-ta.*
 Ken-TOP line-ACC ruler-with/vertically draw-remain-PAST
 'Ken remained a line undrawn (with the ruler/vertically).'

- c. *Sityoo-wa* [*(*ekimae-de)* *enzetu-o* *si*]-*nokosi-ta*.
 mayor-TOP station.front-at speech-ACC do-remain-PAST
 'The mayor did not make a speech (in the front of the station).'

The syntactic V-V compound with *nokosu* differs from the one with *wasureru* in that no adjunct modification is allowed. In particular, given that the locative PP *ekimae-de* cannot be interpreted as taking embedded scope in (19c), the embedded clause which *naosu* takes must be smaller in size than the one selected by *wasureru*. In light of this consideration, I propose that the control construction constructed from *nokosu* comprises only a minimal verbal projection, as depicted in (20).



In (20), the complement structure has only the VP projection. Note that the VP structure needs to be present even in this class of control construction, since the main verb can take an object. Again, I propose that the lower verb can identify the subject selected by the upper verb as its subject, since the lower verb does not project its own $vP_{(ext)}$. Owing to the minimal projection in the complement structure, the syntactic V-V compound with *nokosu* does not allow any modifying expressions in (19) to be added to the complement clause, i.e. the adjuncts do not take embedded scope, because the relevant adjunction sites are missing entirely.

Notably, the control construction formed on *nokosu*, which involves a minimal verbal projection in the embedded clause, allows a numeral quantifier to be launched off an object.

- (21) a. *Ken-wa* [*huta-tu-no* *pan-o* *tabe*]-*nokosi-ta*.
 Ken-TOP two-CL-GEN bread-ACC eat-remain-PAST
 'Ken did not eat two loafs of bread.'
 b. *Ken-wa* [*pan-o* *huta-tu* *tabe*]-*wasure-ta*.
 Ken-TOP bread-ACC two-CL eat-remain-PAST
 'Ken did not eat two loafs of bread.'

The fact suggests that the numeral quantifier can be interpreted to take embedded scope, possibly, by way of the verbal noun to which it is semantically linked.

Recall that in (19c)(=(22a)), *ekimae-de* ‘in front of the station’ cannot take embedded scope. On the other hand, when the second verb *nokosu* is replaced by *wasureru*, the locative adjunct is allowed to take embedded scope, as in (4c)(=(22b)).

- (22) a. *Sityoo-wa* [*(*ekimae-de)* *enzetu-o* *si*]-*nokosi-ta*.
 mayor-TOP station.front-at speech-ACC do-remain-PAST
 ‘The mayor did not make a speech (in front of the station).’
 b. *Sityoo-wa* [*(ekimae-de)* *enzetu-o* *si*]-*wasure-ta*.
 mayor-TOP station.front-at speech-ACC do-forget-PAST
 ‘The mayor forgot to make a speech (in front of the station).’

In both constructions, when the locative adjunct is placed inside the verbal noun in object position, as in (23), it can take embedded scope.

- (23) a. *Sityoo-wa* [[*(ekimae-de-no)* *enzetu*]-*o* *si*]-*nokosi-ta*.
 mayor-TOP station.front-at-GEN speech-ACC do-remain-PAST
 ‘The mayor did not make a speech (in front of the station).’
 b. *Sityoo-wa* [[*(ekimae-de-no)* *enzetu*]-*o* *si*]-*wasure-ta*.
 mayor-TOP station.front-at-GEN speech-ACC do-forget-PAST
 ‘The mayor forgot to make a speech (in front of the station).’

A comparison of (23a) and (23b) shows that the locative adjunct *ekimae-de* extracted from the verbal noun cannot be interpreted in the nominal-internal position where it is base-generated. This fact suggests that *ekimae-de* needs to be interpreted in a structural position to which it is adjoined. When *ekimae-de* is located outside the verbal noun, as in (22), the acceptability of the interpretation where it takes embedded scope differs, depending on the choice of the second verb. Given that *nokosu*, unlike *wasureru*, does not allow *ekimae-de* to take embedded scope, it is plausible to conclude that *nokosu* does not include InchP in its complement clause, but *wasureru* does.

2.2. Raising

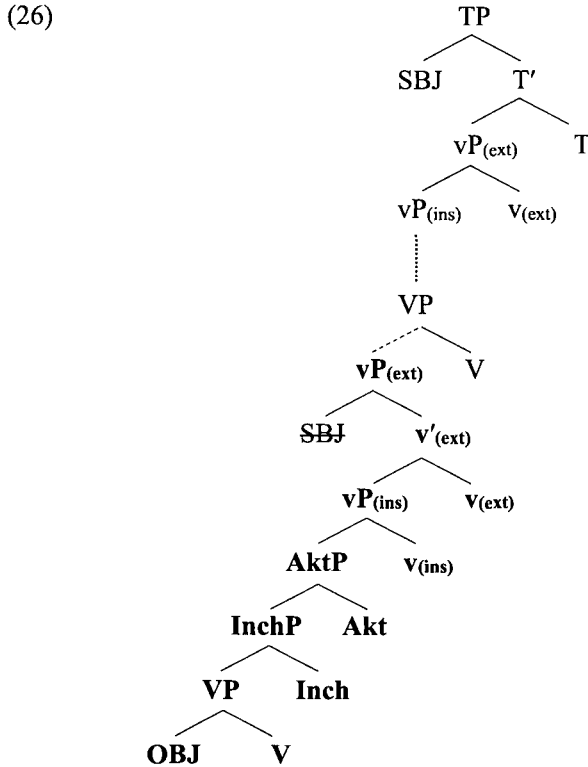
Let us now turn to the raising class of syntactic V-V constructions. Syntactic V-V compound constructions belonging to the raising class behave differently from control constructions with regard to adjunct modification. First, (24) illustrates that the raising verb *dasu* ‘start’ allows a VN-*suru* to be embedded under it, showing that the compound verb counts as a syntactic one.

- (24) *Ken-wa* *posutaa-o* *insatu-si-dasi-ta*.
 Ken-TOP poster-ACC print-start-PAST
 ‘Ken started to print posters.’

In the raising construction in (24), all sorts of adjuncts discussed above, i.e. agent-oriented adverbs, instrumental PPs, manner adverbs, and locative adjuncts extracted from verbal nouns in object position, can be interpreted as modifying the lower clause projected from the main verb, as exemplified in (25).

- (25) a. *Ken-wa [(yorokonde) hasiri]-dasi-ta.*
 Ken-TOP willingly run-start-PAST
 ‘Ken started to run (willingly).’
 b. *Ken-wa [sen-o (zyoogi-de/suityoku-ni) hiki]-dasi-ta.*
 Ken-TOP line-ACC ruler-with/vertically draw-start-PAST
 ‘Ken started to draw a line (with the ruler/vertically).’
 c. *Sityoo-wa [(ekimae-de) enzetu-o si]-dasi-ta.*
 mayor-TOP station.front-at speech-ACC do-start-PAST
 ‘The mayor forgot to make a speech (in front of the station).’

(25a) can mean that Ken started to run willingly. (25b) can mean that Ken started the action of drawing a line with the ruler or vertically, and (25c) can mean that the mayor’s speech in front of the station began. The facts of adverbial modification follow, if the raising construction has the configuration structure, as depicted in (26).



Recall that $vP_{(ext)}$ projection is needed for agent-oriented adverb modification. Instrumental PPs are adjoined to $vP_{(ins)}$, and manner adverbs are adjoined to AktP. A locative PP originated from a verbal noun can be adjoined to InchP. Essentially, in this class of syntactic V-V constructions, the complement clause includes all the projections up to $vP_{(ext)}$, the result of which is that all of the adjuncts in (25) are allowed to modify

the embedded clause.⁹ It stands to reason that the raising verbs should include $vP_{(ext)}$ in their embedded clauses; the agent argument of the embedded verb appears overtly in the subject position of Spec-TP, which indicates that the $vP_{(ext)}$ projection should be present in the embedded clause.

There are a number of raising verbs that involve this type of complement structure, i.e. the complement structure with $vP_{(ext)}$.

- (27) a. *kakeru* ‘be about to’, *dasu* ‘start’
 b. *hazimeru* ‘begin’, *tuzukeru* ‘continue’

The verbs in (27a) are used only as raising verbs. The verbs *hazimeru* ‘begin’ and *tuzukeru* ‘continue’ in (27b) have both control and raising uses. Note that when the ambiguous verbs are used as control verbs, they construct structures that take $vP_{(ins)}$ -complement structures—the control constructions falling into the *sokoneru*-class.

Given a difference in modifiability of agent-oriented adverbs between control and raising verbs, it is predicted that when *hazimeru* and *tuzukeru* are used as raising verbs, they will allow agent-oriented adverbs to modify the embedded clauses. This prediction is in fact borne out.

- (28) *Ken-wa [(iyaiya) kodomo-o home]-hazime-ta.*
 Ken-NOM unwillingly child-ACC praise-begin-PAST
 ‘Ken began to praise the child (unwillingly).’

The second verb *hazimeru* in (28) can be either a raising or a control verb. Since the raising use is available in the context of (28), the agent-oriented adverbs can modify the lower clause embedded under *hazimeru*.

When passivization applies to this verb, no raising use is available, because raising verbs do not passivize, as discussed by Kishimoto (2009, 2013). (This is due to the fact that they do not bear an accusative feature to license an accusative object.¹⁰) (29) illustrates the fact that raising verbs do not passivize.

- (29) a. *Ken-wa kono hon-o yaburi-dasi-ta.*
 Ken-TOP this book-ACC tear-start-PAST
 ‘Ken started to tear this book.’
 b. **Kono hon-wa yaburi-das-are-ta.*
 this book-TOP tear-start-PASS-PAST
 (lit.) ‘This book was started to tear.’

On the other hand, some control verbs can passivize but others do not.

- (30) a. *Kono hon-ga yomi-oe-rare-ta.*
 this book-NOM read-finish-PASS-PAST
 (lit.) ‘This book was finished reading.’
 b. **Kono hon-ga yomi-sokone-rare-ta.*
 this book-NOM read-fail-PASS-PAST
 (lit.) ‘This book was failed to read.’

The verb *hazimeru* can be passivized. When direct passivization applies to the verb, it must be used as a control verb, which does not project $vP_{(ext)}$. This leads to the prediction that the embedded clause will not be compatible with agent-oriented adverbs when second verb *hazimeru* is passivized. This prediction is in fact borne out.

- (31) a. *Ken-wa [(wazato) kenas-are]-hazime-ta.*
 Ken-TOP deliberately criticize-PASS-begin-PAST
 ‘Ken began to be criticized (deliberately).’
 b. *Ken-wa [(*wazato) kenasi]-hazime-rare-ta.*
 Ken-TOP deliberately criticize-begin-PASS-PAST
 (lit.) ‘Ken was began to criticize (deliberately).’

When the main verb is passivized, as in (31a), the embedded clause can be modified by the agent-oriented adverb, but this possibility is excluded when the upper verb is passivized. This is because, in the latter case, the upper verb *hazimeru* can have only a control use.

Finally, the verb *owaru* ‘end’ is a case where opinions are divided as to the distinction between control versus raising. Matsumoto (1996) and Koizumi (1999) classify it as a raising verb, but Kishimoto (2009) treats it as a control verb. Kageyama (1993) lists it as an ambiguous verb. The following examples suggest that *owaru*, just like *oeru* ‘finish’, should be construed as a control verb.

- (32) a. *Ken-wa [(*iyaiya) hon-o yomi]-owat-ta.*
 Ken-TOP unwillingly book-ACC read-end-PAST
 ‘Ken stopped reading the book (unwillingly).’
 b. *Ken-wa [(*iyaiya) hon-o yomi]-oe-ta.*
 Ken-TOP unwillingly book-ACC read-finish-PAST
 ‘Ken finished reading the book (unwillingly).’
 c. *Ken-wa [(iyaiya) hon-o yomi]-dasi-ta.*
 Ken-TOP unwillingly book-ACC read-start-PAST
 ‘Ken started to read the book (unwillingly).’

In (32a), as well as (32b), the interpretation where the frequency adverb takes embedded scope, i.e. the interpretation where Ken finished the unwilling action of reading the book, is not available. This interpretation is available for the raising verb *dasu* ‘start’, which takes $vP_{(ext)}$ as its complement clauses, as in (32c). The absence of the relevant interpretation in (32a-b) leads to the conclusion that the verb *owaru*, just like *oeru*, should be identified as a control verb. (Note that the irrelevant interpretation where the agent-oriented adverb modifies the matrix clause, i.e. the interpretation that Ken unwillingly finished the act of reading the book, is available for (32a-b)).

2.3. Summary

This section has seen that the raising class of compound verb constructions should include the vP projections up to $vP_{(ext)}$ in the complement clauses, and that the control class of compound verb constructions is divided into three subclasses. When control constructions are formed from syntactic V-V compounds, they have the structure where the two component verbs share the subject projected in $vP_{(ext)}$, rather than having a control

construal where PRO is controlled by the thematic subject. Predicate modifiers fail to modify the lower clause in the control construction based on *nokosu*. This fact follows if the complement clause lacks $vP_{(ext)}$, $vP_{(ins)}$, AktP, and InchP projections.

3. CONTROL PROPERTIES

Having looked at how control constructions behave with regard to adjunct (or adverbial) modification, we are now in a position to ask why control constructions without PRO exhibit control properties. In this section, I first show that the two types of control constructions, i.e. *V-tai* (with PRO) and *V-sokoneru/wasureru/nokosu* (without PRO) display unitary behavior with regard to some diagnostics used to distinguish control from raising constructions, despite the differences in the embedded structures.¹¹ I argue then that the uniform behavior is attributed to the fact that the upper control predicates select thematic subjects.

There are two major yardsticks to measure the distinction between raising and control compound predicates in Japanese. The difference between raising and control constructions can be assessed by considering whether inanimate subjects are allowed. Inanimate subjects are excluded in both types of control constructions. As seen in (33), it is not possible to embed a meteorological expression like *ame-ga huru* ‘it rains’ under control predicates.¹²

- (33) a. **Ame-ga huri-ta-i.*
 rain-DAT fall-want-PRES
 ‘It wants to rain.’
 b. **Kinoo ame-ga huri-{sokone/wasure/nokosi}-ta.*
 Yesterday rain-NOM fall-{fail/forget/remain}-PAST
 (lit.) ‘It {failed/forgot/remained} to rain yesterday.’

The distinction between control versus raising can also be measured by considering whether clausal idioms can be embedded under the second predicate. The examples in (34) show that both types of control structures do not admit subject idioms like *kankodori-ga naku* ‘there are few customers’.

- (34) a. **Kono mise-de kankodori-ga naki-ta-i.*
 this shop-in cuckoo-NOM sing-want-PRES
 ‘The cuckoos want to sing at this shop.’
 b. **Kono mise-de kankodori-ga naki-{sokone/wasure/nokosi}-ta.*
 this shop-in cuckoo-NOM sing-{fail/forget/remain}-PAST
 (lit.) ‘The cuckoos {failed/forgot/remained} to sing at this shop.’

The sentences in (34) have only the literal interpretations indicated in the translations. With the desiderative predicate *tai* ‘want’, $vP_{(ext)}$ should be included in the lower complement clause, because agent-oriented adverbs can modify the main verb.

- (35) *Watasi-wa [(yorokonde) hasiri]-ta-i.*
 1.sg.-TOP willingly run-want-PRES
 ‘I want to run (willingly)’

It is apparent that the constructions with *V-tai* and *V-sokoneru/wasureru/nokosu* behave uniformly as control constructions with regard to the embedding of inanimate subjects and subject idioms.

In the control construction constructed from *tai* ‘want’, the lower main verb should project $vP_{(ext)}$, and hence PRO can be assumed to fill the embedded subject position, i.e. the lower Spec- vP , as depicted in (36).

- (36) $[_{TP} \text{ EX } [\dots [_{aP} \text{ EX } [\dots [_{VP} [_{vP} \text{ PRO } [\dots [_{VP} \text{ V }] \dots] v] V] \dots] v] \dots] T]$

On the other hand, in syntactic V-V compound constructions with *V-sokoneru/wasureru/nokosu*, no $vP_{(ext)}$ should be projected in the lower complement clause. Given that $vP_{(ext)}$ is not projected in the complement clause, it follows that there is no place where PRO can be inserted.

- (37) $[_{TP} \text{ AG/EXP } [\dots [_{VP} \text{ AG/EXP } [\dots [_{VP} [_{VP} \text{ V }] V] \dots] v] \dots] T]$

In (37), only the single layer of $vP_{(ext)}$ is available, i.e. only the upper verb has the projection of $vP_{(ext)}$, where the subject is merged. In the present analysis, the intended interpretation can nevertheless be obtained in this configuration, on the grounds that both higher and lower verbs share the experiencer argument as their subject.

Despite the structural differences, the two types of constructions are diagnosed as control constructions. There is good reason to believe that both constructions should count as control types with regard to the diagnostics above. First, the fact that the inanimate subjects are not allowed in (33a) follows straightforwardly, since the overtly realized subject must be an experiencer. As the control predicate *tai* assigns an experiencer role to its subject, the inanimate DP is not acceptable.

- (38) a. $*[_{TP} \text{ Ame-ga } \dots [_{aP} \text{ Ame-ga } \dots [_{VP} \text{ PRO } \dots [_{VP} \text{ huri}]] \dots \text{ ta}] \text{ i}]$
 b. $*[_{TP} \text{ Ame-ga } \dots [_{VP} \text{ Ame-ga } \dots [_{VP} \text{ huri}] \text{ sokone/wasure/nosoki}] \text{ ta}]$

Likewise, the example in (33b) is ruled out, because the matrix control predicate selects a subject, i.e. it assigns an experiencer or agent role to the argument merged with $vP_{(ext)}$. An inanimate subject like *ame* ‘rain’ is excluded from this type of control construction, because it is not compatible with the kind of theta role assigned—i.e. the experiencer or agent argument must be animate.

The facts of subject idioms also follow from the assumption that thematic subjects appear in the upper clause. In the control construction with *V-tai*, $vP_{(ext)}$ appears in the embedded clause, but in the constructions with *V-sokoneru/wasureru/nokosu*, $vP_{(ext)}$ is not projected in the embedded clause. Therefore, the configurations in (39) are obtained for the two types of control constructions when subject idioms like *kankodori-ga naku* are used.

- (39) a. $*[_{TP} \text{ Kankodori } \dots [_{VP} \text{ Kankodori } \dots [_{VP} \text{ PRO } \dots [_{VP} \text{ naki}]] \text{ ta}] \text{ i}]$
 b. $*[_{TP} \text{ Kankodori } \dots [_{VP} \text{ Kankodori } \dots [_{VP} \text{ naki}] \text{ sokone/wasure/nosoki}] \text{ ta}]$

In (39a), PRO intervenes between the subject and the verb *naku*. Since this violates the adjacency condition for idiom formation (Carnie 2006), the sequence does not obtain the

intended idiom meaning. In (39b), it is not possible to derive an idiom interpretation, either, because *kankodori* needs to receive a theta role from the control verbs. As discussed by Chomsky (1982) and Jackendoff (1997), an idiom interpretation should be made available when the idiom sequence is interpreted non-compositionally without theta role assignment. Accordingly, no idiom interpretation is available for (34a) and (34b), where *kankodori* serves as the subject of the control verbs.

By contrast, subject idioms and inanimate subjects are allowed in raising constructions, as shown in (40).

- (40) a. *Ame-ga huri-dasi-ta.*
 rain-NOM fall-start-PAST
 ‘It started raining.’
 b. *Kono mise-de kankodori-ga naki-dasi-ta.*
 this shop-in cuckoo-NOM sing-start-PAST
 ‘The shop has started to get less and less customers.’

Raising predicates do not select thematic subjects, so that both subject idioms and inanimate subjects can be embedded, as shown in (40). In raising constructions, subjects start out from the complement clause, so that any type of subject should be allowed insofar as it satisfies the selectional restriction of the lower predicate.

- (41) a. [_{TP} *Ame-ga* ... [_{VP} [_{VP} *Ame-ga* ... [_{VP} *huri*]] *dasi*] *ta*]
 b. [_{TP} *Kankodori* ... [_{VP} ... [_{VP} ~~*Kankodori*~~ ... [_{VP} *naki*]] *dasi*] *ta*]

In (41a), *huru* selects the meteorological subject, so that (40a) is acceptable. In (41b), the idiomatic subject *kankodori* appears contiguous with the verb *naku*, which does not assign any theta role to the subject, so that the subject and the verb can form an idiom sequence, as in (40b).

In essence, syntactic V-V compound constructions of the control type do not comprise *vP_(ext)*, where PRO is accommodated, but behave as control constructions with regard to the diagnostics for assessing control and raising verbs, on the grounds that the predicates select thematic subjects: Owing to the fact that the thematic subjects of these constructions are assigned either an experiencer or agent theta role, they do not allow inanimate subjects and subject idioms to appear, even though they do not involve control in a strictly syntactic sense. On the other hand, the syntactic behavior of the raising construction comes from the fact that the raising predicate does not select a thematic subject. In raising constructions, the overt subject first appears in the complement clause, and then is moved to the surface subject position of Spec-TP. Since the subjects originate from the embedded clauses, inanimate subjects and subject idioms are allowed in raising constructions (as long as the selectional requirements are satisfied in the embedded clauses).

4. CONCLUSION

In this paper, I have argued that control class of compound verbs is divided into three classes, which involve *vP_(ins)*-complementation, *InchP*-complementation, and *VP*-complementation, and that the raising class of compound verbs includes all the verbal

projections up to $vP_{(ext)}$ in the complement clause. The syntactic V-V compound constructions falling into the control class do not comprise PRO in the complement clauses, but they pattern with control constructions with PRO. I have argued that the control class of syntactic V-V compound constructions possesses control properties, on the grounds that it has a syntactic structure where the two component verbs share a thematic subject. It has been shown that the syntactic behavior of adjuncts provides empirical evidence for the layered structures of the embedded clauses in syntactic V-V compound constructions.

NOTES

¹ The control verb *naosu* ‘repeat’ carries the meaning of ‘repetition’. In a sentence like (i), the agent-oriented adverb can be taken to associate only with the matrix verb.

- (i) *Ken-wa sibusibu [hon-o yomi]-naosi-ta.*
 Ken-TOP unwillingly book-ACC read-repeat-PAST
 ‘Ken unwillingly repeated the action of reading the book.’

Example (i) thus means that Ken made an unwilling repetition of reading books. (In this case, *sibusibu* just modifies the second act of reading the book.) The impossibility of embedded scope for agent-oriented adverbs can be more clearly assessed in other control verbs belonging to the same class.

- (ii) *Ken-wa [(*sibusibu) hon-o yomi]-{sokone/-oe/owat}-ta.*
 Ken-TOP unwillingly book-ACC read-{fail/finish/end}-PAST
 ‘Ken {failed in/finished/stopped} reading the book (unwillingly).’

In the control construction formed on *naosu*, the difference in the matrix and embedded interpretations can also be discerned when a frequency adverb is used. To make this point, consider (iii), which involves a frequency adverb like *san-kai* ‘three times’.

- (iii) *Ken-wa [(*san-kai) hon-o yomi]-naosi-ta.*
 Ken-TOP three-times book-ACC read-repeat-PAST
 ‘Ken repeated the action of reading the book three times.’

In (iii), the adverb *san-kai* cannot be associated with the embedded clause. Thus, the sentence is not interpreted as meaning that Ken repeated the act of reading the book three times (and on this interpretation, the act of reading the book should take place at least six times). Example (i) can only mean that Ken read the book just three times, which is the interpretation when the adverb *san-kai* modifies the matrix clause. It can be hypothesized here that duration/frequency adverbs are adjoined to higher projections than vP (cf. Cinque 1999), although I do not go into this discussion.

² It is also possible for the verbal noun to be directly combined with the verb *suru* ‘do’, and even in this case, the locative adjunct can take embedded scope.

- (i) *Sityoo-wa [ekimae-de enzetu-si]-wasure-ta.*
 mayor-TOP station.front-at speech-do-forget-PAST
 ‘The mayor forgot to make a speech in front of the station.’

This interpretation should be possible if the locative adjunct is extracted from the verbal noun before the verbal noun is incorporated to *suru*.

³ Different labels are assigned in different proposals, but for the present purposes, the differences are immaterial. The crucial point is that there are projections that exist between vP and VP . The

existence of their projections should be determined, according to what component of meaning is included in the lexical entry of the verb (see Vender 1967, Dowty 1979).

⁴ For reasons of space, I will not discuss the structure for the control construction built from *tai* 'want', but this control predicate comprises a larger complement structure than the raising verbs take. This can be seen by the contrast in acceptability between (ia) and (ib) with regard to adjunct modification of a time adverbial.

- (i) a. *Ken-wa [(asita) hasiri]-takat-ta.*
 Ken-TOP tomorrow run-want-PAST
 'Ken wanted to run tomorrow.'
 b. *Ken-wa [(*asita) hasiri]-dasi-ta.*
 Ken-TOP tomorrow run-start-PAST
 'Ken started to run tomorrow.'

With the desiderative predicate *tai*, unlike the raising verb *dasu* 'start', a time adverbial that does not match with the tense in the main clause can be placed in the embedded clause. This fact suggests that some kind of TP is projected in the complement clause embedded under *tai*, whereas no TP is included in the complement clause selected by the raising verb *dasu*. Another difference can be found in the possibility of embedding the aspectual verb *iru* 'be'.

- (ii) a. *Ken-wa [hasit-te i]-takat-ta.*
 Ken-TOP run be-want-PAST
 'Ken wanted to be running.'
 b. **Ken-wa [hasit-te i]-dasi-ta.*
 Ken-TOP run be-start-PAST
 'Ken started to be running.'

The contrast in acceptability is expected if the complement clause selected by *tai* projects TP, but the one selected by *dasu* does not.

⁵ Strictly speaking, the thematic roles related to the upper and lower verbs are not identical, in that the lower verb takes an agent subject, but the upper verb an experiencer subject. Nevertheless, the thematic subject of the control construction is related to the two.

⁶ When the second verb is *sokoneru*, the locative PP cannot be taken to modify the embedded clause.

- (i) *Ken-wa [(*kituen-situ-de) tabako-o sui]-sokone-ta.*
 Ken-TOP smoking-room-in cigarette-ACC smoke-fail-PAST
 'Ken failed to smoke a cigarette (in the smoking room).'

⁷ Some additional examples where locative adjuncts are taken to modify the embedded main verb in the control construction formed from *wasureru* are given in (i).

- (i) a. *Mari-wa depaato-de kaimono-o si-wasure-ta.*
 Mari-TOP department.store-at-GEN shopping-ACC do-forget-PAST
 'Mary forgot to do shopping at the department store.'
 b. *Ken-wa kaigi-de hatugen-o si-wasure-ta.*
 Ken-TOP meeting-at remark-ACC do-forget-PAST
 'Ken forgot to make remarks at the meeting.'

It goes without saying that these sentences include verbal nouns that can accommodate locative PPs, as in (ii).

- (ii) a. *Sityoo-wa [ekimae-de-no enzetu]-o si-wasure-ta.*
 mayor-TOP station.front-at-GEN speech-ACC do-forget-PAST
 ‘The mayor forgot about making a speech at the front of this station.’
 b. *Ken-wa [kaigi-de-no hatugen]-o si-wasure-ta.*
 Ken-TOP meeting-at-GEN remark-ACC do-forget-PAST
 ‘Ken forgot about making remarks at the meeting.’

The fact also confirms that a locative PP can be adjoined to InchP only when an object can serve as its host.

⁸ One important issue arises here as to whether *o*-marked traverse objects should count as arguments or adjuncts (see Haig 1981). The example in (i), which involves the control verb *wasureru* suggests that they behave like arguments.

- (i) *Ken-wa [koko-o nobori]-wasure-ta.*
 Ken-TOP here-ACC climb-forget-PAST
 ‘Ken forgot to climb this place.’

In (i), the traverse object can be interpreted as taking embedded scope. Thus, it is reasonable to say that it behaves like an argument selected by the verb in syntactic terms.

⁹ I am not excluding the possibility that the complement clauses of raising verbs include some projections above $vP_{(ext)}$. The following examples in fact suggest that raising verbs show a difference as to whether they include projections above $vP_{(ext)}$ in their complement clauses.

- (i) a. *Ken-wa [(iti-niti-ni san-kai) kusuri-o nomi]-hazime-ta.*
 Ken-TOP one-day-in three-times medicine-ACC take-begin-PAST
 ‘Ken began to take medicine (three times a day).’
 b. *Ken-wa [(**iti-niti-ni san-kai*) kusuri-o nomi]-sugi-ta.*
 Ken-TOP one-day-in three-times medicine-ACC take-exceed-PAST
 ‘Ken took too much medicine (three times a day).’

It is easy to see that the complement clause selected by *hazimeru* ‘begin’, but not *sugiru* ‘exceed’, includes the projection licensing a frequency adverb like *iti-niti-ni sankai* ‘three times a day’.

¹⁰ Kishimoto (2009, 2013) suggests that whether control verbs can be passivized depends on the availability of accusative case features. Unpassivizable control verbs do not have a case feature that licenses accusative case on objects, but passivizable control verbs do. See also Oprina (2010, 2014).

¹¹ The analysis that accounts for the syntactic behavior of the control construction with *wasureru* can be carried over to the control construction with *nokosu*, although I do not discuss the latter in this paper.

¹² In some cases, control constructions are acceptable if they involve ‘pseudo-control’ (see Pustejovsky 1995). One representative example involving pseudo-control is given in (i).

- (i) *Giron-ga de-tukusi-ta.*
 discussion-NOM come.out-exhaust-PAST
 ‘The discussion was exhausted.’

Despite the fact that the subject is inanimate, the control construction in (i) is acceptable, because the subject argument is taken to refer to an entity that instantiates an action autonomously. The same holds true for the example given in (iia).

- (ii) a. *Mari-ga gohan-o taki-owat-ta.*
 Mari-NOM rice-ACC cook-end-PAST
 ‘Mari finished cooking rice.’

- b. *Gohan-ga taki-owat-ta.*
 rice-NOM cook-end-PAST
 (lit.) ‘The rice finished cooking.’

One interesting fact to be noted here is that with *owaru* ‘end’ specifying the termination of an event, the lower verb could be transitive or intransitive. This is related to the fact that *owaru* can be transitive or intransitive when used as a main verb.

- (iii) a. *Sensei-ga zyugyoo-o hayaku owat-ta.*
 teacher-NOM class-ACC early end-PAST
 ‘The teacher finished his class early.’
 b. *Zyugyoo-ga hayaku owat-ta.*
 class-NOM early end-PAST
 ‘The class ended early.’

The two compound verbs in (ii) differ in their transitivity, despite the fact that their surface forms are the same. The difference in transitivity can be easily detected when the second verbs have a distinct morphology depending on their transitivity, as in (iv).

- (iv) a. *Gakusei-ga ronbun-o kaki-age-ta.*
 student-NOM paper-ACC write-raise-PAST
 ‘The student finished writing the paper.’
 b. *Ronbun-ga kaki-agat-ta.*
 paper-NOM write-rise-PAST
 (lit.) ‘The paper finished writing.’

In (iva), the second verb is transitive, so that the sentence has a nominative-accusative case-marking pattern. But the sentence in (ivb) takes an intransitive case-marking pattern, because the second verb is intransitive.

REFERENCES

- Carnie, Andrew. 2006. *Syntax: A Generative Introduction*. 2nd ed. Malden, Massachusetts: Blackwell.
- Chomsky, Noam. 1982. *Lectures on Government and Binding*. Dordrecht: Foris.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Massachusetts: MIT Press.
- Cinque, Guglielmo. 1999. *Adverbs and Functional Heads: A Cross-Linguistic Perspective: A Cross- Linguistic Perspective*. Oxford: Oxford University Press.
- Dowty, David. 1979. *Word Meaning and Montague Grammar*. Dordrecht: Reidel.
- Fukuda, Shin. 2012. Aspectual verbs as functional heads: evidence from Japanese aspectual verbs. *Natural Language and Linguistic Theory* 30, 965–1026.
- Haig, John. 1981. Are traversal objects objects? *Papers in Linguistics* 14, 69–101.
- Jackendoff, Ray. 1990. *Semantic Structures*. Cambridge, Massachusetts: MIT Press.
- Jackendoff, Ray. 1997. *The Architecture of the Language Faculty*. Cambridge, Massachusetts: MIT Press.
- Kageyama, Taro. 1993. *Bunpoo-to Gokeisei*. Tokyo: Hituzi Syobo.
- Kishimoto, Hideki. 2002. Locative alternation in Japanese: A case study in the interaction between syntax and lexical semantics. *Journal of Japanese Linguistics* 17, 59–81.
- Kishimoto, Hideki. 2009. *Hobun-o toru doosi-to keiyoosi: kontorooru-to zyoosyoo*. In

- Taro Kageyama (ed.) *Niti-ei-taisyoo Keiyoosi-Hukusi-no Imi-to Koobun*, 152–190. Tokyo: Taishukan.
- Kishimoto, Hideki. 2013. Toogoteki-fukugodoosi-no kaku-to togotokusei. In Taro Kageyama (ed.) *Fukugodooshi Kenkyuu-no Saisentan: Nazo-no Kaimei-ni Mukete*, 143–183. Tokyo: Hituzi Syobo.
- Koizumi, Masatoshi. 1999. *Phrase Structure in Minimalist Syntax*. Tokyo: Hituzi Syobo.
- Larson, Richard. 1988. On double object construction. *Linguistic Inquiry* 19, 335–391.
- Matsumoto, Yo. 1996. *Complex Predicates in Japanese: A Syntactic and Semantic Study of the Notion 'Word'*. Stanford, California and Tokyo: CSLI and Kurosio.
- Nishigauchi, Taisuke. 1993. Long distance passive. In Nobuko Hasegawa (ed.) *Japanese Syntax in Comparative Grammar*, 79–114. Tokyo: Kurosio.
- Oprina, Dan Florin. 2010. *Case in Complex Predicates*. Doctoral dissertation, Kobe University.
- Oprina, Dan Florin. 2014. V-V predicates and restructuring. In Hideki Kishimoto and Yoko Yumoto (eds.) *Fukugodooshi-kenkyuu-no Genzai*, 151–177. Tokyo: Hituzi Syobo.
- Pustejovsky, James. 1995. *The Generative Lexicon*. Cambridge, Massachusetts: MIT Press.
- Radford, Andrew. 2009. *Analysing English Sentences: A Minimalist Approach*. Cambridge: Cambridge University Press.
- Ramchand, Gillian. 2008. *Verb Meaning and the Lexicon: A First Phase Syntax*. Cambridge: Cambridge University Press.
- Ritter, Elisabeth and Sara Thomas Rosen. 1998. Delimiting Events in Syntax. In Miriam Butt and Wilhelm Geuder, (eds.) *The Projection of Arguments: Lexical and Compositional Factors*. 135–164. Stanford, California: CSLI Publications.
- Ritter, Elisabeth, and Rosen, Sara Thomas. 2000. Event Structure and Ergativity. In Carol Tenny and James Pustejovsky (eds.) *Events as Grammatical Objects: The Converging Perspectives of Lexical Semantics and Syntax*. 187–238. Stanford, California: CSLI Publications.
- Shibagaki, Ryosuke. 2013. *Analysing Secondary Predication in East Asian Languages*, New Castle upon Tyne: Cambridge Scholars Publishing.
- Shibatani, Masayoshi. 1973. “Where morphology and syntax clash: A case in Japanese aspectual verbs.” *Gengo Kenkyu* 64, 65–96.
- Shibatani, Masayoshi. 1978. *Nihongo-no Bunseki*. Tokyo: Taishukan.
- Travis, Lisa. 2000. Event Structure in Syntax. In Carol Tenny and James Pustejovsky (eds.) *Events as Grammatical Objects: The Converging Perspectives of Lexical Semantics and Syntax*. 145–185. Stanford, California: CSLI Publications.
- Travis, Lisa. 2010. *Inner Aspect: The Articulation of vP*. Dordrecht: Springer.
- Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca, New York: Cornell University Press.