Abstract

This paper examines two types of complex predicates in Japanese from a diachronic perspective. The two-fold purpose is bring more diachronic data into the dialogue on complex predicates and to evaluate the claim by Butt and Lahiri (1998) that light verb constructions are diachronically stable. Using Japanese data it is possible to test this hypothesis. While the serial verb construction has become more restricted with time, over the centuries the light verb construction [N(-ACC) suru] has remained stable and become dramatically more frequent. Using natural written data rather than constructed examples, I demonstrate that in previous stages of Japanese—namely Old Japanese and Classical Japanese—the SVC had fewer restrictions on internal order, transitivity mismatches were possible, and motion verb grammaticalization was less developed than Modern Standard Japanese. In contrast, the suru-type light verb construction has undergone no significant changes in any attested stage of Japanese other than increase in token frequency.

Keywords: serial verbs, complex predicates, light verb construction, Japanese

1 Introduction

Complex predicates are an issue of much linguistic debate, in no small part due to the difficulty in encompassing the variety of constructions that have been called “complex” (e.g. Butt (2003:2)). However, the majority of these linguistic phenomena have been analyzed synchronically alone. In this paper, I analyze two types of complex predicates, serial verbs and the light verb construction, using diachronic data from Japanese. Little work has been done on the diachrony of complex predicates in Japanese; most accounts deal with clause linkage (e.g. Ohori (1992)), particularly the grammaticalization of the conjunctive -te form with verbs of motion to aspectual marking (e.g. Shibatani (2006)). Serial verb constructions have been largely overlooked, and to my knowledge, no work on the history of the light verb construction in Japanese exists at all.

Serial verb constructions (henceforth SVCs) are reported to occur in many languages, yet linguists have arrived at no uncontested definition of their characteristics. At the most basic, an SVC is defined as a series of verbs acting together as a single predicate within one clause (e.g. Bril (2004), Givón (1991)). Paul (2005:12), for example, notes that in general, there is “a consensus that an SVC is not a coordinate construction, that it denotes a single (composite) event, presents one clausal domain (as

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evidenced by a unique tense/aspect value) and displays argument sharing (i.e., a common subject and/or object)."

Many analyses include light verbs (henceforth LV)—and the constructions they form—as complex predicates as well (e.g. Bowern (2008), Butt and Geuder (2001), Butt and Lahiri (1998)). Butt and Lahiri (1998) argue that in Bengali and Urdu, the light verb construction \( V_1-V_2 \) (where \( V_2 \) is the light verb) constitutes a complex predicate because the light verb does not contribute the same predicational value to the clause that the main (lexical) verb does. They note that, “The light verb is assumed to have an incomplete argument structure, which seeks to combine with the argument structure of a main verb” (Butt and Lahiri 1998:9). Furthermore, “The defining characteristics of complex predicates are that the argument structure is complex in the sense that two or more semantic heads contribute arguments or influence the argument structure as part of primary predication. Because the predication is primary and hence monoclusal, the grammatical functional structure is that of a simple predicate: there is only a single subject and no embedding (no control/raising)” (Butt 2003:3).

For Japanese in particular, Grimshaw and Mester (1988), Isoda (1991), Miyamoto (1999), Yokota (2005) and others consider the light verb construction \( [N-\text{ACC suru}] \) (or \( [N-suru] \)) a complex predicate because neither the noun nor the light verb \( \text{suru} \) can assign both arguments and case as full verbs do, but in combination they behave as a single predicate. Example (1) is typical of the light verb construction in Modern Standard Japanese:

(1) 太郎 は 花子と 結婚 した。
Tarō wa Hanako-to kekkon shī-ta
Tarō TOP Hanako-COM marriage LV-PST
‘Tarō married Hanako.’

Here the noun \( \text{kekkon} \) ‘marriage’ pairs with the light verb \( \text{suru} \) ‘do’ to act as one intransitive predicate.

In general the consensus is that the noun in the LV construction determines the predicate’s argument structure, while the light verb \( \text{suru} \) assigns grammatical case. Isoda (1991) identifies the nominal (which he labels VN or ‘verbal noun’ following a norm in Japanese linguistics) as the part of the LV construction that bears \( \theta \)-roles; it occurs together with \( \text{suru} \) ‘do’, which is a light verb capable of assigning case but not \( \theta \)-roles. Isoda (1991:261) notes that “although the nominal appears in the form of the object of \( \text{suru} \), it behaves like a matrix predicate in that it determines the number and type of constituents in the clause, while the matrix predicate \( \text{suru} \) does not seem to affect the constituents.”

That \( \text{suru} \) is a light verb is well accepted. Butt and Lahiri (1998:27) and Butt (2003:3) note that one key criteria for identifying light verbs is that they are always form-identical with a ‘heavy’ verb in the language. This is certainly true for the Japanese light verb \( \text{suru} \), which has remained form-identical with its heavy counterpart \( \text{suru} \) for at least the 1500 years for which we have written records. Citing evidence from Urdu and other Indo-Aryan languages, Butt and Lahiri assert that complex predicates that include a light verb are diachronically stable constructions, so much so that “the light verb is a historical dead end” (1998:5). In section 5, I will demonstrate that despite arguments against Butt and Lahiri’s (1998) theory of the historical stability of light verbs (cf. Hook and Pardeshi (2006), Bowern (2008), Harris (2008)), this assertion indeed holds true in the case of Japanese LVs.¹

Departing from studies focusing on -te grammaticalization and causativization, I will present data tracing the history of two other complex predicate types through the history of Japanese. I will

¹For the purposes of this paper, I focus only on the particular light verb construction formed with the light verb \( \text{suru} \). For discussion of other light verbs, such as \( \text{naru} \) ‘become’ and the aspectual verb \( \text{hajimeru} \) ‘begin’ (inchoative), see Matsumoto (1996a,b).
show that SVC usage has become more restricted from Old Japanese to Modern Standard Japanese, while the light verb construction [N(-acc) suru] has been stable at least since the earliest recorded form of Japanese (see section 5).

2 Complex predicates

Theories about complex predicates are as diverse as the morphosyntactic constructions they are claimed to encompass. Definitions range from general (e.g. Butt (2003), Givón (1991)) to very detailed with numerous criteria (e.g. Aikhenvald (2006), Bril (2004), Pawley and Lane (1998)). Butt (2003:24), for example, defines complex predicates rather broadly, stating that they consist of two or more elements within a single clause acting as a single predicate (and which could be replaced by a single simple predicate). Furthermore, Butt and Geuder (2001) and Bowern (2008) note that a complex predicate has multiple heads in that more than one grammatical element is contributing to the argument structure, unlike a simple predicate with a single head. In sections 2.1 and 2.2, I will review various theories of complex predication pertaining to serial verb constructions and light verbs.

2.1 Serial verbs

Most complex predicate theories include serial verbs, but there are many conflicting definitions regarding what exactly constitutes a serial verb construction (SVC). A commonly cited definition is that of Aikhenvald (2006:1):

A serial verb construction is a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination, or syntactic dependency of any other sort. Serial verb constructions describe what is conceptualized as a single event. They are monoclausal; their intonational properties are the same as those of a monoverbal clause, and they have just one tense, aspect, and polarity value. SVCs may also share core and other arguments. Each component of an SVC must be able to occur on its own.

Aikhenvald’s definition, however, is not without its problems. As Morrison (2008) demonstrated with data from Akan, for example, Aikhenvald’s claim about SVC component verbs occurring on their own does not hold cross-linguistically. Like Morrison, I will demonstrate that SVCs need not be composed only of finite verbs. (Morrison 2008:3) says that, “[I]n reality, the majority of Akan SVCs are not composed wholly of finite verbs.” All verbs within a Japanese SVC are not marked as finite, either—indeed, only one verb stem per SVC can be marked finite (always the last one). See section 4 for more about the characteristics of Japanese SVCs from Old Japanese onward.

Bril (2004:2) lists criteria similar to Aikhenvald in her definition of SVCs, but her major criterion is that a serial verb is “one single predication referring to aspects of a single event.” Givón (1991:140) defines an SVC more loosely, yielding a definition that, while less specific, is arguably easier to apply cross-linguistically to the wide range of documented SVCs: “more than one verb in a single clause that codes what seems to be, at least prima facie, a simple single event.” Similarly, Næss (2004:230) gives a minimal definition of SVCs as constructions that “present clusters of actions as having a greater degree of internal cohesion than other kinds of complex constructions.” The commonality in all these definitions is that a serial verb construction is a single predicate within one clausal do-
main composed of multiple verb roots and encoding a single event (which may be a complex event composed of small subevents, but which is nonetheless a single event).

Crowley (1987, 2002) and Pawley and Lane (1998) distinguish between two main types of verb serialization: core serialization and nuclear serialization. Core serialization “joins groups of verbal inner arguments into a single construction, subject to the constraint that all the verbs in the construction share at least one inner argument” (Pawley and Lane 1998:209), while nuclear serialization “joins verbs together to create a complex predicate with a single set of arguments” (Pawley and Lane 1998:209). Japanese SVCs are of the nuclear type in all attested stages of the language (although the distinction between core and nuclear may be irrelevant in verb-final languages).

Serial verb constructions are often overlooked in discussions of Japanese complex predicates in favor of the -te conjunctive form and the causative. Some claim that SVCs (in Modern Standard Japanese) are compound verbs (cf. Toratani (2002), Tomioka (undated)), usually with an added claim of limited productivity in terms of the number of lexical stems that can occur together. When reading Old Japanese or Classical Japanese, however, it is easy to see that SVCs were both more frequent and more productive than than they are in MSJ. Rather than compound verbs, these complex verb constructions appear to fit many of the accepted criteria for SVCs. In particular, SVCs in Japanese form a single predicate with shared argument structure which encode a single event (where each V may represent a single facet of the event). It will be shown that Old Japanese and Classical Japanese multiple-verb units are in fact serial verbs.

The scope of this paper will be limited to serial verb constructions and the light verb construction [N-(acc) suru]. Thus the -te conjunctive form and the causative will not be analyzed (see Shibatani and Cheung (2006) for a diachronic analysis of the -te form). In the following sections, I will examine data from Old Japanese and Classical Japanese, applying relevant tests for complex predication. I will show that SVCs in Old Japanese and Classical Japanese had fewer restrictions in terms of internal order, ability for transitivity mismatching, and fewer restrictions on the number of verb stems in a single SVC.

2.2 Light verb construction

Cross-linguistically speaking, Butt and Lahiri (1998:4) consider light verb constructions to be complex predicates because “more than one head contributes to the primary predication of the clause.” Bowern (2008) agrees, stating that light verb constructions develop when a predicate—usually a verb or noun—cannot assign arguments like a full predicate, so it must combine with another element in order to do so. Moreover, light verbs are held to be semantically bleached, such that while they can assign case, they lack ability to assign θ-roles. Hence light verbs form constructions with a head that is capable of θ-role assignment. Together, the light verb and its head assign both case and θ-roles, acting as a unified predicate. In the case of Japanese, this head is a noun, which may be a native Japanese noun, a loan word (most commonly from Chinese), or a so-called deverbal noun (i.e., a noun that was formed from a verb via a nominalizer suffix).

For the purposes of this paper, ‘light verb construction’ includes only the Japanese construction N-suru (or N-acc suru) formed with the light verb suru ‘do’, while acknowledging that MSJ has additional LV constructions and that light verb constructions in other languages may take different forms. For Modern Standard Japanese in particular, Isoda (1991), Yokota (2001, 2005), Jacobsen (1992) and others include LV constructions as complex predicates. N and suru together have the argument structure of a single predicate. It should be noted that although I am combining N-suru and N-acc suru in this paper, some consider N-suru an incorporated noun (cf. Isoda (1991), Matsumoto (1996a)) and thus different from N-acc suru. I do not believe that the distinction is helpful here,
because in both cases two components are contributing to the argument structure of one predicate. Unless these two forms display different behaviors in the data, there will be no need to separate them. Moreover, because of the extreme frequency of both argument ellipsis and case marker ellipsis in Old Japanese and Classical Japanese texts, in most cases it is impossible to determine whether an example that appears to be N-\textit{suru} is indeed N-\textit{suru} or simply N-ACC \textit{suru} with the accusative marker elided.

Serial verbs are attested from the very earliest recorded form of Japanese all the way through present day; however, they are less productive and more restricted—in terms of allowed ordering of motion verbs within an SVC—in Modern Standard Japanese than they were in Old Japanese and Classical Japanese. The light verb construction, on the other hand, is seldom found in Old Japanese and only slightly more frequent in Classical Japanese, but it is exceedingly frequent in Modern Standard Japanese, particularly as a device for creating verbs from Sino-Japanese nouns and non-verbal loanwords from other languages. Impressionistically, it is immediately obvious when reading OJ or CJ texts that the LV construction is much less frequent in MSJ. In order to quantify this impression, I analyzed a random sample of OJ, CJ, and MSJ texts for token frequency. Mora was used as the unit of length for consistency’s sake, as wordhood is debatable in Japanese. Using a random 2000-mora sample from OJ, CJ, and MSJ (see C), I found that the LV occurred zero times in the OJ texts, zero times in the CJ texts, and 29 times in the MSJ texts. The difference in the frequency of LV in MSJ texts and both OJ and CJ texts is thus particularly striking. See section 5 for a discussion of light verbs in Japanese language history.

3 Stages in Japanese language history

Old Japanese (henceforth OJ) is the language of the Japanese islands (excepting the Ryūkyū Islands and Ainu-speaking areas of the north) as recorded in texts ranging from approximately 400–794 AD. Representative OJ texts include \textit{Man’yōshū} (\textit{Collection of Ten Thousand Leaves}), compiled ca. 759 (but including poems from centuries earlier) and consisting of 4516 poems in Japanese,\(^2\) and \textit{Senmyō} (\textit{Imperial Edicts}). OJ is distinguished from Classical Japanese (henceforth CJ), the language seen in texts from 794 to approximately 1500 AD. Representative CJ texts include \textit{Taketori monogatari} (\textit{Tale of the Bamboo Cutter}), a piece of fiction ca. 909—the earliest text considered Classical rather than Old Japanese—and \textit{Genji monogatari} (\textit{Tale of Genji}), a piece of fiction ca. 1000 (considered the world’s first novel). Modern Standard Japanese (henceforth MSJ) is generally considered to cover the period from approximately 1500 AD to the present.

OJ, CJ, and MSJ are each significantly different from each other, and a speaker of MSJ cannot readily understand OJ or CJ without study. OJ differs from CJ greatly in phonology, lexical inventory, and to some extent, verbal morphology. The most noticeable difference between OJ and CJ or MSJ is the near absence of Sino-Japanese loan words in OJ. The verbal system of OJ differed markedly from MSJ, particularly in the number of verb classes and the use of the so-called verbal bases. CJ is an intermediate stage between OJ and MSJ in several respects; it had fewer vowel phonemes than OJ, for example, and was beginning to include lexical items from Chinese (mostly terms relating to court life, such as rank names for the nobility) but had largely the same morphological paradigms as OJ. Most scholars set the cut-off point between CJ and MSJ at around 1500 AD, when the verbal and adjectival morphology had been reanalyzed roughly to what is observed in the Japanese spoken today and the \textit{kakarimusubi} phenomenon ceased to be productive.\(^3\)

\(^1\)Many of the extant texts from this time period (the Asuka and Nara eras in Japanese history) were composed entirely in Chinese due to its prestige. \textit{Man’yōshū} is a valuable resource in part because it was entirely written in Old Japanese with the exception of commentary.

\(^2\)There were a series of particles called \textit{kakarimusubi} (係結び) in Old and Classical Japanese which, when present,
In this paper, examples are transliterated using the appropriate phonemic inventory for the language at the date when the text was written. For example, OJ examples will have /p/, whereas CJ examples will have /f/ (corresponding to /h/ or /Ø/ in MSJ); likewise, OJ had more vowel phonemes than CJ and MSJ, and this will be reflected in the transliteration. MSJ examples appear in Hepburn-style transliteration. For a list of abbreviations for glosses and other terms used in the paper, see Appendix A. A complete list of sources and abbreviations used in this paper can likewise be found in Appendix B.

4 Diachrony of serial verbs in Japanese

In Old Japanese texts, sequences composed of multiple verb roots without intervening arguments occur frequently. These are morphologically quite simple, taking the form (V-)V-V with no coordinators (such as -tutu) or subordinators (such as -te) appearing between the multiple verb stems. Regardless of how many verb stems appear in the SVC, all but the last must appear in infinitival form (連用形 ren'yōkei in Japanese historical linguistics); only the last verb in the SVC capable of appearing in finite form (終止形 shūshikei). If the SVC itself is not the final verb in a main clause, however, finite marking will not obtain; if the SVC is modifying an NP, for example, the final verb stem in the SVC will take the attributive suffix rather than the finite suffix. Likewise, if appearing clause-finally in a subordinate clause, an SVC will take the subordinative suffix. Therefore it is more accurate to say that of all the verb stems within the SVC, only the last one can take any form other than infinitive. As mentioned in section 2.1, this is contrary to the claim by Aikhenvald (2006) that SVCs may only be composed of finite verbs (as Morrison (2008) also demonstrated). Example (2) is typical of the SVCs found in OJ texts:

(2) 比羅可駄喩 輔曳 輔枳能朋楼
    pyirakata-yu puye puk-yi-nøpor-u
Hirakata-ABL flute blow-INF-rise-FIN
    ‘[sounds of funeral] flutes are rising from Hirakata’ (NS 98)⁴

The scope of the TAM marking—suffixed to the final verb stem in the SVC but with scope over all component verbs of that SVC—indicates that these multiple verb stems in fact do not comprise multiple clauses, provided that they are not subordinated. Were one of the verbs subordinated, we would expect to see the subordinating suffix -te; however, it is not present. Example (3) demonstrates subordination rather than serialization:

(3) 許 智多鶏波 乎婆頭勢夜麻能 伊波帰爾 母 為弖
    [køt[o] ita-ky-e"pa] [wo°-patuse-yama-nø ipa-kiy-ni mø wi-te]
    rumor painful-ATTR-COND [DIM-Patuse-mountain rock-fortress-LOC PT lead.INF-SUB]
    許母郎奈牟
    [kømer-ana-m-u]
    hide-DES-TENT-FIN

triggered the final verb in a sentence to appear in the evidential/imperfective (izenkei) or attributive (rentaikei) form instead of the expected finite form (shūshikei). Although most of these particles remain in MSJ, they no longer cause any change in the verb. Kakarimusubi can be found in texts after 1500 AD, but irregularity of usage (among other factors) implies that the writers were using them to conform to established literary standards. For more information on kakarimusubi, see Ikeda (1975), Vovin (2002, 2006), Watanabe (2002).

⁴Unless otherwise indicated, English free translations of the examples come from Vovin (2002).
‘If rumors are painful, leading (you) to a rocky fortress on little Hatuse mountain, I want to hide away’ (FK 1, my translation)⁵

The verb stem wi ‘lead’ does not belong to the same clause as the verb immediately following it, kømør ‘hide’. Although an exact contrasting example cannot be located, were it an SVC, the verbs would not be separated by the suffix -te (one function of which is to mark subordinate clauses). Rather, an SVC formed from wi ‘lead’ and kømør ‘hide’ would take the form wi-kømør ‘lead (and) hide’.

Furthermore, evidence from OJ also illustrates that SVCs were not coordinated. It is possible to differentiate coordinated verbs from SVCs on the basis of verbal coordination suffixes such as -tutu, a coordinator which has not survived into MSJ. Example (4) shows two verbs coordinated with this overt suffix:

(4) 故非之久能 於保加流 和礼 波 美都々 之努波牟
   kwopiysi-ku-no opo-k-ar-u ware pa myi-tutu sinwop-am-u
   long-INF-GEN big-INF-exist-ATTR 1SG TOP look-INF-COOR yearn-TENT-FIN
   ‘I, [who] have great longing, will be looking and yearning’ (MYS 4475)

The structure of myi-tutu sinwop-am-u ‘see and yearn’ is therefore V-COOR V, as opposed to (V-)⁶*V-V for SVCs.

More solid evidence that the entire SVC is monoclausal and a single predicate lies in the fact that an SVC can modify a noun phrase, as in examples (5) (Old Japanese) and (5b) (Classical Japanese) below:

(5) a. 麻都理許斯 美岐
   matur-i-kø-si myi-kyi
   present.HUM-INF-come-ATTR hon-wine
   ‘the presented wine’ (KK 39)

b. とぶらひやる 歌
   toburaf-i-yar-u uta
   inquire-INF-send-ATTR poem
   ‘a poem that [she] sent over inquiring’ (TM 53.5)

In both of these, the SVC has two verb stems, and the final verb in the SVC has attributive marking, indicating that the SVC is modifying the following NP. This indicates that the SVC acts a single predicate because it can be nominalized. Were each of the verb roots in question not part of a single unit, they could not undergo a lexical process as a unit, in this case nominalization; rather, each stem would have to nominalize separately. Pawley and Lane (1998:205) speculate that all Kalam SVCs may be lexicalized “to some degree” and the data from OJ and CJ indicate that this may be true for Japanese as well. Furthermore, SVCs in Old Japanese and Classical Japanese were not limited to just two lexical verb stems (see section 4.1).

Constituent order is perhaps the most complicated aspect of any syntactic study on OJ and CJ because nearly any part of a sentence can be omitted freely (cf. Næss (2004)). It is quite common for subject and object arguments to be elided or for the arguments themselves to appear but with

⁵Note that there were no spaces between words in Old Japanese—a writing style that continues through Modern Standard Japanese—nor was there any punctuation. It is nevertheless possible to ascertain word boundaries via indicators such as case marking, verbal and adjectival forms, and particles.
Næss (2004:225) examines the problems faced when attempting to determine whether verbs in a single clause share argument structure when the language in question has frequent argument ellipsis. She notes that, “It is difficult to decide when a construction might be analyzable as an SVC and when it should rather be considered a sequence of clauses with some or all arguments omitted.” Through all stages of Japanese language history, argument and/or case marker ellipsis has also been extremely common, meaning that it can be difficult to ascertain whether verbs are forming a single predicate in OJ, CJ, and even MSJ. However, where full NPs are present, it is possible to ascertain that the basic word order is \((\text{NP}_{\text{SUBJ}} )(\text{NP}_{\text{OBJ}} ) \text{V}\); in other words, \((\text{S})\text{OV}\), just as CJ and MSJ are. When a serial verb is present, it takes the V slot in the sentence; thus, we never see examples like \(^*\text{(NP}_{\text{SUBJ}} \text{V}_1 \text{NP}_{\text{OBJ}} \text{V}_2 \text{V}_{\text{FIN}}).\) The fact that all parts of the SVC must remain adjacent to each other with no intervening elements and in the position a single V would take in a sentence (i.e., sentence-final) and with only one set of TAM markers indicates that an SVC is one predicate.

Additional evidence is provided by clausehood. As Butt (2003:5) and Matsumoto (1996a:197) point out, if verb components belong to one clause, it should be impossible to separate them. This would be equivalent to saying that \(^*\text{os-i wa taos-u ‘push-INF TOP fall-FIN’},\) where the topic marker \text{wa} separates the two verb stems, is impossible in Modern Standard Japanese as a replacement for \text{os-i-taos-u ‘push and fall (down)’} (and indeed it is impossible). Examples of verb strings where \text{V}_1 appears in the infinitive and is separated from \text{V}_2 by case markers (or the topic clitic \text{wa}), however, are not present in the OJ and CJ data. The lack of examples in the OJ and CJ texts demonstrating such separation suggests that these multiple verbal elements could not be separated and thus belong to one clause.

### 4.1 Verb stems and their ordering

In this section, I will show that OJ and CJ allowed more types of verbs in SVCs than MSJ does and that the ordering of verbs within an SVC in OJ and CJ was less restricted than in MSJ. Examples of SVCs composed of two and three lexical verbs in OJ and CJ are widespread, and there is at least one attested example with four lexical verbs in an SVC (see example (6)), which is not possible in MSJ. In addition, the internal order of SVCs in OJ and CJ could be either iconic or non-iconic, in contrast to MSJ, where the order of lexical verbs within an SVC must be iconic.

While SVCs with three verbs are possible in MSJ, there seems to be a limit of two lexical verbs per SVC plus one aspectual verb. For example, the SVC \text{mori-koroshi-hajimeru ‘begin to poison to death’} is composed of two lexical verbs, \text{moru ‘prescribe (medicine)’} and \text{korosu ‘kill’}, and one grammaticalized aspectual verb, \text{hajimeru ‘begin’/inchoative}. However, more than two lexical verbs per SVC were possible in OJ and CJ. Example (6) from CJ has four lexical verbs:

(6) \begin{align*}
\text{わらはべの, 若き人の根籠に吹き折られたる} \\
\text{warafabe-no, waka-ki fito-no nekago-ni fuk-i-or-are-taru}
\end{align*}

\begin{align*}
\text{若き人を取} & \text{り集め起し立て} \\
\text{waka-ki person-NOM to-i-atume-okos-i-tat-e}
\end{align*}

\begin{align*}
\text{へ} & \text{るな短さを} \\
\text{tree/garden-PT-ACC take-INF-gather-INF-raise-INF-stand-SUB}
\end{align*}

\text{‘children [and] young women [lit. ‘young people’], gathering and propping up plants and such that were blown over [by the wind]…’ (MS 200, my translation)}

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\(^6\)The situation is further complicated by the extensive use of honorific, humble, and politeness affixes and auxiliary verbs, which often meant that the participants were clear even if the lexical arguments were omitted. For example, the auxiliary verbs \text{sofus- ‘speak’ (奏す) and kefis- ‘speak’ (敬す) could only be used if the subject was someone of lower rank speaking to an emperor or ex-emperor, respectively.}
Although not the only SVC in the sentence, with its four lexical verb stems tor-i-atume-okos-i-tate ‘take-INF-gather-INF-raise-INF-stand-SUBJ’ is the longest; this 4-verb SVC in example (6) appears representative of the complex event narrative SVCs I will describe in section 4.2.3. SVCs consisting of more than three lexical verbs were not found in the OJ texts used here (although it is likely they would be found in an exhaustive OJ corpus search); several examples with three-verb SVCs are given later on in the paper, but example (7) is representative:

(7) 五十戸良我 許恵 波 寝屋度麻弖
satowosa-ga kowe pa NE-YA-n-two-ma-te
village.headman-GEN voice TOP sleep-INF-house-GEN-door-TERM

‘[the] voice of the village headman set out, came up to our bedroom door, and called us repeatedly’ (MYS 892)

In addition to having fewer restrictions on the number of verb stems in an SVC, the internal order of OJ and CJ SVCs was not required to be iconic, unlike what we find in MSJ. Example (7) also demonstrates this, with the SVC k-yi-tat-i-ywoⁿp-ap-yin-u ‘come-INF-set.out-INF-call-ITER-PERF-FIN’. In MSJ, a motion verb is frequently used as the last verb in an SVC to combine manner with action, such as in suberi-oṣiru ‘slip down’ (example from Toratani (2002:v)); suberi-oṣiru is composed of the infinitival form of the verb suberu ‘slip’ and the motion verb oṣiru ‘fall’. In this OJ example, however, the motion verbs appear first, while the action verb ywoⁿ ‘call’ appears in final position within the SVC.

Moreover, although motion verbs such as ‘come’ are typical candidates for grammaticalization, in this example k ‘come’ is the first verb stem in the SVC, not the last as would be expected. Claims about grammaticalization of verbal constructions such as -te iku in MSJ rely on the order V₁-V₂, where V₁ is the lexical verb and V₂ is the grammaticalized verb—the expected order for a verb-final language and the observed pattern in MSJ. However, in example (7) above as well as in example (8), k ‘come’ is the first verb stem in the SVC:

(8) 萬世爾得之波岐布得母鳥梅能波奈
YØRØⁿTU YØ n-i tesi pa k-yi-p-u tømø uMEY-nø pana
ten.thousand generation(s) DV-INF year TOP come-INF-pass-FIN CONJ plum-GEN blossom

‘Although years will come and pass for ten thousand generations, plum blossoms would continue to bloom without interruption.’ (MYS 830)

This ordering strongly suggests that in OJ, verbs of motion were less restricted, and not grammaticalized to the extent that they have in MSJ. MSJ is strictly OV, and TAM markers always appear suffixed to the right of lexical verb stems (i.e., an aspectual marker never precedes a lexical verb

⁷The different font sizes are intended to represent one of the archaic writing systems of Japanese, senmyōgaki (lit. ’Senmyō writing’, named because it is found primarily in the Senmyō imperial edicts). In this system, when Chinese characters were used for their phonetic/phonemic values, they were written smaller than the surrounding characters; when they were intended logographically, they were written larger. This is represented in the transliterations with uppercase letters for logographic use and lowercase letters for phonetic use.
stem). Motion verbs such as *kuru* ‘come’ and *komu* ‘go into/put into’ often appear with lexical verbs in MSJ, but the lexical verb(s) must always appear first. The appearance of motion verbs within SVCs in positions other than after all lexical verb stems indicates one of two possibilities. Either the motion verbs are not grammaticalized in these SVCs and appear as full lexical verbs or OJ and CJ had fewer restrictions on aspectual marker placement than MSJ does. Given that all other TAM marking is done via suffixation after lexical verb stems, it seems that the former is more likely; however, it is also possible that the ordering of motion verbs lagged behind the process of grammaticalization.

Finally, note that all of these examples demonstrate cases of nuclear serialization, as we would expect based on Crowley’s (2002) claim that verb-final languages will predominantly exhibit nuclear serialization.

### 4.1.1 Transitivity mismatches

Unlike MSJ, both OJ and CJ allowed the verbs within a single SVC to differ in valency with few restrictions. This runs counter to Matsumoto’s (1996b:200) claim that—at least in MSJ—“Typically, intransitive verbs are compounded with intransitive verbs, and transitive verbs with transitive verbs.” Example (9) from CJ pairs an intransitive verb *toburaf* ‘inquire’ with a transitive verb, *yar* ‘send’:

(9) とぶらひやる 歌 toburaf-i-yar-u uta inquire-INF-send-ATTR poem

‘a poem that [Princess Kaguya] sent over inquiring’ (TM 53.5, my translation)

Example (10) contains two separate SVCs, each with verb stems of differing valency:

(10) 荣比久留 母能 波 毛々 久佐 尻 op-yi-k-uru mønø pa mwomwo kusa ni pursue-INF-come-ATTR thing TOP hundred kind PART 勢米余利伎多流 semey-yør-i-k-yi-tar-u assault-INF-approach-INF-come-INF-PERF/PROG-ATTR

‘things that pursue [us] come assaulting [us] in [a] hundred varieties’ (MYS 804)

In the first SVC, *op* ‘pursue’ is transitive while *k* ‘come’ is intransitive; in the second SVC, *semey* ‘assault’ is transitive, but the stems *yør* ‘approach’ and *k* ‘come’ are intransitive. See also example (28) in section 4.2.2.

### 4.2 Event status

Serial verbs are more productive in Old Japanese than in Modern Japanese in terms of the verb stems which may appear in the SVC slots. Types of SVCs observed in OJ and CJ include manner, simultaneous events (including non-separable subevents) and complex narrative events consisting of subevents. Defining what constitutes a single event is controversial; there is evidence to suggest it may differ from language to language. As Næss (2004:230) states, “The problem is, of course, that defining what constitutes a ‘single event’ may turn out to be at least as difficult as defining SVCs.” Durie (1997), Pawley and Lane (1998), Crowley (2002) and Thepkanjana (2006) analyze SVCs as a single complex event with multiple subevents. I adopt the criteria laid out in Pawley and Lane (1998) for Kalam and Thepkanjana (2006) for Thai.
In her work on Thai, Thepkanjana asserts that SVCs “are considered two subevents which constitute a single complex event because they were performed by the same agent, are interpreted as an action-purpose sequence of events, and occur at more or less the same time and place.” Although Thepkanjana is working with Thai SVCs consisting of at most two verb stems, the crucial point is that the subevents need not be simultaneous to be considered one event linguistically. In Thepkanjana’s theory, it is important that the subevents occur without an observable time span between them. However, Pawley and Lane (1998) demonstrate that in Kalam, the subevents need not occur in close sequence or in the same location yet may still be considered one complex event. They cite examples from Kalam where there can be a noticeable time span between the subevents encoded in the SVC and further differentiate between single-scene and multi-scene SVCs. The verb stems used in a serial verb in OJ and CJ do not have to constitute a single, simple event, as I will show in sections 4.2.2 and 4.2.3.

In order to identify SVC types in OJ and CJ, it is first necessary to determine whether the verbs encode a single event, simultaneous events, or multiple non-simultaneous events. For SVCs encoding single events, there are at least two possibilities: 1) a single event where one or more of the verb stems in the SVC encodes the manner of the other verb(s), or 2) a single event comprised of several smaller subevents. By many definitions, an SVC cannot encode multiple events, but Pawley and Lane (1998) demonstrated that a narrative SVC may be comprised of many smaller subevents that are not necessarily required to occur in the same location. By this definition, then, it is unnecessary to differentiate single events with subevents from multiple events in a narrative SVC.

Japanese SVCs meet most of the single-scene criteria listed by Pawley and Lane (1998:205). Namely, Japanese SVCs from any historical period have only one subject, there are no markers of subordination or coordination, TAM marking has scope over the entire SVC, and the verb stems must be continuous. It is unclear whether SVCs in OJ and CJ met the single intonation requirement as there is no linguistically reliable information regarding OJ or CJ intonation. However, because the internal order of the SVC need not be iconic in OJ and CJ (see section 4.1), they do not meet Pawley and Lane’s criteria stating that the order of verb stems in the SVC must follow the temporal order.

Pawley and Lane (1998:206) contrast single-scene SVCs with multi-scene SVCs, which they claim are not bound by the full list of criteria that single-scene SVCs are. Namely, multi-scene SVCs need not fall under a single intonational contour, may be composed of transitive verbs which do not share objects, may be separated by NPs or adverbs, and may take postposed morphemes on any component V. They give the following event structure for SVCs in Kalam:

\[
\text{(11) MOVE/STAY PIVOTAL ACT MOVE (WITH AFFECTED OBJECT) OUTCOME} \\
\text{(Pawley and Lane 1998:212)}
\]

This proposed structure template is ideal for their Kalam data but is language-specific and therefore needs to be revised for OJ and CJ data. I propose the following template (where elements in parentheses are optional):

\[
\text{(12) POSITION/MANNER/ACT (MENTAL) ACT (ACT) (MOVE) }
\]

Crucially for OJ and CJ—but not for MSJ—the ordering of the elements must not be rigid. As I showed in section 4.1, the SVC verbs in OJ and CJ exhibit more freedom of order than in MSJ. POSITION here refers to verbs of motion and/or positional verbs; this category is intended to include motion verbs such as ‘come’ as well as stative verbs such as ‘stand’. All SVCs observed in OJ and CJ must
have one of the three types in slot one. A minimal manner SVC has one manner verb stem and one activity verb stem, for example, while a minimal narrative SVC has at least one positional or activity verb and one other activity verb.

The following sections present various types of SVCs identified in the extant OJ and CJ texts, showing the variety and productivity of the construction. The major types to be discussed here are single-event manner SVCs (section 4.2.1), simultaneous events (section 4.2.2), and narrative events (section 4.2.3).

4.2.1 Single-event manner

Many of the SVCs observed in OJ and CJ involve encoding of manner such that one or more of the SVC’s component verbs describes the manner of the other(s). I will call these single-event manner SVCs. This type is much like the simultaneous/non-separable event type (see section 4.2.2), except that in the case of the latter, no manner is specified. Example (13) shows an Old Japanese SVC where one or more of the verb stems appears to indicate the manner of another:

(13) 可之故伎 美知乎 也須家口 母 奈久 奈夜美伎 弼
kasikwo-kyi miti-wo yasu-ky-eku mø na-ku nayam-yi-k-yi-te
awesome-ATTR road-ACC peaceful-ATTR-NMLZ PT no-INF suffer-INF-come-INF-SUB

‘[I] came along the awesome road, suffering and without peace [of mind]’ (MYS 3694)

Here nayam ‘suffer’ indicates the manner of the final verb in the SVC, k ‘come’. Furthermore, the morphology indicates that nayam is verbal and not a case of adverbial manner marking. Contrast (13) with (14):

(14) 和己 於保 支美 波 多比良気久 那何久 伊末之 弼 等与 美岐
wa^n-kø opo kyimyi pa tapyirakey-ku na^ka-ku imas-i-te tøyø myi-kyi
1SG-POSS great lord TOP safe-INF long-INF exist.HON-INF-SUB abundant HON-wine

麻都流
matur-u
present.HUM-FIN

‘[I] present the abundant wine so that my sovereign (lit. great lord) would live safely and long’ (SNK 4)

Unlike example (13), example (14) has tapyirakey-ku na^ka-ku ‘safe-INF long-INF’—two adjectives with characteristic adjectival morphology—modifying the verb phrase in the subordinate clause to which they belong. Hence adjectives could be exploited to function as adverbs indicating manner of a verb, as could components of SVCs, but the two methods were structurally separate. Furthermore, in an SVC such as in example (13), all component verbs share the same grammatical subject, whereas adverbs such as in (14) cannot be said to have subjects. The SVC is combining the argument structure of two or more component verbs.\(^8\)

Another clear example is provided in (15), where the first verb stem in the SVC, os ‘push’, specifies the manner of the second, pyirak ‘open’.

(15) 伊多斗乎 伊末之 弼 意斯比良伎
ita-two-wo os-i-pyirak-yi

Another clear example is provided in (15), where the first verb stem in the SVC, os ‘push’, specifies the manner of the second, pyirak ‘open’.

\(^8\)This combined argument structure is contra Baker (1997:297), who argues that “argument-takers” cannot be combined without maintaining all arguments that each individual verb would have alone.
‘pushing open the wooden doors where maidens sleep...’ (MYS 804)

The SVC in example (16) is comprised of two verb stems with the first depicting the manner of the second; the snow covers the ground (not overt) by falling and covering.

(16) 波都 由伎波 波 知敝尓 布里之家
patu yukyi pa ti-pye-ni pur-i-sik-ye
first snow TOP thousand-CL-LOC fall-INF-cover-IMP
‘First snow, fall in [a] thousand layers!’ (MYS 4475)

Examples (17)–(22) provide additional examples of SVCs denoting manner:

(17) 阿佐比能 惠美佐迦延伎 弘 多陀牟伎
asa-pyi-nø wem-yi-sakaye-k-yi-te taku-ⁿ-tunwo-nø
morning-sun-smile-INF-flourish-INF-come-GER mulberry-GEN-rope-COMP
斯路伎 多陀牟伎 阿和由伎能 和加夜流 牟泥遠曵
sirwo-kyi taⁿ-tamukyi awa-yukyi-nø mune-wo søⁿ-tatak-yi
white-ATTR arm foam-snow-COMP young-?ATTR breast-ACC embrace-INF
‘[You] come smiling like the morning sun, and [your] white arms [sturdy] like mulberry ropes, embrace my breast(s), young like light snow...’ (KK 3)

(18) 保登等伎須 和我 須武 佐刀尓 許欲 那伎和多流
pøtøtøⁿkyisu wa-ⁿka sum-u satwo-ni kø-ywo nak-yi-watar-u
cuckoo 1S-POSS live-ATTR village-LOC this-ABL cry-INF-cross-FIN
‘The cuckoo cried and crossed over from here to the village where I live.’ (MYS 3783)

(19) 皇 神等 相宇宙万方奉誼
SUMYE KAMIY-TATI APYI-udunø-yi-matur-ite
imperial deity-PL PV-appreciate-INF-eat.HON-GER
‘The imperial deities appreciate and partake [offood]’ (NO 14)

(20) 和可伎 兒等毛 波 乎知 許知爾 佐和吉奈久良牟
waka-kyi KWO⁻ⁿtømwo pa woti køti-ni sawaⁿ-yi-nak-uram-u
young-ATTR child-PL TOP there here-LOC make.noise-INF-cry-TENT2-FIN
‘young children will probably cry loudly here [and] there’ (MYS 3962)

(21) 和礼 由恵 尔 於毛比和夫良牟 伊母我 可奈思佐
ware yuwe n-i omwop-yi-waⁿ-p-uram-u imø⁻ⁿka kanasi-sa
I reason DV-INF think-INF-wor-øy-TENT2-ATTR beloved-POSS dear-NMLZ
‘endearment for [my] beloved who probably worries because of me’ (MYS 3727)

(22) 心 乎 帝 文 支鳥 子烏 卜欺居者
KØKØRØ-wo ITA-myi nuye KWO⁻TØRI ura-NAKEY-WOR-Eⁿ-pa
heart-ACC painful-GER nuye DIM-bird PREF-cry-INF-exist-EV-CON
‘when [my] heart aches and little nuye birds are crying’ (MYS 5)

⁹The final verb in the SVC here does not have finite marking because it is not in the final clause of the sentence; the example was too long to include the entire sentence.

¹⁰The meaning of yar~ (ADJ) is unknown to Old Japanese scholars. Also note that søⁿ-tatak-yi is non-finite because it is not the end of the sentence. The entire passage has not been included here due to its length.
Serial verbs are also evident in Classical Japanese with apparently the same productivity level as in Old Japanese. For example, the Classical Japanese SVC in example (23) is also of the manner type; here *tatazum* ‘pace (around)’ indicates the manner of *arik* ‘walk’.

(23) たゝずみありきけれど かひ あるべく も あらず
    tatazum-i-rik-iker-e-do  kafi  ar-ube-ku  mo ar-az-u
    pace.around-INF-walk-RETR2-EV-CONC use  be-DEB-INF PT be-NEG-FIN
    ‘although [they] paced and walked around [her house], it was no use’ (TM 31.5)

Furthermore, examples from another Japonic language suggests that the SVC must have been present in forms of Japanese or Japonic even earlier than OJ, reinforcing Butt and Lahiri (1998)’s claim that once complex predicates enter a language, they are very stable and not prone to disappear. Consider example (24), from Old Ryukyuan:

(24) しら にしやが おしいちへば
    sira  nisiya-ga  os-i-idife-ba
    white northern.wind-NOM push-INF-exist-CON
    ‘when the first (lit. white) northern wind blows’ (*Omoro Sōshi* VII: 349)

While it is, of course, premature to form conclusions about Old Ryukyuan on the basis of one example, given the shared linguistic history of Japanese and Ryukyuan, it seems unlikely that they would have developed SVCs independently.

### 4.2.2 Simultaneous events

Crowley (2002), Bril and Ozanne-Rivierre (2004), Aikhenvald (2006) and others point out that cross-linguistically, SVCs often encode simultaneous events. Such SVCs are indeed found in OJ texts and may be one of two subtypes: 1) actions or states which can be isolated from one another but which occur simultaneously or 2) actions or states which are simultaneous but not readily separable into distinct subevents. These resemble the single-event manner SVCs discussed in section 4.2.1 except that it is not really possible to isolate one of the component verbs as the manner verb.

Likewise, in example (25), the two verb stems *opop* ‘cover’ and *k* ‘come’ encode simultaneous events where the first is not the manner of the second:

(25) 於毛波奴爾 横風乃 稲敷可
    omwop-an-u-ni  YOKOSIMA-KANSE-nø nipu’ puka n-i
    think-NEG-ATTR-LOC cross-wind-GEN sudden  DV-INF
    覆来礼婆
    OPOP-YI-K-YI-TAr-ë-ⁿpa
    COVER-INF-come-INF-PERF/PROG-EV-CON
    ‘when [I] did not think [about it], a cross wind suddenly came’ (MYS 904)\(^{11}\)

In example (26), *sak* ‘bloom’ and *nipop* ‘smell’ are simultaneous subevents, both with the same intransitive subject:

\(^{11}\) DV stands for ’defective verb’, of which there were three in Old and Classical Japanese: *n* ‘be’, *to* ‘say’, and *to* ‘be’. They are defective in the sense that they do not have full verbal paradigms and were used mainly as copulas or adverbializers. See Vovin (2002:pp.172-186).
(26) 春 初 波 夜知 久佐 小 波奈 佐伎保比
PARU[-nø] PA"SIMEY pa ya-ti kusa ni pana sak-yi-nipop-yi
spring[-gen] beginning TOP eight-thousand kind PART flower bloom-INF-smell-INF

'In the beginning of spring, eight thousand kinds of flowers bloom and smell...' (MYS 4360)

In example (27), we have another SVC encoding simultaneous events:

(27) 壮士墓 此方 彼方二 造置有 故
WOTOKA-N-TUKA KØNATA KANATA-ni TUKUR-I-OK-YER-U YUWE
young.man-gen-grave here there-LOC make-INF-put-PROG-ATTR reason

'because the graves of young men were built here [and] there' (MYS 1809)

Example (28) is a case with two SVCs in one clause. The first, *op-yi-k-uru* 'pursue and come', takes attributive form and acts as a noun modifier, and the second, *semey-yør-i-k-yi-tar-u* 'assault, approach (and) come', forms the predicate of the clause. Each of these describe one larger event. In the first, ‘pursue’ and ‘come’ happen simultaneously, and I would argue that the same is true for the second.

(28) 意比久留 母能 波 毛々 久佐 小
op-yi-k-uru mønø pa mwomwo kusa ni
pursue-INF-come-ATTR thing TOP hundred kind PART
勢米余利伎多流
semey-yør-i-k-yi-tar-u
assault.INF-approach-INF-come-INF-PERF/PROG-ATTR

‘things that pursue [us] come assaulting [us] in [a] hundred varieties’ (MYS 804)

Interestingly, we know that these are SVCs on independent grounds, as they both have complex argument structure. For the first, the combined argument structure is transitive (something must be pursued), but only one of the component verb stems is transitive; *op* ‘pursue’ is transitive but *k* ‘come’ is intransitive. Likewise, for the second SVC, *semey* ‘assault’ is transitive, while *yør* ‘approach’ and *k* ‘come’ are both intransitive.

Single-event manner SVCs are also found in CJ, such as in examples (29) and (30):

(29) その 煙、 未だ 雲の 中へ 立ち昇る
sono keburi, imada kumo-no naka-fe tat-i-nobor-u
that smoke still cloud-gen middle-ALL stand-INF-rise-FIN

‘That smoke still rises to (the middle of) the clouds’ (TM 67.4-5)

(30) 許由 奈伎和多礼
kø-yu nak-yi-watar-e
this-ABL CRY-INF-CROSS-IMP

‘cry and cross from here’ (MYS 4035)

As a subtype of simultaneous subevents, we find sentences like (31) (Old Japanese), where the two verb components cannot readily be isolated from one another. For example, in (31), the verbs in the SVC do not focus on separate subevents of one event; rather, they focus on the *same* event.
‘Although [I] sleep wearing eight layers of travel garments, because [my] beloved is not [here] (lit. does not exist), [my] skin is still cold’ (MYS 4351)

In (31), kyi ‘wear’ and kasane ‘pile’ are both describing the character’s act of clothing himself, and we cannot separate the act of putting on clothes from the act of piling on clothes. I hypothesize that the use of two verbs for one action is likely a method of emphasis but will not explore that further here. What is important here is that unlike complex narrative events (see section 4.2.3), the same subevent is encoded multiple times (here twice) with different lexical verbs, whereas in a narrative SVC, one subevent is encoded with at most one verb stem.

Example (32) is arguably another case of multiply-encoded subevent:

‘saying, “Come back safely and fast!”’ (MYS 4398)

kapyer ‘return’ does not describe the manner of the motion verb k ‘come’ (seen here in its imperative form, kø).

### 4.2.3 Narrative events

Narrative events are those encoded in SVCs á la Pawley and Lane (1998), where there are multiple, separable subevents yet the whole is considered one event. This type of narrative is not a manner SVC as in section 4.2.1, nor does it encode simultaneous events as in section 4.2.2. Example (6) from section 4.1 is a narrative SVC, and (33) is also representative of this type; the SVC describes one complex event comprised of smaller subevents. Here it is possible to isolate two events, breaking the flowers off the plum tree and putting plum blossoms in the hair.

‘When [I] see that all people playing, breaking off plum blossoms and putting [them] in [their] hair, [I] think of the capital.’ (MYS 843)

These two actions cannot be simultaneous, because it is physically impossible (or at least quite inconvenient) to put flowers in one’s hair before they have been plucked from the tree. However, as Thepkanjana (2006) shows, though there may be separate subevents, “[they] are considered...subevents which constitute a single complex event because they were performed by the same agent, are interpreted as an action-purpose sequence of events, and occurred at more or less the same time and
place” [italics added]. Moreover, Pawley and Lane (1998) showed that subevents in a narrative SVC do not necessarily have to occur in the same time and place as long as the subevents are considered one maximally inclusive event. That would mean that this could be conceptualized as one event despite consisting of identifiable subevents, particularly if these subevents form a culturally recognized event. Japanese nobility of the time—the writers of these texts—revered nature and spent a great deal of time engaged in ritualized activities in nature. In *Genji monogatari* and *Makura no sōshi*, for example, noblemen frequently take outings and adorn themselves with plants and flowers. The scene captured by the SVC in (33) is an ideal candidate for a narrative SVC because it is precisely the type of macroevent that would be cognitively real to the writer. In addition, *wor-i-kaⁿ-sa-si* ‘break off and put in hair’ is one syntactic unit, as evidenced by the use of a single coordinand -*tutu* on the SVC: break.off-put.in.hair-INF-COOR.

Example (34) shows an SVC with three verb stems forming a single, complex event:

(34) 五十戸良我 許恵 波 寝屋度麻呂
satwowosa-ga kówe pa NE-YAⁿ-two-maⁿte
village.headman-gen voice top sleep-INF-house-gen-door-term

K-YI-TAT-I-YWOⁿP-Ap-yin-u
come-INF-set.out-INF-call-ITER-PERF-FIN

‘[the] voice of the village headman set out, came up to our bedroom door, and called us repeatedly’ (MYS 892)

In the SVC *k-yi-tat-i-ywoⁿp-ap-yin-u* ‘come-INF-set.out-INF-call-ITER-PERF-FIN’, none of the verbs is the result of the other(s), nor do any of the component verbs describe the manner of the other verbs. Instead, the SVC encodes a narrative sequence of events. We cannot dismiss the motion verbs ‘come’ and ‘set out’ as grammaticalized aspectual markers as they do not appear after the lexical verb stem ‘call’ as expected for Japanese and OV languages in general; instead, the verb stems appear in iconic order, suggesting that they are all lexical here.

The following example from Classical Japanese is another case where the SVC describes multiple subevents treated as one larger event linguistically:

(35) え見つけ奉らず
ye-mi-tuke-tatematur-azu
able-see-INF-attach-INF-HUM-NEG.ATTR become-PERF-FIN

‘it became so that [they] could not find [him]’ (source: Vovin (2002:191); original TM 41.8)

The SVC *ye-mi-tuke-tatematur-azu* ‘able-see-INF-attach-INF-HUM-NEG.ATTR’ has one negative suffix, appearing on the final V in the sequence but with scope over the entire SVC. Note also that there is a morphological potential suffix in all attested stages of Japanese, so the prefix *ye-* ‘able’ appears to be a possible alternative to morphological expression of potentiality.

The examples provided from Old Japanese and Classical Japanese illustrate narrative SVCs, a type of SVC not present in Modern Standard Japanese. This demonstrates that SVCs were less restricted diachronically and have become more restricted.

5 Diachrony of the light verb construction in Japanese

As discussed in section 2.2, a light verb construction may be defined as a N-LV unit acting as a single predicate with shared argument structure because the light verb lacks the ability to assign
arguments the way a heavy verb does (cf. Butt and Geuder (2001:pp.325-326), Miyamoto (1999)). (For the purposes of this paper, ‘light verb construction’ explicitness refers to the structure [N-ACC LV] or [N-LV] with the LV *suru* ‘do’. As stated in section 2.2, due to the frequency of argument and case marker ellipsis in the data, [N-ACC LV] or [N-LV] will be considered one construction here unless the data demands otherwise. It would be impossible in most cases to determine whether what appears to be N LV is actually [N-LV] or [N(-ACC) LV] with an unexpressed accusative marker.) For Japanese (MSJ) in particular, Isoda (1991:270) hypothesizes “that the light verb and the θ-noun create a complex predicate… The light *suru* express [sic] a relation between an agent and an event expressed by the θ-noun, and the agent of light *suru* is obligatorily fused with the highest argument of the θ-noun.” Furthermore, he demonstrates that the light verb construction in MSJ has monoclausal structure.

Unlike most, Matsumoto (1996b:101) does not consider [N-LV] a complex predicate; instead he claims that both the verbal noun and the light verb *suru* are complete, independent predicates because they are separate words morphologically. Matsumoto (1996b:39–40) uses tests for morphological wordhood similar to those outlined by Poser (1989), such as the ability for particles—particularly the accusative suffix—to intervene between the N and the LV. However, although he claims that the two elements in question are separate words morphologically, he does not address the question of complex predicates composed of multiple words. Not only are complex predicates frequently composed of separate morphological words, in many languages they may be discontinuous (cf. Bowern (2008) for Bardi). Therefore Matsumoto’s (1996b) assertion that [N-LV] cannot be a complex predicate because the N and LV may be separate words is flawed.

Butt and Lahiri (1998:9) state that “The [LV] constructions...are also sometimes analyzed as compound verbs, thus shifting the burden of verbal composition into the lexicon. However, the two verbs are separable.... The verbs must therefore be acknowledged to be separate syntactic entities which combine in the syntax to form a single predicational domain.” Data as far back as Old Japanese confirm this, demonstrating that the accusative case marker and other grammatical items can appear between the N and the LV. For example, the particle *nado* ‘and such’ could intervene between a N and the LV (see example (45) in section 5.2). This separability suggests that the LV construction is not coming from the lexicon as a single unit; rather, it is composed syntactically. However, there is also evidence that—like SVCs—the light verb construction in all stages of Japanese comprises one syntactic unit, such as example (38) in section 5.1.

While there have been numerous analyses of the light verb in Modern Standard Japanese in its usage together with a nominal to form verbs, the history of light verbs in Japanese has never been investigated. Butt and Lahiri (1998) and Butt (2003:16) argue that once a light verb construction enters a language it remains stable diachronically: “Light verbs thus appear to be historically stable, very much unlike what has been documented for auxiliaries. The available evidence thus points to the idea that light verbs do not enter the grammaticalization cline, i.e., they are not main verbs which have been reanalyzed as light verbs and which are now prone to further reanalysis.” Data from OJ and CJ support this claim, demonstrating that the light verb construction has existed in Japanese for at least 1500 years. Despite the disparity in frequency between light verbs in MSJ and older stages of Japanese, the light verb constructions [N-LV] and [N-ACC LV] (also known as the verbal noun construction in Japanese linguistics) were in use in Old Japanese at least as early as the sixth century AD. This supports Butt & Lahiri’s 1998 claim that once a light verb enters a language, it is a very stable construction. Indeed, the light verb, being the sole method available to verbalize Sino-Japanese nominals, is exceedingly frequent in Modern Standard Japanese. Its frequency undoubtedly stems from the enormous influx of loanwords from Chinese (often via Korean), such that the light verb became crucial as a method for adding the morphological operators necessary for Japanese syntax.

Contrary to many other scholars (e.g. Bowern (2008), Harris (2008), Hook and Pardeshi (2006)),
Butt and Geuder (2003) claim that light verbs are not prone to grammaticalization but are instead historically stable. Hopper and Traugott (1993) proposed a grammaticalization cline as follows:

full verb > (light verb) > auxiliary > clitic > affix

On this cline, a light verb may or may not develop, but if it does, it is theorized to continue down a chain of grammaticalization until it develops into an auxiliary or aspectual marker. Butt and Geuder (2003:6) reject this argument, claiming that

We argue in this paper that light verbs can be clearly distinguished from main verbs in Urdu, yet this distinction is not to be taken as an indication that they have begun to undergo grammaticalisation. While the grammaticalisation cline appears to hold true for the development of auxiliaries from full verbs and their further slide into more and more of a functional rather than lexical status, light verbs will be found to differ markedly from this picture. In particular, the prediction that light verbs develop further into auxiliaries cannot be confirmed.

The Japanese diachronic data presented in the following sections supports this claim. The most common light verb construction in Japanese has not undergone progressively more semantic bleaching over the centuries, nor has it lost its form-identicalness with its corresponding lexical verb.

5.1 Old Japanese evidence

In order to support or reject Butt & Lahiri’s 1998 claim regarding the diachronic stability of light verb constructions using Japanese data, I have traced the history of the light verb construction N-LV (or its alternate form, N-ACC LV) in the extant texts. For OJ, this included texts such as *Fudoki*, *Senmyō*, and *Man’yōshū*; see section 5.2 for the data from Classical Japanese. The difference in frequency between the occurrence of the LV in Old Japanese and in Modern Standard Japanese is striking, as OJ examples of the LV are quite infrequent whereas the LV is extremely frequent in MSJ. As discussed in section 2.2, a token frequency count using 2000-mora samples from OJ, CJ, and MSJ revealed that the LV construction occurs much more frequently in MSJ than in OJ and CJ. In the random 2000-mora samples, the LV construction occurs 29 times in the MSJ sample but zero times in both the OJ and CJ samples.

This disparity in LV frequency is undoubtedly due in large part to the differences in their lexicons; while OJ had relatively few Sino-Japanese lexical items (mostly terms pertaining to government and Buddhism), a large portion of the lexicon of MSJ (as much as 47.5% (Kokuritsu Kokugo Kenkyūjo 1962) consists of loanwords. A light verb is used with a loanword (always a nominal) in order to provide the necessary morphology and, in the case of verbs, argument structure. However, native Japanese nominals can occur with the LV as well. Example (36) indicates that this method of accommodation has been in existence in Japanese since at least the eighth century AD when the *Man’yōshū* collection was compiled:

(36) 人之言嗣國見為築羽乃山
PYITO-nø IF-I-TU*K-YI KUNI-MI SURU tukupa-YAMA
people-GEN say-INF-continue-INF country-look-INF LV.ATTR Mt. Tsukuha
‘Mt. Tsukuha, (where) people continue to say (and) look out over the country’ (MYS 382)
The *kuni-mi* describes looking down and surveying the landscape from a high place, usually a mountain (Ono et al. 2000). It is made up of the noun *kuni* ‘land, country’ and, with reasonable certainty, the verb *mi* ‘see, look’ in its infinitive/deverbal form (it is impossible to tell which, because as in MSJ, infinitives may be used as deverbal nominals). Regardless of whether this is *mi* as an *inf* or as a deverbal noun, because *mi* ‘see’ is a verb on its own, the LV *suru* is not necessary in order to carry argument structure and morphological necessities. One could simply use *kuni*(-*wo*) *miru* in its place.

Moreover, this must be a noun, because if it were not, the presence of *suru* immediately following it would not be grammatical. Neither the light verb *suru* nor its full lexical counterpart are known to appear in SVCs, so if *kuni-mi* were a verb, it would result in the ungrammatical *kuni-mi-s-uru* ‘country-see-do-’.

Example (37) from MYS 2 also has *kuni-mi* ‘survey (the) land’, but in this case it is an unequivocal example of a noun because it is marked by the accusative suffix *wo*:

(37) 山常庭村山有等取與呂布天乃香具山騰立國見乎國見乎為者
Yamato-LOCMOUNTAIN CLIMB-INF-ARM.ONESSELF-ATTR HEAVEN-GEN

Example (38) from the same long poem as (36) also shows the light verb construction:

(38) 雪消為山道尚矣

Like the previous example, this LVC consists of a verbal noun (i.e., a noun created via nominalization of a verb) and the light verb *suru*. The noun *yukyi-ge* ‘thaw (of snow)’ (n.) derives from the noun *yukyi* ‘snow’ and a nominalized verb, *ge* ‘disappear’ (lit. ‘snow disappearance’) (Omodaka 1967, Ōno et al. 2000). It cannot be the case that *yukyi-ge* is a verb modifying the light verb *suru* because the attributive form of *ge* would be *guru* as it belongs to the lower bigrade verb class (下二段). The light verb itself appears in the attributive form, meaning that this LV construction is modifying the following noun. Although the lexical verb ‘disappear’ could have appeared as a regular intransitive construction, *yukyi(-nø) ge* ‘snow(-NOM) disappear/thaw’, which could then have directly modified the noun *yamamiti* ‘mountain road’, it is revealing that it does not. By appearing in the LV construction, no agent is introduced into the argument structure.

Example (39) comes from Man’yōshū and is discussed by Yanagida (2006:62),¹³ who claims as I do that it contains a light verb:

¹²The literal meanings of *tor- and *yorøp-* are ‘take’ and ‘arm (oneself); put on armor’ but the general consensus among Japanese historical linguists is that the SVC *tor-i-yorøp* means ‘adorn’ as a whole. As it appears in no other OJ sources outside this poem, its meaning remains unclear. However, if the SVC has a different meaning on the whole than the sum of its parts, it is further evidence that the SVC is a unit.

¹³I have re-glossed Yanagida’s example to match the glossing conventions used in the rest of this paper.
Here, the accusative marking is crucial. In all stages of Japanese, no clause can contain more than one accusative-marked noun phrase; this is often called the double-o constraint (cf. Matsumoto (1996a:pp.32–33)), as the accusative suffix has been /-wo/ throughout the recorded history of Japanese. With the light verb construction in MSJ, there are two possibilities: 1) NP-ACC suru or 2) NP-suru.¹⁵ Scholars argue whether the first is really a light verb or simply ‘do’ acting as a full lexical verb. Miyamoto states that

[T]here have been unresolved debates on the role of suru: whether suru... functions as a light verb or not. An observational generalization is that the thematic array of a clause faithfully reflects the argument structure of the [verbal noun] which heads the accusative phrase. Hence, from the viewpoint of argument structure, suru may be ‘light’ in the sense that it makes no thematic contribution to the VN-o suru construction. This use of suru may be different from the regular use of suru as a two-place activity predicate (1999:xi).

This uncertainty poses a problem for the interpretation of (39) since OJ freely omitted arguments. This means that in most cases, there is no way to know whether this example should be koto-wo nas ‘do thing’, where the accusative marker wo has been omitted, or whether it is koto-nas ‘do thing’ with no accusative marker in the first place. However, the presence of wa-wo ‘me-ACC’ in (39) reveals that what occurs in (39) must be koto-nas ‘do thing’ without an accusative marker (i.e., N-LV, not N(-ACC) LV). There is already one accusative marker in the clause, meaning that the maximum has been reached. A second accusative-marked argument cannot occur in this clause, whether omitted or overt. Therefore it is not possible that there is an elided NP-ACC argument here. Formally, then, this example matches the light verb construction still evidenced in MSJ, supporting the claims by Butt and Lahiri (1998) and Butt (2003) regarding the diachronic stability of light verb constructions.

5.2 Classical Japanese evidence

CJ data on the LV construction was gathered with the evaluation of Taketori monogatari—the earliest extant CJ text—and continuing chronologically, including texts such as Genji monogatari and Makura no sōshi. While light verbs are uncommon in OJ, they begin to appear more frequently in CJ (though not nearly as frequently as they occur in MSJ). The fact that LV usage did not decrease or change substantially from the OJ stage to the CJ stage supports the hypothesis of Butt and Lahiri (1998) regarding the diachronic stability of the LV construction.

Example (40) shows that the light verb was in use in early Classical Japanese:

(40) この 世の 人は、 男は 女に 婚ふ 事を す
kono yo-no fito-fa wotoko-fa wonna-ni kunaf-u koto-wo s-u
this world-GEN people-TOP man-TOP woman-DAT marry-ATTR thing-ACC LV-FIN

¹⁴Due to lenition, phonemic /wo/ is now pronounced the same as phonemic /o/, but because the historical spelling /wo/ is retained, references to both double-o and double-wo can be found.
¹⁵The light verb used can be suru ‘do’ [OJ: su] or its honorific counterpart, nasaru ‘do [OJ: nasu]’.
In this particular example, it must be the case that koto-wo su is a LV construction. Since kunaf ‘marry’ (v.i.)¹⁶ is a verb itself, it could occur on its own, assigning the necessary TAM suffixes and arguments. In CJ the finite form of this verb would also be kunafu because it belongs to the quadrigrade verb class, in which the attributive (rentaikei) and finite (shūshikei) forms are identical. However, because it modifies a noun (koto ‘thing’), it must be the attributive form. We know on the basis of verbs belonging to verb classes with formally distinct attributive and finite forms that only the attributive form could have appeared before a noun, not the finite form.

In this example, then, we literally have ‘marry-thing-do’ (or ‘sex-thing-do’). In MSJ the lexical verb ‘marry’ is absent, with no modern reflex of kunafu. To express the meaning ‘to marry’, MSJ speakers must use the light verb suru ‘do’ with the Sino-Japanese noun kekkon ‘marriage’. However, in Classical Japanese the native Japanese lexical verb kunaf-u ‘marry’ was productive; the verb’s other meaning, ‘have sexual intercourse’, is likewise available in MSJ only with a Sino-Japanese noun plus the light verb: seikō-suru ‘sexual.intercourse-LV’ (slang notwithstanding). A light verb construction would simply not have been required in an example like (40), but we see that it is possible nonetheless. Example (41) is another example like (40) where a lexical native Japanese verb—in this case kaferu ‘reply’ (v.i.)—would have been sufficient but instead the LV construction appears:

(41) て、 鉢を 門に 棄てて、 この 歌の
文を かきて やれど 返事 せず
fumi-wo kak-ite yar-e-do kaferigoto se-z-u
letter-ACC write-SUB send-EV-CON reply (n.) do-NEG-FIN
‘Although [they] wrote letters and sent [them to her], [she] did not reply.’ (TM 31.4-5, my translation)

However, it is not always possible to determine whether su(ru) is being used as a light verb or as the full lexical verb ‘do’. In example (42) from Taketori monogatari, the verb phrase can be interpreted either as ‘return’ or ‘do returning’.

(42) とて、 返し出すを、 鉢を 門に 棄てて、 この 歌の
tote, kaes-i-das-u-wo fati-wo kado-ni sute-te kono uta-no
so return-INF-exit-ATTR-ACC bowl-ACC gate-LOC discard-GER this poem-GEN
返しを す
kaes-i-wo s-u
return-INF-ACC LV-FIN
‘So, return this song/poem as [you would] return a begging bowl at the gate.’ (TM)

The same inability to differentiate ‘do’ in its light verb sense from its full lexical verb sense is true for examples (43) and (44) from Genji monogatari:

¹⁶The verb 婚ふ (kunafu) ‘marry’ in CJ had a range of meanings, including ‘marry’, ‘have sexual intercourse’, and ‘adulterate’. I have chosen to gloss it with ‘marry’ for ease of glossing, but the meaning is wider than that. Note that this verb did not survive into MSJ.
‘From the very beginning, [she/Genji’s mother] was not of the rank [who] should perform ordinary court service.’ (GM)

[other court ladies] repeatedly did cruel deeds [to Genji’s mother] here and there along the walkways [in the palace]’ (GM)

In (44), the verb su ‘do’ could be either the light verb, creating a verb out of the noun waza ‘deed’, or it could be the full lexical verb. Given the controversy over when suru is truly behaving like a light verb in MSJ, a simple answer is unlikely to be forthcoming from CJ. At the very least, however, the inability to determine whether this is a LV construction or not indirectly supports the claim by Butt and Lahiri (1998:27) that light verbs stay form-identical with their heavy verb counterparts. They claim that the stability of light verbs is demonstrated by the fact that they remain form-identical with heavy verbs over many centuries, whereas auxiliaries and other grammaticalized verbs rarely do. In the case of Japanese, the LV suru remained identical to the lexical verb suru ‘do’ even after the verb paradigms of OJ/CJ collapsed into the paradigms observed in MSJ. OJ/CJ su(ru) belonged to the sahen-type (サ変) irregular verb paradigm, and in MSJ it is one of only two irregular verbs, just as the lexical verb suru ‘do’ is. This means that the LV remained identical in form to the lexical verb even when the verb paradigms collapsed and all other sa-type verbs regularized to godan-type (五段). It is consistent with Butt and Tantos’s (2004:126) claim that “[H]istorical changes that apply to change the surface form of the verb (changes in morphology, form, etc.) will apply to both the light and the main verb uses…”

Example (45) also contains the LV construction, and unlike examples from OJ, we see that a particle may intervene between the verbal noun and the LV:

‘Because people also laugh and say about [his] excellent Chinese writing and his good Japanese writing, but saying [that] is also charming’ (MS 99, my translation)

¹⁷Uchihashi (in CJ, utifasi) are wooden planks placed across terraces in traditional Japanese buildings to create temporary walkways, while watadono are permanent walkways.
In warafi nado s-ure-ba the nominalized verb ‘laugh’ is followed by a particle meaning ‘and such’/‘and so on’, then the light verb in conjunctive gerund form. This has the structure [N pt LV]. The form waraf-e-ba laugh-ev-con ‘because (people) laugh’ is morphologically possible, and indeed, the conj form occurs frequently. However, it appears that the reason for the use of the LV construction here is so that the particle nado can intervene (see section 5, page 184). As a particle, nado must follow a non-verbal element, almost always a noun; therefore forms such as *waraf-e-ba nado or *nado waraf-e-ba would not be possible.

This hypothesis of LV construction as a method for allowing particle insertion (among other grammatical elements) is supported by the frequency of nado-type LV examples in Makura no sōshi. Compared to other CJ texts, Makura no sōshi features the most frequent use of the LV construction. Interestingly, almost all of the examples are of this nado-type, including example (46):

(46) 事を 行ひ など する よ。
koto-wo okonaf-i nado s-uru yo
thing-ACC happen-NMLZ PT LV-ATTR PT
‘things happen and such, you know’ (MS, my translation)

The reasons behind this sudden explosion of the nado-type LV construction remain to be explored in a future study. However, I speculate that because the LV construction existed as a device for inserting particles where they would otherwise not be allowed in native Japanese verbs, the stability of the LV construction was established before the prevalence of Sino-Japanese words began.

6 Conclusion

A striking picture emerges upon examination of two types of complex predicates—serial verbs and light verbs—throughout the recorded history of Japanese. SVCs were very productive in Old Japanese and much less restricted than SVCs in Modern Standard Japanese. SVCs with more than two lexical verb stems were common, the internal ordering was not required to be iconic, and transitivity mismatches were possible. Functionally speaking, SVCs had a wider range of uses as well: they could describe various simultaneous subevents and non-simultaneous subevents (i.e., narratives) and had at least some of the manner and aspectual functions that SVCs have in MSJ. In addition, OJ and CJ allowed non-iconicity in verb stem ordering within an SVC as well as transitivity mismatches.

In contrast, the LV construction is uncommon both in OJ and CJ but its form and functions have remained diachronically stable. Where Modern Standard Japanese uses the LV suru ‘do’ very frequently, OJ and CJ did not. This change in frequency has likely been brought about by lexical necessity; as Sino-Japanese words (and other loans) have grown to roughly forty percent of the modern lexicon, native Japanese words—verbs in particular—were often supplanted entirely in favor of verbal nouns. Use of the LV construction increased dramatically as the need to mold Sino-Japanese loans into forms with the requisite Japanese morphology became more pressing. The occurrence of the LV construction in the oldest extant texts shows that it has not only been a part of the Japanese language for over 1500 years, but has maintained its two possible forms. During that time, it has survived through dramatic changes in Japanese, such as the collapse of the verbal paradigm system (from five regular classes and four irregular classes to just two regular classes and two irregular verbs). Certainly the light verb construction was much scarcer in OJ than MSJ—and only slightly less so in CJ—but its diachronic stability supports Butt and Lahiri’s (1998) theory that light verbs are very stable once established within a particular language.
A Appendix: Glosses

The following abbreviations for glosses were used in the paper:

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<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
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B Appendix: Primary sources

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</tbody>
</table>

While the compilation date would seem to indicate that Norito is Classical Japanese, it contains Old Japanese. Norito is a collection of prayers and rituals used in Shinto, handed down for centuries before being written down. It is thought that the ritual function of Norito preserved its Old Japanese language.
C  Appendix: Token frequency of the light verb construction

For each of the three stages in Japanese language history (OJ, CJ, and MSJ), a random sample 2000 moras in length was used to count token frequency of the light verb construction. The results and sources of the samples are summarized below:

<table>
<thead>
<tr>
<th>era</th>
<th>sample source</th>
<th># of moras</th>
<th># of tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>OJ</td>
<td><em>Man’yōshū</em> poem 1</td>
<td>85</td>
<td>0</td>
</tr>
<tr>
<td>OJ</td>
<td><em>Man’yōshū</em> poem 29</td>
<td>290</td>
<td>0</td>
</tr>
<tr>
<td>OJ</td>
<td><em>Man’yōshū</em> poem 4214</td>
<td>373</td>
<td>0</td>
</tr>
<tr>
<td>OJ</td>
<td><em>Man’yōshū</em> poem 199</td>
<td>1004</td>
<td>0</td>
</tr>
<tr>
<td>OJ</td>
<td><em>Man’yōshū</em> poem 217</td>
<td>198</td>
<td>0</td>
</tr>
<tr>
<td>OJ</td>
<td><em>Man’yōshū</em> poem 16</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>OJ</td>
<td><strong>OJ subtotal</strong></td>
<td>2000</td>
<td>0</td>
</tr>
<tr>
<td>CJ</td>
<td><em>Taketori monogatari</em>, first passage</td>
<td>2000</td>
<td>0</td>
</tr>
<tr>
<td>CJ</td>
<td><strong>CJ subtotal</strong></td>
<td>2000</td>
<td>0</td>
</tr>
<tr>
<td>MSJ</td>
<td><em>Be Not Defeated by the Rain</em> (雨ニモマケズ), poem by Miyazawa Kenji (宮沢賢治)</td>
<td>337</td>
<td>3</td>
</tr>
<tr>
<td>MSJ</td>
<td><em>Norwegian Wood</em> (ノルウェイの森) sample, novel by Murakami Haruki (村上春樹)</td>
<td>1663</td>
<td>26</td>
</tr>
<tr>
<td>MSJ</td>
<td><strong>MSJ subtotal</strong></td>
<td>2000</td>
<td>29</td>
</tr>
</tbody>
</table>
References


