

A Frame-Semantic Approach to Verb-Verb Compound Verbs in Japanese: A Case Study of *V-toru**

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This paper claims a semantic constraint on Japanese [V1+V2]_v compound verbs¹ (henceforth JCVs), such as *osi-taosu* (push-topple) ‘topple by pushing’, is that V1 and V2 must constitute a coherent *semantic frame*. In order to support this claim, a corpus-based analysis of JCVs with V2 *tor(-u)* ‘get/remove’ was conducted in the framework of Frame Semantics (Fillmore 1982, 1985, Fillmore & Baker 2010, Goldberg 2010, inter alia). V2 *toru* is a polysemous word, which generally carries two meanings, ‘get’ (1a) and ‘remove’ (1b).²

(1) a. Jon-wa Biru-kara okane-o damasi-tot-ta
John-TOP Bill-from money-ACC cheat-get-PST
‘John cheated Bill out of money.’

b. Jon-wa teeburu-no yogore-o huki-tot-ta
John-TOP table-GEN stain-ACC wipe-remove-PST
‘John wiped out a stain on a table.’

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¹ Kageyama (1993) claims Japanese compound verbs can be classified into syntactic compounds and lexical compounds based on their syntactic properties and meaning relation of V1 and V2 (see also Kageyama 2009). The term JCVs used in this study refers to lexical compounds for convenience.

² The abbreviations used in this paper are as follows: ACC = accusative; GEN = genitive; HON = honorific; LOC = locative; PART = particle; PST = past; TOP = topic.

This paper asks the following three questions with regard to JCVs with V2 *toru*. First, what are the possible combinations of V1 and V2? Second, what is the semantic relation between the two verbs and how it is determined in a particular compound verb? Third, how is the meaning of V2 selected in a particular compound verb when V2 is polysemous? By examining a total of 65 JCVs with V2 *toru* found in an online database of JCVs, this study argues that there is a necessity to incorporate *encyclopedic knowledge* (see Taylor 1996) into the semantic structure when explaining the construction of meaning in JCVs.

This paper is organized as follows. Section 1 will describe the basic properties of JCVs as well as the problems of the semantic structures utilized by previous studies of JCVs. In Section 2, the framework of this study, Frame Semantics, will be introduced with a focus on the concepts of *semantic frame* and *frame elements*. In Section 3, JCVs with V2 *toru* will be analyzed on the basis of the data found in an online database of JCVs. Finally, Section 4 concludes my discussion.

1 Background

1.1 Basic Properties of Compound Verbs in Japanese

According to Lieber (1992), the least productive compounds in English are those that contain verbs. In contrast, compounds involving verbs are productive and widespread in Japanese (Kageyama 2009:512). For example, an online database of JCVs developed by a project of NINJAL (National Institute for Japanese Language and Linguistics) called “Web-based database of Japanese compound verbs” (<http://csd.ninjal.ac.jp/comp/index.php>) lists 3,757 JCVs.

A compound verb is a sequence of two verbs formed as one word. V1s in compounds take the Renyookei (‘infinitive’) form to be combined with V2. In JCVs, V1 and V2 constitute a single morphological word, which can be judged by their “lexical integrity” (see Kageyama 1989, Matsumoto 1996). V1 and V2 in JCVs cannot be separated by particles (**tobi-wa-agaru* ‘jump-PART-go.up’), nor can V2 alone be put in an honorific form (**tobi-o-agari-ni-naru* ‘jump-HON.go.up’). Additionally, passive and causative morphemes cannot be inserted between V1 and V2; they must be attached to the end of the whole compound. JCVs also possess “compound accent,” which indicates that the compounds behave phonologically as a single word. These properties of JCVs distinguish themselves from other V-V sequences like Japanese V-te V complex verbs such as *hasit-te kuru* (run-TE come) ‘come running’ or serial verb constructions in other languages.

The combinatory possibilities of JCVs are constrained by “the principle of subject sharing,” which requires that the most prominent participants (subjects) in the semantic structure of the two verbs be identical in the compound (Matsumoto 1998). Though this constraint captures an important insight into the formation of

JCVs, it is proposed as only a necessary, and not sufficient condition. Thus, Matsumoto (1998) claims that semantic constraints are also required alongside the principle of subject sharing, since the principle of subject sharing alone is too general and says too little. As Matsumoto (1998, 2011) states, JCVs permit only a restricted set of semantic relations between V1 and V2, as shown in (2).

(2) **Semantic relations of JCVs (Matsumoto 2011)**

- a. **Coordination:** *naki-sakebu* (cry-scream) ‘cry out’
- b. **Means:** *osi-akeru* (push-open) ‘open by pushing’
- c. **Manner:** *korogari-otiru* (roll-fall) ‘fall rolling’
- d. **Cause:** *aruki-tukareru* (walk-get.tired) ‘get tired from walking’
- e. **Background:** *mi-nogasu* (see-let.escape) ‘let escape one’s notice’
- f. **Theme event:** *arai-ageru* (wash-complete) ‘wash up’

When two verbs with similar meanings are compounded, they form a “coordinate compound.” “Means compounds” are those where V1 represents the means by which the causation of change represented by V2 is executed. In a “manner compound,” V1 represents the manner in which the process denoted by V2 is performed. In other cases V1 represents the cause by which the process denoted by V2 comes to happen (“cause compounds”). There are also cases where V1 represents the “background” or the “theme event” of V2. Nevertheless, the problem of how we build these semantic relations remains unsolved. To put it another way, in the case of *huki-toru* (wipe-remove) ‘remove by wiping’, how is the means relationship is selected in this particular compound?

1.2 Previous Semantic Structures

Previous studies of JCVs, such as Kageyama (1996, 1999) and Yumoto (2005, 2008), were mainly conducted utilizing lexical conceptual structure (LCS). For example, *naki-otosu* (cry-persuade) ‘persuade someone by crying’ is represented in LCS as illustrated in (3) (Yumoto 2011:151).

However, the theory of LCS is deemed to be insufficient, since the semantic structure of LCS itself is too simple to capture the semantic features that determine the possible combinations of JCVs (cf. Yumoto 2011). For instance, the semantic structure of LCS cannot account for the possible patterns of [V1+*tirasu*]_v. V2 *tirasu* ‘scatter’ can be combined with a variety of V1s such as *maku* ‘strew’, *kuwu* ‘eat’, *nugu* ‘undress’, *keru* ‘kick’, *owu* ‘chase’, *huku* ‘blow’, etc. What is the shared semantic feature among these V1s? One possibility is that verbs can be compounded with *tirasu* if they are “verbs of scattering” which entail the result of something being scattered. For example, *maku* ‘strew’ entails the result of strewn objects being scattered. In this case, the LCS of “verbs of

scattering” can be represented by “[x ACT ON y] CAUSE [y BECOME [y BE [AT SCATTERED]]].”

(3) **Lexical Conceptual Structure**

naki-otosu (cry-persuade) ‘persuade someone by crying’:

[[x_i] ACT_{CRY}] +
 [[x'_i] ACT ON [y'_j]] CAUSE [[y'_j] BECOME [BE [AT PERSUADED]]]

 [[[x_i] ACT ON [y_j]] CAUSE [[y_j] BECOME [BE [AT PERSUADED]]]]
 BY [[x_i] ACT_{CRY}]

Nevertheless, it is unreasonable to say that V1s in other instances of [V1-*tirasu*]_V must be “verbs of scattering.” The events designated by *kuwu* ‘eat’, *nugu* ‘undress’, *keru* ‘kick’, *owu* ‘chase’, or *huku* ‘blow’, do not logically entail the result of being scattered. Scatteredness is merely one of the results that could happen. Furthermore, one needs to possess rich encyclopedic knowledge to produce or interpret these compounds. In the case of *kuwi-tirasu* (eat-scatter) ‘scatter the food by eating’, one needs to know that when eating something, the food may be scattered. Similarly, one needs to possess the background knowledge, that if you chase someone, they will run away, as in the case of *owi-tirasu* (chase-scatter) ‘disperse persons by chasing them’.

Another structure is used by Lieber (2009), who has recently proposed a “skeleton/body model” to analyze Japanese compound verbs. The “skeleton” is comprised of only features that are of relevance to the syntax, while the “body” encodes various perceptual, cultural, and encyclopedic aspects of meaning. Basically, this model is based on various semantic features of the action expressed by the verb.

(4) **The skeleton/body model** (Lieber 2009: 102)

naki-sakebu (cry-scream) ‘cry out’

naku ‘cry’
 [+dynamic ([i])]
 <personal>
 <sound emission>
 {noise caused by pain, sorrow, etc.}

sakebu ‘scream’
 [+dynamic ([i])]
 <personal>
 <sound emission>
 {noise – loud, piercing}

The lexical entries in (4) have three parts: skeleton enclosed in square brackets, body presented in angle brackets, and encyclopedic elements given between curly brackets. Lieber (2009) claims this model to be a finer-grained semantic structure than LCS. For example, in the compound *naki-sakebu* (cry-scream) ‘cry out’, both *naku* ‘cry’ and *sakebu* ‘scream’ have the semantic features of “dynamic” (the positive value corresponding to an event or process), “personal,” and “sound emission.” Thus, based on the similarity between V1 *naku* and V2 *sakebu*, they can be combined as a coordinate compound. Actually, this approach, based on the similarity between the semantic features of V1 and V2, works well in coordinate compounds. However, this account cannot deal with the formation of other semantic relations such as means compounds or cause compounds. The reason is that it is too difficult to try to find the same semantic features between V1 and V2 in means, cause, or manner compounds. For example, what is the shared semantic feature between V1 *erabu* ‘choose’ and V2 *toru* ‘get’ in *erabi-toru*? Maybe one can extract a very abstract semantic feature such as <agentive action>. However, this sort of abstract feature cannot be used to distinguish *erabi-toru* from other combinations such as **nade-toru* (stroke-get/remove). Even though the constituents of **nade-toru* also possess the same feature <agentive action>, they still cannot be combined as a compound verb.

Most importantly, neither of these previous semantic structures can solve the three basic questions in this paper. First, what are the possible combinations of V1 and V2? Second, what is the semantic relation between the two verbs? Third, what criteria does one use to interpret or determine the meaning of a polysemous V2? Previous semantic structures cannot explain these problems because they only contain the information of the action itself, and do not contain the “related events” of an action like typical results, purposes, means, etc.

Consequently, LCS or Lieber’s model cannot account for why V1s like *kosuru* ‘rub’ can be combined with both V2 *toru* ‘remove’ and *tukeru* ‘attach’, which respectively carry the opposite meanings, as shown in (5).

- (5) a. Taro-wa yogore-o burasi-de kosuri-tot-ta
 Taro-TOP dirt-ACC brush-with rub-remove-PST
 ‘Taro removed the dirt with a brush by rubbing.’
- b. Taro-wa taoru-ni sekken-o kosuri-tuke-ta
 Taro-TOP towel-LOC soap-ACC rub-attach-PST
 ‘Taro applied soap to the towel by rubbing.’

In LCS, V1 *kosuru* cannot entail two opposite results (removing, attaching) at the same time. In Lieber’s model, it is unclear whether a verb can possess two opposite semantic features at one time or not. In contrast to the previous semantic structures, this study employs a rich semantic structure called *semantic frame*,

which contains detailed knowledge of a verb's semantics *and* its related events.

2 Frame Semantics

The basic idea of Frame Semantics is that meanings are relativized to scenes or frames (Fillmore 1977:59). A frame is a set of concepts related in such a way that to understand any one of them, you have to understand the whole structure in which it fits (Fillmore 1982:111). Thus, to understand the word *hypotenuse*, one has to understand the whole structure, namely a right-angled triangle (Langacker 1987).

A number of studies in cognitive psychology support this sort of “situated conceptualization” (Barsalou 2003, Yeh & Barsalou 2006, Simons et al. 2008, inter alia). As Yeh & Barsalou (2006:349) claim, concepts are not abstracted out of situations but are situated instead. Feldman (2010:12) also states that concepts are never learned or activated in isolation – concepts we have are richly interrelated. Based on these sorts of related concepts in situation-based semantic structure, we can solve the problems of JCVs mentioned previously.

The approach adopted by Ryder (1994) to examine English noun-noun compounds is basically the same as the frame-semantic approach of this study.

[W]e can say in order to establish a connection between component structures, it must be possible to establish a correspondence between a schema connected with each of the two structures, as in the two nouns in a noun-noun compound. (Ryder 1994:72)

According to Ryder, a person may construe noun-noun compounds differently based on different schemas that two nouns can share: *tiger-hunter* as a hunter of tigers (based on a shared event schema) or as a hunter who is fierce and voracious (based on shared feature schemas). Ryder uses the term *schema* to refer to the knowledge structure like *frame* or *script*.

In the same vein, Goldberg (2010:39) claims that the only constraint on the combination of events designated by a single verb is that the events must constitute a coherent *semantic frame*.³ Although this constraint is proposed for single verbs, I claim it can be applied to compound verbs as well (see Chen 2012). In this study, a word sense's semantic frame is what the word “means” or “evokes” under a “background frame” (background situation), which means that the same word will carry different meanings under different background situations. For example, under the background frame Cause_harm, *beat* carries the meaning of ‘hit someone to cause damage’ as in *John beat Bob with a bat*. In contrast, under the background frame Cause_to_make_noise, *beat* means ‘hit a percussion

³ In addition, according to Goldberg (2010:41), the semantic frame of a verb is a generalized, possibly complex state or event that constitutes a “cultural unit” (cultural representation judging from cultural logic, see Enfield 2002).

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instrument to make sound’ as in *John beats a drum*. Background frames in this paper are set by referring to Berkeley FrameNet (Fillmore et al. 2003, <http://framenet.icsi.edu>). FrameNet is a lexical database of English developed by the International Computer Science Institute in Berkeley. FrameNet is based on a semantic network of predefined frames and their *frame elements*.

The frame elements (FEs) stand for those entities or properties which may or must be present in any instance of a given frame (Fillmore & Baker 2010). The frame elements of a verb’s semantic frame in this study are the **Essential Event** expressed by the verb, the **Event Participants**, and the **Related Events**.

(6) Frame elements (FEs) of a verb’s semantic frame

- a. The **Essential Event** expressed by a verb
- b. **Event Participants** which may or may not be realized as arguments
- c. **Related Events**, such as means, purpose, reason, cause, manner, result, presupposition, co-occurring events, etc.

Table (7) represents the semantic frame of *kosuru* ‘rub’ under a background frame Removing.

(7) The semantic frame of *kosuru* under the background frame Removing

<i>kosuru</i> ‘rub’ Background Frame: Removing	
Essential Event	An [Agent]_{agt} applies pressure and friction to a [Patient]_{pat} on a [Surface]
Event Participants	Agent_{agt}, Patient_{pat}, Surface , Instrument
Related Events	Purpose (to remove the patient; etc.) Manner (repeatedly; roughly; etc.) Result (the patient removed from the surface; the agent got tired; etc.) Presupposition (the patient sticks to the surface; etc.)

In (7), FEs represented in **boldface** are the core FEs (profile, see Langacker 1987), whereas those FEs that are not in boldface are the peripheral FEs (base). “Essential Event” is represented in the order of “action chain” (Langacker 1991). Inside the square brackets are the entities of the essential events. Entities with subscripts “agt” or “pat” represent the proto-agent and proto-patient respectively (Dowty 1991), which could be utilized to explain the argument realization of JCVs. “Event Participants,” which may or may not be realized as arguments, are

the semantic roles that participate in the event. When V1 and V2 are compounded, the event participants will be fused (see Goldberg 1995:50-51). The last section is the “Related Events”, which includes the means of causation, the purpose and reason of an agentive action, the cause of a nonagentive action, the manner of a motion/action, the result and presupposition of an action, co-occurring events, etc. Related events are the “typical” means, results, etc., and they are not entailed by the verb (cf. “prototypical outcomes” in Boas 2003).

A semantic frame may change under a different background frame. Thus when the same verb *kosuru* ‘rub’ under a different background frame Attaching, its semantic frame will be different from the one in (7). For example, the purposes (to attach the patient; etc.) and the results (the patient attached to the surface; etc.) are different from those in the background frame Removing.

By virtue of the encyclopedic knowledge via the notion of semantic frame, each verb carries background information concerning the likely causes and results of the process or the manner/means by which the process may be executed. Consequently, the combinations of V1 and V2 can be restricted and predicted based on the information extractable from the semantic frame.

3 Analysis

In this section, I conduct a case study of compound verbs with V2 *toru* ‘get/remove’ in a frame-semantic approach. The data of this study is a total of 65 JCVs with V2 *toru* found in the “Web-based database of Japanese compound verbs.” V1s compounded with V2 *toru* can be categorized into the following 3 groups based on the interpretation of V2, as judged by the example sentences given in the database.

(8) V1s compounded with V2 *toru* in three interpretations.

a. ‘get’

V1: *utu* ‘hit’, *semeru* ‘attack’, *tatakawu* ‘fight’, *katu* ‘win’, *ubawu* ‘rob’, *nusumu* ‘steal’, *kasumeru* ‘filch’, *odosu* ‘threaten’, *yusuru* ‘extort’, *sebiru* ‘pester’, *damasu* ‘cheat’, *kaziru* ‘bite’, *musaboru* ‘covet’, *suwu* ‘suck’, *karu* ‘reap’, *karu* ‘hunt’, *kanziru* ‘feel’, *kagu* ‘smell’, *kiku* ‘listen’, *miru* ‘see’, *yomu* ‘read’, *kaku* ‘write’, *manabu* ‘learn’, *hiku* ‘pull’, *kumu* ‘draw’, *tukamu* ‘seize’, *nuwu* ‘sew’, *neru* ‘sleep’, *noru* ‘get on’, *hakaru* ‘measure’, *mukaeru* ‘meet’, *mesu* ‘call’, *ukeru* ‘receive’, *utusu* ‘copy’, *erabu* ‘choose’, *kawu* ‘buy’. (36 in total)

b. ‘remove’

V1: *huku* ‘wipe’, *nuguwu* ‘wipe (tears or sweat)’, *haku* ‘sweep’, *yaku* ‘burn’. (4 in total)

c. ‘get’ or ‘remove’

V1: *kiru* ‘cut’, *kezuru* ‘shave’, *sogu* ‘chip’, *eguru* ‘gouge out’, *oru* ‘break’, *yaburu* ‘tear’, *tigiru* ‘tear to pieces’, *hagasu* ‘tear off’, *hagu* ‘peel off’, *nuku* ‘pull out’, *musiru* ‘pluck’, *mogu* ‘wrench’, *tumu* ‘pick’, *kosu* ‘filter’, *kosuru* ‘rub’, *siboru* ‘squeeze’, *sukuwu* ‘scoop’, *suru* ‘graze’, *daku* ‘embrace’, *nameru* ‘lick’, *horu* ‘dig’, *maku* ‘roll’, *kaku* ‘scratch’, *karamu* ‘entwine’, *utusu* ‘move’. (25 in total)

The three basic problems in this paper can be solved by means of semantic frame. First, we can explain the possible combinations of V1 and V2 by the “semantic link(s).” When the semantic frames of V1 and V2 can establish semantic link(s) between each other, and there exists no inconsistency among all frame elements, V1 and V2 can constitute a coherent semantic frame of [V1+V2]_v.⁴ Take *nusumi-toru* (steal-get) ‘get by stealing’ as an example. Table (9) shows the semantic frames of V1 *nusumu* ‘steal’ and V2 *toru* ‘get’.

(9) Semantic links between V1 *nusumu* ‘steal’ and V2 *toru* ‘get’⁵

	V1 <i>nusumu</i> ‘steal’ Background Frame: Theft	V2 <i>toru</i> ‘get’ Background Frame: Getting
Essential Event	A [Perpetrator] _{agt} takes [Goods] _{pat} from a [Victim]/[Source]	A [Recipient] _{agt} starts off without the [Theme] _{pat} in their possession, and then comes to possess it
Event Participants	Perpetrator _{agt} , Goods _{pat} , Victim/Source, Instrument	Recipient _{agt} , Theme _{pat} , Source
Related Events	Purpose (to get the goods; etc.) Means (by sneaking into; etc.) Manner (swiftly; etc.) Result (the perpetrator gets the goods; caught by police; etc.)	Purpose (to possess the theme; etc.) Means (by stealing; by robbing etc.) Manner (swiftly; etc.) Result (the recipient obtains the theme; etc.)

In (9), the background frame of *toru* is Getting, thus *toru* will be interpreted as ‘get’. In this case, one of the related events of V2 *toru*, “Means,” contains the information of “by stealing.” This information can build a semantic link with the

⁴ To constitute a coherent semantic frame, the semantic links must be restricted to the particular semantic relations as (2) shows. For example, even if V1 *toru* ‘get’ and V2 *nusumu* ‘steal’ can establish semantic links such as “V1: purpose–V2: means,” they still cannot constitute a coherent semantic frame. That is why **tori-nusumu* (get-steal) does not exist.

⁵ The shading and the border of the frame elements represent the semantic links (resemblance).

essential event of V1 *nusumu* ‘steal’ based on their semantic resemblance. Similarly, the purpose of V1 is “to get the goods,” which can build another semantic link with the essential event of V2. It is these semantic links that make a semantic frame of a compound coherent.

Regarding the second question, an appropriate semantic relation of V1 and V2 is selected by the semantic links as well. Based on the semantic links, we know that V1 is the Means of V2, and V2 is the Purpose of V1; therefore, this compound would be interpreted as a “means compound” (V1: means–V2: purpose).

As to the third question, we interpret or determine the meaning of a polysemous V2 by establishing coherent semantic links. As (10) shows, when the background frame of V2 *toru* is Removing, V1 *nusumu* ‘steal’ and V2 *toru* ‘remove’ cannot build the semantic links as in (9). Therefore, when combined with V1 *nusumu* ‘steal’, V2 *toru* can only be interpreted as ‘get’. This is how a particular meaning of *toru* is selected for a particular compound.

(10) Semantic frames of V1 *nusumu* ‘steal’ and V2 *toru* ‘remove’

	V1 <i>nusumu</i> ‘steal’	V2 <i>toru</i> ‘remove’
	Background Frame: Theft	Background Frame: Removing
Essential Event	A [Perpetrator]_{agt} takes [Goods]_{pat} from a [Victim]/[Source]	An [Agent]_{agt} causes a [Theme]_{pat} to move away from a [Source]
Event Participants	Perpetrator_{agt}, Goods_{pat}, Victim/Source, Instrument	Agent_{agt}, Theme_{pat}, Source, Goal
Related Events	Purpose (to get the goods; etc.) Means (by sneaking into; etc.) Manner (swiftly; etc.) Result (the perpetrator gets the goods; caught by police; etc.)	Purpose (to remove the theme) Means (by washing; by wiping; etc.) Manner (efficiently; etc.) Result (the source became clean; etc.)

As mentioned earlier in Section 1.2, there is a problematic example in regards to the verb *kosuru* ‘rub’ since it can be combined with V2 *toru* ‘remove’ or *tukeru* ‘attach’, which respectively carry the opposite meanings. However, now we can solve this problem by semantic frames. Based on the different background frames (Removing or Attaching), the Purposes of V1 *kosuru* ‘rub’ are different (“to remove the patient” or “to attach the patient”). Also, both V2 *toru* ‘remove’ and *tukeru* ‘attach’ have the Means “by rubbing.” Therefore, V1 *kosuru* can be combined with V2 *toru* or *tukeru* based on the different semantic links. Table (11) shows the semantic links between V1 *kosuru* and V2 *toru* under the background

frame Removing.

(11) Semantic links between V1 *kosuru* ‘rub’ and V2 *toru* ‘remove’

	V1 <i>kosuru</i> ‘rub’	V2 <i>toru</i> ‘remove’
	Background Frame: Removing	Background Frame: Removing
Essential Event	An [Agent] _{agt} applies pressure and friction to a [Patient] _{pat} on a [Surface]	An [Agent] _{agt} causes a [Theme] _{pat} to move away from a [Source]
Event Participants	Agent _{agt} , Patient _{pat} , Surface, Instrument	Agent _{agt} , Theme _{pat} , Source, Goal
Related Events	Purpose (to remove the patient; etc.) Manner (repeatedly; etc.) Result (the patient removed from the surface; etc.)	Purpose (to remove the theme) Means (by rubbing; etc.) Manner (repeatedly; etc.) Result (the theme no longer exists in the source)

Under a different background frame Attaching, the semantic links between V1 *kosuru* and V2 *tukeru* will be like the ones shown in (12).

(12) Semantic links between V1 *kosuru* ‘rub’ and V2 *tukeru* ‘attach’

	V1 <i>kosuru</i> ‘rub’	V2 <i>tukeru</i> ‘attach’
	Background Frame: Attaching	Background Frame: Attaching
Essential Event	An [Agent] _{agt} applies pressure and friction to a [Patient] _{pat} on a [Surface]	An [Agent] _{agt} attaches an [Item] _{pat} to a [Goal]
Event Participants	Agent _{agt} , Patient _{pat} , Surface, Instrument	Agent _{agt} , Item _{pat} , Goal, Connector
Related Events	Purpose (to attach the patient; etc.) Manner (repeatedly; etc.) Result (the patient attached to the surface; etc.)	Means (by rubbing; by painting; etc.) Manner (repeatedly; etc.) Result (the item attached to the goal)

Let us now return to the classification of V2 *toru* in (8). With the third group of verbs in (8), V2 *toru* can be interpreted as ‘get’ or ‘remove’ depending on their background situations. Therefore, the same verb *nuki-toru* (pull-get/remove) will be interpreted as ‘get by pulling’ in the context such as “mushroom hunting,” whereas in the context like “weeding” it will be interpreted as ‘remove by pulling’. This alternation of meaning is due to that the different contexts evokes different background frames (e.g. Getting or Removing), thus the meaning of V2 *toru* would be determined under the evoked background frame.

Moreover, compounds such as *ne-toru* (sleep-get) requires one to possess rich sociocultural knowledge to understand its meaning ‘steal someone else’s partner by sleeping with her/him’. Besides, *ne-toru* is a good example to show that in order to explain the construction of meaning in compound verbs, we need the concept of Event Participants which may not be realized as arguments. V1 *neru* ‘sleep’ is an intransitive verb which does not take an object, and the subject of V1 *neru* will be identified with the subject of V2 *toru*. Thus, the object of V2 *toru* (here the theme of getting) is not an argument of V1 *neru* ‘sleep’. However, the object of V2 *toru* must participate in the event designated by V1 *neru* as an event participant (Partner₂), since one cannot get someone else’s partner by sleeping himself/herself. In such cases, the LCS used by Kageyama and Yumoto cannot account for the meaning construction of compounds, since it only contains the information of arguments, whereas semantic frames consisting of frame elements include event participants which may not be realized as arguments.

(13) Semantic links between V1 *neru* ‘sleep’ and V2 *toru* ‘get’

	V1 <i>neru</i> ‘sleep’	V2 <i>toru</i> ‘get’
	Background Frame: Personal_relationship	Background Frame: Getting
Essential Event	[Partner₁]_{agt} has a sexual relationship with [Partner₂]_{pat}	A [Recipient]_{agt} starts off without the [Theme]_{pat} in their possession, and then comes to possess it
Event Participants	Partner₁_{agt}, Partner₂_{pat}, Time, Place	Recipient_{agt}, Theme_{pat}, Source
Related Events	Purpose (to get someone else’s partner) Manner (secretly; etc.) Result (the agent gets someone else’s partner)	Purpose (to possess the theme) Means (by sleeping with him/her; etc.) Manner (secretly; etc.) Result (the recipient gets the theme)

4 Conclusion

In this paper, I have shown that in order to elucidate the meaning construction of JCVs, a rich semantic structure like *semantic frame* is required. By looking into JCVs with V2 *toru*, this study suggests that the meaning of a verb is not activated in isolation. Instead, a verb has richly related concepts. By virtue of such related concepts, we can establish semantic links between V1 and V2, which thus constitute the coherent semantic frame of [V1+V2]_v.

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