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# Clipping as Morphology: Evidence from Japanese

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Clipping as Morphology: Evidence from Japanese

by

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A THESIS

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## **ABSTRACT**

This thesis examines the role of morphology in clipping through an investigation of the Japanese language. The research objectives of this thesis are to outline the roles of morphology, phonology, and semantics in the clipping process, to distinguish patterns and types of clipping, and to explore whether the clipping process should be described in the grammar, as well as to determine whether clipped forms are organized lexically. The objectives of this thesis are met through analyzing the relevant literature, compiling and analyzing a database of Japanese clipped forms, and conducting a survey study involving native Japanese speakers. A definition of clipping which is distinguished from other word-formation processes is proposed based on the analysis of the relevant literature. The analysis of the database reveals predictable patterns in clipped outputs which indicates the possibility of grammaticality in the clipping process. The results from the survey study provide further evidence of patternability in Japanese clipping. Based on the patterns of clipped forms observed in the database and survey study, clipping rules which account for these prototypical forms in Japanese clipping are proposed, as well as a conceptual model of the clipping process which pertains to components of the grammar. Finally, these clipping rules are adapted into a paradigm model which outlines the structures of clipping formation, lexical storage, and the processing involved in relating clipped forms with their sources and other inflected and/or derived forms.

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*“Wij leven allen met het doel gelukkig te worden, wij leven allen verschillend en toch gelijk.”*

*(We all live with the goal of being happy, we all live differently and yet the same.)*

*-Anne Frank*

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## CHAPTER 1: INTRODUCTION

### 1.0 Introduction

This thesis investigates clipping from a morphological perspective by investigating the process in the Japanese language. In simple terms, clipping shortens word-forms and while the topic of clipping has been addressed before, the question of why and how clipped forms are created is not often asked. The clipping process is often ignored in morphological theory and the relation of clipped forms to source forms in the lexicon is understudied. As this thesis will show, Japanese contains many clipped forms which appear to be morphologically motivated in their constructions. The goal of this thesis is to investigate clipping in Japanese morphologically and to determine how clipped forms are created, whether clipping should be described within morphological theory, and whether or not clipped forms are stored in the lexicon.

### 1.1 Issues

The status of clipping as a morphological process is controversial. While clipping is a process which creates new lexemes, some linguists claim that is not a morphological process and should not be incorporated into morphological theory (e.g. Scalise 1984: 94, Spencer 1991: 461, Mel'čuk 2006: 311). The proposed justification for this position is that clipped outputs are phonologically unpredictable, violate morphological boundaries consistently, and do not differ in semantic content from the source form.

The language which has been studied most thoroughly in regard to clipping is English. English clippings like *app* from *application*, *prof* from *professor*, or *blog* from *web log* certainly seem to have no association with morphological structures, since the words are clipped without

regard to morphological boundaries. For example, the morphological boundary in the word *application* is *applic-ation*, yet the word is clipped to *app*, not *appli* or *applic*. English clippings also often violate phonological word boundaries. For example, the clipping *blog* takes the segment /b/ as part of its onset even though this segment comes from the coda position in *web* in the compound source *web log*. A clipping like *blog* perfectly demonstrates that while clipping in English breaks phonological word boundaries, it also happens to ignore morphological boundaries as well.

Because modern English is not a morphologically rich language in comparison to other languages of the world, there are limitations in using English as the basis for how we view the morphological status of clipping. It is important to investigate other morphologically richer languages to see whether speakers engage in a similarly structurally violatory manner. Investigating the potential involvement of morphology in the clipping process should be done with a language where clipping is productive and morphological structure is more apparent. For this reason, I investigate the Japanese language as it fulfills both of these criteria.

Japanese exhibits a large number of clipped words and phrases. As Japanese expressions consist of a consonant-vowel pattern (Hinds 1986: 399), these expressions can grow to expansive lengths. These long syllable chains are the reason Shibatani (1990: 254) gives for the prevalence of clipping in Japanese. Clipping is most easily seen in loanwords borrowed from languages that allow consonant clusters phonologically, a phonological pattern not allowed in Japanese. A large number of loanwords in Japanese come from English, a consonant clustering language. As seen

in (1) when these words enter Japanese<sup>1</sup>, the consonant clusters become epenthesized. This example clearly shows the syllable expansion which occurs due to the Japanese CV system.

- (1) a. English, 1 syllable: post /post/ > Japanese, 3 syllables: /po.su.to/  
b. English, 2 syllables: plastic /plæs.tɪk/ > Japanese, 5 syllables: /pu.ra.su.tɪk.ku/  
c. English, 3 syllables: asterisk /æ.s.tə.ɪ.sks/ > Japanese, 6 syllables: /a.su.te.ri.su.ku/

(Campbell 2013: 81-88)

Japanese clipping, however, is not just limited to loanwords, but it is also prevalent in native words, phrases, compounds, and hypocoristics – all of which provide further evidence of the highly productive nature of its clipping process. An example of clippings in each of these contexts is shown in (2a-d).

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<sup>1</sup> The romanization system used in this thesis is a modified form of the Kunrei-shiki, or Kokutei system (Carr 1939: 100). It is not my preferred system as it is not intuitive to English speakers; however, it is more suited to show morphological structure in Japanese. For example, a stem change on the verb /matsu/ ‘wait(s)’ to /maʃi/ ‘waiting’ is better shown in the Kunrei-shiki orthography as *matu* → *mati*, rather than *matsu* → *machi* which does not show the stem change as following a pattern based on the segment /t/.

(2) Japanese clippings in native contexts

Whole Form		Clipped Output	Gloss	Source Type
a. <i>natuka-si-i</i>	→	<i>natu-i</i>	‘nostalgic’	single word
b. <i>osaki-ni siturei simasu</i>	→	<i>osaki-ni</i>	‘excuse me’	phrase
c. <i>gaikoku sihon</i>	→	<i>gai-si</i>	‘foreign capital’	compound
d. <i>Nobuo-tyan</i>	→	<i>Noo-tyan</i>	‘(little) Nobuo’	hypocoristic

(Poser 1990: 85, Prem 1993: 189, Nishihara, van de Weijer, and Nanjo 2001: 301)

The hypocoristic clipping in (2d) exemplifies why examining Japanese is important for considering the status of clipping as a morphological process. The diminutive naming suffix *-tyan* still appears in the clipped output of the hypocoristic as if it is being retained during the clipping process. Evidence for morphological involvement in the process of clipping can be ascertained by applying Itō’s (1990) prosodic minimality constraint which will be covered more in depth in Section 2.2. To summarize this constraint, Itō (1990: 221) states that in Japanese, a minimal word derived by deletion processes must be more than one syllable and must contain at least two morae distributed across its syllables. If the suffix *-tyan* were not being considered in the clipping process, the expected clipped output would be *\*Noo*. Yet, *\*Noo* only consists of only one syllable; thus, it violates Itō’s prosodic minimality constraint. Additionally, while

\**Nobu* could be created in the clipping process and would satisfy the constraint, the clipped output that speakers produce is *Noo-tya<sub>N</sub>*, a form which satisfies the minimality constraint through the suffix being attached. As the *-tya<sub>N</sub>* suffix seems to be crucial in satisfying the minimality requirement of the clipped form, this suggests that speakers are exhibiting awareness of the morphological structure of an expression when engaging in the clipping process. More examples of suffix retention in hypocoristics can be seen in (3). Two sets of length are provided; the left-side numbers count syllables and morae without the suffix, while the right-side numbers include the suffix in the count of syllables and morae. The notation of an asterisk indicates an insufficient number of syllables or morae which would violate the prosodic minimality constraint.

(3) Japanese hypocoristic clippings

a. <i>Sa.i.ko-tya.N</i>	2σ,3μ/3σ,5μ	→	<i>Sa.i-tya.N</i>	*1σ,2μ/2σ,4μ
b. <i>Yu.ki.ko-tya.N</i>	3σ,3μ/4σ,5μ	→	<i>Yu.ki-tya.N</i>	2σ,2μ/3σ,4μ
d. <i>Ta.i.zo.u-tya.N</i>	2σ,4μ/3σ,6μ	→	<i>Ta.i-tya.N</i>	*1σ,2μ/2σ,4μ
e. <i>Ki.N.su.ke-tya.N</i>	3σ,4μ/4σ,6μ	→	<i>Ki.N-tya.N</i>	*1σ,2μ/2σ,4μ

(Petrulyté 2015: 1, 5)

The data in (3) show that no matter how much of the original base is deleted, the suffix is always retained. This information gives rise to an important question: can the retention of morphological

components be seen elsewhere in Japanese clippings? In this thesis, I will show that they are visible elsewhere and are important components in the clipping process.

## 1.2 Research Objectives

The main goal of this thesis is to outline the role of morphology, phonology, and semantics in the clipping process. To do so, the types of clipping must be distinguished as variation of type may indicate how morphology, phonology, and semantics interact in the clipping process. Thirdly, due to the productivity of clipping in Japanese, this thesis aims to explore how clipping and its outputs are stored lexically, if at all.

Until now, Japanese clipping has been examined primarily using phonological analyses (cf. e.g. Poser 1990, Itō 1990, Nishihara, van de Weijer, and Nanjo 2001). However, such analyses have limitations when considering other aspects of linguistic expressions such as semantics and morphology. Additionally, much of the work focusing on clipping in Japanese has investigated loanwords (cf. e.g. Irwin 2011, Petrulyté 2015). However, because morphological elements are often ignored in the borrowing and clipping of loanwords, as shown in (3), then it seems apparent that phonological accounts alone are not enough to describe what occurs during the clipping process.

(4) English: *manner-ism* → Japanese: *mannerizumu* ‘stereotype’ → Clipped output: *manneri*



Example (4) shows that in loanwords, a suffix like *-ism*, or *-izumu* as borrowed into Japanese, is ignored in the clipping process. Thus, awareness of morphological structure in loanwords may not be present, whereas it is more likely to be so with native expressions. This fact indicates the importance of investigating morphology in Japanese clipping outside of the realm of loanword clippings. Therefore, this thesis focuses on native words, compounds, and phrases as well as Sino-Japanese compounds, which over the course of centuries have become nativized.

Ultimately, inasmuch as a phonological account can explain the sound profile of a clipped output and the constraints used by speakers to produce it, it is not able to explain the influence of materials like *-i* in (2a), or other affixes in the creation of a clipped output. Clipping data for Japanese suggests a need for research beyond just the phonological, something which a morphological account may explain. To embark on this investigation, I have compiled a database of Japanese clipped outputs in order to analyze their morphological structures as well as how these structures relate to the clipping process if so. To supplement this research, I have also conducted a survey study in which the acceptability judgements of Japanese speakers have been analyzed to discern whether the acceptability of clipped outputs can elucidate what structures are more preferred in creating clipped forms.

### **1.3 Layout of the Thesis**

Chapter 2 explores the background of clipping and accounts of clipping available in the literature specifically for Japanese, delimits clipping from other word-formation processes, provides a definition of clipping for this thesis, and discusses theoretical approaches applied to clipping so far. Chapter 3 outlines the methodology for the database compilation and the survey study carried out for this thesis. Chapter 4 analyzes the database which classifies clipping types

and discusses the data found therein. Chapter 5 discusses the survey study, its statistical tests, and what information can be derived from the results. Chapter 6 combines the findings from the survey and database into a theoretical framework which explores the role of morphology in Japanese clipping, its lexical implications, and further directions for research. Lastly, Chapter 7 concludes the findings of this thesis.

## CHAPTER 2: CLIPPING IN DEFINITION AND THEORY

### 2.0 Introduction

The goals of this chapter are to characterize clipping as well as establish a theoretical perspective from which to analyze clipping in Japanese. Section 2.1 of this chapter reviews some of the fundamental definitions, explanations, and descriptions of clipping and distinguishes clipping from other word-formation processes. Section 2.2 explores accounts of clipping in Japanese specifically. In Section 2.3, theories of clipping and lexical storage are discussed, and a framework for this thesis is outlined. Finally, Section 2.4 summarizes the contents of the chapter.

### 2.1 Exploring definitions, descriptions, and classifications of clipping

Definitions of clipping available in the literature are often general, omitting specifics of how it is actually accomplished. Marchand (1969: 441) in his description of clipping in English, defines it simply as reducing a word to just one part of its whole form, like *mag* for *magazine*. He adds that new words derived from clipping processes contain their own linguistic value whereby the source form is the standard while the clipped form is slang, because these forms are not interchangeably used within the same situational contexts. Marchand also claims that a clipped form is not a morpheme, but an arbitrary part of the source word; however, this does not mean they can never be, as counterevidence is seen in Japanese clippings, e.g. *daigaku-in-sei* ‘graduate student’ → *in-sei*.

Adams (1973: 135) defines clipping as a process which usually occurs on nouns whereby two or more syllables are removed from the word and no meaning change occurs. Bauer (1983: 233) shares some ideas with Adams by defining clipping as “the process of shortening a lexeme

without changing its meaning or part of speech”. Bauer also states that which parts or syllables of a word and how much of it will be clipped are unpredictable. Mattiello (2013: 68) defines clipping in a similar way to Marchand (1969: 441) in that she states that the clipping process shortens a word to one of its parts and as a result, all other phonetic material is lost.

Even though Adams (1973:135) and Bauer (1983: 233) state that clipping is unpredictable, Marchand (1969: 445), López-Rúa (2002: 43), Plag (2003: 148-152), Fandrych (2004: 30), and Mattiello (2013: 72-79) identify patterns in clipping. Of these patterns, there are six subtypes mentioned: back-clipping (5) – the deletion of the end of a word, fore-clipping (6) – the deletion of the beginning of a word, mid-clipping (7) – the deletion of the middle of a word, edge-clipping (8) – the deletion of the beginning and end of a word, clipped compounds (9) – the deletion of a compound to one or two of its parts, and suffixed clipping (10) – the deletion of word elements where a suffix is added on later. Many of these types can be seen in Japanese and are shown in Section 2.2. This last subtype is of particular interest as it may be applicable to some of the Japanese clippings seen in Section 1.1, where suffixes seem to influence the formation of the clipped output.

(5) *photograph* → *photo*

(6) *caravan* → *van*

(7) *procurator* → *proctor*

(8) *prescription* → *script*

(9) *prenuptial agreement* → *prenup*

(10) *journalist* → *journ*

Cannon (1989: 101) states that the history of classifying clipping is confusing in comparison to other deletion-based word-formation processes. The lack of a definitive identification for what constitutes clipping is compounded by the fact that a multitude of terms have been used to describe the process in an interchangeable manner, such as “abbreviation”, “truncation”, and “shortening”. For example, Cannon (1989: 101) mentions that in earlier English dictionaries, clippings and abbreviations (e.g. *A.B. & Q.* 'appropriation for barracks and quarters') were not distinguished as different word-formations and therefore fell under one label – abbreviations. Similarly, Jespersen (1942: 533-552) puts clippings and initialisms (e.g. *Los Angeles* → *LA*) into a single category called “stump-words”. Therefore, it is important for this thesis to use a single term for this type of word-formation, as well as to identify the properties unique to clipping.

Bauer, Plag, and Lieber (2013: 403-404) characterize a number of factors which are particular to clipping. First is the purpose of clipping, which Bauer, Plag, and Lieber claim (2013: 402) is to create a sense of familiarity among speakers who used clipped forms. In essence, the creation and usage of clippings establish a social in-group and indicate shared

knowledge among other in-group members. Secondly, Bauer, Plag, and Lieber (2013: 403) claim that there are two types of clippings – phonological clippings and morpheme clippings. A phonological clipping targets sound sequences with no focus on meaning, whereas a morphemic clipping is one which targets morphemic constituents for retention such as *fiche* from *microfiche*, *fridge* from *refrigerator*, and *shrink* from *head-shrinker*. This seems to correspond to compound noun clippings in Japanese shown in Section 1.1 example (2c), as both *gai* ‘outside’ and *si* ‘resource’ are morphemes; this example is repeated in (11).

(11) *gaikoku sihon* → *gai-si* ‘foreign capital’

(Nishihara, van de Weijer, and Nanjo 2001: 301)

Finally, clipping is not restricted to the word level but can also occur at the phrase level, whereby the clipped output is the same syntactic category as the original head of the phrase. This is also seen in Section 1.1, example (2b), where a Japanese verb phrase is clipped and loses its verb *simasu*, yet the clipped output is still understood in its verbal context; this example is repeated in (12).

(12) *o-saki ni siturei simasu* → *o-saki ni* ‘excuse me (for going ahead of you)’

(Prem 1993: 189)

The final criteria for recognizing the unique properties of clipping are its media of usage and what it accomplishes in contrast to other word-formation processes. López-Rúa (2002: 43) points out that clippings are both written and spoken, but are primarily used orally. She additionally provides criteria which distinguish clipping from acronyms, abbreviations, and blends which can be seen in Table 1.

Table 1: Types of deletion-based word-formation processes

Process	Example	Characteristics
Abbreviation	<i>Dr.</i> /daktər/	Does not change the phonological profile of source expression Used in written contexts only No change in meaning from source
Acronym	<i>radar</i> /rejdər/	Creates a new phonological profile from its source expression Used in written and spoken contexts No change in meaning from its source expression
Blending	<i>mo-tel</i> /motɛl/	Combines phonological profiles of its source expressions Used in written and spoken contexts Differs in meaning from its source expressions
Clipping	<i>lab</i> /læb/	Shortens the phonological profile of its source expression Used in written and spoken contexts No change in meaning from its source expression

López-Rúa (2002: 40-41)

As for the unique function of clipping, Fandrych (2004: 29) asserts that clipping is “the only word-formation process which shortens lexemes without parallel or concomitant expansion”, which means that unlike acronyms, blends, or back-formation, clippings do not add

a change of meaning. Thus, it appears that clipping is a process which takes an expression, selects a sequence of material to retain as opposed to delete since morphemic clipping would imply that a morpheme's meaning is essential to the interpretation of the clipping, and deletes the rest of the unselected material. The purposes of this word-formation process are to establish familiarity of form and convey social inclusivity.

Despite Fandrych (2004: 29) and Bauer, Plag, and Lieber (2013: 403) describing clipping as a word-formation process, not everyone agrees that clipping is word-formation. Mel'čuk (2006: 310) refers to clipping as a word-creation device which constructs new lexemes, but is not word-formation. Mel'čuk states that because processes like clipping, blending, and back-formation are all diachronic, create new lexemes, do not change meanings, and only increase the lexical stock, that clipping and the like cannot be word-formation processes. This view is problematic since not all word-formation processes express new meanings nor is it certain that clipped forms in general are static in the lexicon as Mel'čuk's claims of diachrony would imply. As Beard (1995: 30) and Pounder (2000: 51) point out, in grammatical morphology, the suffixes *-al* and *-ic* attach to a variety of adjectives such as *electric* → *electrical*, *classic* → *classical*, *socialist* → *socialistic*, and *capitalist* → *capitalistic*; yet, these suffixes add no new meaning nor do they change the syntactic class of these words.

This section has reviewed many definitions, descriptions, and views of clipping, many of which describe clipped outputs, but either do not define the clipping process itself or do so vaguely. Therefore, I will supply a working definition of clipping that guided my research. For this thesis, the working definition of clipping combines the unique properties outlined by López-Rúa (2002: 43), Fandrych (2004: 29), Mattiello (2013: 68), and Bauer, Plag, and Lieber (2013: 403-404) with some modifications.



Clipping: the word-formation process which creates a shorter form of a whole expression without a change in meaning or lexico-syntactic class.

Truncatum: the phonologically or morphologically defined material remaining after the clipping of an expression.

The working definitions of clipping and truncatum that I have established may be revised later if evidence shows that they are insufficient. However, for the moment, these definitions will allow for a discussion of clipping in more definitive terms.

## **2.2 Accounts of Japanese clipping**

This section examines current accounts of clipping in Japanese and assesses their contributions. One of the most frequently cited sources on Japanese word-structure is Itō (1990), who establishes prosodic constraints for word minimality in Japanese and attempts to explain clipping as a deletion-based, morpho-phonological word-formation process. Itō maintains (1990: 213) that word structure and prosodic theory can provide a foundation for minimality constraints. She claims (1990: 221) that the minimal Japanese phonological word contains two syllables consisting of at least two morae distributed across the syllables. In the phonological literature, there is no unified definition of what constitutes a mora. Ladefoged (1982: 226) defines a mora as a unit of phonological timing where each syllable takes the same length of time to say one mora. McCawley (1968: 58) describes a mora along the same lines as Ladefoged but states that a

long syllable contains two morae and a short syllable contains one mora. Paster (2015: 532) defines a mora in simple terms as a unit of syllable weight. Specific to Japanese, Iwasaki (2002: 19, 24) defines a mora as a syllable-like, tone-bearing unit while Yamaguchi (2007: 30) describes a mora as a fundamental unit of word-building which structures how phonemes are ordered and determines the phonotactics of the language for Japanese. Therefore, only the Japanese accounts of what constitutes a mora will be used for this thesis.

Based on a lexical survey Itō (1990: 216-217) conducted of clipped loanwords in Japanese, she discovered that there is a tendency for clippings to be two-, three-, and four-morae long. Of these three lengths, the two-mora type was the most prevalent, which forms the basis for her two-mora minimality constraint. Itō (1990: 217) recognizes that there are words which consist of one syllable with just one mora and other variations which do not fall within her constraint, for example, *pe* for *peezi* ‘page’ and *po* for *pointo* ‘size of print’, both of which she reveals only appear in written form, not spoken. She also addresses the fact that even though lexical words are commonly monomoraic (e.g. *ya* ‘arrow’), derived forms from loanwords are consistent in being minimally bimoraic (1990: 224). Thus, her proposed template of minimality only relates to derived forms, not underived lexical items.

Findings from Poser (1990), who investigates Japanese hypocoristic clippings constitute the evidence which leads Itō (1990: 220) to state that the minimal derived Japanese word follows a bisyllabic template but the most important part of the template is multi-moraicity. She describes this two-syllable, multi-moraic clipping template as one which is highly productive, especially in the realm of loanwords. (13) lists some frequently encountered clippings of loanwords in Japanese from Itō (1990) which follow the pattern for single words; they reduce to the minimal template of at least two syllables and two morae. It should be noted that *n* is one

mora in Japanese; therefore, not all morae in Japanese consist of a consonant and a vowel, or just a vowel. The heading “phonological length” refers to the syllable and morae length of the clipped output.

(13)	Whole loanword		Clipping	Phonological Length	Gloss
	<i>a. amatyua</i>	→	<i>ama</i>	2σ, 2μ	‘amateur’
	<i>b. hankatiihu</i>	→	<i>hankati</i>	3σ, 4μ	‘handkerchief’
	<i>c. intorodakusyon</i>	→	<i>intoro</i>	3σ, 4μ	‘introduction’
	<i>d. irasutoreesyon</i>	→	<i>irasuto</i>	4σ, 4μ	‘illustration’

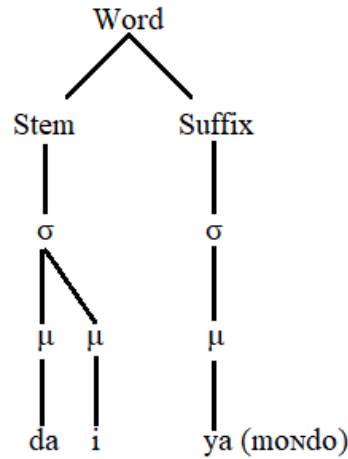
(Itō 1990: 213, example sets 1a and 1b)

As seen in (13), each of these outputs is minimally bimoraic and bisyllabic though they may contain more than two morae or syllables. Applying the minimality constraint pattern of at least two syllables and two morae to a word like *amatyua* means that the potential minimal outputs are *ama*, *matyu*<sup>2</sup>, or *tyua*<sup>2</sup>, yet the latter two are not forms which are produced and are less likely to occur. An account for this may be found in Kubozono (1993: 187) who says that “back truncation” – the deletion of the right-edge segments in the clipping process – is the second most common clipping pattern in Japanese; this accords with Vogel’s (1990: 103) hypothesis that there is linguistic salience in the left-edge of borrowed words regardless of the source or

borrowing language's morphological characteristics. This offers an explanation for why *ama* is preferred over *matyu*? or *tyua*?. Despite this however, other clippings which are not back-truncated remain unaccounted for by this hypothesis, e.g. *rireki-syo* → *reki* 'curriculum vitae' which would be expected to be clipped to *\*rire*, yet is not.

Additional structural analysis of a clipped output according to Itō (1990: 227) results in what she labels as “the stem” and “the suffix”. In the stem, there must be at least one to two syllables with one mora in each syllable. In cases where the stem is only one syllable, then there must be one syllable with one mora in the suffix. However, this concept of “suffix” can be called into question. In morphology, a suffix is a bound morpheme which attaches to the end of a base (Plag 2002: 13). Figure 1 depicts a prosodically minimal word according to Itō. As seen in the figure, Itō labels *ya* as a suffix in the loanword clipping *daiya* from its source word *daiyamondo* cf. English 'diamond'. Labelling *ya* as a suffix would be tantamount to considering the *a* segment in *dia* to be suffix material when it is not in English nor Japanese in morphological terms and would also imply that *dai* is a base in and of itself when it is not.

Figure 1: A prosodically minimal Japanese word



(Itō 1990: 234)

From a phonological standpoint, Itō’s constraint of at least two syllables and two morae appears to be sufficient for clipping. However, using the suffix label as done in her model seems to complicate the phonological structure of clipping more than necessary and is also potentially misleading morphologically.

In addition to her phonological investigation of Japanese clipping, Itō (1990: 216) also attempts to account for clipping from a morphological perspective. She notes that the word parsing of Japanese loanword clipping does not always correlate to a grammatical phonological or morphological juncture in the source language (SL), shown in (14). The column “SL clipped equivalent” refers to where the break of these expressions would occur in the source language if the English clipped form corresponded directly to the Japanese clipped form. As can be seen, these breaks are often across morpheme boundaries or very unlikely to be used in the source

language due to creating a phonologically unpreferable item, e.g. a consonant cluster with no vowel segments.

(14)	Whole loan		Clipping	Gloss	SL correlation
	a. <i>ootomeesyon</i>	→	<i>ootome</i>	‘automation’	<i>automa...</i>
	b. <i>sutoraiki</i>	→	<i>suto</i>	‘(labour) strike’	<i>st...</i>

(Itō 1990: 216, 232)

Both (14a) and (14b) contain clippings that may not occur in the source language. For (14a), the fracture of the morpheme *strike* into the phonological segments /st/ is highly unlikely, while in (14b) a fracture of the suffix material in *-ation* to *-a* is also unlikely. For *automation*, what occurs in English is *auto*, which removes the suffix entirely. The word *strike* however, is difficult to create a clipped output for as it is already one syllable, but if it were to be clipped, then it would likely contain the vowel segment in order to be a standalone word and might appear as *stri*?, *trike*?, or *rike*?. In Japanese, however, ‘strike’ becomes multi-syllabic. Wilford (2012: 174) states that English loanwords are “adapted to Japanese phonetics and phonotactics, particularly its preferred CV syllable structure, through various processes, including epenthesis (e.g. *baseball* > *besuboru*), syllabification of glides (e.g. *quiz* > *kuizu*), and cluster simplification (e.g. *sweater* > *seta*)”. Thus, although *strike* is from English, it is integrated into Japanese as *sutoraiki* and clips to *suto* as is expected from Itō’s (1990) minimal template. Additionally, Wilford (2012: 174) states that loanwords must be adapted to the morphology of the recipient

language, especially when the recipient language has case, number, agreement, and other inflectional rules, which Japanese does. For example, adjectives borrowed from English into Japanese attach the genitive case suffix *-no* or the suffix *-na* to signify the relationship between the loanword and the noun being modified, e.g. *orenzi-no* *yoake* ‘orange sunset’, *haado-na* *sigoto* ‘hard job’,

Nishihara, van de Weijer, and Nanjo (2001) expand on Itō’s findings by organizing Japanese compound clipping into three phonological types (15) which they label “front truncation”, “back truncation”, and “double truncation”. These types correspond to the types identified in Section 2.1 as fore-clipping, back-clipping, and compound clipping. Although double truncation corresponds to compound clipping, Nishihara, van de Weijer, and Nanjo (2001: 301) specify that it refers particularly to the retention of the first morpheme in each word of a two-word compound. Examples of front truncation or fore-clipping are shown in (15a), back truncation or back-clipping in (15b), and lastly, compound clipping or more specifically to Nishihara, van de Weijer, and Nanjo’s term – double truncation, is shown in (15c).

(15) Patterns of clipping in Japanese

	Loanword compound	Clipping	Gloss
a.	<i>gooru-kiipaa</i>	→ <i>kiipaa</i>	‘goal keeper’
b.	<i>mini-sukaato</i>	→ <i>mini</i>	‘mini skirt’

c. *paasonaru-konpyuutaa* → *paso-kon* ‘personal computer’

(Nishihara, van de Weijer, and Nanjo 2001: 300-301, example sets 1a, b, and c)

Nishihara, van de Weijer, and Nanjo state (2001:301) that the double truncation pattern is the most frequent process of clipping in Japanese, as also reported by Itō (1990: 229) and Kubozono (1993: 188), who further states that back truncation is the second-most frequently occurring, while front truncation is the least.

Irwin (2011: 72) expands on the three phonological clipping processes for Japanese as laid out by Nishihara, van de Weijer, and Nanjo (2001). Irwin offers the same subtypes of clipping that Nishihara, van de Weijer, and Nanjo (2001) do, but uses the terms seen in Section 2.1: back-clipping, fore-clipping, and compound-clipping as well as adding mid-clipping to the types of clipping encountered in Japanese. Irwin asks the important question of why clippings occur in the forms they do, but as he only investigates clipping in loanwords, he is unable to provide a view on the morphological potential of clipping. Thus, his largest contribution to our understanding of clipping in Japanese is expanding upon the known subtypes of clipping.

Ultimately, the main issue in the accounts of Japanese clipping presented thus far is that the morphology of clipping is still understudied. By operating primarily with phonological perspectives, the analyses of clipping offered by Poser (1990), Itō (1990), Nishihara, van de Weijer, and Nanjo (2001), and Irwin (2011) are limited in what they can explain about clipping beyond what is deleted and how clipped forms seem to follow a minimality constraint. These analyses offer no insight for why certain parts of an expression are deleted or retained, or an answer to the question of when clipping happens in the grammar. Additionally, their



investigations centre on the clipping of loanwords, which are not likely to be analyzed morphologically by speakers and two-word compounds, e.g. *toukyou daigaku* → *tou-dai* ‘University of Tokyo’ (Itō 1990: 229). The accounts which have focused on hypocoristics (cf. e.g. Poser 1990, Itō 1990) do not look at the presence of the *-tyaN* suffix in the clipped output. This is a missed opportunity for the morphological investigation of clipping when compared to Roca and Felíu (2003) or Lappe (2003) who investigate Spanish and German hypocoristic clipping respectively from a morphological standpoint. For example, the Spanish hypocoristic clipping *Agustín* → *Tino* (Roca and Felíu 2003: 200) uses the suffix *-o* which signifies masculine gender; this suffix is not something phonology can anticipate, similar to how phonology does not seem to predict the appearance of the *-i* suffix in a Japanese adjective clipping, e.g. *hazuka-si-i* → *hazu-i* ‘embarrassing’. Therefore, the works of Lappe (2003), and Roca and Felíu (2003) indicate that morphological accounts of clipping are able to provide information beyond what phonological accounts can provide.

An additional problem that occurs in accounts of Japanese clipping so far is that research has been limited to short two-word compounds and loanwords; this presents a threefold problem. Firstly, how Poser (1990), Itō (1990), Nishihara, van de Weijer, and Nanjo (2001), and Irwin (2011) examine these compounds is only in terms of phonological type, e.g. *tou-dai* is a double-clipping; there is no investigation into the possible semantic motivations for why speakers would choose *tou* and *dai* to be retained in the clipped output. Secondly, by only looking at two-word compounds, their analyses fail to account for the possibility of other clipping types and the overall structure of longer, more complicated compounds, as shown in (16).

(16) Clipping of a multi-element compound

*ni-ho<sub>N</sub> zi-dou-sya bu-hi<sub>N</sub> kou-gyou-kai* → *bu-kou-kai*

day-origin self-moving-vehicle<sub>AFF</sub> **part-item** craft-vocation-**association**<sub>AFF</sub>

‘Japan auto parts industries association’

(Prem 1993: 168)

The clipped output in (16) shows a clipping type outside of back-, front-, mid-, and double-clipping as many parts have been chosen for retention.

Overall, Poser (1990), Itō (1990), Nishihara, van de Weijer, and Nanjo (2001), and Irwin (2011) provide significant phonological classification of Japanese clipping by identifying clipping types and attempting to explain what truncata are retained despite providing no explanation for how or why these truncata are retained. In particular, the constraint established by Itō (1990) is integral as it aids in the discussion of minimality thresholds for clipped outputs. However, phonological analyses alone are unable to account for certain clipping phenomena as discussed in Section 1.1. This thesis will attempt to remedy this by exploring morphological aspects of clipping in Japanese in Chapter 6.

### 2.3 Lexical and theoretical accounts of clipping

While clipping is considered by some (cf. e.g. Scalise 1984: 94, Spencer 1991: 461, Mel’čuk 2006: 311) to be removed from morphological theory altogether, other scholars have suggested that clipping may belong in the theoretical realm of “expressive morphology” (cf. e.g.

Siegel 1974, Zwicky and Pullum 1987), or “extragrammatical morphology”, (cf. e.g. Dressler and Merlini-Barbaresi 1994, Dressler 2000) and perhaps should be described within morphology.

Expressive morphology describes the usage of language in a creative self-expressive manner (Siegel 1974: 180-181, Zwicky and Pullum 1987: 330). Types of word-formation which belong to this category are expletive infixation (e.g. *Massa-friggin-chusetts*), ideophones (e.g. onomatopoeia), code language (e.g. Pig Latin), language games (e.g. *schm-* reduplication), and innovative word-formation (e.g. *chocolate* + *-eria* → *chocolateria* ‘a retail store selling chocolate’) (Zwicky and Pullum 1987: 331, examples 4b and 11a). The concept of extragrammatical morphology, on the other hand, refers to word-formation which violates the established grammatical morphological rules, as these word-formations are outside the normal grammar, they are considered “extragrammatical” (Dressler 1997: 1400). Both of the concepts of expressive morphology and extragrammatical morphology are easily applicable to clipping. In the case of expressive morphology, however, clipped forms are used in more than just slang contexts, for example, *lab* from *laboratory* is a widely-used clipped form.

Despite Dressler’s (1997: 1400) description of extragrammatical morphology being so named for its violations of established grammar rules, Bat-El (2000) addresses the concept as being more similar than dissimilar to grammatical morphological structure. In her investigations of Hebrew blends, Bat-El states (2000: 67) that much like grammatical forms, extragrammatical forms also follow certain phonological patterns such as stress falling predictably on the rightmost foot just as it does in non-blended words. For example, using an accent to mark stress, stress falls on the rightmost foot in the words *mošáv* ‘cooperative agreement’ and *kibúc* ‘collective agreement’ as well as in the blend created from both of these words: *mošbúc* ‘an agreement that is both cooperative and collective’ (Bat-El 2000: 72, 78). Bat-El also comments (2000: 77) that

blends follow Vennemann's (1988: 40) Syllable Contact Law which states that "a syllable contact A\$B is the more preferred, the less the Consonantal Strength of the offset A and the greater the Consonantal Strength of the onset B". A phonological change is often caused by a violation of the syllable contact law, so that the changed phoneme more optimally fits the constraint. Vennemann's (1988) Consonantal Strength Scale is given in (17); (18a-c) provides some examples from Bat-El (2000).

(17) Consonantal Strength Scale: Vowels > Glides > /l/ > /r/ > Nasals > Fricatives > Stops

(Vennemann 1988: 9)

(18) Hebrew blends adhering to Vennemann's (1988) Syllable Contact Law

Base Elements			Blend Formations		Gloss
a. <i>xáy</i> 'alive'	<i>dák</i> 'thin'	→	<i>xay<u>d</u>ák</i>	* <i>dak<u>x</u>áy</i>	'bacterium'
b. <i>kál</i> 'light'	<i>kár</i> 'cold'	→	<i>kalk<u>á</u>r</i>	* <i>kark<u>á</u>l</i>	'polystyrene'
c. <i>ʔar(afél)</i> 'fog'	<i>pír</i> 'soot'	→	<i>ʔarp<u>í</u>x</i>	* <i>pix<u>ʔ</u>ár</i>	'smog'

(Bat-El 2000: 75, 77-78, examples 13v, and 18)

In (18a) and (18b), while the coda-onset combinations of /rk/ and /xʔ/ do not violate the syllable contact law, their slopes on the sonority scale are lower than the combinations of /lk/ and /rp/, which is why these blend formations are not optimal in comparison to their counterparts. Overall,

Bat-El's (2000) discussion of the similarity of extragrammatical morphology to grammatical morphology suggests that contrary to the belief that clipping is unpredictable, the clipping process may in fact have definitive structure as well as follow patterns in creating clipped outputs. Therefore, if Bat-El's claims for blending can be extended to clipping, then it is possible that clipping can be shown to be grammatical.

Another theoretical view of clipping and other abbreviatory word-formation processes is the view held by López-Rúa (2002) that such types of word-formation should be viewed under the scope of Prototype Theory. The foundations of Prototype Theory come from Rosch (1975) who proposes that instead of a strict definition-based approach to semantic representation, a broader approach should be taken. To elaborate with an example, when considering the idea of a bird, a bird like a robin is more prototypical of the ontological category of [bird] than a penguin is. However, a penguin is a bird nonetheless; therefore, in Prototype Theory, a strict definition of a concept is not used but a loose set of traits are used to identify something as belonging to an ontological category. Since Rosch's conception of Prototype Theory, the idea has been expanded by linguists like Lakoff (1987) and Kleiber (1990) to discuss categorization in language, whereas Rosch used it to discuss categorization from a psychological standpoint.

Using Prototype Theory, López-Rúa (2002) analyzes word-shortening devices such as clipping, acronymy, blends, alphabetisms, and abbreviations and then creates a set of parameters by which to assess their relation to a prototypical output of their word-formation type. For the purposes of this thesis, however, only López-Rúa's parameters for clipping will be reviewed. The prototypical values which she proposes are pronunciation, degree of shortening, source form, orthography, mode of expression, and degree of phonic integration.

In the following, I will describe each of López-Rúa's (2002: 3538) prototypical values.

“Pronunciation” relates to whether an output form is pronounced orthoepically or similar to how a word is pronounced (e.g. *ZIP* [zip] ‘zone improvement plan’), or if it is pronounced cacoeptically or similar to how individual letters are pronounced (e.g. *NY* [ɛnwaɪ] ‘New York’).

“Mode of expression” relates to whether a shortened form is used only in writing, in speech, or in both of those media. “Degree of shortening” ranges from maximum shortening in which the source form is reduced as much as possible (e.g. *Scholastic Aptitude Test* → *SAT*), to medium and minimum in which the source form is shortened but retains more of its original structure (e.g. *Alberta* → *Alta*).

“Orthography” conveys how a shortened form is written, either in a form which resembles a non-shortened word like blends or clippings (e.g. *smoke* + *fog* → *smog*), or in a form which indicates that the shortened form has heavily combined multiple source expressions, for example, the use of capital letters in acronyms (e.g. *Strategic Arms Limitation Treaty* → *SALT*).

“Source form” means the type of expression which has been shortened (e.g. word, phrase). Lastly, “phonic integration” is a parameter which López-Rúa does not believe can apply to clippings as it refers to a combining of source words as in blending or acronyms. This parameter is something which I will argue can apply to clippings, especially of the compound variety. The set of prototypical values which clipping meets according to López-Rúa's classification is shown in Table 2.

Table 2: The prototypical values of clipping

Parameters	Values
Pronunciation	Orthoepic
Degree of Shortening	Medium
Source Form	Typically one word
Orthography	Similar to regular words
Mode of Expression	Used in both speaking and writing
Degree of Phonic Integration	Not applicable

(López-Rúa 2002: 41, table 4)

Overall, the application of Prototype Theory, where clipping is not so constrained as to produce a predictable output each time, is a creative way to address the issues others (cf. e.g. Adams 1973: 135, Bauer 1983: 233) have expressed, for example that clipping is unable to be a morphological process or part of morphological theory due to its unpredictability. There are many types of clipping in English and Japanese as seen in Section 2.1 and 2.2; presumably, this applies to other languages as well. By using the most frequent clipping type as the prototype in a given language, any other clipped form derived from a different clipping type can be treated as relevant to the prototype as all clipped forms have an established set of criteria that they meet. Thus, by relating clipped forms to a set of prototypical parameters, clipping as a process is made less unpredictable than imagined as outputs will always have certain unified properties.

Psycholinguistically, Prototype Theory opens the door to discussion about clipping and the lexicon. When conversing with a friend a few years ago about the actor, Chris Pine, whose name transliterates phonemically to [kurisu pain] in Japanese, we had coined a clipped form of his name – *kuripa*. This form takes the first two morae of his given name and the first mora of his surname. Despite my not being a native Japanese speaker myself, this form was accepted between us, but has been used by other Japanese native speakers as well. Although this is anecdotal, the premise of this experience can relate to the concepts of Prototype Theory and lexical relations within the word paradigm regarding clipping. As I had exposure to what would presumably be a prototype of clipped forms in Japanese, where as discussed in Section 2.2, the most frequently encountered clipping type is double clipping, then my friend and I were able to create a clipped form using this prototypical template among our word-formation rules and produce an acceptable word-form. Thus, it is possible that prototypes of clipping establish a set of parameters as proposed by López-Rúa (2002) which are then integrated as possible word-formation rules accessible as a path in the word-paradigm connecting a source form to its clipped form or the possible creation of a clipped form, the topic of clipping in relation to the word-paradigm is further discussed in Chapter 6.

Psycholinguistic research on the lexical aspects of word-fragments was carried out by Nootboom (1981), who conducted a study on Dutch that investigated which types of word-fragments best facilitate lexical retrieval. Nootboom builds his study based on previous research by Marslen-Wilson and Welsh (1978), who established the Cohort Model, a model of word-recognition in which “word recognition is mediated by a whole array of parallel independent word recognition elements”. Nootboom concludes (1981: 422) that while initial fragments of words are easier to retrieve lexically, final word fragments are not irrelevant. This supports

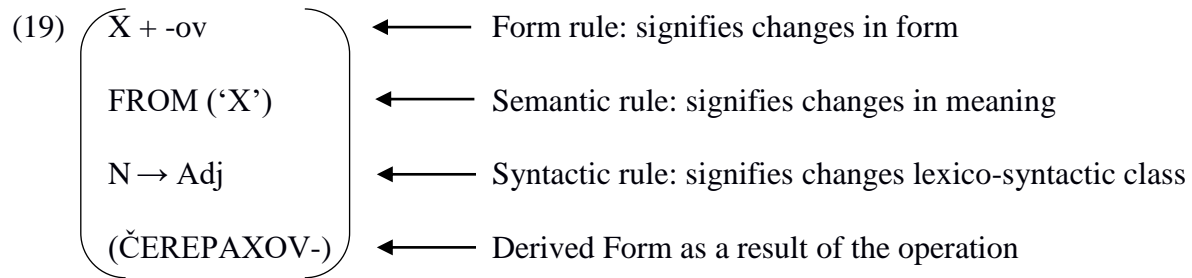


Vogel's (1990: 103) hypothesis, as mentioned in Section 2.2, that linguistic salience is stronger at the left edge of words. However, the lexical recognition of a word is still possible from a final word-fragment, which provides a reason for why words can be segmented in more than one way and still be recognizable relevant to their source forms.

While Nooteboom's (1981) research focuses on a phonological approach to the lexical retrieval and recognition of word-fragments in relation to their source forms, Gries (2006) discusses subtractive morphological processes such as blending and clipping. Nooteboom's word-fragments are little more than broken pieces of words which may not be formed via deliberate processes. Clipping and blending, however, are not just incidental word-fragmentations; they require a purpose-driven creative process in order to produce them. Gries (2006: 536) places clipping and blending under the category of "morphological processes", in the subcategory of "lexical processes" and investigates the optimal recognition points of subtractively formed words. He concludes (2006: 555) that because word-formation processes like blending and clipping are deliberately formed, that they are able to be empirically studied and exhibit predictability in the types described in Section 2.2.

Similar to Gries (2006), research done by Winters (2017) also focuses on the morphological side of lexical storage in relation to subtractive word-formations. Adapting Pounder's (2000) theory of Process and Paradigm Morphology which claims that word-formation is paradigmatic, Winters examines Ukrainian blends and how they are stored in the lexicon via paradigm structure which relates blends back to their source forms. According to Pounder (2000: 96), the word-formation paradigm consists of the set of possible paths leading from a lexeme base to correct grammatical lexemes that are derivations or compounds of it. Winters (2017) establishes word-formation operations for Ukrainian blends which can be

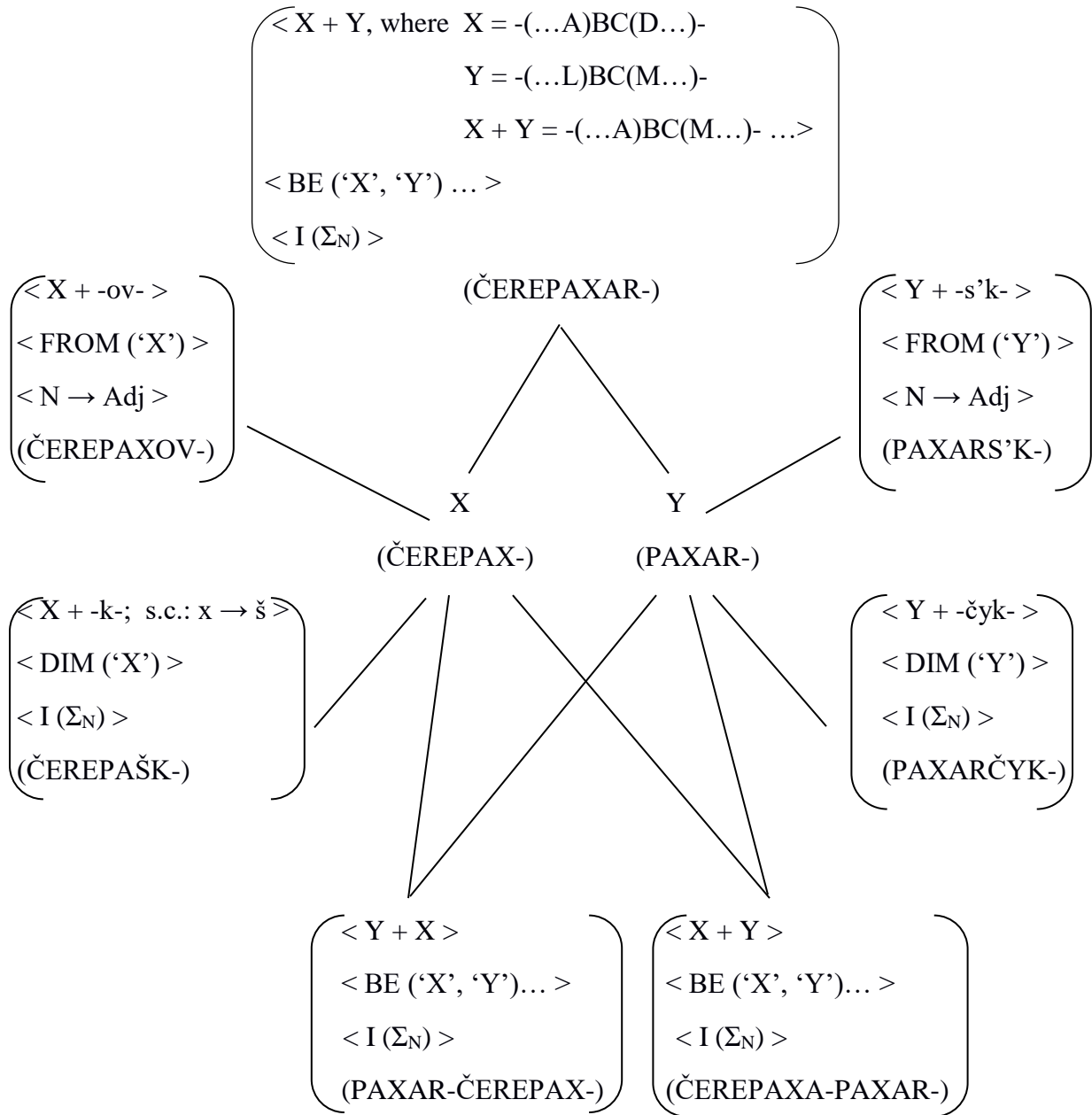
incorporated in the paradigm. A short explanation of an example of a paradigm operation is shown in (19).



(Winters 2017: 167, Figure 3)

In (19), the operation is applied to the base lexeme *ČEREPAXA* ‘turtle’. The form rule shows that affixing *-ov* maps onto a meaning of ‘from a turtle’ and transforms the noun into an adjective. Winters uses the paradigm structure in Figure 2 to show possible formulations and lexeme relations of nonce blends involving the combination of *čerepaxa* ‘turtle’ and *paxar* ‘ploughman’ to infer the meaning of ‘slow ploughman’, this structure corresponds to the paradigm structures illustrated in Pounder (2000).

Figure 2: Model of a word-formation paradigm for a Ukrainian blend



(Winters 2017: 167, Figure 3)

Relating the paradigm in Figure 2 to clipping, Winters (2017) shows a clipped form of ČEREPAKA ‘turtle’ as ČEREPAK- which is used in derivation as well as blending with other lexemes. Winters (2017: 10) uses the term “splinter” to refer to these clipped forms, but uses

them to mean the fragments of a source word after clipping. However, these clipped forms are not standalone words nor do they act as independent word-forms, but rather, are used in combination with other clipped forms to create blends. Thus, I will continue to use the concept of truncatum to refer to the remnant of a clipping which can act as word-form, for example *kimoti* (*ga*) *waru-i* ‘sick, disgusting’ is shown to clip to *kimo-i* a standalone word-form, but using *kimo* from *kimo-i* in the blend *kimo-kawai-i* ‘ugly-cute’ is acting as a splinter instead of a standalone word-form. Therefore, it is important to maintain a distinction between a truncatum and a splinter by how they are purposed in the word-formation process. Additionally, because Winters (2017) only applies Process and Paradigm Morphology to clippings as they pertain to creating blends. Therefore, because this framework has yet to be applied for independent clipped forms, it provides an opportunity for this thesis to make a substantive contribution to the theory.

## 2.4 Conclusion

The exploration of definitions and descriptions of clipping provided by various scholars (e.g. Mel’čuk 2006, Bauer, Lieber, and Plag 2013, and Mattiello 2013) in this chapter serve to create a foundation for my analysis of Japanese clipping data in Chapter 4. Accounts of Japanese clipping specifically (e.g. Itō 1990, Nishihara, van de Weijer, and Nanjo 2001, and Irwin 2011) will further assist in this endeavour such as identifying clipping types in Japanese as well as how clipped forms correspond to Itō’s minimality constraint. Additionally, Bat-El 2000, Lappe 2003, Roca and Felíu 2003, Lopez-Rúa 2002, and Gries 2006 provide compelling arguments that clipping is a morphological process and that there are grammatical and unifying concepts to be found in clipping. Finally, the formal analysis of clipping in Japanese will be carried out within the theory of Process-and-Paradigm Morphology (Pounder 2000) and additional application by

Winters (2017) as this theory can show the paradigmatic relationships between source forms and clipped forms through the integration of the grammar rules within the lexicon.

## **CHAPTER 3: METHODOLOGY**

### **3.0 Introduction**

This chapter discusses the methodologies for the two studies that I have carried out for this thesis. Section 3.1 explains the methodology which I used to compile a database of Japanese clippings. Section 3.2 gives an explanation of the methodology for a survey study that I conducted which investigated Japanese speakers' acceptability judgements of a variety of clipped outputs. Section 3.3 summarizes the methodology of the two studies.

### **3.1 Methodology for the database compilation**

A database of clipped forms was compiled from sources such as Prem (1993), Jisho Online Dictionary (n.d.), Zokugo Dictionary Online (n.d.), and from various newspaper articles compiled from Asahi Newspaper (2011) which occurred in a compilation book of that year. In compiling this database, I specifically sought out native Japanese expressions and Sino-Japanese expressions. Loanwords were omitted in general as most of the research on Japanese clipping has been conducted using loanwords. However, some loanwords appear in the database since they were compounded with a native Japanese or Sino-Japanese word.

Overall, 609 items were collected for the database. However, out of these 609 items, a few are counted two or three times as they contain multiple affixes and each affix was analyzed separately. The database compilation contains various organizational categories such as source form, expression type (e.g. a single word, compound, or phrase), syntactic class (e.g. noun, verb, adjective), phonological clipping type (e.g. fore-clipping, back-clipping), morphological formation type (e.g. derivational, inflectional), affix retention status, and affix type which

corresponds to the affixes found in the clipping and their meaning. These organizational parameters were established to aid in analyzing the data which is discussed in Chapter 4.

### **3.2 Methodology for the survey study**

This survey study was created to explore how Japanese speakers judged the acceptability of clipped outputs. The survey was conducted in Japanese and participants were native or heritage Japanese speakers over the age of 18 who were living in Canada or Japan. Flyers advertising the study were distributed on bulletin boards across campus and in the International Centre at the University of Calgary. Altogether, the study involved twenty participants and was conducted over a period of six months.

In total, four surveys were designed so that speakers could encounter a variety of possible clipped outputs, each survey only showing one possible clipping per test item. These clippings were made from Japanese words and phrases for which no clipped forms are yet attested. The survey consisted of sixty-four questions with eight of each type of expression. Participants were asked to judge the acceptability of the clipped form of an expression based on a seven-point Likert scale, from the answers of *kyoyou dekinai* ‘completely unacceptable’ to *kyoyou dekiru* ‘completely acceptable’. This survey study was created in two media. One medium was a laboratory survey whereby local Japanese speakers, namely university students, could be tested in real time with the ability to include response times, which would have shown how readily acceptable the clipped forms were by how fast the participants judged them. The other medium was an online survey which would allow for the gathering of data from participants in Japan or other remote locations. Unfortunately, only two laboratory participants were available and thus

response times were not included in the survey data, as it became impossible to evaluate them and assess statistical significance.

Four variables were tested for the study: the type of expression (e.g. compound, phrase, or single word), the lexico-syntactic class of the expression, the moraic length of the clipped expressions, and the presence of affixes or lack thereof in the clipped expression. As results from the database study revealed that affixes played a significant role in the formation of clipped outputs, only expressions which had affixes were considered for the survey in order to test the role of affixes further.

In the single-word category, only adjectives were used as seen in Appendix 1 for the database; most long-form nouns which have affixes are compounds. Also as seen in the database entries in Appendix 1, scarcely any single-word verbs were found to be clipped; however, the database is not an exhaustive list of Japanese clippings, so this may not be representative. Nonetheless, no verbs were tested here. The compound category consisted of only nouns and adjectives because compound verbs in Japanese are noun-verb combinations using the verb *su-ru* ‘do’ or are verb-verb combinations for which no clipped forms were found. For phrases, only adjectives and verbs were used because the expected obligatoriness of the class-specific affixes they often use.

The organizational categories for the survey questions were created to test the acceptability of clipped outputs for *-si*-adjectives, otherwise known as single-word adjectives in this study, as well as compound adjectives, compound nouns, and phrases. To elaborate on the use of *-si* adjectives, the majority of long single-word type adjectives in Japanese are of the *-si* adjective class identified by Shirane (2005: 53). This class of adjective typically consists of three



morae excluding the *-i* tense-marking affix<sup>2</sup>, making them more likely to be clipped by speakers. For this reason, *-si* adjectives were used in the single-word category as opposed to non-*si* adjectives. The length of clipped items in the survey ranged from short – one to two morae not including the affix, to long – three or more morae not including the affix. For noun compounds, the length was determined by the number of morphemes – a constant of two root morphemes is present in every noun clipping. Variation in this type was created by the presence of an affix or lack thereof since the affix could contribute to the length of the clipped form. The reasoning behind this comes from the observation of Ishiwata (1993: 99) that the most frequent clipping type in compound nouns is double-clipping (see Section 2.2). For this study, however, clipping to just the first root morpheme of each compound element would only result in two testable forms – with an affix or without. Therefore, I chose to add variation by adding in two other testable forms where the second root morpheme was taken from the first compound element while the first root morpheme was taken from the second compound element. An example of this is seen in (20), which shows the variations of clipped outputs for a compound noun given in the survey. Lastly, acceptability for affixes in all clipped outputs were tested relative to whether or not the clipped output contained an affix. Test questions in Appendix 2 appear slightly different to the example given in (20), as the questions are written in Japanese and the formatting is made to include the whole test question. (20) is a modified form of example 7 from appendix 2 which only shows the test source form and possible clipped outputs.

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2 With the exception of two adjectives *oisi-i* ‘tasty’ and *uresi-i* ‘glad’

(20) Source Form	Survey 1	Survey 2	Survey 3	Survey 4
<i>kin-kyuu en-zyo-tai</i>	<i>kin-en-tai</i>	<i>kin-en</i>	<i>kyuu-en-tai</i>	<i>kyuu-en</i>
tense-hurry help-help-unit <sub>AFF</sub>				
‘emergency aid unit’				

The clipped forms in (20) are *kin-en* which retains the first morphemes *kin* and *en* of both words *kin-kyuu* ‘emergency’ *en-zyo* ‘aid’, and *kyuu-en* which retains the second morpheme *kyuu* of the first word *kin-kyuu* ‘emergency’ and the first morpheme *en* of the word *en-zyo* ‘aid’ in order to test acceptability of the retained morphemes. Both of these clipped forms have a form with the suffix *-tai* ‘unit’ also retained in order to test the influence of the affix in the acceptability of the clipped form.

Overall, in addition to the thirty-two testable questions, there were thirty-two filler questions. Filler questions consisted of sixteen filler questions which were expected to earn high-ranking or good judgements of acceptability and another sixteen filler questions which were expected to earn low-ranking or bad judgements of acceptability. “Good” filler questions contained expressions which were known to have clipped forms in Japanese and the forms used were the known clipped forms of these expressions, e.g. *keitai denwa* → *keitai* ‘cellular phone’. “Bad” filler questions contained expressions which were either known or not known to clip in Japanese and the clipped forms were created so that the output form would violate phonological rules (e.g. beginning a word with *n*) or morphological structure (e.g. *kuu-ki o yo-mu* → *\*u-ki-yo* ‘to read the air, get a sense of’).

After the collection of the data, a statistical analysis was run in the program *R* (R Core Team 2015) using an “lmer” (Bates, Maechler, Bolker, and Walker 2015), i.e. linear mixed-effects regression, to identify any interactions between length and presence of affix. An lmer can account for variation between both test variables specifically, as well as account for random effects (Winter 2016: 6). The reason for using this statistical test was that it allowed for the ability to factor in for possible non-systematic variations between the participants of the study. This method was chosen based on applying the Akaike Information Criterion (Akaike 2011: 22-25), an information theory which is based on the idea of Occam’s Razor – that in a situation, all else being equal, the simplest explanation is the best explanation. How this is applied in the Akaike Information Criterion is that in statistics, the model with the fewest parameters is the most preferred. Thus, the model chosen for this study was selected from the best choice of models that were tested using this information theory.

### **3.3 Conclusion**

This chapter has shown the methodology for the two studies conducted for this thesis. The purposes of these studies are to illuminate if and how morphology plays a role in the clipping process. The database study consists of compiling examples of Japanese clipped words and phrases together so that an analysis of morphological structure can indicate possible patterns in how clippings are formed in Japanese. The survey study is meant to provide insight on clipped forms by the use of acceptability judgements from Japanese speakers. These judgements may be able to indicate which clipped forms are more likely or less likely to be understood or used by speakers, and in turn, may also be able to show patterns in clipping process.

## CHAPTER 4: CLIPPING DATABASE ANALYSIS

### 4.0 Introduction

This chapter analyzes the material in the database described in Section 1.2 and 3.1. In Section 4.1, I explore the phonological structures of the clipped forms encountered in the gathering of items for the database. Section 4.2 focuses on the morphological structures observed. This section contains a short discussion of the theoretical implications of the database items while a much broader and in-depth discussion will be found in Chapter 6. Section 4.3 outlines the difficulties of compiling the database and what could be improved in future research. Section 4.4 summarizes the chapter in conclusion.

In this chapter, an analysis of the database of compiled Japanese clippings shows that predictability can be found in clipping. Evidence for this is shown in (21-24) where in each expression, the morpheme *gen* ‘prime’ is always retained. The retention of this morpheme indicates a level of predictability for clipped outputs involving atom-related topics in Japanese which may be able to be extrapolated to other clipped outputs.

- (21) *gen-si-ryoku hatu-den-syo*<sup>3</sup> → *gen-patu* ‘atomic power plant’  
**prime**-particle-power **emit**-electric-place

---

<sup>3</sup> The change of /h/ to /p/ occurs on an initial consonant when a word, or in this case a truncatum, becomes the second element of a compound (Hinds 1986: 421). In this case, *hatu* is the beginning of its own word *hatu-den-syo* ‘power plant’ in the larger compound *gen-si-ryoku hatu-den-syo* ‘atomic power plant’, but when clipped to *gen* + *hatu*, *hatu* becomes the second element and undergoes the phonological change from /h/ to /p/ resulting in *gen-patu* through despirantization.

(22) *gen-si-ryoku nen-ryou* → *gen-nen* ‘atomic fuel’  
 prime-particle-power burn-material

(23) *ni-hon gen-si-ryoku ken-kyuu-syo* → *gen-ken* ‘Japan atomic research institute’  
 sun-origin prime-particle-power study-research-place

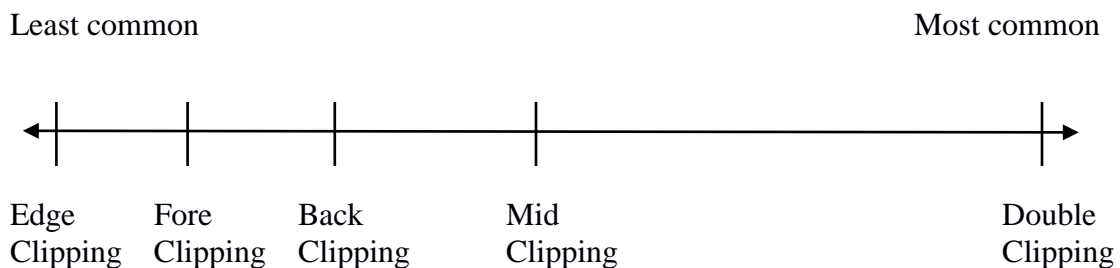
(24) *ni-hon gen-si-ryoku san-gyou* → *gen-san* ‘Japan atomic industry’  
 sun-origin prime-particle-power produce-craft

The process of producing a clipped output may seem to be unpredictable in what components will be retained or deleted. This may be because unlike in (21) and (22), the outputs in (23) and (24) do not appear as *\*ni-gen* which would be the expected output of a double clipping process outlined in Section 2.2. However as shown in (21-24), predictability can indeed be found beyond a surface view as in all of these examples, the focus of retention is the morpheme *gen* ‘prime’ and not just a phonological sequence. This implies that anytime ‘atomic’ is part of the source, the *gen* morpheme is retained. Furthermore, this implies possible patternability in Japanese clipping overall and that clipping requires an investigation of more components in a speaker’s grammar than just the phonology. In this chapter, analyses of the morphology of clippings will ultimately show that there are distinguishable patterns in clipped outputs which are not deducible from a phonological analysis alone.

#### 4.1 Database Findings – Phonological Clipping Types

The database contains multiple phonologically defined types of clipping. All of these types – fore-clipping, back-clipping, mid-clipping, edge-clipping, double-clipping, and suffix-clipping have been described by various scholars (cf. e.g. Shibatani 1990, Itō 1990, Ishiwata 1993, Kubozono 1993, Nishihara, van de Weijer, and Nanjo 2001, Fandrych 2004, Irwin 2011, and Mattiello 2013) as reported in further detail in Chapter 2, Sections 2.1 and 2.2. Of these five different phonological types, the least frequently-occurring type is edge-clipping, while the most frequent appears to be double-clipping. Figure 3 shows a diagram of clipping processes from least frequent in Japanese on the left to most frequent on the right.

Figure 3: The frequency of the five clipping types in Japanese



Despite double-clipping appearing to be the most frequent clipping process from the data I have gathered, the results of the database compiled for this thesis show that this label is problematic in three regards. Firstly, the definitions given by Nishihara, van de Weijer, and Nanjo (2001: 300) and Ishiwata (1993: 99) are too rigid as they apply the label only to two-word compounds. This definition cannot account for clippings which are derived from compounds of more than two words as in (25) where the first morpheme of each of its three words in the

compound is retained, or in (26) where the retained elements do not even stem from the first word in the compound.

(25) *kou-sei tori-hiki i-in-kai* → *kou-tori-i* ‘fair trade commission’

**public**-correct **take**-pull **committee**-member-association

(26) *den-ki tuu-sin ken-kyuu-syo* → *tuu-ken* ‘telecommunications research institute’

electric-energy **commute**-faith **study**-research-place

Secondly, the definition of double clipping cannot account for two-word clippings in which morphemes other than the first ones are kept. For example in (27), the first morpheme of the first word in the compound and the last morpheme of the last word in the compound are retained as first-last instead of first-first which runs counter to the expectations of Ishiwata (1993: 99) and Nishihara, van de Weijer, and Nanjo (2001: 300).

(27) *butu-ri ti-ryou* → *butu-ryou* ‘physical therapy’

**object**-arrangement cure-**heal**

Lastly, the definition of double-clipping cannot account for two-or-more-word compound clippings in which an affix is retained in the clipped output. In (28), the clipped output retains not only the first morpheme of each word, but also the *-sya* affix which indicates an agent.

(28) *tyuu-to tai-gaku-sya* → *tyuu-tai-sya* ‘school dropout’

**middle-way resign-learning-person**

Given the examples in (21-28), I suggest there are two solutions which are possible in order to address the shortcomings in the definition of double clipping provided by Nishihara, van de Weijer, and Nanjo (2001: 300) and Ishiwata (1993: 99). The first step is to redefine double clipping in a manner which can account for problematic counterexamples such as (27) and other similar clippings. This approach would most likely require renaming this type of clipping to a label such as “miscellaneous clipping”, in order to be more inclusive of the counterexamples which retain two or more compound elements and/or affixes. A second approach would need two steps whereby the first step is to expand the definition of double clipping to account for two-word compounds which have affix retention as part of one of their retained elements or have first-last or last-first element retention combinations, e.g. *butu-ri ti-ryou* ‘physical therapy’ would count as double clipping even though its clipped form *butu-ryou* retains its first word’s first morpheme and its second word’s last morpheme. The second step is to create a new definition which accounts for multi-element retention in compounds larger than two words. The difficulty in the first approach is that a definition for clipping which retains two or more elements can become bloated as it implies randomness and is thus counterproductive to establishing patterns in clipping. While the second approach will create a category for clipped outputs containing multiple retained compound elements, which will better define double clipping in a well-outlined manner. Because of the benefit in the second approach, I have chosen to reanalyze and redefine double clippings while also creating the new clipping category of multi-clipping. However, no raw figures will be given for frequency as doing so would not be informative to the



language as a whole since compiling data for the database was selective as will be mentioned in Section 4.3.

Expanding the definition of double clipping given by Nishihara, van de Weijer, and Nanjo (2001: 300) and Ishiwata (1993: 99), I suggest that double clipping can be redefined as in (29).

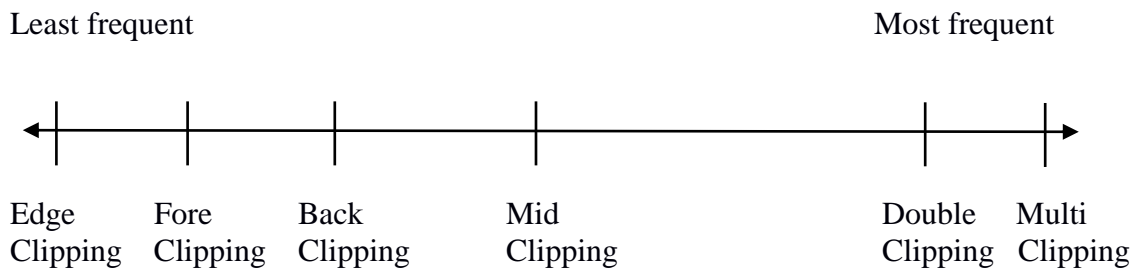
(29) Double clipping: a process of clipping in which a two-word compound expression retains truncata such as morphemes, phonological sequences, or affixes where the truncata come from each of the two compound source words, e.g. *sin-bun-sya ron-setu* → *sya-setu* ‘newspaper company editorial’

The benefit of a more generalized definition like in (29) is that it is not necessarily limited to Japanese. For example, if this definition were applied to an English two-word compound such as *satellite navigation*, the known clipped output *satnav* is able to be produced by the process in the definition of (29). With an expanded definition of double-clipping, this label can apply to clippings seen in (27, 28). Similar to double clipping is the concept of multi-clipping which is defined in (30).

(30) Multi-clipping: a type of clipping in which the truncata of a two-or-more-word compound expression come from multiple compound source words, e.g. *sin-tai syou-gai-sya* → *sin-syou-sya* ‘person with disabilities’, *gen-kin yuu-sou-sya* → *gen-sou-sya* ‘cash van’,

With multi-clipping as a new defined clipping category which can account for examples like those in (25, 28), the prevalence of clippings in the database must be reanalyzed to account for this new type. Reassessment of the clipping types in the database show that while double-clippings are one of the most frequent types of clipping, multi-clippings are the most common. However, this database was not compiled with loanword entries; therefore, the actual prevalence of clipping categories with loanword entries applied may look much different. For this thesis however, the frequencies of clipping types in the database is reconfigured in Figure 4.

Figure 4: The frequency of the six clipping types in Japanese



This section has shown that the phonological types of clipping established in Sections 2.1 and 2.2 are evident in Japanese, thus demonstrating a level of predictability regarding clipping. However, results from the database show that some of these phonological types are insufficient in their descriptions of clipping phenomena. Therefore, to be properly applicable, the definition of double-clipping had to be revised, while a definition pertaining to a new type of clipping – multi-clipping, had to be developed.

## 4.2 Database Findings – Morphological Structures in Clipping

As evidenced from the many examples in section 4.1, phonology alone does not seem to account for why certain phonological sequences of a source word are retained during clipping. This suggests that the phonology in a speaker's grammar is being directed by another component of the grammar so as to select what materials and sequences should be retained for a clipped output. A hypothesis formed in Chapter 1 of this thesis is that it is the morphological component of the grammar which is ultimately responsible for driving the clipping process and directing the phonological component in how to carry out instructions for creating a clipped output. In the database compiled for this thesis, there are two components of expressions which seem to affect element retention in a clipped output: root morphemes and affixes.

Nishihara, van de Weijer, and Nanjo (2001: 300), and Ishiwata (1993: 99) state that morphemes are an essential component in clipping Sino-Japanese compound expressions. This statement appears to be true as morphemes often contain more than one mora which would mean that the phonological minimal constraints of two morae, two syllables (Itō 1990) for a clipped output, would often be satisfied by just the first morpheme alone in a compound clipping. Yet as predicted by Nishihara, van de Weijer, and Nanjo (2001), and Ishiwata (1993), a two-word compound as in (31) retains its first morpheme of its first word in the compound as well as the first morpheme in the second word of the compound. Thereby, this output which contains four morae as indicated by the period notation in (31), has exceeded in morae by twice that of the prosodic minimum. Even a two-word compound which is clipped via the multi-clipping process, as in (32), retains triple the number of morae beyond the prosodic minimum of two.

(31) *wa.ri-ma.e ka.N-zyo.u* → *wa.ri-ka.N* ‘dutch treat-style date’

**split-before cheque-determine**

(32) *te.i-ki zyo.u-sya-ke.N* → *te.i.ki-ke.N* ‘season commuter pass’

**determine-period ride-vehicle-ticket**

By having more than the minimally required number of morae, the retained elements in (31) and (32) imply that these clippings as well as many others like them do not have their elements selected for retention solely on the basis of meeting phonological constraints. When analyzed further, the morphemes *wari* and *kan* in (31) contain the semantic meanings of ‘split’ and ‘cheque’ respectively. In (32) *tei*, *ki*, and *ken* have been selected for retention and mean ‘determine’, ‘period’, and ‘ticket’. Regarding the semantics of morphemes, examples such as (31) and (32) show logical ties with the composite meaning of their respective compounds. For example, a ‘split-cheque’ relates easily to the idea of a dutch-style date where each person pays their own way; just as a ‘determine(d)-period-ticket’ relates easily enough to the intended meaning of a season pass since a season is a fixed or determined period of time for which the ticket or pass is valid. Examples (31) and (32) show that when analyzing the truncata which form Japanese clipped outputs, the semantics of morpheme elements may be important in the formation of clippings. Another example which supports this possible implication is seen in Section 4.0, examples (21-24), where the morpheme *gen* ‘prime’ is retained in each of the clippings involving the topic of atom-related phenomena. However, examples like those in (21-24) with the retention of *gen* ‘prime’ are not as intuitive in providing a meaning which relates

back to the whole source form. More research is needed for this topic as the focus of this thesis is not morpheme semantics, but only addresses the topic to clarify that the semantics seem to play a role in determining what truncata will result from a clipping.

Other elements which are retained in Japanese clippings as seen in (22) and (26), yet are unretained in (28) and (32) as *-kai* and *-syo*, are elements which appear to be affixes. Their classification as affixes is suggested by the fact that these elements are attached onto words yet are not words in and of themselves. For example, *-kai* ‘meeting, association’ is attached onto nouns to indicate this meaning, while if one wanted to refer to a meeting or association alone, then one would use the noun *kaigi*. This same situation occurs with *-syo* ‘place’ also being attached to nouns, yet the standalone word for ‘place’ is *basyo*. An element like *-sya* ‘person’ in (28) is even more apparent as an affix because it has no independent word that it can relate to (Yamaguchi 2007: 113), unlike *-syo* relating to the standalone *basyo* or *-kai* to *kaigi*.

In the case of *-kai* and *-syo* as with many other similar materials, the Jisho Online Dictionary (n.d.) considers such bound morphemes as nouns which act as affixes. However such a perspective seems contradictory. Additionally, since *-syo* is not a standalone word, the classification of these materials as nouns in and of themselves is a difficult concept to grasp. A different perspective regarding these derivational materials is that of Ofuji (n.d.) who lists them as affixes in their own right. Yet, there is possibly a third explanation to the role of these items. In English, the word *like* is a standalone word in many contexts, for example *he has reflexes **like** a cat*. However, English speakers are able to affix *-like* onto a noun thus creating an eponymous affix-like derivational material, e.g. *he has cat-**like** reflexes*. Marchand (1969: 356) states that a semi-affix is a morphemic element which is midway between a standalone word and a suffix; in

English, some semi-affixes are only used as the second element in a compound, but despite this fact, the standalone meaning of the semi-affix is still transparent and recognizable.

It seems unlikely that the position given by Ofuji (n.d.), that elements like *-kai* and *-syo* are affixes in and of themselves, is the best possible analysis due to the large number of these truncata in the database. If these materials were affixes then it would mean that Japanese has hundreds upon hundreds of derivational semantic affixes, some of which are highly specific in their meanings, like *-tyou* ‘leader’ or *-ryoku* ‘power(ed)’. However, the position of Jisho Online Dictionary (n.d.) that these are nouns acting as affixes is also a difficult analysis to make because many of these materials cannot stand alone as nouns themselves. Theoretically, this would mean that affixes are nouns in and of themselves or vice versa, that potentially all nouns can double as affixes. Therefore, I argue that Japanese employs semi-affixes much in the same way that English does; however, more discussion will be provided on the speculation of semi-affixes in Section 6.3.

Aside from semi-affixes, truncata like unambiguous affixes, i.e. affixes which are undeniably identified as such, are also important in influencing what elements of a source word will remain in its clipped output. In Japanese, verbs and adjectives have obligatory, lexico-syntactic class-specific marking for tense. The forms of verbs and adjectives in the database are given in their non-past forms but may inflect for past or any other inflected values. From the database entries gathered, there is a noticeable retention of these adjective and verb markers. Examples are given in (33) of an adjective clipping and in (34) of a verb clipping, both of which show that the morphological value of these class-specific tense markers affect the clipping process as they must appear affixed to a clipped output.

(33) *uttousi-i* → *utto-i* ‘gloomy’  
gloom-ADJ

(34) *koku-haku su-ru* → *koku-ru* ‘confess’  
**reveal**-white do-NON-PAST

Overall, the presence of an affix or semi-affix appears to contribute to a pattern in the clipping process. For example, affixes like *-i* and *-ru* for adjectives and verbs, and semi-affixes like *kei-* ‘light’, *zyuu-* ‘heavy’, and *-hou* ‘law’ show consistent retention in the database, while other semi-affixes like *-ryoku* ‘powered’, *-sei* ‘type’, and *-tou* ‘et cetera’ show consistent deletion. Moreover, semi-affixes like *zen-* ‘all’, *sou-* ‘general’, and *-kai* ‘association’ show variable rates of deletion and retention.

Out of the 609 entries in the database with affixes or semi-affixes in their source forms, 195 items showed affix/semi-affix retention which is roughly 35%. The deletion and retention as mentioned previously seems dependent on the semi-affix. Table 3 provides details for each (semi-)affix seen in the data and its retention status which ranges from zero retention - not retained in any occurrences in the database, low retention - retained in less than half of its occurrences, even retention - retained in exactly half of its occurrences, high retention - retained in more than half of its occurrences, and constant retention - retained in all occurrences in the database. The number of entries for each (semi-)affix is also given as it is important to recognize that some (semi-)affixed expressions had few entries and thus despite being labelled “low” or

“constant”, require further research and exploration of more examples.

Table 3: Retention rates of affixes

<b>Affix</b>	<b>Gloss</b>	<b>Retention Status</b>	<b>Number of Entries</b>
<i>-bu</i>	‘club’	constant retention	1
<i>dai-</i>	‘large’	zero retention	3
<i>-gakari</i>	‘official’	constant retention	1
<i>-go</i>	‘language’	constant retention	8
<i>-ha</i>	‘faction’	constant retention	4
<i>-han</i>	‘size’	constant retention	1
<i>-hi</i>	‘cost’	zero retention	2
<i>-hou</i>	‘law’	constant retention	50
<i>-i</i>	adjective marker	constant retention	13
<i>-in</i>	‘institute’	even retention	10
<i>-in</i>	‘member’	low retention	8
<i>-ka</i>	‘occupation’	zero retention	2
<i>-ka</i>	‘section’	zero retention	2
<i>-kai</i>	‘association’	low retention	150
<i>-kan</i>	‘building’	low retention	7
<i>-kan</i>	‘service’	low retention	3
<i>kei-</i>	‘light’	constant retention	5
<i>-ken</i>	‘(individual) right’	zero retention	1



<i>-ken</i>	‘ticket’	high retention	3
<i>-ki</i>	‘machine’	high retention	11
<i>kou-</i>	‘high’	constant retention	1
<i>-kyoku</i>	‘bureau’	constant retention	6
<i>-nin</i>	‘person’	zero retention	1
<i>-ru</i>	verb marker	constant retention	20
<i>-rui</i>	‘class’	zero retention	1
<i>-ryoku</i>	‘powered’	zero retention	7
<i>-sei</i>	‘person’	constant retention	2
<i>-sei</i>	‘type’	zero retention	3
<i>-sen</i>	‘train line’	high retention	8
<i>-si</i>	adjective class	zero retention	6
<i>-si</i>	‘professional’	zero retention	2
<i>-si</i>	‘specialist’	zero retention	1
<i>-siki</i>	‘style’	zero retention	1
<i>sin-</i>	‘new, neo-’	constant retention	3
<i>-situ</i>	‘content’	zero retention	1
<i>sou-</i>	‘general’	high retention	4
<i>-sya</i>	‘company’	low retention	4
<i>-sya</i>	‘person’	low retention	23
<i>-sya</i>	‘vehicle’	low retention	23
<i>-syo</i>	‘document’	low retention	7
<i>-syo</i>	‘place’	low retention	71

<i>-syou</i>	‘certificate’	zero retention	1
<i>-syou</i>	‘ministry’	high retention	5
<i>-tai</i>	‘unit’	even retention	4
<i>-tati</i>	plural marker	constant retention	1
<i>-teki</i>	‘-like’	zero retention	3
<i>-ten</i>	‘shop’	zero retention	1
<i>-to</i>	‘city’	zero retention	1
<i>-tou</i>	‘et cetera’	zero retention	7
<i>-tou</i>	‘political party’	high retention	7
<i>-tuki</i>	‘provision’	constant retention	2
<i>-tyou</i>	‘agency’	low retention	11
<i>-tyou</i>	‘leader’	constant retention	3
<i>-you</i>	‘purpose’	zero retention	2
<i>zen-</i>	‘all’	even retention	10
<i>-zin</i>	‘person’	even retention	2
<i>zyo-</i>	‘co-, assistant’	constant retention	2
<i>zyou-</i>	‘location’	even retention	2
<i>zyun-</i>	‘semi’	constant retention	2
<i>zyuu-</i>	‘heavy’	constant retention	4

Of the (semi-)affixes in the database, the positioning of the (semi-)affix appears to show some pattern in its retention or deletion. The semi-affix *-in* ‘member’ in (35) for example, shows

retention when it is the final element in an expression; however, when *-in* is the final element of a word in a larger compound expression or another semi-affix is attached after it like in (36), it is deleted.

(35) *gi<sup>N</sup>-kou-in* → *kou-in* ‘bank teller’  
 silver-conduct-member<sub>AFF</sub>

(36) *kok-ka kou-mu-in-hou* → *kok-kou-hou* ‘national civil service law’  
 nation-house public-task-member-law<sub>AFF</sub>

The implication that arises from (35) and (36) is that some (semi-)affixes are dependent on the headedness of a compound or phrasal expression which is not covered in this thesis and is reserved for future research. The results of the morphological analysis in this section suggests that the morphological component of the grammar in Japanese speakers plays a significant role in the clipping process. This is attested by morpheme retention and some of the morpheme truncata showing relations in terms of semantics; for example, the clipping *wari-kan* ‘Dutch-style date’ consists of the morphemes corresponding to ‘split’ and ‘cheque’. As evidence in this section has shown, the morphological structure of an expression seems to be analyzed to a great extent.

### 4.3 Database Issues

At first, constructing a database seems to be a simple and straight-forward task. The compiler assembles a list of items and tabulates them. However, much more work is needed in the organization of a database. The compiler must come up with organizational factors which cannot be arbitrary: each factor must have a use and contribute to organizing the items in an efficient manner. Finding items for a database is no easy task either. A database compiler has to search multiple sources for items, determine which items relate to the research, and deciding how many items can or should be included. Ideally the more items a database has, the better, but time for item searching and item entry can hinder this goal. For the database in this thesis, both organization and item searching have proven to be difficult.

As discussed in Chapter 3 on methodology, many organizational factors were used in arranging the database items. However, deciding on which organizational factors to use was not simple. As this thesis explores the idea that clipping may be more than just phonology, organizational factors needed to be expanded beyond just phonological types of clipping. Morphological types have had to be integrated to allow for the database organization to be arranged according to affix retention and expression/word-formation. As discussed further in Chapter 6, language origin of word/expression was also a factor included in database organization as evidence in the data seems to suggest that language origin plays a role in the clipping process.

Many sources were searched for items which can be included in the database. One of the biggest difficulties in this endeavour has been finding clippable items which are not loanwords, as loanwords appear to be a large contingent of clipped expressions in Japanese. Sources which contain non-loanword clippings unfortunately are few and far between as mentioned in Chapters

1 and 2; these types of clippings have not been investigated in great detail. Additionally, it is questionable whether clipped outputs which are no longer modern should be included. While this concern has some validity, ultimately these clipped forms have been recorded, meaning that at some point they were in use and can still offer insight on the clipping process. Therefore, these items were kept and analyzed. The final problem to address is the problem of possible skewing when creating a database. Skewing means here the potential for a database compiler to only seek out certain data. In this regard, there is perhaps some skewing which occurred in the creation of this database as only native Japanese and Sino-Japanese words of origin were sought. Yet, I argue that this was necessary, as mentioned in Section 2.2, most databases of Japanese clipped forms are compiled using only loanwords; therefore, to analyze clipping from a morphological perspective, native Japanese and Sino-Japanese words of origin were specifically required.

#### **4.4 Conclusion**

The data collected for the database and the subsequent analyses done have indicated that a multitude of phonological types of clipping are seen in Japanese. Moreover, while phonological types are prevalent, morphological material such as morphemes, affixes, and semi-affixes appear to drive the clipping process to a strong degree. These items show noticeable influence in what parts of a source expression will be retained or deleted during the speaker's clipping process. As I have argued earlier in the chapter, evidence shown from the database implies that the phonological component of a Japanese speaker's grammar cannot account for nor direct the clipping process alone. It is, instead, apparent from the data gathered that the morphological component of the grammar plays a role in the clipping process and interacts with the phonology in determining the truncata for creating a clipped output.

## **CHAPTER 5: SURVEY STUDY ANALYSIS**

### **5.0 Introduction**

This chapter analyzes the results from the survey study described in Section 3.2. As this was a pilot study, results cannot be considered definitive, but do serve to provide a morphological perspective on clipping. The most significant results gathered from this study show that longer clipped forms, in this case, three morae excluding an affix, are preferred in speaker judgements to the minimum of two morae proposed by Itō (1990: 233). Additionally, the retention of affixes in a clipped form is more likely to lead speakers to judge the clipped form favourably, which indicates some influence of morphological structure.

Section 5.1 examines possible identifiable patterns in the acceptability of clipped forms regarding their morphological and phonological structures. The findings in this section provide theoretical implications for considering clipping as a process largely housed in the morphological component of the grammar, which will be discussed further in Chapter 6. Section 5.2 gives an account of the difficulties encountered in conducting the study and discusses what improvements or different approaches future studies should undertake in order to obtain better results. Finally, Section 5.3 gives a summary of the survey findings and possible implications.

### **5.1 Survey Findings**

For this study, two formulas were created in R from each of which a model would be derived. The first formula constructed a model from the data by operating with criteria which considered length and affix of clippings as interactive factors in speaker's acceptability judgements as seen in (37a). The second formula constructed a model by considering length and

affix as separate factors contributing to speakers' acceptability judgements as seen in (37b). Both of these formulas allowed for the random effects of participant variations. The formula and subsequent model which showed the best parameters according to the Akaike Information Criterion were the ones wherein length and affix occur as independent factors (37b). This may imply that length and affix are considered separately in the acceptability judgement of a clipped output.

(37) a.  $\text{Score} \sim \text{Length} \times \text{Affix} + (1 \mid \text{Participant})$

b.  $\text{Score} \sim \text{Length} + \text{Affix} + (1 \mid \text{Participant})$

The formulae in (37a) and (37b) were used as it allowed the ability to factor in the potential for non-systematic variations between the participants of the study. There was no significant difference between the formulae; however, non-interaction is better according to the Akaike Information Criterion covered in Section 3.2. The chosen formula, (37b), takes the acceptability score given by participants, then analyzes the length variables “LengthLong” and “LengthShort”, and the affix variables “AffixYes” and “AffixNo” for the affix being present or not present. For nouns, a different length label was used – “LengthLeftLeft” and “LengthRightLeft”. These labels correspond to which root morphemes were retained in the created clipped forms.

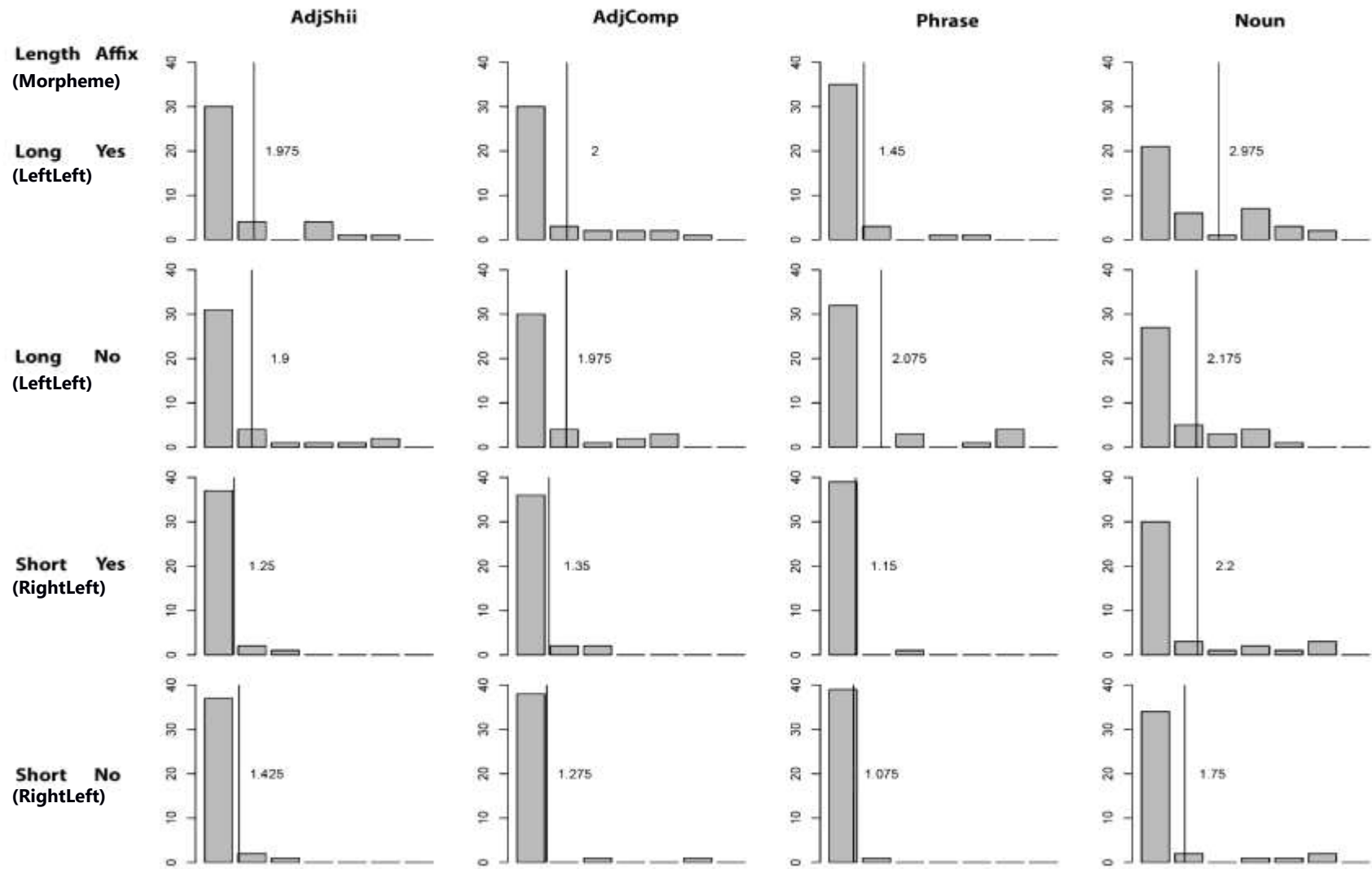
“LengthLeftLeft” follows the principle of double clipping mentioned in Section 2.2, while “LengthRightLeft” corresponds to clippings which retained the second root morpheme of the first compound element and the first root morpheme of the second compound element.

All speaker judgements in this study show a higher level of acceptability for forms which were considered long – three morae excluding the additional morae an affix would provide, see Appendix 3 for more details. This may imply that even though Itō (1990: 233) establishes a minimum of two morae in her Prosodic Minimality Constraint, Japanese speakers may actually prefer forms which are not at the minimum threshold, but rather, are just above it. For length, all categories had p-values of less than .05. Additionally, speaker judgements in all categories except verb and adjective phrases show that in a clipped form, the retention of affixes from the source form are generally more preferred as seen in Appendix 2. In single-word adjectives and compound adjectives, this acceptability is understandable as the *-i* affix specific to the adjective class is an obligatory marker of tense. Even though phrases consisted of verbs and adjectives and thus have obligatory class-specific affixes, the presence of an affix in the clipped form was dispreferred among speakers as seen in Appendix 3. This occurrence is explained in more detail in Section 5.2, but the general issue which arose from these clipped forms is that a few of the clipped forms resembled standalone words by accident. Thus, their judgement by speakers may have been skewed due to this error in creating the forms.

An examination of the results shown in Figure 5 shows that the data is strongly skewed towards the low end of the Likert scale; in other words, most participants rejected a great deal of the test items or rated them unfavourably. Some participants rejected all or most of the stimuli altogether, even items which should not have been rejected (i.e. the “Good Fillers”). It is possible that these participants are outliers and thus the results should be recalculated omitting them. This is explained in further detail in Section 5.2, but it does cause the implications of the data to not appear meaningful. This is not the case however, as the data still shows noticeable trends.



Figure 5: Japanese Speakers' Acceptability Averages



Overall, the data indicates that across the four test categories: single-word adjectives, compound adjectives, verb and adjective phrases, and compound nouns, speakers accepted longer mora clipped outputs as well as clipped outputs which contained a derivational or inflectional affix. Regarding the statistical significance, in an lmer model, p-values range from zero to one; the closer a variable's p-value is to zero, then the more statistically significant the variable is, likewise, anything above .05 is not statistically significant. The statistical models in Appendix 3 show that the variable with the greatest statistical significance for single-word adjectives and compound adjectives is the length with p-values of 0.0024 and 0.000128 respectively. For verb and adjective phrases, the variable with the greatest statistical significance is also the length with a p-value of 0.00169. For nouns, the opposite happens in comparison to phrases. Nouns show the greatest statistical significance with the affix variable at a p-value of 0.0024; however, with a p-value of 0.0116, length or in this case, morpheme selection, is still significant.

Although the statistical models indicate which variables are significant, the average value for speakers' acceptability judgements is what shows the most important information for the goals of the study – to determine what speakers' judgement of clipped forms can reveal about the formation of clippings in Japanese. Despite all of the averages being low on the 7-point Likert scale used for the study, an issue which is discussed in Section 5.2, these variable sets indicate a trend in speakers' acceptability judgements of the tested forms.

There are three implications that the acceptability averages appear to allow. The first implication is that averages seem to indicate that length is preferred to be above the minimum morae threshold established by Itō (1990: 233). As the averages from each category show, the preferred length is three morae excluding affixes.

The second implication that the acceptability averages seem to indicate is that while compound nouns seem to be more preferred when clipped to the first root morphemes of each compound element, morphemes still seem to be considered for their semantic value in being selected for the clipped form. Examples (38a-c) show three stimuli from the survey in their whole forms and the clipped forms which were most preferred based on having the highest acceptability judgements. Left-Left morphemes had a mean judgement of 2.56 on the Likert scale, while Left-Right morphemes had a mean judgement of 1.96. Additionally, affixed outputs had a mean judgement of 2.64, while affixless outputs had a mean judgement of 1.93 on the Likert scale. The semantic glosses for each morpheme in (38a-c) are written below the whole forms.

(38) Whole Form	Preferred Clipping	Gloss
a. <i>doku-sai-teki ken-ryoku</i> single- <b>decision</b> -like <sub>AFF</sub> <b>authority</b> -power	<i>sai-ken</i>	‘dictatorial power’
b. <i>syo-zai hu-mei-sya</i> place- <b>exist not</b> -clear- <b>person</b> <sub>AFF</sub>	<i>zai-hu-sya</i>	‘missing person’
c. <i>zi-yuu-tou kan-zi</i> self- <b>reason-party</b> <sub>AFF</sub> <b>main</b> -fact	<i>yuu-tou-kan</i>	‘liberal party organizer’

Even though the clipped forms which retained the first morpheme of each compound element were most preferred by participants in the survey, the three examples in (38a-c) show that the semantics seems to be important in which elements become truncata in the clipping process. Further examples of the survey stimuli and preferred clipped outputs are found in Appendix 2.

The final implication that the acceptability averages seem to lead to is that the greater the number of possible affixes a form has, then the higher the rating of the affix variable as a factor for the acceptability judgement. To elaborate, adjectives have a limited number of affixes available to them; in the data for this survey, only the *-i* affix is available. In phrases, both verbs and adjectives were tested which expanded the possible set of affixes available as both adjectives and verbs have class-specific affixes. Nouns in comparison to verbs and adjectives have the largest array of possible affixes, a topic discussed in Section 4.2 with the concept of semi-affixes. The implication that the wider the array of possible affixes is, the greater is the effect affix variable has is evidenced in the statistical models where the greatest effect for the affix variable was contained in nouns, then phrases, and lastly in single-word and compound adjectives. As mentioned before, the categories of phrases and compound adjectives contained errors which may have affected their statistical significance. Also, the statistical significance of the presence of affixes in single-word adjectives may have been affected by a different cause which is further discussed in Section 5.2. Each of these category's p-values were greater than .05, only nouns had a p-value of less than .05. This seems to correspond directly with nouns having the widest array of possible affixes, then phrases having a narrower array of possible affixes, and finally, single-word and compound adjectives with the narrowest array of possible affixes, being only one in the stimuli.

## 5.2 Survey Study Issues

As outlined in section 5.1, when results from participants began coming in, it was immediately noticeable that answers were not as expected. Most participants rated a high number of unacceptable judgements on the test questions as well as even the “good” filler questions seen in Appendix 2. There were also answers which rated good acceptability on clipped outputs which were expected to be unacceptable. This may be explained by an error on my part in creating a few of the clipped forms in Appendix 2: Phrase Clipping Tests and Appendix 2: Compound Adjective Clipping Tests. For example, in the test phrase *azi o su-ru* ‘to have the taste of’, the clipped outputs were *azi-ru*, *azi*, *a-ru*, and *a*. The clipped output *azi* received a noticeable number of high-ranked acceptability judgments before I realized that I had created a clipped output which was already a word and may be acceptable on its own, i.e. *azi* ‘taste<sub>N</sub>’. Likewise, this occurs with the clipped outputs *genki* ‘vigour, liveliness’, *kyoumi* ‘interest<sub>N</sub>’, *yuuki* ‘courage’, *kaoiro* ‘complexion’, *kokoti* ‘sensation’, *kenka* ‘fight’, and *nebari* ‘tenacity’.

The reasons for the large number of unacceptable judgements are not fully clear; however, one participant toward the end of the survey period informed me that many of the data were formal words and expressions, so that he could not abbreviate them. The topic of formality brings up two concerns, one – how are expressions defined in terms of formality in Japanese and what level of formality must be reached before the creation of clipped forms becomes dispreferred? Two – if speakers are judging the acceptability of these created clippings based on a primarily pragmatic sense, then it is quite possible that these clipped forms are actually well-formed after all.

To address the concern of where the allowable threshold for clipping is in relation to pragmatics of formality, the formality of the source forms did not occur to me as a factor to

consider for control in the testing. The reason I did not consider it is because Japanese has some seemingly formal source expressions which are able to be clipped. For example, *kokusai rengou* ‘United Nations’ is a formal entity, as are *nihon sekizyuuzi-sya* ‘the Japanese Red Cross’, and *saikou saiban-syo* ‘the Supreme Court’, yet these source expressions are clipped to *oku-ren*, *nis-seki*, and *saikou-sai* respectively. Therefore, if formal expressions such as these can be clipped, then it was not evident to me that formality would be a pragmatic factor that could affect acceptability judgements for survey participants. Furthermore, if the distinction is that Sino-Japanese compound noun clippings are used even in more formal situations, while adjective and verb clippings may be restricted to only casual colloquial speech then this may explain why noun clippings on average were rated higher in acceptability compared to the lower judgements of acceptability for adjectives and verbs.

Another factor of difficulty in conducting the survey study was mentioned in Section 5.1 regarding the low number of laboratory participants. The idea behind creating the survey for the lab was to be able to test response times in addition to the already discussed variables of expression category, lexico-syntactic class, affix, and length. As this study was conducted in the summer, however, very few Japanese participants could be located locally. The majority of the participants engaged in the online survey as they were in Japan or in other remote locations, so that response times could not be calculated in the statistics. Despite the issues described in this section, for example, low judgements of test items, the results clearly show that affix and length, while separate, play a role in the acceptability of a clipped form.

Ultimately, this survey was a pilot study and if developed for further research, then a better approach to conducting the survey would begin with the creation of the survey items. To do so, I think future studies may need to be done in two phases. The first phase would involve

creating a list of possible source expressions then passing this list of items onto a group of participants who would judge these as pragmatically possible to clip or not. The second phase would be to take the refined and pragmatically acceptable source form and create clipped forms for them which would have a completely new and different set of participants engaging in the acceptability judgements. By doing this, the survey's results and the ability of those results to show patterns in what Japanese speakers find acceptable in a clipped form could be more effectively studied. Because this was not done, as many participants did not like any of the clipped forms, even among the “good” fillers, it altered the results in an undesirable manner.

### **5.3 Conclusion**

For analyzing this study, the statistical computing program R (R Core Team 2015) was used in combination with the lmer model (Bates, Maechler, Bolker, and Walker 2015). This created an analysis of linear mixed effects for a relationship between length and the presence of affix in Japanese speakers' acceptability judgements of clipped forms. The model which tested for the effects of length and affix separately and without interaction was chosen as it best fit the data. This chapter has shown that even though the survey study conducted for this thesis was a pilot study, there are some potential implications about the acceptability judgements of Japanese speakers regarding clipped outputs. The greater the number of possible affixes an expression can have implies that the effect of the presence of an affix becomes greater as this number increases. When clipping to root morphemes in a compound noun, the morphemes are selected for more than just their phonological sequencing, but also their semantic value. Additionally, the prosodic minimum implies a threshold for the fewest amount of morae in a clipping, but overall, this threshold is not the preferred number of morae in a clipping. Finally, the implications of this

study are discussed in more detail in Chapter 6 along with the results of the database in regard to the theoretical aspects of clipping from a morphological perspective and how clipped forms relate to the lexicon.



## CHAPTER 6: DISCUSSION

### 6.0 Introduction

This chapter addresses the analyses from the compiled database of Japanese clippings and the survey study to discuss the implications of a morphological analysis of clipping in terms of theory and the status of clipped forms in the lexicon. The primary questions of this chapter are: when does the clipping process take place in the grammar, and are clipped forms stored lexically? To be able to answer the first question, a conceptual model of the grammar needs to be developed. Of the scholars discussed in this thesis so far, none have addressed when clipping takes place in the grammar. Therefore, analyses of the database and survey conducted for this thesis serve to aid in constructing a model which may be able to show how clipping functions within the grammar. Section 6.3 will discuss how clipped forms may be lexically stored using interactions between the lexicon and the word-formation paradigm.

Adapting a model from Beard (1995: 45), Table 4 shows a hypothetical model of how the clipping process in Japanese may correspond to the grammar.

Table 4: A conceptual model of the clipping process

Grammar	Clipping Process
Lexicon	
Lexical Organization	Early-phase clipping: analysis of syntactic class, origin of expression, and morpho-semantics –if noun: select morphemes to retain –if adjective, verb: select first two morae
Word-Formation and Grammar Rules	
Inflection	Late-phase clipping: analysis of inflection and phonological structure –select necessary inflectional material, check prosodic requirements
Phonology	
Spellout	Clipped Output

The model in Table 4 shows that there are two phases of clipping. The first phase of clipping, named “early-phase clipping”, corresponds to the lexical organization, word-formation, and grammar rule components of the grammar. The second phase of clipping, or “late-phase clipping”, corresponds to the inflectional and phonological components of the grammar. Finally, the clipped output occurs at “spellout”. I will argue for this model and these phases in the following sections using evidence from my research.

Sections 6.1 and 6.2 are dedicated to discussing two phases of the clipping process which lead up to creating a clipped output in Japanese. To elaborate, Section 6.1 explores early-phase clipping - the phase in which clipping operations are applied to most nouns. Section 6.2 explores late-phase clipping - the phase in which clipping operations are applied to adjectives and verbs.

Section 6.2 also discusses the end of the clipping process before all expressions are clipped for spellout. Section 6.3 investigates theoretical aspects of clipped forms and the lexicon within Pounder's (2000) Process and Paradigm morphology approach and the addenda to this theory made by Kunduracı (2013), and Winters (2017). Section 6.4 addresses some directions for future research and concludes this chapter.

## 6.1 Early-phase clipping

As discussed in Chapter 4, a number of factors appear to influence the creation of a clipped output in Japanese – lexico-syntactic class, morphological structure, phonological structure, and even language origin. I argue that each of these factors is essential to creating a clipped form and have a correspondent phase of the grammar in which they are assessed in the clipping process.

The early phase of clipping happens right after word-formation operations have been applied. In this phase, an expression's syntactic class, language origin, and morpho-semantics are assessed. Syntactic class is important in this assessment as expressions which are adjectives or verbs have obligatory class marking, whereas nouns do not have this requirement for form. For example, in the adjective *kara-i* 'spicy', *-i* is suffixed to an adjective's base to mark tense, in this case, the non-past form. As the *-i* suffix is class-specific to adjectives, however, it also indirectly marks the lexico-syntactic class<sup>4</sup>.

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<sup>4</sup> The status of the *-i* suffix as a non-past inflection marker is debated by Iwasaki (2013: 109). He claims that the *-i* suffix is a derivational stem-formation suffix, instead; while this thesis treats the *-i* suffix as an inflectional marker, an analysis which regards *-i* as a derivational suffix merits further research in how it will change the treatment of *-i* suffixed adjectives in the clipping model discussed in this thesis.

Language origin is important for the system to discern the degree to which the morpho-semantics play a role in the expression's interpretation and is crucial for the analysis of nouns. For example, a loanword such as *merodii* 'melody' is clipped to its first two morae: *mero*, while a Sino-Japanese word such as *ri-reki-syo* 'curriculum vitae' is clipped to one of its morphemes *reki* instead of its first two morae \**ri-re*, which would break a morpheme boundary. According to a survey of vocabulary conducted by the national language institute in Japan, Iwasaki (2002: 29) reports that words of Sino-Japanese origin (47%) outnumber words of native Japanese origin (36%) and loanwords (17%) when compared to these categories separately. A source expression's language origin is oftentimes apparent to Japanese speakers, as Sino-Japanese expressions have certain phonological structures which set them apart from most native Japanese expressions, while loanwords, most of which come from English, are also rather phonologically transparent as foreign in origin. Shibatani (1990: 147) further elaborates that the meanings and origins of Sino-Japanese words are transparent to Japanese speakers, much like how Latinate words are sometimes transparent in English. Furthermore, Itō and Mester (1999: 62-63) also attest this phenomenon which they label "phonological stratification". Therefore, language origin in regards to clipping and morphemic analysis refers to the notion that a loanword has little or no morphemic analysis to offer, while a Sino-Japanese word is comprised of multiple morphemes transparent to the speaker. Examples of loanword structure and Sino-Japanese structure are shown in (39a and b).

(39) a. *ma.N.ne.ri.zu.mu* 'stereotype'

b. *a.sa i.ti-ba.N*

‘first thing in the morning’

morning one-number

In (39a), *mannerism* has morphological structure in English, with the base lexeme MANNER and the derivational affix *-ism*. In Japanese, however, this word consists of nothing more than a base altogether. The clipped form of the word, *manneri*, shows that the source expression is a whole base as it can be clipped across the *-ism* affix, its morphological boundary being opaque in Japanese. The breakdown of an expression into its morphemes, as in (39b), seems to be the reason why clipping targets specific moraic sequences rather than one mora alone. For example, (39b) can be clipped to *asa-iti* which shows that when morphological boundaries are transparent, violation of them seems to be avoided, as forms like *\*asa-i*, *\*sa-iti*, and *\*iti-ba* are not produced. In cases of Sino-Japanese expressions, it is a lexical morpheme, not a phonological sequence, that is retained and/or clipped, and therefore may exceed the two-mora minimum established by Itō (1990: 233). In (40), *ko.ku* ‘nation’ and *re.N* ‘connect’ consist of multi-moraic sequences which correspond to single morphemes in the compound *koku-sai reN-gou* ‘United Nations’. Breaking these morpheme boundaries is not permissible in the clipping process and thus explains why clipping results in the complex structure *koku-reN* rather than the simpler *\*ko-re*, which, despite satisfying Itō’s (1990) prosodic minimality requirement, would break morpheme boundaries to do so.

(40) *ko.ku-sa.i*      *re.N-go.u*      →      *ko.ku-re.N*      (\**ko-re*)  
          nation-edge      connect-join  
          ‘United Nations’

Example (40) of a Sino-Japanese compound noun illustrates that noun clippings as well as clippings of Sino-Japanese origin have much more analyzable material in their structures which necessitates thorough morphological analysis in the early phase of the clipping process.

When an expression’s syntactic class is assessed, adjectives and verbs are coded to clip to the first two morae and pass through the early phase without a need for in-depth morpheme analysis due to their class-specific obligatory marking. Nouns, however, require an assessment of language origin in order to discern the degree of how thorough of a morpho-semantic analysis is needed. This analysis determines which morphemic components, if any, are to be selected for retention and therefore language origin seems to offer an important contribution to Japanese clipping. As an example, a loanword noun will be recognized in origin as a loan and selected to clip to a minimum number of morae plus any derivational affixes it has which are key to interpretation. In the case of having a key derivational affix, the loan will then most likely distribute its required morae across the clipped base and the affix, seen in (41, 42) where the base has been clipped to just one mora and the affix completes the overall mora requirement.

(41) *po.ru.to.ga.ru-* + *-go*      →      *po-go*      ‘Portuguese language’  
          Portugal      language  
          ‘Portugal’      ‘language’

(42) <i>i.ta.ri.a-</i>	+ <b>-go</b>	→	<i>i-go</i>	‘Italian language’
Italy	language			
‘Italy’	‘language’			

(41) and (42) are expressions gathered from the database wherein it is evident that the suffix, which is Sino-Japanese in origin, has been retained. When comparing (41) and (42) to wholly Sino-Japanese expressions with the same *-go* ‘language’ affix attached, as in (43) and (44) which are also from the database, the clipped outputs of (43) and (44) consist of a two-mora base rather than a one-mora base as seen in the loanword expressions containing the same Sino-Japanese affix. These two-mora bases in Sino-Japanese clippings correspond to morphemes whereas the one-mora bases in the loanwords have no morphological structure to analyze.

(43) <i>ga.i-ko.ku-</i>	+ <b>-go</b>	→	<i>ga.i-go</i>	‘foreign language’
outside-nation	language			
‘foreign nation’	‘language’			

(44) <i>ka.N-ko.ku-</i>	+ <b>-go</b>	→	<i>ka.N-go</i>	‘Korean language’
Korea-nation	language			
‘(South) Korea’	‘language’			

Thus, an expression of native Japanese or Sino-Japanese origin requires more processing due to its morphological structure as opposed to loanwords. After an analysis of syntactic class and language origin occur, the morpho-semantics determine which components of the expression exhibit the best saliency for interpretation in a shorter form. Using the example of the *-go* ‘language’ affix in (41-44), it is evident that this affix provides crucial information for these expressions and is therefore carried through to its clipped forms.

In compound expressions, as discussed in Section 2.2, the most frequent type of clipping retains the first morpheme of each compound element in a two-word compound. However, as seen in the database in Appendix 1, the first morphemes are not always the ones which appear in clipped outputs. Furthermore, in compounds containing many words, many morphemes are usually retained. Examples are given in (45) where the expected first morphemes are retained, in (46), where the first-morpheme double clipping pattern is not followed, and (47), where multiple morphemes are retained.

(45) <i>byo.u-ki</i>	<i>kyu.u-ka</i>	→	<i>byo.u-kyu.u</i>	‘sick leave’
<b>ill</b> -spirit	<b>rest</b> -leisure			
‘sick’	‘holiday’			

(46) <i>syu.s-sa.N</i>	<i>kyu.u-ka</i>	→	<i>sa.N-kyu.u</i>	‘maternity leave’
exit- <b>produce</b>	<b>rest</b> -leisure			
‘childbirth’	‘holiday’			



(47) <i>zi-do.u</i>	<i>ha.N-ba.i-ki</i>	→	<i>zi-ha.N-ki</i>	‘vending machine’
<b>self</b> -move	<b>market</b> -sell- <b>machine</b> <sub>AFF</sub>			
‘automation’	‘vending’		‘machine’	

In (45-47), it seems that morpheme retention is dependent on the semantics of the morphemes, rather than the sequence in which the morphemes occur. This is especially evident when comparing (45) and (46), as both of these compounds pertain to types of work-leave where the morphemes corresponding to the meanings of ‘ill’ and ‘produce’ are retained. Additionally, in compounds, derivational affix retention cannot always be anticipated. For example, in the database in Appendix 1, the affix *-sho* ‘place’ has fewer instances of retention compared to the affix *-hou* ‘law’, examples of which are shown in (48) and (49). Why certain derivational affixes are given more weight in selection for retention than others is not yet clear and is something which merits further study as it is beyond the scope of this thesis. However, I hypothesize that this may be due to the pragmatics of formality as mentioned in Section 5.2, as laws are typically formal documents or concepts while places are rather generic.

(48) <i>ro.u-do.u</i>	<i>ki-zyu.N</i>	+ <i>-ho.u</i>	→	<i>ro.u-ki-ho.u</i>	‘labour standards law’
<b>labour</b> -work	<b>basis</b> -conform	<b>-law</b>			
‘labour’	‘standard’	‘law’			

(49) <i>ka-te.i</i>	<i>sa.i-ba.N</i>	+ <i>-syo</i>	→	<i>ka-sa.i</i>	‘family court’
<b>house</b> -yard	<b>judge</b> -seal	place			
‘family’	‘judgement’	‘place’			

As shown in (48, 49), the morphological analysis of an expression is seemingly vital to the clipping process in Japanese. Moreover, this is implied by the results of the survey study in Chapter 5, as participants showed the highest average acceptability judgements for the compound noun category. The results of the noun category judgements indicate that speakers are analyzing the morpheme components in a source expression compared to the morphemes in the clipped outputs. This is seen particularly in examples (38a-c) in Section 5.1 where participants favoured the second morpheme of the first word, the first morpheme of the second word, and the derivation affix in a two-word affixed compound. Thus, after syntactic class is assessed then language origin and morpho-semantics are analyzed if applicable, after these analyses, expressions proceed to the late phase of clipping.

## **6.2 Late-phase clipping**

In the late phase of clipping, inflection and phonology carried out. Inflectional affixes such as *-i* for adjectives, *-ru* for verbs, and case affixes are attached to the clipped forms created in the early phase of clipping. For nouns, the late-phase is only used for case marking, as mentioned in Section 6.1, where inflection was shown to occur after derivational affixes had been attached. Adjectives and verbs, on the other hand, pass through the early phase typically without undergoing derivation; thus, they are simply clipped to a first two-mora template, then sent off to the late phase for their inflection. Evidence for this can be seen in database examples like the compound adjective *ki-syoku waru-i* ‘sickening, creepy’, shown in (50).

(50) *ki-syo.ku*      *wa.ru-i*      →      *ki-syo-i*      ‘sickening, creepy’  
          spirit-colour      bad-NON-PAST

In (50), the morpheme boundary of *syoku* is violated as only the first mora *syo* is retained. This is the opposite of what would be expected in a noun clipping where the integrity of the mora sequencing which corresponds to a morpheme would be maintained. What this seems to imply is that for adjectives, because there is obligatory tense marking which is class-specific, the clipping process uses class-specificity to allow for morpheme boundary violation. Thus, clipping an adjective to its first two morae even if the selection of these morae breaks a morpheme boundary seems to be sufficient. As verbs also have class-specific obligatory tense marking, they seem to undergo this same type of clipping where a morpheme's moraic sequencing is broken; this is shown in (51).

(51) *da-be.N-O*                      *ro.u su-ru*                      →                      *da.be-ru*                      ‘to jabber, chitchat’  
trivial-speech-ACC                      trifle do-NON-PAST

Because the clipping of adjectives and verbs show a predictable pattern, I have illustrated two inflectional operations for adjectives in (52) and verbs in (53) with corresponding examples in (54-55). Following that, I have created a clipping rule for adjectives and verbs which is shown in (56) with corresponding examples in (57-58). A more detailed explanation for these operations and rules is in Section 6.3.

(52) Inflection Operations: Adjectives

$\left( \begin{array}{l} \text{x-} + -i \\ \text{'non-past'} \\ \text{Adj; Slot I} \end{array} \right)$	$\left( \begin{array}{l} \text{x-} + -katta \\ \text{'past'} \\ \text{Adj; Slot I} \end{array} \right)$
---	---

(53) Inflection Operations: Verbs

$\left( \begin{array}{l} \text{x-} + -(r)u \\ \text{'non-past'} \\ \text{V; Slot I} \end{array} \right)$	$\left( \begin{array}{l} \text{x-} + -ta \\ \text{'past'} \\ \text{V; Slot I} \end{array} \right)$
--	--

(54) TUYOI 'strong'

<i>tuyo-</i> + <i>-i</i>	→	<i>tuyoi</i>	'strong-NON-PAST'
<i>tuyo-</i> + <i>-katta</i>	→	<i>tuyokatta</i>	'strong-PAST'

(55) KANGAERU 'think'

<i>kangae-</i> + <i>-ru</i>	→	<i>kangaeru</i>	'think-NON-PAST'
<i>kangae-</i> + <i>-ta</i>	→	<i>kangaeta</i>	'think-PAST'

(56) Clipping Rule for adjectives and verbs

$$\left( \begin{array}{l} \mu_1\mu_2\mu_3\dots- \rightarrow \mu_1\mu_2- \\ Z('X') \\ \Sigma_{Adj, V} \rightarrow \Sigma_{Adj, V} \end{array} \right)$$

(57) UZATTAI 'annoying'

<i>u.zat.ta-</i>	→	<i>u.za-</i>	→	<i>u.za- + -i</i>	→	<i>uza-i</i>
Base		Clipped Base		Inflection		Clipped Output

(58) SYASYARIDERU 'to partycrash'

<i>sya.sya.ri.de-</i>	→	<i>sya.sya-</i>	→	<i>sya.sya- + -ru</i>	→	<i>syasya-ru</i>
Base		Clipped Base		Inflection		Clipped Output

The clipping rule which applies to adjectives or verbs results in the lexeme base being reduced to just two morae before inflectional operations. In these types of clippings, the affix appears in the clipped output which suggests that these expressions' inflectional material has been added after the clipping process.

The end of the late phase consists of phonological analysis wherein prosodic minimality constraints are assessed and then the spellout. By this point, an expression should meet the two-mora, two-syllable minimum in either its base or through a combination of a base truncatum and a derivational or inflectional affix, or in rare cases, affixes alone. For example, *ki.za.wa.ri* →

*ki.za* ‘disagreeability’ meets the moraic and syllabic minimum by forming its truncatum in the base alone, *po.ru.to.ga.ru-go* → *po-go* ‘Portuguese language’ meets the minimum by combining a base truncatum and an affix, and *da.i.ga.ku-i.N-se.i* → *i.N-se.i* ‘graduate student’ meets the minimum through retaining two affixes. Naturally, only a well-formed clipping will proceed to spellout and be used. There are however, a few examples which seem to involve breaking the order of the clipping process or the expected output for a clipping such as hypocoristic formation involving moraic lengthening as well as clippings which have two outputs that are both used by speakers. For example, a name such as *Mariko-tyan* may clip to *Maa-tyan* which shows a lengthening of the vowel in its clipped base. This lengthening may indicate that clipping does not isolate the phases of grammar apart from one other such as morphology first, phonology second. Additionally, *zinriki-sya* ‘rickshaw’ has two possible clipped outputs: *zin-sya* and *riki-sya*. More research is needed to investigate the reason why vowel lengthening or multiple clipped outputs occur, but I hypothesize that perhaps there is a level in the clipping process that the phonology accesses before the early phase of clipping has been completed. This would possibly allow for an explanation of vowel lengthening in hypocoristics. I also hypothesize that for clippings which have two outputs, these may occur because the expected output may be homophonous with another word to a degree that speakers disprefer mixing the two and therefore create a second clipped form to compensate. For example, the clipped output *zin-sya* ‘rickshaw’ is homophonous with the word *zin-sya* ‘humanity’. However, these are topics I will leave for future research and will discuss further in Chapter 7.

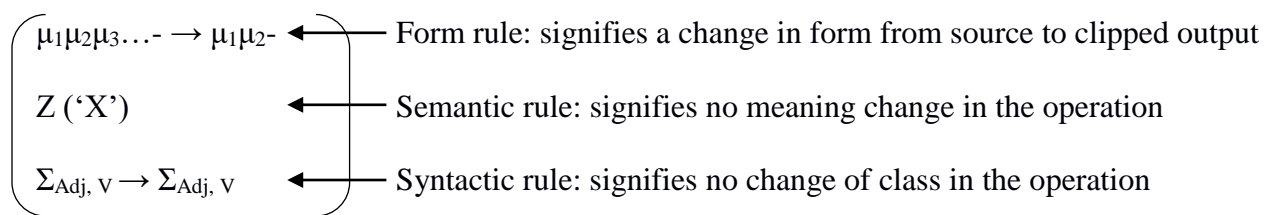
### 6.3 Clipping in the framework of Process and Paradigm Morphology

A review of the literature in Chapter 2 reveals that clipping is understudied in morphological analyses. The reason for this may be due to some claiming that clipping is too unpredictable to analyze morphologically (cf. e.g. Adams 1973: 135, Bauer 1983: 233), or that it is not worthy of being included in theoretical discussions (cf. e.g. Scalise 1984: 94, Spencer 1991: 461) as seen in Section 2.1. Despite this, clipping has been studied morphologically as well as lexically by Winters (2017) who has created clipping operations for Ukrainian blends based on Process and Paradigm Morphology models of word-formation proposed by Pounder (2000). As mentioned in Section 2.3, because this framework specifically investigates morphological structures and how they are stored in the lexicon, it is an ideal framework to analyze clipping in relation to my research questions proposed in Section 1.2. Additionally, while Winters (2017) has studied clipping in this framework, she has only done so in the context of how clippings combine to form blends; therefore, there has been no substantial application of this framework regarding clipping as a process which produces standalone forms used in their own capacities.

The premise of the Process and Paradigm Morphology framework is that morphology is assumed to be an individual and separately defined component of the grammar apart from but interacts with syntax, semantics, phonology, and the lexicon (Pounder 2000: 35). The interaction between morphology and the lexicon is the primary focus of this section and the research questions of this thesis. In this framework, the lexicon is viewed as a static repository of bases and unpredictable information, while the morphology is dynamic. Lexeme bases from the lexicon are modified formally in the morphology via word-formation and/or inflection operations which map onto syntax as well as semantics. Operations are sets of rules applied to a base to

modify it. The three types of operations are: form or morphological rules which modify form, semantic rules which modify meaning, and syntactic rules which modify class such as changing a noun to an adjective. As shown in Section 6.2, the primary function of the clipping rule is to focus on form, as clippings does not change an expression's meaning or its lexico-syntactic class. The clipping rule shown in (59) is given brief explanation as to how each component works.

(59) Clipping Rule for adjectives and verbs



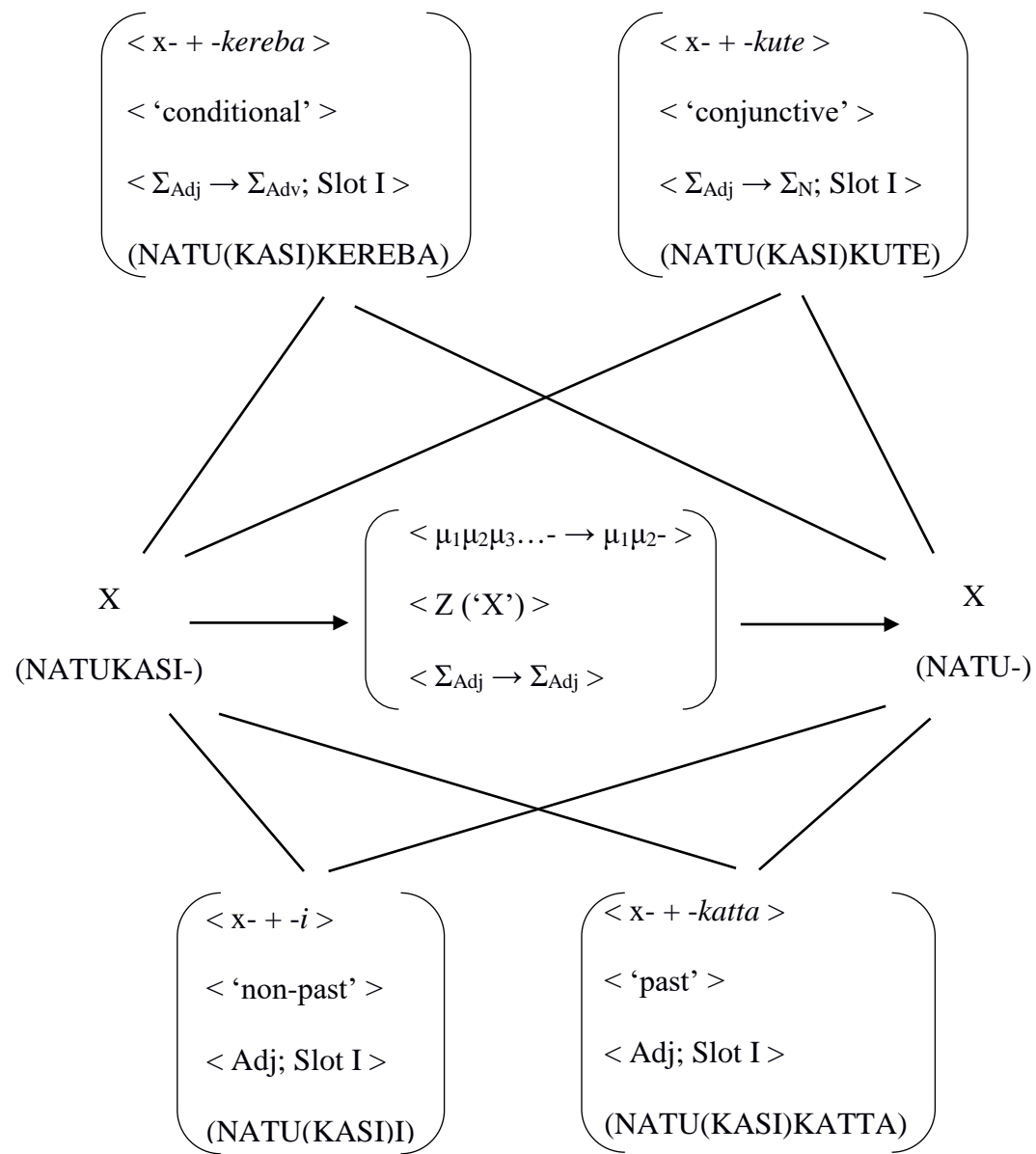
The clipping rule in (59) establishes that the form is the only part which changes in the clipping of adjectives and verbs in Japanese. Formally, the source expression changes by reducing to just two mora, while semantically and syntactically, there are no changes.

How clipped forms created by the operation in (59) relate to their source expressions may be represented in the lexicon through paradigmatic structures. This concept is a cornerstone of the Process and Paradigm framework as it treats word-formation as paradigmatic, meaning that a base in the lexicon is interrelated with all derivations and inflections pertaining to it. Pounder (2000: 82-84) claims that this paradigmaticity is evident in when speakers access a word-form and other word-forms similar to or derived from the accessed word-form are also activated, for example accessing the word-form *book* may activate other forms relative to that word like *books*, *bookshelf*, *bookstore*, *bookend*, and *bookbag*.



A lexical paradigm for the Japanese adjective base NATUKASI- is shown in Figure 6 and Figure 7 and contains the clipped base NATU-. For both of these bases, forms which are likely to be paradigmatically related are shown as well. The inflectional relations are shown in Figure 6 and involve a few additional operations, while the derivational relations are in Figure 7 which involve word-formation relations proposed by Pounder (2000: 110-121) and Kunduraci (2013: 34). Ideally, all of these forms would coincide in one paradigm; however, since only a two-dimensional model can be represented in this thesis, two paradigm diagrams have been made.

Figure 6

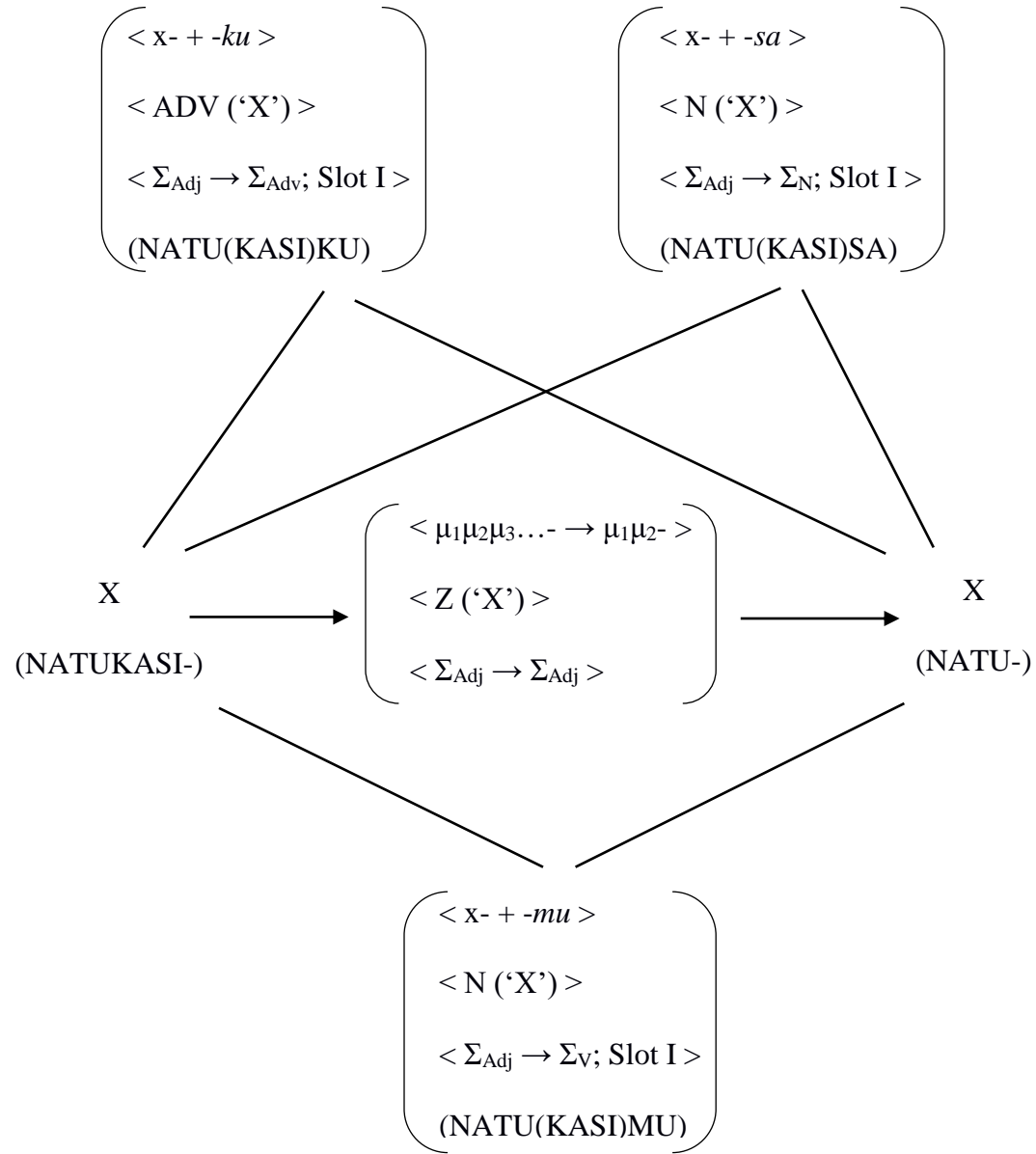


The base lexeme in the paradigm in Figure 6 shows the adjective base NATU(KASI)- ‘nostalgic’ and a few of its inflectional forms. It is assumed that within the paradigm a clipped base is able to be inflected in the same ways as its source is able to be inflected. The inflected paradigmatic relations to NATU(KASI)- ‘nostalgic’ are described in more detail in (60a-d).

(60)

Inflected Whole Form	Inflected Clipped Form	Gloss
a. <i>natukasi-i</i>	<i>natu-i</i>	‘is nostalgic’
b. <i>natukasi-katta</i>	<i>natu-katta</i>	‘was nostalgic’
c. <i>natukasi-kereba</i>	<i>natu-kereba</i>	‘if nostalgic’
d. <i>natukasi-kute</i>	<i>natu-kute</i>	‘being nostalgic’

Figure 7



The derivational paradigm in Figure 7 shows a few derivational forms of the base NATU(KASI)- and as in Figure 6, it is similarly assumed that the clipped base is able to derive any forms that the whole base can. More detail about the derived forms in Figure 7 are seen in (61a-c).

(61)

Derived Whole Form	Derived Clipped Form	Gloss
a. <i>natukasi-ku</i>	<i>natu-ku</i>	‘nostalgically’
b. <i>natukasi-sa</i>	<i>natu-sa</i>	‘nostalgicness, nostalgia’
c. <i>natukasi-mu</i>	<i>natu-mu</i>	‘be nostalgic for, yearn for’

The paradigms in Figure 6 and Figure 7 are by no means exhaustive, but only a suggestive model of how a paradigm structure may exist and the interrelated forms derived from the base lexeme and its clipped form. For example, another possible paradigmatic relation is seen in specific compound clippings where the first morpheme has been clipped from the source and seems to have become lexicalized as an affix. An example of this is seen in the word *daigaku* which is not known to be clipped on its own, but is clipped when part of a compound. The clipping of *dai* from *daigaku* in compounds such as *tou-kyou dai-gaku* → *tou-dai* ‘Tokyo University’, *kyou-to dai-gaku* → *kyou-dai* ‘Kyoto University’, and many other Japanese

universities has been disassociated to a degree where *-dai* can now be suffixed to any proper noun to indicate that the noun is a university as seen in (62).

(62) *Haabaado-dai*                      ‘Harvard University’

The example in (62) of the possible lexicalization of a truncatum is also seen in other institution-related expressions, like *-ken* from *kenkyuusyo* ‘research institute’, *-syoo* from *syougakkou* ‘elementary school’, *-tyuu* from *tyuugakkou* ‘middle school’, and *-kou* from *koutou gakkou* ‘high school’. This phenomenon may be able to explain some of the semi-affixes mentioned in Section 4.2; for example, *-kai* may be a lexicalized truncatum from *kaigi* ‘meeting’, just as *-syo* may be one from *basyo* ‘location’ in which the second morpheme is unexpectedly used rather than the first. Overall, this topic requires further research and has the potential to provide even more insight into clipping and the lexicon.

## 6.4 Conclusion

The positions argued for in this chapter have shown evidence based on the database corpus and survey study conducted for this thesis, that a clipping model which consists of early and late phases for clipping provides more predictability in how Japanese clipped outputs are formed using a combination of morphological structure, semantics, and phonology. How these clippings relate to the source form is best accounted for using the Process and Paradigm Morphology approach designed by Pounder (2000) and expanded upon by Kunduracı (2013) and

Winters (2017), as this framework corresponds to the paradigmaticity of bases to derived word-forms and word-formation morphology.

## CHAPTER 7: CONCLUSION

This thesis has argued with evidence from Japanese that morphology plays a substantial role in clipping as a word-formation process. Japanese was chosen as the focus for this thesis as it is a more morphologically transparent language than English, the language with respect to which clipping is most often discussed, and the Japanese clipping process is productive. While clipped forms in English are often structurally violatory, Japanese is not without similar violations such as breaking morpheme boundaries. Despite this, violations which occur on part of Japanese clippings show predictability. By analyzing Japanese clipping from a morphological perspective, it is evident that there is predictability in the clipping process which can be accounted for by not only the morphology, but also the semantics and phonology of a clipped form. The database compiled for this thesis identified a variety of clipping types in Japanese, noting that the most frequent types are multi-clipping and double-clipping. In regard to multi-clipping which is found in Section 4.2, this is a specific contribution of this thesis as this type of clipping had not been defined before. The pilot survey study conducted for this thesis showed trends that speakers preferred clipping forms which were longer than predicted by the prosodic minimality constraint established by Itō (1990: 233) and that speakers preferred clipped forms which had affixes. These findings show that morphological structures such as affixes are evaluated in the judgement of clipped forms as being influential on their acceptability.

The applications of Process and Paradigm Morphology for clipping and the phase model of clipping that I have shown and argued for in this thesis are valid for Japanese; however, these concepts may also be applicable to other languages. In English, there are suffix clippings much like in Japanese as attested in Section 2.1 by Mattiello (2013: 81). For example, *spectacles* referring to ‘glasses’ is frequently clipped to *specs*, a form which has the plural -s suffix in the



output. This clipped form and forms similar to this may relate to the early and late-phase model of clipping wherein the source *spectacles* is the base lexeme which is modified by the clipping process shortening the lexeme then in the late-phase attaching the plural suffix *-s* to produce *specs*. Additionally, the Process and Paradigm morphology model which I have used to analyze clipping provides insight into the lexical status of clipped forms. As discussed in Section 2.1, Mel'čuk (2006: 311) claims that clipping is a diachronic process whereby clipped forms are static in the lexicon which indicates that clipping is not word-formation. However, a paradigm, as claimed by Pounder (2000: 45, 91), is dynamic; therefore, while some clipped forms have become lexicalized and static, there are many clipped forms which are dynamically created through the operations organized within paradigm structure. For example, *pants* from *pantaloon*s is a lexicalized word for most people and has lost recognition with its source word; therefore, the form *pants* is static and not created anew each time it is used, as Mel'čuk (2006) suggests. However, before a clipped form can become static, it has to be creatively and actively formed by speakers, meaning that during such a phase in the clipped form's development, it is dynamic and synchronic. This suggests that clipping itself is a dynamic process, but that clipped forms can be either static or dynamic, the status of which differs for each clipped form and may be affected by frequency or how long the clipped form has been in use.

Future research that would supplement the evidence for morphology in clipping are topics such as the investigation of hypocoristic clippings mentioned in section 6.2, in depth analyses of the semantics of morphemes mentioned in section 4.2, and historical accounts of clipping which are discussed partially by Labrune (1999: 109) in the context of *nyoubou kotoba* which refers to women's court language originating in eighth century Japan. Hypocoristic clippings behave differently than word clippings as they are the only clippings which undergo

compensatory lengthening on the vowel of the base when the base is reduced to one mora. The fact of this vowel lengthening indicates the possibility that the phonology interacts with the morphology throughout the clipping process as opposed to separately after the morphological analysis has been achieved. Likewise, a deeper analysis of the morphemes involved in Sino-Japanese clippings may provide further insight on how semantics plays a role in which truncata will be selected for retention in the clipping process. This thesis so far offers a rather cursory look into the involvement of semantic in clipping; thus, it would benefit the research of this thesis for more semantic analysis to be done. Additionally, investigation the history of clipping in Japanese can illuminate how the process has changed over time and provide a better foundation for understanding the static-dynamic aspects of clipped forms and lexical storage.

In conclusion, while this thesis offers insight and evidence for the role of morphology in clipping, it is not an exhaustive account of clipping in Japanese or as a process in entirety. As discussed above, many directions of future research would benefit the findings in this thesis which lie in other spheres of linguistics.

## REFERENCES

- Adams, V. 1973. *An introduction to modern English word-formation*. London: Longman.
- Akaike, H. 2011. Akaike's information criterion. In *International Encyclopedia of Statistical Science*. Berlin: Springer Berlin Heidelberg. 22-25.
- Asahi Newspaper. 2011. *Vox populi, vox dei – tensei ningo*. Spring. Hara Shobou Publishing.
- Bat-El, O. 2000. The grammaticality of “extragrammatical” morphology. In *Extragrammatical and marginal morphology*. Munich: Lincom Europa. 61-84.
- Bates D., Maechler M., Bolker B., & Walker, S. 2015. *lme4: linear mixed-effects models using Eigen and S4*. R package version 1.1-10. <http://cran.r-project.org/package=lme4>.
- Bauer, L. 1983. *English word-formation*. Cambridge: Cambridge University Press.
- Bauer, L., Lieber, R., & Plag, I. 2013. *The Oxford reference guide to English morphology*. Oxford: Oxford University Press.
- Beard, R. 1995. *Lexeme-morpheme base morphology*. State University of New York Press.
- Campbell, L. 2013. *Historical linguistics: an introduction*. Edinburgh University Press.
- Carr, D. 1939. The New Official Romanization of Japanese. In *Journal of the American Oriental Society*, 59(1). American Oriental Society. 99-102.
- Dressler, W., and Merlini-Barbaresi, L. 1994. *Morphopragmatics: diminutives and intensifiers in Italian, German, and other languages*. Berlin: Mouton de Gruyter.

- Dressler, W. 1997. Universals, typology, and modularity in Natural Morphology. In *Language history and linguistic modelling*. Berlin: Walter de Gruyter. 1399-1424.
- Dressler, W. 2000. Extragrammatical vs marginal morphology. In *Extragrammatical and marginal morphology*. Munich: Lincom Europa. 1-10.
- Fandrych, I. 2004. *Non-morphematic word-formation processes: A multi-level approach to acronyms, blends, clippings and onomatopoeia*. Bloemfontein: University of Free State, unpublished doctoral dissertation.
- Gries, S. 2006. Cognitive determinants of subtractive word formation: a corpus-based perspective. In *Cognitive Linguistics*, 17(4). Walter de Gruyter. 535-558.
- Hinds, J. 1986. *Japanese: descriptive grammar*. New York: Routledge.
- Irwin, M. 2011. Mora clipping of loanwords in Japanese. In *Journal of Japanese Linguistics*, 27. Ohio State University. 71-82.
- Ishiwata, T. 1993. Waseieigo to kokusaitsuuyoo [Japanese-English and international common languages]. In *Gairaigo* [Foreign words]. Tokyo: Kawade-syoboo shin-sha.
- Itō, J. 1990. Prosodic minimality in Japanese. In M. Ziolkowski et al. (eds.), *Chicago Linguistic Society* 26(2). Chicago: Chicago Linguistic Society. 213-239.
- Itō, J., and Mester, A. 1999. The phonological lexicon. In *The handbook of Japanese linguistics*. Oxford, Wiley and Sons, Inc. 62-100.

Iwasaki, S. 2002. *Japanese*. London Oriental and African Language Library. John Benjamins Publishing Company.

Iwasaki, S. 2013. *Japanese – Revised Edition*. London Oriental and African Language Library, John Benjamins Publishing Company.

Jespersen, O. 1942. *A modern English grammar on historical principles: morphology*. Copenhagen: E. Munksgaard.

Jisho Online Japanese Dictionary. (n.d.). <http://jisho.org/>

Kleiber, G. 1990. *La sémantique du prototype: catégories et sens lexical* [The semantics of the prototype: categories and lexical meaning]. Paris: Presses Universitaires de France.

Kubozono, H. 1993. Review of W.U. Dressler et al. (eds.), *Contemporary morphology* (Berlin: Mouton de Gruyter). In *Gengo kenkyu* [Journal of the linguistic society of Japan], The Linguistic Society of Japan.

Kunduracı, A. 2013. *Turkish noun-noun compounds: a process-based paradigmatic account*. Calgary: University of Calgary, unpublished doctoral dissertation.

Labrune, L. 1999. Les dérivés évaluatifs du Japonais et l'émergence de la marque. In *La morphologie des dérivés évaluatifs*. Lille: L'U.M.R. 8528 du C.N.R.S. (SILEX). 107-116.

Ladefoged, P. 1982. *A course in phonetics*. New York: Harcourt Brace.

- Lakoff, G. 1987. *Women, fire, and dangerous things*. Chicago: University of Chicago Press.
- Lappe, S. 2003. Monosyllabicity in prosodic morphology: the case of truncated personal names in English. In *Yearbook of Morphology* 2002. Eds. Booij, G., and van Marle, J. Dordrecht: Kluwer Academic Publishers. 135-186.
- Lopez-Rúa, P. 2002. On the structure of acronyms and neighbouring categories: a prototype-based account. In *English Language and Linguistics* 6(1): 31-60. Cambridge University Press.
- Marchand, H. 1969. *The categories and types of present-day English word-formation*. Munich: C.H. Beck'sche Verlagsbuchshandlung.
- Marslen-Wilson, W., and Welsh, A. 1978. Processing interactions and lexical access during word-recognition in continuous speech. In *Cognitive psychology*, 10(1). Amsterdam: Elsevier. 29-63.
- Mattiello, E. 2013. *Extra-grammatical morphology in English: Abbreviations, blends, reduplicatives, and related phenomena*. Hawthorne: Walter de Gruyter.
- McCawley, J. 1968. *The phonological component of a grammar of Japanese*. The Hague: Mouton de Gruyter.
- Mel'čuk, I. 2006. *Aspects of the theory of morphology*. Berlin: Mouton de Gruyter.
- Nishihara, T., van de Weijer, J., & Nanjo, K. 2001. Against headedness in compound truncation: English compounds in Japanese. In *Studies in generative grammar: issues in Japanese*

- phonology and morphology*. Eds. van de Weijer, J., and Nishihara, T. Berlin: Mouton de Gruyter. 299-324.
- Nooteboom, S. 1981. Lexical retrieval from fragments of spoken words: beginnings vs endings. In *Journal of Phonetics*, 9. London: Academic Press Inc. 407-424.
- Ofuji, K. (n.d.). *Kanji used as a prefix and suffix*. Lewiston: Bates College. Retrieved from <http://abacus.bates.edu/~kofuji/StudyResources/kanji.html>
- Paster, M. 2015. Phonological analysis. In *The Oxford Handbook of Linguistic Analysis*. Eds. Heine, B. and Narrog, H. Oxford: Oxford University Press. 525-544.
- Petrulyté, E. 2015. *Let's make them shorter! Abbreviated loanwords in Japanese*. Lund: Lund University, unpublished bachelor's thesis.
- Plag, I. 2003. *Word-formation in English*. Cambridge: Cambridge University Press.
- Poser, W. J. 1990. Evidence for foot structure in Japanese. In *Language*, 66(1). Eds. Thomason, S. 78-105.
- Pounder, A. 2000. *Processes and paradigms in word-formation morphology*. Berlin: Mouton de Gruyter.
- Prem, M. 1993. *Nichiei ryakugo – ryakuya jiten* [Japanese-English abbreviation dictionary]: A dictionary of abbreviations and truncations. Tokyo: Maruzen.

- R Core Team. 2015. *R: a language and environment for statistical computing*. Vienna: R Foundation for Statistical Computing. <http://www.r-project.org/>.
- Roca, I., and Felíu, E. 2003. Morphology in truncation: the role of Spanish desinence. In *Yearbook of Morphology 2002*. Eds. Booij, G., and van Marle, J. Dordrecht: Kluwer Academic Publishers. 187-243.
- Rosch, E. 1975. Cognitive representations of semantic categories. In *Journal of experimental psychology*, 104(3). Eds. Gauthier, I. Washington D.C.: American Psychological Association. 192-233.
- Scalise, S. 1984. *Generative morphology*. Dordrecht: Foris Publication.
- Shibatani, M. 1990. *The languages of Japan*. Cambridge: Cambridge University Press.
- Shirane, H. 2005. *Classical Japanese: a grammar*. New York City: Columbia University Press.
- Siegel, D. 1974. *Topics in English morphology*. Cambridge: Massachusettes Institute of Technology, unpublished doctoral dissertation.
- Spencer, A. 1991. *Morphological theory*. Cambridge: Basil Blackwell.
- Vennemann, T. 1988. *Preference laws for syllable structure*. Berlin: Mouton de Gruyter. Association, poster presentation.
- Wilford, D. 2012. Contact and borrowing. In *The handbook of Language Contact*. Eds. Hickey, R. Hoboken: Wiley-Blackwell. 170-187



- Winter, B. 2014. *A very basic tutorial for performing linear mixed effect analyses*. Retrieved from [http://www.bodowinter.com/tutorial/bw\\_LME\\_tutorial2.pdf](http://www.bodowinter.com/tutorial/bw_LME_tutorial2.pdf).
- Winter, B. 2016. *Linear models and linear mixed effect models in R*. Retrieved from [http://www.bodowinter.com/tutorial/bw\\_LME\\_tutorial1.pdf](http://www.bodowinter.com/tutorial/bw_LME_tutorial1.pdf).
- Winters, S. 2017. *Lexical blending in Ukrainian: system or sport?* Calgary: University of Calgary, unpublished doctoral dissertation.
- Yamaguchi, T. 2007. *Japanese linguistics: an introduction*. Continuum Publishing. 98-131.
- Zokugo Dictionary Online. (n.d.). <http://zokugo-dict.com/>
- Zwicky, A., and Pullum, G. 1987. Plain morphology and expressive morphology. In *Proceedings of the thirteenth annual meeting of the Berkeley linguistic society*. Eds. Aske, J. Berkeley: Berkeley Linguistic Society. 330-340.

## APPENDIX 1: Clipping Database

Source Expression	Clipped Output	Form. Type	Phon. Type	Class	Expr. Type	Afx. stat	Gloss	Affix Meaning	Origin
imo kusa-i	imo-i	inflection	mid	Adjective	CompAdj	retained	country bumpkin-esque	i (adjective)	Japanese
ki mazu-i	ki-ma-i	inflection	mid	Adjective	CompAdj	retained	unpleasant	i (adjective)	Japanese
kisyoku waru-i	kisyo-i	inflection	mid	Adjective	CompAdj	retained	sickening	i (adjective)	Japanese
mendou kusa-i	mendo-i	inflection	mid	Adjective	CompAdj	retained	bothersome	i (adjective)	Japanese
amerika-sei zidou-sya	ame-sya	derivation	double	Noun	CompNoun	deleted	American car	sei (type)	Mixed
amerika-sei zidou-sya	ame-sya	derivation	double	Noun	CompNoun	retained	American car	syā (vehicle)	Mixed
anzen hosyou rizi-kai	an-po-ri	derivation	multi	Noun	CompNoun	deleted	UN security council	kai (association)	Sino-Japanese
asa itiban	asa-iti	derivation	double	Noun	CompNoun	N/A	first thing in the morning	N/A	Mixed
azia ahurika mondai kenkyuu-kai	a-a-ken	derivation	multi	Noun	CompNoun	deleted	afro-asian study group	kai (association)	Mixed
azia keizai kenkyuu-syo	azi-ken	derivation	double	Noun	CompNoun	deleted	institute of developing economies	syō (place)	Mixed
azia mondai kenkyuu-kai	a-ken	derivation	double	Noun	CompNoun	deleted	asian problems study group	kai (association)	Mixed
baisyun bousi-hou	bai-bou-hou	derivation	multi	Noun	CompNoun	retained	anti-prostitution law	hou (law)	Sino-Japanese
beika kondan-kai	bei-kon	derivation	double	Noun	CompNoun	deleted	round table conference on rice price	kai (association)	Sino-Japanese
beika singi-kai	bei-sin	derivation	double	Noun	CompNoun	deleted	rice price deliberative council	kai (association)	Sino-Japanese
beikoku taisi-kan	bei-tai	derivation	double	Noun	CompNoun	deleted	American embassy	kan (building)	Sino-Japanese
boutyuu zyosou-ki	bou-zyo-ki	derivation	multi	Noun	CompNoun	retained	insecticide/herbicide sprayer	ki (machine)	Sino-Japanese
bukka mondai kondan-kai	buk-kon	derivation	double	Noun	CompNoun	deleted	special committee on commodity prices	kai (association)	Sino-Japanese
bukka-tou tokubetu iin-kai	but-toku-i	derivation	multi	Noun	CompNoun	deleted	special committee on prices	kai (association)	Sino-Japanese
bukka-tou tokubetu iin-kai	but-toku-i	derivation	multi	Noun	CompNoun	deleted	special committee on prices	tou (etc)	Sino-Japanese
bungaku kenkyuu-kai	bun-ken	derivation	double	Noun	CompNoun	deleted	literature study group	kai (association)	Sino-Japanese
bunka dai-kakumei-ha	bun-kaku-ha	derivation	multi	Noun	CompNoun	deleted	cultural revolutionist	dai (large)	Sino-Japanese
bunka dai-kakumei-ha	bun-kaku-ha	derivation	multi	Noun	CompNoun	retained	cultural revolutionist	ha (faction)	Sino-Japanese
buturi tiryou	butu-ryou	derivation	double	Noun	CompNoun	N/A	physical therapy	N/A	Sino-Japanese
byouki kyuuuka	byou-kyuu	derivation	double	Noun	CompNoun	N/A	sick leave	N/A	Sino-Japanese
daigaku sotugyō	dai-sotu	derivation	double	Noun	CompNoun	N/A	university graduation	N/A	Sino-Japanese
dai-kibo kouri tenpo-hou	dai-tenpo-hou	derivation	multi	Noun	CompNoun	retained	large scale retail trade law	dai (large)	Sino-Japanese
dai-kibo kouri tenpo-hou	dai-tenpo-hou	derivation	multi	Noun	CompNoun	retained	large scale retail trade law	hou (law)	Sino-Japanese
dai-kibo zisin taisaku tokubetu soti-hou	zisin-hou	derivation	multi	Noun	CompNoun	deleted	law for emergency measures against large-scale earthquakes	dai (large)	Sino-Japanese
dai-kibo zisin taisaku tokubetu soti-hou	zisin-hou	derivation	multi	Noun	CompNoun	retained	law for emergency measures against large-scale earthquakes	hou (law)	Sino-Japanese
daitai kyūuzitu	dai-kyuu	derivation	double	Noun	CompNoun	N/A	compensatory holiday	N/A	Sino-Japanese
dantai kousyō	dan-kou	derivation	double	Noun	CompNoun	N/A	collective bargaining	N/A	Sino-Japanese
dendou kasya	den-sya	derivation	double	Noun	CompNoun	N/A	train	N/A	Sino-Japanese
denki tetudou	den-tetu	derivation	double	Noun	CompNoun	N/A	electric railway	N/A	Sino-Japanese
denki tikuon-ki	den-tiku	derivation	double	Noun	CompNoun	deleted	electric gramophone	ki (machine)	Sino-Japanese
denki tuusin kenkyuu-syo	tuu-ken	derivation	double	Noun	CompNoun	deleted	telecommunications research institute	syō (place)	Sino-Japanese
denpa kenkyuu-syo	denpa-ken	derivation	multi	Noun	CompNoun	deleted	radio research laboratory	syō (place)	Sino-Japanese
denryoku tyūuou kenkyuu-syo	den-tyuu-ken	derivation	multi	Noun	CompNoun	deleted	central power research institute	syō (place)	Sino-Japanese
densi honyaku-ki	den-yaku-ki	derivation	multi	Noun	CompNoun	retained	electronic translation machine	ki (machine)	Sino-Japanese
densi keisan-ki	den-san-ki	derivation	multi	Noun	CompNoun	retained	computer (old fashioned)	ki (machine)	Sino-Japanese
densi-siki takuzyou keisan-ki	den-taku	derivation	double	Noun	CompNoun	deleted	calculator	ki (machine)	Sino-Japanese
densi-siki takuzyou keisan-ki	den-taku	derivation	double	Noun	CompNoun	deleted	calculator	siki (style)	Sino-Japanese
douro koutuu-hou	dou-kou-hou	derivation	multi	Noun	CompNoun	retained	road traffic law	hou (law)	Sino-Japanese
eiga engeki roudou kumiai sou-rengou	ei-en-sou-ren	derivation	multi	Noun	CompNoun	retained	Japanese federation of film and theatre workers' trade unions	sou (general)	Mixed
eiga kenkyuu-kai	ei-ken	derivation	double	Noun	CompNoun	deleted	movie study group	kai (association)	Sino-Japanese
eiga rinri kitei kanri iin-kai	ei-rin	derivation	double	Noun	CompNoun	deleted	motion picture code of ethics	kai (association)	Sino-Japanese
eiga sangyō dantai rengou-kai	ei-dan-ren	derivation	multi	Noun	CompNoun	deleted	federation of Japanese film industry	kai (association)	Sino-Japanese
eigo kentei	ei-ken	derivation	double	Noun	CompNoun	N/A	English proficiency exam	N/A	Sino-Japanese
eikaiwa gakkou	eikaiwa	derivation	back	Noun	CompNoun	N/A	English conversation school	N/A	Sino-Japanese

Source Expression	Clipped Output	Form. Type	Phon. Type	Class	Expr. Type	Afx. stat	Gloss	Affix Meaning	Origin
eizou bunka seisaku-sya renmei	ei-bun-ren	derivation	multi	Noun	CompNoun	deleted	Japan association of cultural film producers	sya (person)	Sino-Japanese
gaikoku kawase oyobi gaikoku boueki kanri-hou	gai-tame-hou	derivation	multi	Noun	CompNoun	retained	foreign exchange & trade control law	hou (law)	Sino-Japanese
gaikoku sihon	gai-si	derivation	double	Noun	CompNoun	N/A	foreign capital	N/A	Sino-Japanese
gaikoku-sei zidou-sya	gai-sya	derivation	double	Noun	CompNoun	deleted	foreign car	sei (type)	Sino-Japanese
gaikoku-sei zidou-sya	gai-sya	derivation	double	Noun	CompNoun	retained	foreign car	sya (vehicle)	Sino-Japanese
gaikoku-zin touroku-hou	gai-tou-hou	derivation	multi	Noun	CompNoun	retained	alien registration law	hou (law)	Sino-Japanese
gaikoku-zin touroku-hou	gai-tou-hou	derivation	multi	Noun	CompNoun	deleted	alien registration law	zin (person)	Sino-Japanese
gakkou kyouiku-hou	kyouiku-hou	derivation	fore	Noun	CompNoun	retained	school education law	hou (law)	Sino-Japanese
gakusei waribiki	gaku-wari	derivation	double	Noun	CompNoun	N/A	student discount	N/A	Mixed
gakusei waribiki syoumei-syo	gaku-wari	derivation	double	Noun	CompNoun	deleted	certificate for student fare reduction	syo (document)	Mixed
gakusyuu sankou-syo	gaku-san	derivation	double	Noun	CompNoun	deleted	student reference book	syo (document)	Sino-Japanese
gan kenkyuu-syo	gan-ken	derivation	double	Noun	CompNoun	deleted	foundation for cancer research	syo (place)	Sino-Japanese
gendouki-tuki ziten-sya	gen-tuki	derivation	double	Noun	CompNoun	deleted	motorbike	sya (vehicle)	Mixed
gendouki-tuki ziten-sya	gen-tuki	derivation	double	Noun	CompNoun	retained	motorbike	tuki (provision)	Mixed
genkin yuusou-sya	gen-sou-sya	derivation	multi	Noun	CompNoun	retained	cash van	sya (vehicle)	Sino-Japanese
genshi bakudan	gen-baku	derivation	double	Noun	CompNoun	N/A	atomic/nuclear bomb	N/A	Sino-Japanese
genshi-ryoku hatuden-syo	gen-patu	derivation	double	Noun	CompNoun	deleted	nuclear powerplant	ryoku (power)	Sino-Japanese
genshi-ryoku hatuden-syo	gen-patu	derivation	double	Noun	CompNoun	deleted	nuclear powerplant	syo (place)	Sino-Japanese
genshi-ryoku nenryou	gen-nen	derivation	double	Noun	CompNoun	deleted	nuclear fuel	ryoku (power)	Sino-Japanese
genshi-ryoku sensuikan	gen-sen	derivation	double	Noun	CompNoun	deleted	nuclear submarine	ryoku (power)	Sino-Japanese
gensuibaku kinsi nihon kyougi-kai	gensui-kin	derivation	multi	Noun	CompNoun	deleted	Japan council against atomic and hydrogen bombs	kai (association)	Sino-Japanese
giin unei iin-kai	gi-un-i	derivation	multi	Noun	CompNoun	deleted	committee on rules & administration	kai (association)	Sino-Japanese
gunzi kakutai	gun-kaku	derivation	double	Noun	CompNoun	N/A	military expansion	N/A	Sino-Japanese
gyousei kaikaku	gyou-kaku	derivation	double	Noun	CompNoun	N/A	administrative reform	N/A	Sino-Japanese
gyousei kaikaku singi-kai	gyou-kaku-sin	derivation	multi	Noun	CompNoun	deleted	council on administrative reform	kai (association)	Sino-Japanese
gyousei kanri iin-kai	gyou-kan-i	derivation	multi	Noun	CompNoun	deleted	administrative management & inspection committee	kai (association)	Sino-Japanese
gyousei kanri-kyoku	gyou-kan-kyoku	derivation	multi	Noun	CompNoun	retained	administrative management bureau	kyoku (bureau)	Sino-Japanese
gyousei kanri-tyou	gyou-kan-tyou	derivation	multi	Noun	CompNoun	retained	administrative management agency	tyou (agency)	Sino-Japanese
hakai katudou bousi-hou	ha-bou-hou	derivation	multi	Noun	CompNoun	retained	anti-subversive activities law	hou (law)	Sino-Japanese
hati miri eisyu-ki	hati-miri	derivation	double	Noun	CompNoun	deleted	eight mm movie projector	ki (machine)	Mixed
hokkaidou keizai rengou-kai	dou-kei-ren	derivation	multi	Noun	CompNoun	deleted	Hokkaido economic federation	kai (association)	Sino-Japanese
honda gizyutu kenkyuu-syo	honda-gi-ken	derivation	multi	Noun	CompNoun	deleted	Honda technical research institute	syo (place)	Mixed
houan teisyutu dannen	teisutyu-dannen	derivation	multi	Noun	CompNoun	N/A	withdrawal of a bill	N/A	Sino-Japanese
houmon hanbai-hou	hou-han-hou	derivation	multi	Noun	CompNoun	retained	doorstep sale law	hou (law)	Sino-Japanese
housei singi-kai	housei-sin	derivation	multi	Noun	CompNoun	deleted	legislation council	kai (association)	Sino-Japanese
houya yongou-sen	hou-yon	derivation	double	Noun	CompNoun	deleted	radial road #4 around Tokyo	sen (line)	Sino-Japanese
houya-sen eikyou kenkyuu-syo	hou-ei-ken	derivation	multi	Noun	CompNoun	deleted	radiation hazard research institute	sen (line)	Sino-Japanese
houya-sen eikyou kenkyuu-syo	hou-ei-ken	derivation	multi	Noun	CompNoun	deleted	radiation hazard research institute	syo (place)	Sino-Japanese
houya-sen igaku sougou kenkyuu-syo	hou-i-ken	derivation	multi	Noun	CompNoun	deleted	institute of radiological sciences	sen (line)	Sino-Japanese
houya-sen igaku sougou kenkyuu-syo	hou-i-ken	derivation	multi	Noun	CompNoun	deleted	institute of radiological sciences	syo (place)	Sino-Japanese
huzin keisatu-kan	hu-kei	derivation	double	Noun	CompNoun	deleted	policewoman	kan (service)	Sino-Japanese
huzin senkyo-ken	hu-sen	derivation	double	Noun	CompNoun	deleted	women's suffrage	ken (right)	Sino-Japanese
hyakka ziten	hyakka	derivation	back	Noun	CompNoun	N/A	encyclopaedia	N/A	Sino-Japanese
ippou tuukou	it-tuu	derivation	double	Noun	CompNoun	N/A	one-way traffic	N/A	Sino-Japanese
kabuki kenkyuu-kai	kabu-ken	derivation	double	Noun	CompNoun	deleted	Kabuki study group	kai (association)	Sino-Japanese
kabusiki gaisya gakusyuu kenkyuu-sya	gak-ken	derivation	double	Noun	CompNoun	deleted	Gakken research company	sya (company)	Sino-Japanese
kabusiki gaisya hitati seisaku-syo	hitati	derivation	edge	Noun	CompNoun	deleted	Hitachi production company	syo (place)	Mixed
kabusiki gaisya yomiuri koukoku-sya	yomi-kou	derivation	double	Noun	CompNoun	deleted	Yomiuri advertising company	sya (company)	Mixed
kado keizai-ryoku syuutyuu haizyo-hou	syuu-hai-hou	derivation	multi	Noun	CompNoun	retained	law for elimination of excessive economic concentration	hou (law)	Sino-Japanese
kado keizai-ryoku syuutyuu haizyo-hou	syuu-hai-hou	derivation	multi	Noun	CompNoun	deleted	law for elimination of excessive economic concentration	ryoku (power)	Sino-Japanese
kagaku gizyutu kenkyuu-syo	ka-gi-ken	derivation	multi	Noun	CompNoun	deleted	national chemical laboratory	syo (place)	Sino-Japanese
kagaku gizyutu sinkou taisaku tokubetu iin-kai	ka-gi-i	derivation	multi	Noun	CompNoun	deleted	special committee on science & tech	kai (association)	Sino-Japanese
kagaku gizyutu-tyou	ka-gi-tyou	derivation	multi	Noun	CompNoun	retained	science and technology agency	tyou (agency)	Sino-Japanese
kagaku gizyutu-tyou muki zaisitu kenkyuu-syo	mu-zai-ken	derivation	multi	Noun	CompNoun	deleted	institute for inorganic material research	syo (place)	Sino-Japanese

Source Expression	Clipped Output	Form. Type	Phon. Type	Class	Expr. Type	Afx. stat	Gloss	Affix Meaning	Origin
kagaku gizyutu-tyou muki zaisitu kenkyuu-syo	muki-zai-ken	derivation	multi	Noun	CompNoun	deleted	institute for inorganic material research	tyou (agency)	Sino-Japanese
kagaku seni	ka-sen	derivation	double	Noun	CompNoun	N/A	synthetic fibre	N/A	Sino-Japanese
kagaku tansan renraku kyougai-kai	kagaku-ren-kyou	derivation	multi	Noun	CompNoun	deleted	coordinating council of chemical industry workers' unions	kai (association)	Sino-Japanese
kaisoku densya	kaisoku	derivation	back	Noun	CompNoun	N/A	rapid-service train	N/A	Sino-Japanese
kaizyou bakuryou-tyou	kai-baku-tyou	derivation	multi	Noun	CompNoun	retained	chief of staff maritime self-defence force	tyou (leader)	Sino-Japanese
kaizyou hoan-tyou	kai-ho-tyou	derivation	multi	Noun	CompNoun	retained	maritime safety agency	tyou (agency)	Sino-Japanese
kaizyou ziei-tai	kai-zi	derivation	double	Noun	CompNoun	deleted	Japan maritime self-defence force	tai (unit)	Sino-Japanese
kani saiban-syo	kan-sai	derivation	double	Noun	CompNoun	deleted	summary court	syo (place)	Sino-Japanese
kankou roudou kumiai renraku kyougai-kai	kankou-rou-kyou	derivation	multi	Noun	CompNoun	deleted	national council of government and public workers' unions	kai (association)	Sino-Japanese
kankyou bunka kenkyuu-syo	kan-bun-ken	derivation	multi	Noun	CompNoun	deleted	institute for environmental development	syo (place)	Sino-Japanese
kansai keiei-sya kyoukai	kansai-kei-kyou	derivation	multi	Noun	CompNoun	deleted	Kansai employers' association	syas (person)	Sino-Japanese
kansai keizai rengou-kai	kan-kei-ren	derivation	multi	Noun	CompNoun	deleted	Kansai economic federation	kai (association)	Sino-Japanese
kantou keiei-sya kyoukai	kantou-kei-kyou	derivation	multi	Noun	CompNoun	deleted	Kanto employers' association	syas (person)	Sino-Japanese
kanzyou hatigou-sen	kan-pati	derivation	double	Noun	CompNoun	deleted	loop road #8 around Tokyo	sen (line)	Sino-Japanese
kanzyou nanagou-sen	kan-nana	derivation	double	Noun	CompNoun	deleted	loop road #7 around Tokyo	sen (line)	Sino-Japanese
kappu hanbai-hou	kappu-hou	derivation	mid	Noun	CompNoun	retained	credit installment sale law	hou (law)	Mixed
karyoku hatuden-syo	ka-den	derivation	double	Noun	CompNoun	deleted	thermal power plant	syo (place)	Sino-Japanese
katamiti kippu	katamiti	derivation	back	Noun	CompNoun	N/A	one-way ticket	N/A	Sino-Japanese
katei saiban-syo	ka-sai	derivation	double	Noun	CompNoun	deleted	family court(house)	syo (place)	Sino-Japanese
katei-you denka seihin	ka-den	derivation	double	Noun	CompNoun	deleted	consumer electronics	you (purpose)	Sino-Japanese
kati uma touhyou-ken	ba-ken	derivation	double	Noun	CompNoun	retained	betting ticket (in a derby)	ken (ticket)	Sino-Japanese
kazi sinpan-hou	ka-sin-hou	derivation	multi	Noun	CompNoun	retained	law for adjudgement of domestic relations	hou (law)	Sino-Japanese
keiei kyougai-kai	kei-kyou	derivation	double	Noun	CompNoun	deleted	joint labor management consultation council	kai (association)	Sino-Japanese
keihin hyouzi-hou	kei-hyou-hou	derivation	multi	Noun	CompNoun	retained	law against unjustifiable premium & misleading representation	hou (law)	Sino-Japanese
keiryuu kenkyuu-syo	keiryuu-ken	derivation	multi	Noun	CompNoun	deleted	meteorology laboratory	syo (place)	Sino-Japanese
keisatu-kan syokumu sikkou-hou	kei-syoku-hou	derivation	multi	Noun	CompNoun	retained	police duties execution law	hou (law)	Sino-Japanese
keisatu-kan syokumu sikkou-hou	kei-syoku-hou	derivation	multi	Noun	CompNoun	deleted	police duties execution law	kan (service)	Sino-Japanese
keisi-tyou kagaku keisatu kenkyuu-syo	ka-kei-ken	derivation	multi	Noun	CompNoun	deleted	institute of police science	syo (place)	Sino-Japanese
keisi-tyou kagaku keisatu kenkyuu-syo	ka-kei-ken	derivation	multi	Noun	CompNoun	deleted	institute of police science	tyou (agency)	Sino-Japanese
keisi-tyou kagaku sousa kenkyuu-syo	ka-sou-ken	derivation	multi	Noun	CompNoun	deleted	criminalistics research institute	syo (place)	Sino-Japanese
keisi-tyou kagaku sousa kenkyuu-syo	ka-sou-ken	derivation	multi	Noun	CompNoun	deleted	criminalistics research institute	tyou (agency)	Sino-Japanese
keitai bangou	kei-ban	derivation	double	Noun	CompNoun	N/A	mobile phone number	N/A	Sino-Japanese
keitai denwa	keitai	derivation	back	Noun	CompNoun	N/A	cell phone	N/A	Sino-Japanese
kei-yonrin zidou-sya	kei-yon	derivation	back	Noun	CompNoun	retained	small sized car	kei (light)	Sino-Japanese
kei-yonrin zidou-sya	kei-yon	derivation	back	Noun	CompNoun	deleted	small sized car	syas (vehicle)	Sino-Japanese
keizai dantai rengou-kai	kei-dan-ren	derivation	multi	Noun	CompNoun	deleted	federation of economic organizations	kai (association)	Sino-Japanese
keizai douyuu-kai	douyuu-kai	derivation	fore	Noun	CompNoun	retained	Japan committee for economic development	kai (association)	Sino-Japanese
keizai kikaku-tyou	kei-ki-tyou	derivation	multi	Noun	CompNoun	retained	economic planning agency	tyou (agency)	Sino-Japanese
keizai kouzou kenkyuu-kai	kei-kou-ken	derivation	multi	Noun	CompNoun	deleted	society for the study of industrial structure	kai (association)	Sino-Japanese
keizi sosyuu-hou	kei-so-hou	derivation	multi	Noun	CompNoun	retained	code of criminal procedure	hou (law)	Sino-Japanese
kei-zidou-sya doraibaa	kei-doraibaa	derivation	double	Noun	CompNoun	retained	light vehicle driver	kei (light)	Mixed
kei-zidou-sya doraibaa	kei-doraibaa	derivation	double	Noun	CompNoun	deleted	light vehicle driver	syas (vehicle)	Mixed
kei-zidou-sya torakku	kei-tora	derivation	double	Noun	CompNoun	retained	light commercial truck	kei (light)	Mixed
kei-zidou-sya torakku	kei-tora	derivation	double	Noun	CompNoun	deleted	light commercial truck	syas (vehicle)	Mixed
kei-zyouyou-sya menkyo	kei-men	derivation	double	Noun	CompNoun	retained	light vehicle driver's licence	kei (light)	Sino-Japanese
kei-zyouyou-sya menkyo	kei-men	derivation	double	Noun	CompNoun	deleted	light vehicle driver's licence	syas (vehicle)	Sino-Japanese
kekkaku yobou-kai kenkyuu-syo	kek-ken	derivation	double	Noun	CompNoun	deleted	institute for tuberculosis	kai (association)	Sino-Japanese
kekkaku yobou-kai kenkyuu-syo	kek-ken	derivation	double	Noun	CompNoun	deleted	institute for tuberculosis	syo (place)	Sino-Japanese
kenkou hoken	ken-po	derivation	double	Noun	CompNoun	N/A	health insurance	N/A	Sino-Japanese
kenkou hoken kumiai rengou-kai	ken-po-ren	derivation	multi	Noun	CompNoun	deleted	national federation of health insurance societies	kai (association)	Sino-Japanese
kensatu sinsa-kai	ken-sin-kai	derivation	multi	Noun	CompNoun	retained	police investigation committee	kai (association)	Sino-Japanese
ketueki ginkou	ketu-gin	derivation	double	Noun	CompNoun	N/A	bloodbank	N/A	Sino-Japanese
kinkyuu situgyou taisaku-hou	sit-tai-hou	derivation	multi	Noun	CompNoun	retained	law for countermeasures against unemployment	hou (law)	Sino-Japanese
kinyuu seido tyousa-kai	kin-sei-tyou	derivation	multi	Noun	CompNoun	deleted	financial system research council	kai (association)	Sino-Japanese

Source Expression	Clipped Output	Form. Type	Phon. Type	Class	Expr. Type	Afx. stat	Gloss	Affix Meaning	Origin
kinzoku zairyou gizyutu kenkyuu-syo	kin-zai-ken	derivation	multi	Noun	CompNoun	deleted	research institute for metals	syo (place)	Sino-Japanese
kisyoku kenkyuu-syo	kisyoku-ken	derivation	multi	Noun	CompNoun	deleted	meteorological research institute	syo (place)	Sino-Japanese
kogata yonrin-sya unten-sya	syou-yon-unten	derivation	multi	Noun	CompNoun	deleted	driver of a small four-wheel drive	syu (person)	Mixed
kogata yonrin-sya unten-sya	syou-yon-unten	derivation	multi	Noun	CompNoun	deleted	driver of a small four-wheel drive	syu (vehicle)	Mixed
kokka koumu-in roudou kumiai renraku-kai	kok-kou-renraku-kai	derivation	multi	Noun	CompNoun	deleted	council of national service employees' unions	in (member)	Mixed
kokka koumu-in roudou kumiai renraku-kai	kok-kou-renraku-kai	derivation	multi	Noun	CompNoun	retained	council of national service employees' unions	kai (association)	Mixed
kokka koumu-in-hou	kok-kou-hou	derivation	multi	Noun	CompNoun	retained	national civil service law	hou (law)	Sino-Japanese
kokka koumu-in-hou	kok-kou-hou	derivation	multi	Noun	CompNoun	deleted	national civil service law	in (member)	Sino-Japanese
kokka taisai	kokku-tai	derivation	double	Noun	CompNoun	N/A	national polity	N/A	Sino-Japanese
kokkai taisaku iin-kai	kokku-tai-i	derivation	multi	Noun	CompNoun	deleted	diet policy committee	kai (association)	Sino-Japanese
kokudo riyu keikaku-hou	kokudo-hou	derivation	multi	Noun	CompNoun	retained	national land utilization law	hou (law)	Sino-Japanese
kokuei kigyou roudou kankei-hou	kokuei-kou-hou	derivation	multi	Noun	CompNoun	retained	national enterprise labor relations law	hou (law)	Sino-Japanese
kokuei kigyou-tou roudou kumiai kyougai-kai	kou-rou-kyou	derivation	multi	Noun	CompNoun	deleted	council of government enterprise workers' unions	kai (association)	Mixed
kokuei kigyou-tou roudou kumiai kyougai-kai	kou-rou-kyou	derivation	multi	Noun	CompNoun	deleted	council of government enterprise workers' unions	tou (etc)	Mixed
kokugo singi-kai	kokugo-sin	derivation	multi	Noun	CompNoun	deleted	council on national language	kai (association)	Sino-Japanese
kokumin kenkou hoken-hou	ken-po-hou	derivation	multi	Noun	CompNoun	retained	national health insurance act	hou (law)	Sino-Japanese
kokumin taiiku taikai	kokku-tai	derivation	double	Noun	CompNoun	N/A	national athletic competition	N/A	Sino-Japanese
kokuren gunbi syukusyou iin-kai*	kokuren-gun-syuku-i	derivation	multi	Noun	CompNoun	deleted	UN disarmament commission	kai (association)	Sino-Japanese
kokuritu bousai kagaku gizyutu kenkyuu-syo	bousai-ken	derivation	multi	Noun	CompNoun	deleted	national research centre for disaster prevention	syo (place)	Sino-Japanese
kokuritu idengaku kenkyuu-syo	iden-ken	derivation	multi	Noun	CompNoun	deleted	institute of genetics	syo (place)	Sino-Japanese
kokuritu kagaku hakubutu-kan	ka-haku	derivation	double	Noun	CompNoun	deleted	national science museum	kan (building)	Sino-Japanese
kokuritu kokugo kenkyuu-syo	kok-ken	derivation	double	Noun	CompNoun	deleted	national language institute	syo (place)	Sino-Japanese
kokuritu kyokuti kenkyuu-syo	kyokuti-ken	derivation	multi	Noun	CompNoun	deleted	institute for polar research	syo (place)	Sino-Japanese
kokuritu kyouiku kenkyuu-syo	kyou-ken	derivation	double	Noun	CompNoun	deleted	national institute for educational research	syo (place)	Sino-Japanese
kokuritu minzokugaku hakubutu-kan	min-paku	derivation	double	Noun	CompNoun	deleted	national folklore museum	kan (building)	Sino-Japanese
kokuritu raibyou kenkyuu-syo	rai-ken	derivation	double	Noun	CompNoun	deleted	institute for leprosy research	syo (place)	Sino-Japanese
kokuritu rekisi minzoku hakubutu-kan	reki-haku	derivation	double	Noun	CompNoun	deleted	national history and folklore museum	kan (building)	Sino-Japanese
kokuritu tokusyu kyokui sougou kenkyuu-syo	tok-kyou-ken	derivation	multi	Noun	CompNoun	deleted	institute of special education	syo (place)	Sino-Japanese
kokuritu yobou eisei kenkyuu-syo	yo-ken	derivation	double	Noun	CompNoun	deleted	national institute of health	syo (place)	Sino-Japanese
kokusai hana to midori no hakuran-kai	hana-haku	derivation	double	Noun	CompNoun	deleted	international garden and greenery exposition	kai (association)	Mixed
kokusai rengou	kokku-ren	derivation	double	Noun	CompNoun	N/A	United Nations	N/A	Sino-Japanese
kokusai rengou anzen hosyou rizi-kai	kokku-ren-an-po-ri	derivation	multi	Noun	CompNoun	deleted	UN security council	kai (association)	Sino-Japanese
kokuyuu tetudou	kokku-tetu	derivation	double	Noun	CompNoun	N/A	national railway	N/A	Sino-Japanese
kouan iin-kai	kouan-i	derivation	multi	Noun	CompNoun	deleted	public safety commission	kai (association)	Sino-Japanese
kou-enerugii buturigaku kenkyuu-syo	kou-ene-ken	derivation	multi	Noun	CompNoun	retained	research institute for high-energy physics	kou (high)	Sino-Japanese
kou-enerugii buturigaku kenkyuu-syo	kou-ene-ken	derivation	multi	Noun	CompNoun	deleted	research institute for high-energy physics	syo (place)	Mixed
kougai-tou tyousei iin-kai	kou-tyou-i	derivation	multi	Noun	CompNoun	deleted	environmental disputes coordination commission	kai (association)	Sino-Japanese
kougai-tou tyousei iin-kai	kou-tyou-i	derivation	multi	Noun	CompNoun	deleted	environmental disputes coordination commission	tou (etc)	Sino-Japanese
kougyou gizyutu-in	kou-gi-in	derivation	multi	Noun	CompNoun	retained	industrial science and technology agency	in (institute)	Sino-Japanese
kougyou gizyutu-in	kou-gi-in	derivation	multi	Noun	CompNoun	retained	agency of industrial science and tech	in (institute)	Sino-Japanese
kougyou gizyutu-in densi gizyutu sougou kenkyuu-syo	den-sou-ken	derivation	multi	Noun	CompNoun	deleted	electrotechnical laboratory	in (institute)	Sino-Japanese
kougyou gizyutu-in densi gizyutu sougou kenkyuu-syo	den-sou-ken	derivation	multi	Noun	CompNoun	deleted	electrotechnical laboratory	syo (place)	Sino-Japanese
kougyou gizyutu-in kougai sigen kenkyuu-syo	kou-si-ken	derivation	multi	Noun	CompNoun	deleted	research institute for pollution and resources	in (institute)	Sino-Japanese
kougyou gizyutu-in kougai sigen kenkyuu-syo	kou-si-ken	derivation	multi	Noun	CompNoun	deleted	research institute for pollution and resources	syo (place)	Sino-Japanese
koukuu bakuryou-tyou	kuu-baku-tyou	derivation	multi	Noun	CompNoun	retained	chief of staff air self-defence force	tyou (leader)	Sino-Japanese
koukuu bakan	kuu-bo	derivation	double	Noun	CompNoun	N/A	aircraft carrier	N/A	Sino-Japanese
koukuu utyuu gizyutu kenkyuu-syo	kou-gi-ken	derivation	multi	Noun	CompNoun	deleted	national aerospace laboratory	syo (place)	Sino-Japanese
koukuu ziei-tai	kou-zi	derivation	double	Noun	CompNoun	deleted	Japan air self-defence force	tai (unit)	Sino-Japanese
koukyou kigyoutai-tou roudou iin-kai	kou-rou-i	derivation	multi	Noun	CompNoun	deleted	public and national enterprise labor relations commission	kai (association)	Sino-Japanese
koukyou kigyoutai-tou roudou iin-kai	kou-rou-i	derivation	multi	Noun	CompNoun	deleted	public and national enterprise labor relations commission	tou (etc)	Sino-Japanese
koukyou kigyou-tou roudou kankei-hou	kou-rou-hou	derivation	multi	Noun	CompNoun	retained	public and national enterprise labor relations law	hou (law)	Sino-Japanese
koukyou kigyou-tou roudou kankei-hou	kou-rou-hou	derivation	multi	Noun	CompNoun	deleted	public and national enterprise labor relations law	tou (etc)	Sino-Japanese
koumu-in seido singi-kai	kou-sei-sin	derivation	multi	Noun	CompNoun	deleted	public service system council	in (member)	Sino-Japanese
koumu-in seido singi-kai	kou-sei-sin	derivation	multi	Noun	CompNoun	deleted	public service system council	kai (association)	Sino-Japanese

Source Expression	Clipped Output	Form. Type	Phon. Type	Class	Expr. Type	Afx. stat	Gloss	Affix Meaning	Origin
kousei torihiki iin-kai	kou-tori-i	derivation	multi	Noun	CompNoun	deleted	fair trade commission	kai (association)	Mixed
kousoku dourou	kousoku	derivation	back	Noun	CompNoun	N/A	expressway/highway	N/A	Sino-Japanese
kousyoku senkyo-hou	kou-sen-hou	derivation	multi	Noun	CompNoun	retained	public offices election law	hou (law)	Sino-Japanese
koutou gakkou sotugyou	kou-sotu	derivation	double	Noun	CompNoun	N/A	high school graduation	N/A	Sino-Japanese
koutou kensatu-tyou	kou-ken	derivation	double	Noun	CompNoun	deleted	high public prosecutor's office	tyou (agency)	Sino-Japanese
koutou saiban-syo	kou-sai	derivation	double	Noun	CompNoun	deleted	high court	syo (place)	Sino-Japanese
koutuu-hi syokuzi-tuki	kou-syoku-tuki	derivation	multi	Noun	CompNoun	deleted	food and transportation provided	hi (cost)	Mixed
koutuu-hi syokuzi-tuki	kou-syoku-tuki	derivation	multi	Noun	CompNoun	retained	food and transportation provided	tuki (provision)	Mixed
koutuu-hi zengaku sinkyuu	kou-zen	derivation	double	Noun	CompNoun	deleted	transportation fully reimbursable	hi (cost)	Sino-Japanese
kouwan gizyutu kenkyuu-syo	kou-ken	derivation	double	Noun	CompNoun	deleted	harbor research institute	syo (place)	Sino-Japanese
ku kensatsu-tyou	ku-ken	derivation	double	Noun	CompNoun	deleted	ward/local public prosecutor's office	tyou (agency)	Sino-Japanese
kurabu katudou	bu-katu	derivation	double	Noun	CompNoun	N/A	extracurricular (club) activities	N/A	Mixed
kuuki tyousei	kuu-tyou	derivation	double	Noun	CompNoun	N/A	air conditioning	N/A	Sino-Japanese
kuutyuu satuei	kuu-satu	derivation	double	Noun	CompNoun	N/A	aerial photography	N/A	Sino-Japanese
kyabinetto-ban	kyabine-ban	derivation	mid	Noun	CompNoun	retained	cabinet-size (photograph)	han (size)	Mixed
kyouiku iin-kai	kyou-i	derivation	double	Noun	CompNoun	deleted	board of education	kai (association)	Sino-Japanese
kyouiku katei singi-kai	kyou-ka-sin	derivation	multi	Noun	CompNoun	deleted	curriculum council	kai (association)	Sino-Japanese
kyouiku kihon-hou	kyou-ki-hou	derivation	multi	Noun	CompNoun	retained	fundamentals of education law	hou (law)	Sino-Japanese
kyouiku syokuin menkyo-hou	kyou-men-hou	derivation	multi	Noun	CompNoun	retained	teacher's licence act	hou (law)	Sino-Japanese
kyouiku syokuin yousei singi-kai	kyou-you-sin	derivation	multi	Noun	CompNoun	deleted	educational personnel training council	kai (association)	Sino-Japanese
kyouka-you tosyo kentei tyousa singi-kai	kentei-sin	derivation	multi	Noun	CompNoun	deleted	textbook authorization research council	kai (association)	Sino-Japanese
kyouka-you tosyo kentei tyousa singi-kai	kentei-sin	derivation	multi	Noun	CompNoun	deleted	textbook authorization research council	you (purpose)	Sino-Japanese
kyousan syugi-sya doumei sekigun-ha	sekigun-ha	derivation	fore	Noun	CompNoun	retained	red army	ha (faction)	Sino-Japanese
kyouto kokuritu hakubutu-kan	kyou-haku	derivation	double	Noun	CompNoun	deleted	Kyoto national museum	kan (building)	Sino-Japanese
kyuukou ressyu	kyuukou	derivation	back	Noun	CompNoun	N/A	express train	N/A	Sino-Japanese
manga kenkyuu-kai	man-ken	derivation	double	Noun	CompNoun	deleted	comics study group	kai (association)	Sino-Japanese
minsyu syakai-tou	min-sya-tou	derivation	multi	Noun	CompNoun	retained	Japan democratic socialist party	tou (party)	Sino-Japanese
minzi sosyuu-hou	min-so-hou	derivation	multi	Noun	CompNoun	retained	code of civil procedure	hou (law)	Sino-Japanese
mitubisi sougou kenkyuu-syo	mitubisi-sou-ken	derivation	multi	Noun	CompNoun	deleted	Mitsubishi research institute	syo (place)	Sino-Japanese
mogi siken	mo-si	derivation	double	Noun	CompNoun	N/A	mock examination	N/A	Sino-Japanese
monbu kagaku-syuu	monka-syuu	derivation	multi	Noun	CompNoun	retained	ministry of education, etc	syuu (ministry)	Sino-Japanese
monbu-syuu bizyutu tenran-kai	bun-ten	derivation	double	Noun	CompNoun	deleted	art expo by ministry of education, science, and culture	kai (association)	Sino-Japanese
monbu-syuu bizyutu tenran-kai	bun-ten	derivation	double	Noun	CompNoun	deleted	art expo by ministry of education, science, and culture	syuu (ministry)	Sino-Japanese
nara kokuritu bunkazai kenkyuu-syo	na-bun-ken	derivation	multi	Noun	CompNoun	deleted	Nara national institute of cultural properties	syo (place)	Sino-Japanese
nara kokuritu hakubutu-kan	na-haku	derivation	double	Noun	CompNoun	deleted	Nara national museum	kan (building)	Sino-Japanese
nara sirukuroodo hakuran-kai	nara-haku	derivation	double	Noun	CompNoun	deleted	Nara Silk Road exposition	kai (association)	Mixed
nihon bankoku hakuran-kai	ban-paku	derivation	double	Noun	CompNoun	deleted	Japan world exposition	kai (association)	Sino-Japanese
nihon bengou-si rengou-kai	nit-ben-ren	derivation	multi	Noun	CompNoun	deleted	Japan federation of bar associations	kai (association)	Sino-Japanese
nihon bengou-si rengou-kai	nit-ben-ren	derivation	multi	Noun	CompNoun	deleted	Japan federation of bar associations	si (professional)	Sino-Japanese
nihon biziutu-in tenran-kai*	nit-ten	derivation	double	Noun	CompNoun	deleted	Japan art institute exhibition	in (institute)	Sino-Japanese
nihon biziutu-in tenran-kai*	in-ten	derivation	double	Noun	CompNoun	retained	Japan art institute exhibition	in (institute)	Sino-Japanese
nihon biziutu-in tenran-kai*	nit-ten	derivation	double	Noun	CompNoun	deleted	Japan art institute exhibition	kai (association)	Sino-Japanese
nihon biziutu-in tenran-kai*	in-ten	derivation	double	Noun	CompNoun	deleted	Japan art institute exhibition	kai (association)	Sino-Japanese
nihon byouin-kai	nit-byou	derivation	double	Noun	CompNoun	deleted	Japan hospital association	kai (association)	Sino-Japanese
nihon eiga seisaku-sya renmei	ei-ren	derivation	double	Noun	CompNoun	deleted	motion picture producers' association of Japan	syu (person)	Sino-Japanese
nihon gakuzyutu sinkou-kai	gaku-sin	derivation	double	Noun	CompNoun	deleted	Japanese society for the promotion of science	kai (association)	Sino-Japanese
nihon geinou zituen-ka dantai kyougi-kai	gei-dan-kyou	derivation	multi	Noun	CompNoun	deleted	Japan council of public performance groups	ka (occupation)	Sino-Japanese
nihon geinou zituen-ka dantai kyougi-kai	gei-dan-kyou	derivation	multi	Noun	CompNoun	deleted	Japan council of public performance groups	kai (association)	Sino-Japanese
nihon gensi-ryoku hatuden kabusiki gaisya	gen-den	derivation	double	Noun	CompNoun	deleted	Japan atomic power company	ryoku (power)	Sino-Japanese
nihon gensi-ryoku kenkyuu-syo	gen-ken	derivation	double	Noun	CompNoun	deleted	japan atomic energy research institute	ryoku (power)	Sino-Japanese
nihon gensi-ryoku kenkyuu-syo	gen-ken	derivation	double	Noun	CompNoun	deleted	japan atomic energy research institute	syo (place)	Sino-Japanese
nihon gensi-ryoku sangyou	gen-san	derivation	double	Noun	CompNoun	deleted	Japan atomic industry	ryoku (power)	Sino-Japanese
nihon gentsuibaku higai-sya dantai kyougi-kai	hi-dan-kyou	derivation	multi	Noun	CompNoun	deleted	Japan council of atomic/hydrogen bomb victims groups	kai (association)	Sino-Japanese
nihon gentsuibaku higai-sya dantai kyougi-kai	hi-dan-kyou	derivation	multi	Noun	CompNoun	deleted	Japan council of atomic/hydrogen bomb victims groups	syu (person)	Sino-Japanese

Source Expression	Clipped Output	Form. Type	Phon. Type	Class	Expr. Type	Afx. stat	Gloss	Affix Meaning	Origin
nihon ginkou	nichi-gin	derivation	double	Noun	CompNoun	N/A	Bank of Japan	N/A	Sino-Japanese
nihon hujin dantai rengou-kai	hu-dan-ren	derivation	multi	Noun	CompNoun	deleted	federation of Japanese womens' organizations	kai (association)	Sino-Japanese
nihon isi-kai	nit-i	derivation	double	Noun	CompNoun	deleted	Japan medical association	kai (association)	Sino-Japanese
nihon kagaku enerugii roudou kumiai kyougi-kai	kagaku-enerugii-rou-kyou	derivation	multi	Noun	CompNoun	deleted	ICEF Japan affiliates federation	kai (association)	Mixed
nihon keiei-sya dantai renmei	nik-kei-ren	derivation	multi	Noun	CompNoun	deleted	Japan federation of employers' associations	syu (person)	Sino-Japanese
nihon keizai tyousa kyougi-kai	nik-kei-tyou	derivation	multi	Noun	CompNoun	deleted	Japan economic research institute	kai (association)	Sino-Japanese
nihon kensetu roudou kumiai rengou-kai	ken-setu-rou-ren	derivation	multi	Noun	CompNoun	deleted	federation of construction workers' unions	kai (association)	Mixed
nihon kokka koumu-in roudou kumiai rengou-kai	kok-kou-rou-ren	derivation	multi	Noun	CompNoun	deleted	Japan national federation of public worker unions	in (member)	Mixed
nihon kokka koumu-in roudou kumiai rengou-kai	kok-kou-rou-ren	derivation	multi	Noun	CompNoun	deleted	Japan national federation of public worker unions	kai (association)	Mixed
nihon kokusai mondai kenkyuu-syo	kok-u-mon-ken	derivation	multi	Noun	CompNoun	deleted	japanese institute of international affairs	syo (place)	Sino-Japanese
nihon kyousan-tou	kyousan-tou	derivation	fore	Noun	CompNoun	retained	Japan communist party	tou (party)	Sino-Japanese
nihon marukusu syugi gakusei doumei tyuukaku-ha	tyuukaku-ha	derivation	fore	Noun	CompNoun	retained	Marxist student league faction	ha (faction)	Mixed
nihon minkan housou renmei housou kenkyuu-syo	min-pou-ken	derivation	multi	Noun	CompNoun	deleted	japanese institute of broadcasting research	syo (place)	Sino-Japanese
nihon nougyou kenkyuu-syo	nit-i-nou-ken	derivation	multi	Noun	CompNoun	deleted	japanese agricultural research institute	syo (place)	Sino-Japanese
nihon ongaku zigyou-sya kyokukai	ni-zi-kyou	derivation	multi	Noun	CompNoun	deleted	Japan music organizers' association	syu (person)	Sino-Japanese
nihon sekizyuuzi-sya	nis-seki	derivation	double	Noun	CompNoun	deleted	Japan Red Cross society	syu (company)	Sino-Japanese
nihon sika isi-kai	nis-si	derivation	double	Noun	CompNoun	deleted	Japan dental association	kai (association)	Sino-Japanese
nihon sitetu roudou kumiai sou-rengou-kai	sit-e-tu-rou-ren	derivation	multi	Noun	CompNoun	deleted	general federation of private railway workers' unions	kai (association)	Mixed
nihon sitetu roudou kumiai sou-rengou-kai	sit-e-tu-rou-ren	derivation	multi	Noun	CompNoun	deleted	general federation of private railway workers' unions	sou (general)	Mixed
nihon syakai-tou	syakai-tou	derivation	fore	Noun	CompNoun	retained	socialist democratic party of Japan	tou (party)	Sino-Japanese
nihon syougyou roudou kumiai rengou-kai	syougyou-rou-ren	derivation	multi	Noun	CompNoun	deleted	Japan federation of commercial workers' unions	kai (association)	Mixed
nihon syoukou kaigi-syo	nis-syou	derivation	double	Noun	CompNoun	deleted	Japan chamber of commerce and industry	syo (place)	Sino-Japanese
nihon tekkou sangyou roudou kumiai rengou-kai	tekkou-rou-ren	derivation	multi	Noun	CompNoun	deleted	national federation of iron and steel workers' unions	kai (association)	Mixed
nihon yakuzai-si-kai	nit-i-yaku	derivation	double	Noun	CompNoun	deleted	Japan pharmaceutical association	kai (association)	Sino-Japanese
nihon yakuzai-si-kai	nit-i-yaku	derivation	double	Noun	CompNoun	deleted	Japan pharmaceutical association	si (specialist)	Sino-Japanese
nihon zidou-sya buhin kougyou-kai	bu-kou-kai	derivation	multi	Noun	CompNoun	deleted	Japan auto parts industries association	syu (vehicle)	Sino-Japanese
nihon zidou-sya buhin kyougi-kai	bu-kou-kai	derivation	multi	Noun	CompNoun	retained	Japan auto parts industries association	kai (association)	Sino-Japanese
nihon zidou-sya kougyou-kai	zi-kou-kai	derivation	multi	Noun	CompNoun	retained	Japan automobile manufacturers' association	kai (association)	Sino-Japanese
nihon zidou-sya kougyou-kai	zi-kou-kai	derivation	multi	Noun	CompNoun	deleted	Japan automobile manufacturers' association	syu (vehicle)	Sino-Japanese
nitibei boueki keizai goudou iin-kai	nitibei-keizai-i	derivation	multi	Noun	CompNoun	deleted	Japan-US business cooperation committee	kai (association)	Sino-Japanese
nomura sougou kenkyuu-syo	nomura-sou-ken	derivation	multi	Noun	CompNoun	deleted	Nomura research institute	syo (place)	Sino-Japanese
nougyou kankyou zizyutu kenkyuu-syo	nou-kan-ken	derivation	multi	Noun	CompNoun	deleted	institute of agricultural engineering	syo (place)	Sino-Japanese
nougyou kihon-hou	nou-ki-hou	derivation	multi	Noun	CompNoun	retained	law for orientation of agriculture	hou (law)	Sino-Japanese
nougyou saigai hosyou-hou	nou-sai-hou	derivation	multi	Noun	CompNoun	retained	agricultural disaster indemnity law	hou (law)	Sino-Japanese
nougyou sinkou tiiki seibi-hou	nou-sin-hou	derivation	multi	Noun	CompNoun	retained	adjustment law for agricultural development region	hou (law)	Sino-Japanese
nougyou tegata	nou-te	derivation	double	Noun	CompNoun	N/A	agricultural bill	N/A	Sino-Japanese
nourin suisan iin-kai	nou-sui-i	derivation	multi	Noun	CompNoun	deleted	committee on agriculture, forestry, & fisheries	kai (association)	Sino-Japanese
nourin suisan-syou	nou-sui-syou	derivation	multi	Noun	CompNoun	retained	ministry of farming, forestry, and fishing	syou (ministry)	Sino-Japanese
nouryoku kaihatu kenkyuu-syo	nou-ken	derivation	double	Noun	CompNoun	deleted	education test research institute	syo (place)	Sino-Japanese
nyuugaku siken	nyuu-si	derivation	double	Noun	CompNoun	N/A	entrance examination	N/A	Sino-Japanese
nyuukoku kanri-kyoku	nyuu-kan-kyoku	derivation	multi	Noun	CompNoun	retained	immigration bureau	kyoku (bureau)	Sino-Japanese
oosaka syouken torihiki-syo	dai-syou	derivation	double	Noun	CompNoun	deleted	Osaka stock exchange	syo (place)	Mixed
ouhuku kippu	ouhuku	derivation	back	Noun	CompNoun	N/A	round-trip ticket	N/A	Sino-Japanese
rika kyouiku oyobi sangyou kyouiku singi-kai	ri-san-sin	derivation	multi	Noun	CompNoun	deleted	scientific & industrial education council	kai (association)	Mixed
rikagaku kenkyuu-syo	ri-ken	derivation	double	Noun	CompNoun	deleted	institute of physical and chemical research	syo (place)	Sino-Japanese
rikken minsei-tou	minsei-tou	derivation	fore	Noun	CompNoun	retained	constitutional democratic party	tou (party)	Sino-Japanese
rikuzyou bakuryou-tyou	riku-baku-tyou	derivation	multi	Noun	CompNoun	retained	chief of staff ground self-defence force	tyou (leader)	Sino-Japanese
rikuzyou kyougi	rikuzyou	derivation	back	Noun	CompNoun	N/A	track-and-field event	N/A	Sino-Japanese
rinzi gyousei kaikaku suisin singi-kai	gyou-kaku-sin	derivation	multi	Noun	CompNoun	deleted	ad-hoc council on administrative reform	kai (association)	Sino-Japanese
rinzi gyousei tyousa-kai	rin-tyou	derivation	double	Noun	CompNoun	deleted	ad-hoc administrative reform research council	kai (association)	Sino-Japanese
rinzi kyouiku singi-kai	rin-kyou-sin	derivation	multi	Noun	CompNoun	deleted	ad-hoc council for education reform	kai (association)	Sino-Japanese
rittai tyuusya-zyou	rittai	derivation	back	Noun	CompNoun	deleted	parkade	zyou (location)	Sino-Japanese
roudou kagaku kenkyuu-syo	rou-ken	derivation	double	Noun	CompNoun	deleted	industrial science research institute	syo (place)	Sino-Japanese
roudou kankei tyousei-hou	rou-tyou-hou	derivation	multi	Noun	CompNoun	retained	labor relations adjustment law	hou (law)	Sino-Japanese

Source Expression	Clipped Output	Form. Type	Phon. Type	Class	Expr. Type	Afx. stat	Gloss	Affix Meaning	Origin
roudou kizyun-hou	rou-ki-hou	derivation	multi	Noun	CompNoun	retained	labor standard law	hou (law)	Sino-Japanese
roudou kizyun-kyoku	rou-ki-kyoku	derivation	multi	Noun	CompNoun	retained	labor standards bureau	kyoku (bureau)	Sino-Japanese
roudou kumiai rengou-kai	rou-ren	derivation	double	Noun	CompNoun	deleted	federation of labor unions	kai (association)	Mixed
roudou kumiai sou-rengou-kai	sou-ren	derivation	edge	Noun	CompNoun	deleted	general federation of trade unions	kai (association)	Mixed
roudou kumiai sou-rengou-kai	sou-ren	derivation	edge	Noun	CompNoun	retained	general federation of trade unions	sou (general)	Mixed
roudou kumiai-hou	rou-sou-hou	derivation	multi	Noun	CompNoun	retained	labor (trade) union law	hou (law)	Sino-Japanese
roudou saigai	rou-sai	derivation	double	Noun	CompNoun	N/A	work-related injury	N/A	Sino-Japanese
roudou-sya saigai	rou-sai	derivation	double	Noun	CompNoun	deleted	industrial injury/accident	syu (person)	Sino-Japanese
roudou-sya saigai hoshou	rou-sai-hoshou	derivation	multi	Noun	CompNoun	deleted	workmen's compensation	syu (person)	Sino-Japanese
roudou-sya saigai hoshou hoken	rou-sai-hoken	derivation	multi	Noun	CompNoun	deleted	workmen's accident compensation insurance	syu (person)	Sino-Japanese
rusuban denwa	rusu-den	derivation	multi	Noun	CompNoun	N/A	answering machine	N/A	Sino-Japanese
ryuukou-sei kanbou	ryuu-kan	derivation	double	Noun	CompNoun	deleted	influenza (old fashioned)	sei (type)	Sino-Japanese
ryuutuu keizai kenkyuu-syo	ryuu-ken	derivation	double	Noun	CompNoun	deleted	distribution of economics institute	syo (place)	Sino-Japanese
saiban-kan sotui iin-kai	sotui-i	derivation	double	Noun	CompNoun	deleted	indictment committee	kai (association)	Sino-Japanese
saiban-kan sotui iin-kai	sotui-i	derivation	multi	Noun	CompNoun	deleted	indictment committee	kan (service)	Sino-Japanese
saigai taisaku tokubetu iin-kai	sai-toku-i	derivation	multi	Noun	CompNoun	deleted	special committee on disasters	kai (association)	Sino-Japanese
saikou kensatu-tyou	saikou-ken	derivation	multi	Noun	CompNoun	deleted	supreme public prosecutor's office	tyou (agency)	Sino-Japanese
saikou saiban-syo	saikou-sai	derivation	multi	Noun	CompNoun	deleted	Supreme Court	syo (place)	Sino-Japanese
saikou saiban-syo	sai-kyou-sen	derivation	multi	Noun	CompNoun	retained	Saikyo line	sen (line)	Mixed
saitei tingin-hou	sai-tin-hou	derivation	multi	Noun	CompNoun	retained	minimum wage legislation	hou (law)	Sino-Japanese
sangyou kouzou singi-kai	san-kou-sin	derivation	multi	Noun	CompNoun	deleted	industrial structure council	kai (association)	Sino-Japanese
sangyou kyouiku sinkou-hou	san-sin-hou	derivation	multi	Noun	CompNoun	retained	industrial education promotion law	hou (law)	Sino-Japanese
sanwa sougou kenkyuu-syo	sanwa-sou-ken	derivation	multi	Noun	CompNoun	deleted	Sanwa research institute	syo (place)	Sino-Japanese
seihin kagaku kenkyuu-syo	sei-ka-ken	derivation	multi	Noun	CompNoun	deleted	industrial products research institute	syo (place)	Sino-Japanese
seihu zeisei tyousa-kai	zei-tyou	derivation	double	Noun	CompNoun	deleted	tax commission	kai (association)	Sino-Japanese
seimei hoken	sei-ho	derivation	double	Noun	CompNoun	N/A	life insurance	N/A	Sino-Japanese
seimu tyousa-kai	sei-tyou-kai	derivation	multi	Noun	CompNoun	retained	policy research council	kai (association)	Sino-Japanese
seizi-teki bouryoku kouei bousi-hou	sei-bou-hou	derivation	multi	Noun	CompNoun	retained	law for the prevention of political violence	hou (law)	Sino-Japanese
seizi-teki bouryoku kouei bousi-hou	sei-bou-hou	derivation	multi	Noun	CompNoun	deleted	law for the prevention of political violence	teki (-like)	Sino-Japanese
sekiyu kagaku	seki-ka	derivation	double	Noun	CompNoun	N/A	petrochemicals	N/A	Sino-Japanese
seni koubunsi zairyou kenkyuu-syo	sen-kou-ken	derivation	multi	Noun	CompNoun	deleted	institute for polymer and textile research	syo (place)	Sino-Japanese
senkyo kanri iin-kai	sen-kan	derivation	double	Noun	CompNoun	deleted	election administration committee	kai (association)	Sino-Japanese
senkyo taisaku iin-kai	sen-tai-i	derivation	multi	Noun	CompNoun	deleted	election committee	kai (association)	Sino-Japanese
sensou hanzai-nin	sen-pan	derivation	double	Noun	CompNoun	deleted	war criminal	nin (person)	Sino-Japanese
setuzoku zyosi	setu-zyo	derivation	double	Noun	CompNoun	N/A	conjunction	N/A	Sino-Japanese
shakai hoken	sha-ho	derivation	double	Noun	CompNoun	N/A	social insurance	N/A	Sino-Japanese
siei densya	si-den	derivation	double	Noun	CompNoun	N/A	municipal streetcar	N/A	Sino-Japanese
sinbun-sya ronsetu	syu-setu	derivation	double	Noun	CompNoun	retained	newspaper company editorial	syu (company)	Sino-Japanese
sin-nihon seitetu kabusiki gaisya	sin-nit-tetu	derivation	multi	Noun	CompNoun	retained	Nippon steel corporation	sin (new, neo-)	Sino-Japanese
sin-nihon syuukyoku dantai rengou-kai	sin-syuu-ren	derivation	multi	Noun	CompNoun	retained	federation of new religious organizations of Japan	sin (new, neo-)	Sino-Japanese
sin-nihon syuukyoku dantai rengou-kai	sin-syuu-ren	derivation	multi	Noun	CompNoun	deleted	federation of new religious organizations of Japan	kai (association)	Sino-Japanese
sinsin syougai-sya	sin-syuu-sya	derivation	multi	Noun	CompNoun	retained	mentally handicapped person	syu (person)	Sino-Japanese
sintai syougai-sya	sin-syuu-sya	derivation	multi	Noun	CompNoun	retained	physically handicapped person	syu (person)	Sino-Japanese
sinYOU kinko	sin-kin	derivation	double	Noun	CompNoun	N/A	credit union	N/A	Sino-Japanese
siritu daigaku	si-dai	derivation	double	Noun	CompNoun	N/A	private university	N/A	Sino-Japanese
siritu daigaku	si-dai	derivation	double	Noun	CompNoun	N/A	city college	N/A	Sino-Japanese
sityuu ginkou zyuugyou-in kumiai rengou-kai	si-gin-ren	derivation	multi	Noun	CompNoun	deleted	federation of city bank employees' unions	kai (association)	Mixed
songai hoken roudou kumiai rengou-kai	son-po-rou-ren	derivation	multi	Noun	CompNoun	deleted	federation of non-life insurance workers' unions	kai (association)	Mixed
sotugyou ronbun	sotu-ron	derivation	double	Noun	CompNoun	N/A	bachelor's thesis	N/A	Sino-Japanese
sougou hyouka	sou-hyou	derivation	double	Noun	CompNoun	N/A	general comment	N/A	Sino-Japanese
suiryoku hatuden-syo	sui-den	derivation	double	Noun	CompNoun	deleted	hydroelectric power plant	syo (place)	Sino-Japanese
suityuu satuei	sui-satu	derivation	double	Noun	CompNoun	N/A	underwater photography	N/A	Sino-Japanese
supootsu no sinkou ni kan-su-ru kondan-kai	supo-kon	derivation	double	Noun	CompNoun	deleted	special committee on sports promotion	kai (association)	Mixed
supootsu no sinkou ni kan-su-ru kondan-kai	supo-kon	derivation	double	Noun	CompNoun	deleted	special committee on sports promotion	ru (verb)	Mixed



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syakai hoken seido singi-kai	sya-ho-sin	derivation	multi	Noun	CompNoun	deleted	council on social insurance	kai (association)	Sino-Japanese
syakai hosyou seido singi-kai	sya-sei-sin	derivation	multi	Noun	CompNoun	deleted	advisory council on social insurance	kai (association)	Sino-Japanese
syakai kagaku kenkyuu-kai	sya-ken	derivation	double	Noun	CompNoun	deleted	social study group	kai (association)	Sino-Japanese
syakai kyouiku singi-kai	sya-kyou-sin	derivation	multi	Noun	CompNoun	deleted	social education council	kai (association)	Sino-Japanese
syakai roudou iin-kai	sya-rou-i	derivation	multi	Noun	CompNoun	deleted	committee on social & labor affairs	kai (association)	Sino-Japanese
syatai kensa syoumei-syo	sya-ken-syou	derivation	multi	Noun	CompNoun	deleted	automobile inspection certificate	syo (document)	Sino-Japanese
syokugyou ante-hou	syoku-an-hou	derivation	multi	Noun	CompNoun	retained	employment security law	hou (law)	Sino-Japanese
syokugyou ante-syo	syoku-an	derivation	double	Noun	CompNoun	deleted	public employment security office	syo (place)	Sino-Japanese
syokuryou kanri-hou	syok-kan-hou	derivation	multi	Noun	CompNoun	retained	food control law	hou (law)	Sino-Japanese
syotou tyuutou kyouiku-kyoku	syo-tyuu-kyoku	derivation	multi	Noun	CompNoun	retained	elementary and secondary education bureau	kyoku (bureau)	Sino-Japanese
syouken torihiki singi-kai	syou-tori-sin	derivation	multi	Noun	CompNoun	deleted	stock exchange council	kai (association)	Mixed
syouken torihiki-hou	syou-tori-hou	derivation	multi	Noun	CompNoun	retained	securities and exchange law	hou (law)	Sino-Japanese
syuhu rengou-kai	syuhu-ren	derivation	multi	Noun	CompNoun	deleted	Japan housewives association	kai (association)	Sino-Japanese
syussan kyuuka	san-kyuu	derivation	double	Noun	CompNoun	N/A	maternity leave	N/A	Sino-Japanese
syutunyuukoku kanri oyobi nanmin nintei-hou	nyuu-kan-hou	derivation	multi	Noun	CompNoun	retained	immigration control & refugee recognition act	hou (law)	Sino-Japanese
tairyou seisan	ryou-san	derivation	double	Noun	CompNoun	N/A	mass production	N/A	Sino-Japanese
takuti tatemono torihiki kigyou-hou	tak-ken-gyou-hou	derivation	multi	Noun	CompNoun	retained	building lots & transaction business law	hou (law)	Mixed
tanki daigaku	tan-dai	derivation	double	Noun	CompNoun	N/A	vocational college	N/A	Sino-Japanese
tanmatu souti	tanmatu	derivation	back	Noun	CompNoun	N/A	computer terminal	N/A	Sino-Japanese
tannin kyousi	tannin	derivation	back	Noun	CompNoun	N/A	homeroom teacher	N/A	Sino-Japanese
teiki zyousya-ken	teiki-ken	derivation	multi	Noun	CompNoun	retained	season commuter pass	ken (ticket)	Sino-Japanese
teikoku bizyutu-in tenran-kai	tei-ten	derivation	double	Noun	CompNoun	deleted	art exhibition held by imperial art academy	in (institute)	Sino-Japanese
teikoku bizyutu-in tenran-kai	tei-ten	derivation	double	Noun	CompNoun	deleted	art exhibition held by imperial art academy	kai (association)	Sino-Japanese
teinen taisyoku-sya	tei-tai-sya	derivation	multi	Noun	CompNoun	retained	retiree	syu (person)	Sino-Japanese
tihou gyousei iin-kai	ti-gyou-i	derivation	multi	Noun	CompNoun	deleted	standing committee on local administration	kai (association)	Sino-Japanese
tihou kensatu-tyou	ti-ken	derivation	double	Noun	CompNoun	deleted	district public prosecutor's office	tyou (agency)	Sino-Japanese
tihou kouei kigyou roudou kankei-hou	ti-kou-rou-hou	derivation	multi	Noun	CompNoun	retained	local public enterprise labor relations law	hou (law)	Sino-Japanese
tihou koumu-in-hou	ti-kou-hou	derivation	multi	Noun	CompNoun	retained	local civil service law	hou (law)	Sino-Japanese
tihou koumu-in-hou	ti-kou-hou	derivation	multi	Noun	CompNoun	deleted	local civil service law	in (member)	Sino-Japanese
tihou roudou iin-kai	ti-rou-i	derivation	multi	Noun	CompNoun	deleted	local labor relations commissions	kai (association)	Sino-Japanese
tihou saiban-syo	ti-sai	derivation	double	Noun	CompNoun	deleted	district court	syo (place)	Sino-Japanese
tihou zaisei-hou	ti-zai-hou	derivation	multi	Noun	CompNoun	retained	local finance law	hou (law)	Sino-Japanese
tihou ziti-hou	ziti-hou	derivation	fore	Noun	CompNoun	retained	local self government law	hou (law)	Sino-Japanese
tintai ryoukin	tin-ryou	derivation	double	Noun	CompNoun	N/A	rent	N/A	Sino-Japanese
tokubetu kougeki-tai	tok-kou-tai	derivation	multi	Noun	CompNoun	retained	special attack corps	tai (unit)	Sino-Japanese
tokubetu kyuuka	tok-kyuu	derivation	double	Noun	CompNoun	N/A	special leave	N/A	Sino-Japanese
tokubetu kyuuoku	tok-kyuu	derivation	double	Noun	CompNoun	N/A	limited express train	N/A	Sino-Japanese
tokutei sangyou sinko-hou	toku-sin-hou	derivation	multi	Noun	CompNoun	retained	special industry promotion law	hou (law)	Sino-Japanese
toriatukai setumei-syo*	tori-setu	derivation	double	Noun	CompNoun	deleted	instruction manual	syo (document)	Mixed
toriatukai setumei-syo*	setumei-syo	derivation	fore	Noun	CompNoun	retained	instruction manual	syo (document)	Mixed
touki iin-kai	tou-i	derivation	double	Noun	CompNoun	deleted	discipline committee	kai (association)	Sino-Japanese
toukyou bengo-si-kai	tou-ben	derivation	double	Noun	CompNoun	deleted	Tokyo bar association (lawyers)	kai (association)	Sino-Japanese
toukyou bengo-si-kai	tou-ben	derivation	double	Noun	CompNoun	deleted	Tokyo bar association (lawyers)	si (professional)	Sino-Japanese
toukyou bizyutu kenkyuu-syo	toukyou-bi-ken	derivation	multi	Noun	CompNoun	deleted	Tokyo fine arts institute	syo (place)	Sino-Japanese
toukyou daigaku	tou-dai	derivation	double	Noun	CompNoun	N/A	Tokyo University	N/A	Sino-Japanese
toukyou kokuritu bunkazai kenkyuu-syo	tou-bun-ken	derivation	multi	Noun	CompNoun	deleted	Tokyo national research institute of cultural properties	syo (place)	Sino-Japanese
toukyou kokuritu hakubutu-kan	tou-haku	derivation	double	Noun	CompNoun	deleted	Tokyo national museum	kan (building)	Sino-Japanese
toukyou syouken torihiki-syo	tou-syou	derivation	double	Noun	CompNoun	deleted	Tokyo stock exchange	syo (place)	Mixed
toukyou syoukou kaigi-syo	tou-syou	derivation	double	Noun	CompNoun	deleted	Tokyo chamber of commerce and industry	syo (place)	Sino-Japanese
toukyou tiba-sen	kei-you-sen	derivation	multi	Noun	CompNoun	retained	Keiyo line	sen (line)	Sino-Japanese
toukyou toritu kyouiku kenkyuu-syo	to-ken	derivation	double	Noun	CompNoun	deleted	Tokyo metropolitan education institute	syo (place)	Sino-Japanese
toukyou yokohama touhoku-sen	kei-hin-touhoku-sen	derivation	multi	Noun	CompNoun	retained	Keihin Tohoku line	sen (line)	Mixed
toukyou yokohama-sen	tou-yoko-sen	derivation	multi	Noun	CompNoun	retained	Tokyo-Yokohama line	sen (line)	Mixed
toukyou-to roudou kumiai rengou-kai	to-rou-ren	derivation	multi	Noun	CompNoun	deleted	federation of Tokyo government workers' unions	kai (association)	Mixed

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toukyou-to roudou kumiai rengou-kai	to-rou-ren	derivation	multi	Noun	CompNoun	retained	federation of Tokyo government workers' unions	to (city)	Mixed
toyota zidou-sya kabusiki gaisya	toyota	derivation	back	Noun	CompNoun	deleted	Toyota motor corporation	syā (vehicle)	Mixed
tukuba kokusai kagaku gizyutu hakuran-kai	tukaba-ban-paku	derivation	multi	Noun	CompNoun	deleted	Tsukuba international exposition	kai (association)	Mixed
tuusyou sangyou-syou	tuu-san-syou	derivation	multi	Noun	CompNoun	retained	ministry of international trade & industry	syou (ministry)	Sino-Japanese
tuusyou seisaku-kyoku	tuu-sei-kyoku	derivation	multi	Noun	CompNoun	retained	international trade policy bureau	kyoku (bureau)	Sino-Japanese
tyouka kinmu	tyou-kin	derivation	double	Noun	CompNoun	N/A	overtime work	N/A	Sino-Japanese
tyuuka ryouri	tyuuka	derivation	back	Noun	CompNoun	N/A	Chinese cuisine	N/A	Sino-Japanese
tyuukei housou	tyuukei	derivation	back	Noun	CompNoun	N/A	relay broadcasting	N/A	Sino-Japanese
tyuuou iin-kai	tyuu-i	derivation	double	Noun	CompNoun	deleted	central policy committee	kai (association)	Sino-Japanese
tyuuou kensetu singi-kai	tyuu-ken-sin	derivation	multi	Noun	CompNoun	deleted	central construction council	kai (association)	Sino-Japanese
tyuuou kogai-tou taisaku singi-kai	tyuu-kou-sin	derivation	multi	Noun	CompNoun	deleted	central council on environment	kai (association)	Sino-Japanese
tyuuou kogai-tou taisaku singi-kai	tyuu-kou-sin	derivation	multi	Noun	CompNoun	deleted	central council on environment	tou (etc)	Sino-Japanese
tyuuou kyouiku singi-kai	tyuu-kyou-sin	derivation	multi	Noun	CompNoun	deleted	central council on education	kai (association)	Sino-Japanese
tyuuou roudou iin-kai	tyuu-rou-i	derivation	multi	Noun	CompNoun	deleted	central labor relations commissions	kai (association)	Sino-Japanese
tyuuou seisaku kenkyuu-syo	tyuu-sei-ken	derivation	multi	Noun	CompNoun	deleted	policy research affairs institute	syo (place)	Sino-Japanese
tyuuou seisyounen dantai renraku kyougi-kai	tyuu-sei-ren	derivation	multi	Noun	CompNoun	deleted	national council of youth organizations	kai (association)	Sino-Japanese
tyuuou senkyo kanri iin-kai	tyuuou-sen-kan	derivation	multi	Noun	CompNoun	deleted	central election administration committee	kai (association)	Sino-Japanese
tyuuou sikkou iin-kai*	tyuu-situ	derivation	double	Noun	CompNoun	deleted	executive council	kai (association)	Sino-Japanese
tyuuou sikkou iin-kai*	tyuu-situ-i	derivation	multi	Noun	CompNoun	deleted	central executive committee	kai (association)	Sino-Japanese
tyuuou yakuzi singi-kai	yakuzi-sin	derivation	multi	Noun	CompNoun	deleted	central pharmaceutical affairs council	kai (association)	Sino-Japanese
tyuuto taigaku-sya	tyuu-tai-sya	derivation	multi	Noun	CompNoun	retained	drop-out	syā (person)	Sino-Japanese
unten menkyo-syou	menkyo	derivation	edge	Noun	CompNoun	deleted	driver's licence	syou (certificate)	Sino-Japanese
utyuu kagaku kenkyuu-syo	utyuu-ken	derivation	multi	Noun	CompNoun	deleted	institute for astronomical science	syo (place)	Sino-Japanese
warimae kanzyou	wari-kan	derivation	double	Noun	CompNoun	N/A	dutch-style date	N/A	Mixed
yakan keibi-in	ya-kei	derivation	double	Noun	CompNoun	deleted	night watchman	in (member)	Sino-Japanese
yobidasi denwa	yobidasi	derivation	back	Noun	CompNoun	N/A	phone number for a person without a phone	N/A	Mixed
yokohama haneda-sen	yoko-hane-sen	derivation	multi	Noun	CompNoun	retained	Yokohama-Haneda road	sen (line)	Mixed
yokozuna singi iin-kai	yoko-sin	derivation	double	Noun	CompNoun	deleted	Yokozuna deliberation committee	kai (association)	Mixed
yonrin kudou-sya	yon-ku	derivation	double	Noun	CompNoun	deleted	four-wheel drive vehicle	syā (vehicle)	Sino-Japanese
yunomi tyawan	yunomi	derivation	back	Noun	CompNoun	N/A	teacup	N/A	Mixed
yusyutunyuu torihiki-hou	yu-tori-hou	derivation	multi	Noun	CompNoun	retained	export & import transaction law	hou (law)	Sino-Japanese
yuusei singi-kai	yuusei-sin	derivation	multi	Noun	CompNoun	deleted	post & telecommunications advisory council	kai (association)	Sino-Japanese
yuusei-syou tuusin sougou kenkyuu-syo	tuu-sou-ken	derivation	multi	Noun	CompNoun	deleted	institute for communication technology	syo (place)	Sino-Japanese
yuusei-syou tuusin sougou kenkyuu-syo	tuu-sou-ken	derivation	multi	Noun	CompNoun	deleted	institute for communication technology	syou (ministry)	Sino-Japanese
yuusen housou	yuusen	derivation	back	Noun	CompNoun	N/A	public broadcast	N/A	Sino-Japanese
zaigen kakuho-hou	zai-kaku-hou	derivation	multi	Noun	CompNoun	retained	fiscal resources development law	hou (law)	Sino-Japanese
zaisei seido singi-kai	zaisei-sin	derivation	multi	Noun	CompNoun	deleted	finance system council	kai (association)	Sino-Japanese
zandaka syoumei-syo	zan-syou	derivation	double	Noun	CompNoun	deleted	balance certificate	syo (document)	Mixed
zeisei mondai tyousa tokubetu iin-kai	zei-toku-i	derivation	multi	Noun	CompNoun	deleted	select committee on tax systems	kai (association)	Sino-Japanese
zenkoku denryoku roudou kumiai rengou-kai	denryoku-rou-ren	derivation	multi	Noun	CompNoun	deleted	national federation of electric worker's unions	kai (association)	Mixed
zenkoku gakusei ziti-kai rengou-kai	zen-gaku-ren	derivation	multi	Noun	CompNoun	deleted	national students' self-government associations	kai (association)	Sino-Japanese
zenkoku gakusei ziti-kai rengou-kai	zen-gaku-ren	derivation	multi	Noun	CompNoun	deleted	national students' self-government associations	kai (association)	Sino-Japanese
zenkoku gakusei zittai renraku kyougi-kai	zen-gaku-kyou	derivation	multi	Noun	CompNoun	deleted	national student autonomous bodies	kai (association)	Sino-Japanese
zenkoku kinrou-sya ongaku kyougi-kai renraku kaigi	rou-on	derivation	double	Noun	CompNoun	deleted	worker's music council of Japan	kai (association)	Sino-Japanese
zenkoku kinrou-sya ongaku kyougi-kai renraku kaigi	rou-on	derivation	double	Noun	CompNoun	deleted	worker's music council of Japan	syā (person)	Sino-Japanese
zenkoku kyousai nougyou kyoudou kumiai rengou-kai	zen-kyou-ren	derivation	multi	Noun	CompNoun	deleted	national insurance federation of agricultural initiatives	kai (association)	Mixed
zenkoku nougyou kyoudou kumiai rengou-kai	zen-nou	derivation	double	Noun	CompNoun	deleted	national insurance federation of agricultural initiatives	kai (association)	Mixed
zenkoku nougyou kyoudou kumiai tyuuou-kai	zen-tyuu	derivation	double	Noun	CompNoun	deleted	central union of agricultural cooperatives	kai (association)	Mixed
zenkoku roudou kumiai renraku kyougi-kai	zen-rou-kyou	derivation	multi	Noun	CompNoun	deleted	national coordinating council of labor unions	kai (association)	Mixed
zenkoku seimei hoken roudou kumiai rengou-kai	sei-ho-rou-ren	derivation	multi	Noun	CompNoun	deleted	national federation of life insurance workers' unions	kai (association)	Mixed
zenkoku syakai hukuji kyougi-kai	zen-sya-kyou	derivation	multi	Noun	CompNoun	deleted	national council of social welfare	kai (association)	Sino-Japanese
zenkoku tiiki hujin dantai renraku kyougi-kai	zen-ti-hu-ren	derivation	multi	Noun	CompNoun	deleted	national federation of regional women's organizations	kai (association)	Sino-Japanese
zenkoku zidou-sya koutuu roudou kumiai rengou-kai	zen-zi-kou-(rou-ren)	derivation	multi	Noun	CompNoun	deleted	national automobile transport workers' unions	kai (association)	Mixed
zenkoku zousen zyuu-kikai roudou kumiai rengou-kai	zousen-zyuu-ki-rou-ren	derivation	multi	Noun	CompNoun	deleted	national shipbuilding and engineering workers' unions	kai (association)	Mixed

Source Expression	Clipped Output	Form. Type	Phon. Type	Class	Expr. Type	Afx. stat	Gloss	Affix Meaning	Origin
zenkoku zousen zyuu-kikai roudou kumiai rengou-kai	zousen-zyuu-ki-rou-ren	derivation	multi	Noun	CompNoun	retained	national shipbuilding and engineering workers' unions	zyuu (heavy)	Mixed
zen-nihon gakusei ziti-kai sou-rengou	zen-gaku-ren	derivation	multi	Noun	CompNoun	deleted	national federation of student self-gov't associations	kai (association)	Sino-Japanese
zen-nihon gakusei ziti-kai sou-rengou	zen-gaku-ren	derivation	multi	Noun	CompNoun	deleted	national federation of student self-gov't associations	sou (general)	Sino-Japanese
zen-nihon gakusei ziti-kai sou-rengou	zen-gaku-ren	derivation	multi	Noun	CompNoun	retained	national federation of student self-gov't associations	zen (all)	Sino-Japanese
zen-nihon kankou roudou kumiai rengou-kai	zen-kankou	derivation	multi	Noun	CompNoun	deleted	Japanese confederation of public sector trade unions	kai (association)	Mixed
zen-nihon kankou roudou kumiai rengou-kai	zen-kankou	derivation	multi	Noun	CompNoun	retained	Japanese confederation of public sector trade unions	zen (all)	Mixed
zen-nihon kinzoku sangyou roudou kumiai kyougai-kai	kinzoku-rou-kyou	derivation	multi	Noun	CompNoun	deleted	Japan council of metal workers' unions	kai (association)	Mixed
zen-nihon kinzoku sangyou roudou kumiai kyougai-kai	kinzoku-rou-kyou	derivation	multi	Noun	CompNoun	deleted	Japan council of metal workers' unions	zen (all)	Mixed
zen-nihon kuuyuu kabusiki gaisya	zen-nik-kuu	derivation	multi	Noun	CompNoun	retained	All Nippon Airways company	zen (all)	Sino-Japanese
zen-nihon kyousyoku-in kumiai kyougai-kai	zen-kyou	derivation	double	Noun	CompNoun	deleted	national council of teachers' unions	in (member)	Mixed
zen-nihon kyousyoku-in kumiai kyougai-kai	zen-kyou	derivation	double	Noun	CompNoun	deleted	national council of teachers' unions	kai (association)	Mixed
zen-nihon kyousyoku-in kumiai kyougai-kai	zen-kyou	derivation	double	Noun	CompNoun	retained	national council of teachers' unions	zen (all)	Mixed
zen-nihon nourin kumiai rengou-kai	zen-niti-nou	derivation	multi	Noun	CompNoun	deleted	national federation of agricultural workers' unions	kai (association)	Mixed
zen-nihon nourin kumiai rengou-kai	zen-niti-nou	derivation	multi	Noun	CompNoun	retained	national federation of agricultural workers' unions	zen (all)	Mixed
zen-nihon roudou kimiai rengou-kai	rengou	derivation	edge	Noun	CompNoun	deleted	Japan trade union confederation	kai (association)	Mixed
zen-nihon roudou kimiai rengou-kai	rengou	derivation	edge	Noun	CompNoun	deleted	Japan trade union confederation	zen (all)	Mixed
zen-nihon syokuhin roudou kumiai rengou-kai	syokuhin-rengou	derivation	multi	Noun	CompNoun	deleted	Japan federation of food and allied workers' unions	kai (association)	Mixed
zen-nihon syokuhin roudou kumiai rengou-kai	syokuhin-rengou	derivation	multi	Noun	CompNoun	deleted	Japan federation of food and allied workers' unions	zen (all)	Mixed
zen-nihon unyu sangyou roudou kumiai rengou-kai	unyu-rou-ren	derivation	multi	Noun	CompNoun	deleted	all Japan federation of transport workers' unions	kai (association)	Mixed
zen-nihon unyu sangyou roudou kumiai rengou-kai	unyu-rou-ren	derivation	multi	Noun	CompNoun	deleted	all Japan federation of transport workers' unions	zen (all)	Mixed
zidou hanbai-ki*	hanbai-ki	derivation	fore	Noun	CompNoun	retained	automated vending machine	ki (machine)	Sino-Japanese
zidou hanbai-ki*	zi-han-ki	derivation	multi	Noun	CompNoun	retained	automated vending machine	ki (machine)	Sino-Japanese
zidou-sya gakkou	sy-a-kou	derivation	double	Noun	CompNoun	retained	driving school	sy-a (vehicle)	Sino-Japanese
zidou-sya hanbai	zi-han	derivation	double	Noun	CompNoun	deleted	automobile sales	sy-a (vehicle)	Sino-Japanese
zidou-sya kougyou	zi-kou	derivation	double	Noun	CompNoun	deleted	automobile industry	sy-a (vehicle)	Sino-Japanese
zidou-sya kougyou-kai	zi-kou-kai	derivation	multi	Noun	CompNoun	retained	automobile manufacturer's association	kai (association)	Sino-Japanese
zidou-sya kougyou-kai	zi-kou-kai	derivation	multi	Noun	CompNoun	deleted	automobile manufacturer's association	sy-a (vehicle)	Sino-Japanese
zidou-sya kyousyuu-zyo	kyousyuu-zyo	derivation	fore	Noun	CompNoun	deleted	driving school	sy-a (vehicle)	Sino-Japanese
zidou-sya kyousyuu-zyo	kyousyuu-zyo	derivation	fore	Noun	CompNoun	retained	driving school	syo (place)	Sino-Japanese
zidou-sya songai baisyou sekinin hoken	zi-bai-seki	derivation	multi	Noun	CompNoun	deleted	compulsory automobile liability insurance	sy-a (vehicle)	Sino-Japanese
zidou-sya songai baisyou-hou	zi-bai-hou	derivation	multi	Noun	CompNoun	retained	automobile accident compensation law	hou (law)	Sino-Japanese
zidou-sya songai baisyou-hou	zi-bai-hou	derivation	multi	Noun	CompNoun	deleted	automobile accident compensation law	sy-a (vehicle)	Sino-Japanese
zimin-tou zeisei tyousa-kai	tou-zei-tyou	derivation	multi	Noun	CompNoun	deleted	tax system council of labor democratic party	kai (association)	Sino-Japanese
zimin-tou zeisei tyousa-kai	tou-zei-tyou	derivation	multi	Noun	CompNoun	retained	tax system council of labor democratic party	tou (party)	Sino-Japanese
zinkou mondai kenkyuu-syo	zinkou-ken	derivation	multi	Noun	CompNoun	deleted	institute of population problems	syo (place)	Sino-Japanese
zinzaï kakuho-hou	zin-kaku-hou	derivation	multi	Noun	CompNoun	retained	teaching personnel development law	hou (law)	Sino-Japanese
ziyuu minsyu-tou	zi-min-tou	derivation	multi	Noun	CompNoun	retained	liberal democratic party	tou (party)	Sino-Japanese
zyoshi koukou-sei	zyo-kou-sei	derivation	multi	Noun	CompNoun	retained	female high school student	sei (person)	Sino-Japanese
zyouhou bunka-kyoku	zyou-bun-kyoku	derivation	multi	Noun	CompNoun	retained	public information & cultural affairs bureau	kyoku (bureau)	Sino-Japanese
zyousya-ken zidou kenbai-ki	kenbai-ki	derivation	fore	Noun	CompNoun	deleted	auto ticket vending machine	ken (ticket)	Sino-Japanese
zyousya-ken zidou kenbai-ki	kenbai-ki	derivation	fore	Noun	CompNoun	retained	auto ticket vending machine	ki (machine)	Sino-Japanese
zyun-kyuukou ressyu	zyun-kyuu	derivation	back	Noun	CompNoun	retained	local express	zyun (semi-)	Sino-Japanese
zyuuhou touken-rui syozi-tou torisimari-hou	zyuu-tou-hou	derivation	multi	Noun	CompNoun	retained	law to control possession of firearms & swords	hou (law)	Sino-Japanese
zyuuhou touken-rui syozi-tou torisimari-hou	zyuu-tou-hou	derivation	multi	Noun	CompNoun	deleted	law to control possession of firearms & swords	ru (class)	Mixed
zyuuhou touken-rui syozi-tou torisimari-hou	zyuu-tou-hou	derivation	multi	Noun	CompNoun	deleted	law to control possession of firearms & swords	tou (etc)	Mixed
zyuui daigaku	zyuu-dai	derivation	double	Noun	CompNoun	N/A	veterinary school	N/A	Sino-Japanese
go-tisou su-ru	go-ti-ru	inflection	suffix	Verb	CompVerb	deleted	to treat someone to a snack/food	go (honourific)	Mixed
go-tisou su-ru	go-ti-ru	inflection	suffix	Verb	CompVerb	retained	to treat someone to a snack/food	ru (verb)	Mixed
gusatto sasa-ru	gusa-ru	inflection	suffix	Verb	CompVerb	retained	to criticize	ru (verb)	Japanese
kokuhaku su-ru	koku-ru	inflection	suffix	Verb	CompVerb	retained	to confess	ru (verb)	Mixed
musi su-ru	musi-ru	inflection	suffix	Verb	CompVerb	retained	to disregard/ignore	ru (verb)	Mixed
tamuro su-ru	tamu-ru	inflection	suffix	Verb	CompVerb	retained	to gather as a crowd	ru (verb)	Japanese
tekateka hika-ru	teka-ru	inflection	suffix	Verb	CompVerb	retained	to gleam	ru (verb)	Japanese
udauda su-ru	uda-ru	inflection	suffix	Verb	CompVerb	retained	to dawdle	ru (verb)	Japanese

Source Expression	Clipped Output	Form. Type	Phon. Type Class	Expr. Type	Afx. stat	Gloss	Affix Meaning	Origin
ziwaziwa ku-ru	ziwa-ru	inflection	suffix	Verb	CompVerb	retained	to grow to like something	ru (verb) Japanese
kimoti ga waru-i	kimo-i	inflection	suffix	Adjective	Phrase	retained	feeling bad/gross	i (adjective) Japanese
basu no teiryuu-zyo	basu-tei	derivation	double	Noun	Phrase	deleted	bus stop	syō (place) Mixed
roudou-sya to shiyō-sya	rou-si	derivation	double	Noun	Phrase	deleted	labor management	syā (person) Mixed
roudou-sya to sihon-ka	rou-si	derivation	double	Noun	Phrase	deleted	labor and capital management	ka (occupation) Sino-Japanese
roudou-sya to sihon-ka	rou-si	derivation	double	Noun	Phrase	deleted	labor and capital management	syā (person) Mixed
roudou-sya to siyō-sya	rou-si	derivation	double	Noun	Phrase	deleted	labor management	syā (person) Mixed
bokoboko ni su-ru	boko-ru	inflection	suffix	Verb	Phrase	retained	to gang up on	ru (verb) Japanese
daben o rou su-ru	dabe-ru	inflection	suffix	Verb	Phrase	retained	to jabber/shoot the breeze	ru (verb) Mixed
gikotina-ku na-ru	giko-ru	inflection	suffix	Verb	Phrase	deleted	to be awkward	ku (adverb) Japanese
gikotina-ku na-ru	giko-ru	inflection	suffix	Verb	Phrase	retained	to be awkward	ru (verb) Japanese
gotyagotya ni na-ru	gotya-ru	inflection	suffix	Verb	Phrase	retained	to become chaotic	ru (verb) Japanese
hami-(dasita)-ko ni su-ru	hami-ru	inflection	suffix	Verb	Phrase	retained	to ostracize	ru (verb) Japanese
kosi ga hike-ru	kosi-ru	inflection	suffix	Verb	Phrase	retained	to back away	ru (verb) Japanese
rati o su-ru	rati-ru	inflection	suffix	Verb	Phrase	retained	to kidnap	ru (verb) Mixed
hazuka-si-i	hazu-i	inflection	suffix	Adjective	Word	retained	embarrassing	i (adjective) Japanese
hazuka-si-i	hazu-i	inflection	suffix	Adjective	Word	deleted	embarrassing	si (adj. class) Japanese
kebaka-si-i	keba-i	inflection	suffix	Adjective	Word	retained	gaudy	i (adjective) Japanese
kebaka-si-i	keba-i	inflection	suffix	Adjective	Word	deleted	gaudy	si (adj. class) Japanese
mabu-si-i	mabu-i	inflection	suffix	Adjective	Word	retained	bright/garish	i (adjective) Japanese
mabu-si-i	mabu-i	inflection	suffix	Adjective	Word	deleted	bright/garish	si (adj. class) Japanese
musakuru-si-i	musa-i	inflection	suffix	Adjective	Word	retained	sordid	i (adjective) Japanese
musakuru-si-i	musa-i	inflection	suffix	Adjective	Word	deleted	sordid	si (adj. class) Japanese
muzuka-si-i	muzu-i	inflection	suffix	Adjective	Word	retained	difficult	i (adjective) Japanese
muzuka-si-i	muzu-i	inflection	suffix	Adjective	Word	deleted	difficult	si (adj. class) Japanese
natuka-si-i	natu-i	inflection	suffix	Adjective	Word	retained	nostalgic	i (adjective) Japanese
natuka-si-i	natu-i	inflection	suffix	Adjective	Word	deleted	nostalgic	si (adj. class) Japanese
uttou-si-i	utto-i	inflection	suffix	Adjective	Word	retained	gloomy	i (adjective) Japanese
uttou-si-i	utto-i	inflection	suffix	Adjective	Word	deleted	gloomy	si (adj. class) Japanese
uzatta-i	uza-i	inflection	suffix	Adjective	Word	retained	annoying	i (adjective) Japanese
daigaku-in-sei	in-sei	derivation	fore	Noun	Word	retained	graduate student	in (institute) Sino-Japanese
daigaku-in-sei	in-sei	derivation	fore	Noun	Word	retained	graduate student	sei (person) Sino-Japanese
doitu-go	doku-go	derivation	suffix	Noun	Word	retained	German language	go (language) Mixed
gaikoku-go	gai-go	derivation	suffix	Noun	Word	retained	foreign language	go (language) Sino-Japanese
gaikoku-zin	gai-zin	derivation	suffix	Noun	Word	retained	foreigner	zin (person) Sino-Japanese
ginkou-in	kou-in	derivation	suffix	Noun	Word	retained	bank teller	in (member) Sino-Japanese
higai-sya	gai-sya	derivation	suffix	Noun	Word	retained	victim	syā (person) Sino-Japanese
huran-su-go	hutu-go	derivation	suffix	Noun	Word	retained	French language	go (language) Mixed
itaria-go	i-go	derivation	suffix	Noun	Word	retained	Italian language	go (language) Mixed
kankoku-go	kan-go	derivation	suffix	Noun	Word	retained	Korean language	go (language) Sino-Japanese
kei-kikanzyuu	kei-ki	derivation	back	Noun	Word	retained	light machine gun	kei (light) Sino-Japanese
keiryō-ki	kei-ki	derivation	suffix	Noun	Word	retained	gauge	ki (machine) Sino-Japanese
keisatu	satu	derivation	fore	Noun	Word	N/A	police	N/A Sino-Japanese
keisatu-kan	kei-kan	derivation	suffix	Noun	Word	retained	policeman	kan (service) Sino-Japanese
kissa-ten	kissa	derivation	back	Noun	Word	deleted	café	ten (shop) Sino-Japanese
kizawari	kiza	derivation	back	Noun	Word	N/A	disagreeability	N/A Japanese
kokugo-ka	kokugo	derivation	back	Noun	Word	deleted	(Japanese) language studies	ka (section) Sino-Japanese
nookuratti-sya	nookura	derivation	fore	Noun	Word	deleted	automatic transmission car	syā (vehicle) Mixed
porutogaru-go	po-go	derivation	suffix	Noun	Word	retained	Portuguese language	go (language) Mixed
rekkaa-sya	rekkaa	derivation	fore	Noun	Word	deleted	wrecker car/tow truck	syā (vehicle) Mixed
rezisutaa-gakari	rezi-gakari	derivation	suffix	Noun	Word	retained	cashier	gakari (official) Mixed
rireki-syo	reki	derivation	edge	Noun	Word	deleted	curriculum vitae	syō (document) Sino-Japanese
roke-syon-tai	roke-tai	derivation	suffix	Noun	Word	retained	location team/unit	tai (unit) Mixed
rosia-go	ro-go	derivation	suffix	Noun	Word	retained	Russian language	go (language) Mixed
roudou-tou	roudou	derivation	back	Noun	Word	deleted	labour party	tou (party) Sino-Japanese

Source Expression	Clipped Output	Form. Type	Phon. Type	Class	Expr. Type	Afx. stat	Gloss	Affix Meaning	Origin
sangi-in	san-in	derivation	suffix	Noun	Word	retained	house of councillors	in (institute)	Sino-Japanese
sinbun-bu	bun-bu	derivation	suffix	Noun	Word	retained	newspaper club	bu (club)	Sino-Japanese
sin-sotugyou-sya	sin-sotu	derivation	back	Noun	Word	retained	fresh graduate	sin (new, neo-)	Sino-Japanese
sin-sotugyou-sya	sin-sotu	derivation	back	Noun	Word	deleted	fresh graduate	syā (person)	Sino-Japanese
supein-go	sei-go	derivation	suffix	Noun	Word	retained	Spanish language	go (language)	Mixed
syakai-ka	syakai	derivation	back	Noun	Word	deleted	social studies	ka (section)	Sino-Japanese
syuugi-in	syuu-in	derivation	suffix	Noun	Word	retained	house of representatives	in (institute)	Sino-Japanese
tanpaku-situ	tanpaku	derivation	back	Noun	Word	deleted	protein content	situ (content)	Sino-Japanese
tomo-dati	dati	inflection	fore	Noun	Word	retained	friend	tati (plural)	Japanese
yakyuu-zyou	kyuu-zyou	derivation	suffix	Noun	Word	retained	baseball field	zyou (location)	Sino-Japanese
ziri-riki-sya	riki-sya	derivation	suffix	Noun	Word	retained	rickshaw	syā (person)	Sino-Japanese
zyo-dousi	zyo-dou	derivation	back	Noun	Word	retained	auxiliary verb	zyo (co-)	Sino-Japanese
zyo-kantoku	zyo-kan	derivation	back	Noun	Word	retained	assistant director	zyo (co-)	Sino-Japanese
zyun-kangohu	zyun-kan	derivation	back	Noun	Word	retained	practical nurse	zyun (semi-)	Sino-Japanese
zyuu-denki	zyuu-den	derivation	back	Noun	Word	retained	heavy electric equipment	zyuu (heavy)	Sino-Japanese
zyuu-kikanzyuu	zyuu-ki	derivation	back	Noun	Word	retained	heavy machine gun	zyuu (heavy)	Sino-Japanese
zyuu-kougyou	zyuu-kou	derivation	back	Noun	Word	retained	heavy industry	zyuu (heavy)	Sino-Japanese
shirabakkure-ru	bakkure-ru	inflection	suffix	Verb	Word	retained	to feign ignorance	ru (verb)	Japanese
syasyaride-ru	syasya-ru	inflection	suffix	Verb	Word	retained	to crash a party	ru (verb)	Japanese

## APPENDIX 2: Survey Stimuli

Notation: A – Survey A, B – Survey B, C – Survey C, D – Survey D, All – All Surveys

Underlined forms are the test object for clipping. Forms in brackets are the clipped outputs.

Affixes which were tested in the data are in bold to make them more visible.

### Example Stimuli

Test Type: Positive Filler Test

Source Expression: 携帯電話の電源を切ってください。

Romanization: *kei-tai den-wa no dengen o kitte kudasai.*

Gloss: ‘Please turn off cell phones’

Clipped Expression: [(All) 携帯]の電源を切ってください。

Romanization: [(All) *kei-tai*] *no dengen o kitte kudasai.*

### Adjective Clipping Tests (Questions 1, 9, 17, 25, 33, 41, 49, 57)

1. 父はあたらしい車を買いました。

*titi wa atara-si-i kuruma o kaimasita.*

‘My father bought a new car’

父は[(A) あたい, (B) あた, (C) あたらい, (D) あたら] 車を買いました。

*titi wa [(A) ata-i, (B) ata, (C) atara-i, (D) atara] kuruma o kaimasita.*

2. 明日の準備でいそがしいんです。

*asita no zyunbi de isoga-si-i-N desu.*

‘It’s that I’m busy with tomorrow’s preparations’

明日の準備で[(A) いそ, (B) いそがい, (C) いそが, (D) いそい]んです。

*asita no zyunbi de [(A) iso, (B) isoga-i, (C) isoga, (D) iso-i]-N desu.*

3. 日本にはうつくしい都市が多いです。

*nihon ni wa utuku-si-i tosi ga ooi desu.*

‘There are many beautiful cities in Japan’

日本には[(A) うつくい, (B) うつく, (C) うつい, (D) うつ] 都市が多いです。

*nihon ni wa [(A) utuku-i, (B) utuku, (C) utu-i, (D) utu] tosi ga ooi desu.*

4. 私は彼の幸運がうらやましいです。

*watasi wa kare no kouun ga urayama-si-i desu.*

‘I am jealous of his good fortune’

私は彼の幸運が[(A) うらや, (B) うらい, (C) うら, (D) うらやい] です。

*watasi wa kare no kouun ga [(A) uraya, (B) ura-i, (C) ura, (D) uraya-i] desu.*

5. 牛は大きくて、おとなしいです。

*usi wa ookikute, otonasi-i desu.*

‘The cows are big and quiet’

牛は大きくて、[(A) おとい, (B) おと, (C) おとない, (D) おとな] です。

*usi wa ookikute, [(A) oto-i, (B) oto, (C) otona-i, (D) otona] desu.*

6. そのおそろしいニュースを聞いて気を失った。

*sono osoro-si-i nyuusu o kiite ki o usinatta.*

‘I fainted from hearing that dreadful news story’

その[(A) おそ, (B) おそろい, (C) おそろ, (D) おそい] ニュースを聞いて気を失った。

*sono [(A) oso, (B) osoro-i, (C) osoro, (D) oso-i] nyuusu o kiite ki o usinatta.*

7. 彼はたくましい少年だ。

*kare wa takuma-si-i syounen da.*

‘He is a bold boy’

彼は[(A) たくまい, (B) たくま, (C) たくい, (D) たく] 少年だ。

*kare wa [(A) takuma-i, (B) takuma, (C) taku-i, (D) taku] syounen da.*



8. 彼はたのもしい男だ。

*kare wa tanomo-si-i otoko da.*

‘He is a trustworthy guy’

彼は[(A) たのも, (B) たのい, (C) たの, (D) たのもい] 男だ。

*kare wa [(A) tanomo, (B) tano-i, (C) tano, (D) tanomo-i] otoko da.*

Compound Adjective Clipping Tests (Questions 6, 14, 22, 30, 38, 46, 54, 62)

1. あの男の人はかっこうわるい服を着ているねえ。

*ano otoko no hito wa kak-kou-waru-i huku o kite iru nee.*

‘That man over there is wearing lame clothes for sure’

あの男の人は[(A) かっこうい, (B) かっこう, (C) かっこい, (D) かっこ] 服を着ている  
ねえ。

*ano otoko no hito wa [(A) kak-kou-i, (B) kak-kou, (C) kak-ko-i, (D) kak-ko] huku o kite iru  
nee.*

2. 日本の夏にはむしあついです。

*nihon no natu ni wa musu-atu-i desu.*

‘Summers in Japan are humid’

日本の夏には[(A) むしあ, (B) むしい, (C) むし, (D) むしあい] です。

*nihon no natu ni wa [(A) musu-a, (B) musu-i, (C) musu, (D) musu-a-i] desu.*

.

3. この花は大変こちよい香りを発する。

*kono hana wa taihen kokoti-yo-i kaori o hassuru.*

‘This flower emits a really pleasant fragrance’

この花は大変[(A) ここい, (B) ここ, (C) こちよい, (D) こち] 香織を発する。

*kono hana wa taihen [(A) koko-i, (B) koko, (C) kokoti-i, (D) kokoti] huku o kite iru nee.*

4. 子供はだいたいなさけぶかいと思います。

*kodomo wa daitai nasake-buka-i to omoimasu.*

‘I think children are generally compassionate’

子供はだいたい[(A) なさ, (B) なさけい, (C) なさけ, (D) なさい] と思います。

*kodomo wa daitai [(A) nasa, (B) nasake-i, (C) nasake, (D) nasa-i] to omoimasu.*

5. そのあくみようたかい犯罪人は昨日逮捕された。

*sono aku-myou-taka-i hanzainin wa kinou taiho sareta.*

‘That infamous criminal was arrested yesterday’

その[(A) あくみよい, (B) あくみよ, (C) あくい, (D) あく] 犯罪人は昨日逮捕された。

*sono [(A) aku-myo-i, (B) aku-myo, (C) aku-i, (D) aku] hanzainin wa kinou taiho sareta.*

6. 彼はねばりづよい精神の持ち主だ。

*kare wa nebari-zuyo-i seisin no motinusi da.*

‘He has a tenacious spirit’

彼は[(A) ねばり, (B) ねばい, (C) ねば, (D) ねばりい] 精神の持ち主だ。

*kare wa [(A) nebari, (B) neba-i, (C) neba, (D) nebari-i] seisin no motinusi da.*

7. あいつはけんかばやい人だ。

*aitu wa ken-ka-baya-i hito da.*

‘That guy is quarrelsome’

あいつは[(A) けんい, (B) けん, (C) けんかい, (D) けんか] 人だ。

*aitu wa [(A) ken-i, (B) ken, (C) ken-ka-i, (D) ken-ka] hito da.*

8. だまされやすい人はたえず生まれてくるといった人がある。

*damasare-yasu-i hito wa taezu umarete kuru to itta hito ga aru.*

‘There are people who have said that gullible people are born everyday’

[(A) だま, (B) だまさい, (C) だまさ, (D) だまい] 人はたえず生まれてくるといった人がある。

*[(A) dama, (B) damasa-i, (C) damasa, (D) dama-i] hito wa taezu umarete kuru to itta hito ga aru.*

Phrasal Clipping Tests (Questions 5, 13, 21, 29, 37, 45, 53, 61)

1. 彼女はものわりのいい人だと思います。

*kanozzyo wa mono-wakari no i-i hito da to omoimasu.*

‘I think that she is a sensible person’

彼女は[(A) ものわい, (B) ものわ, (C) ものい, (D) もの] 人だと思います。

*kanozzyo wa [(A) mono-wa-i, (B) mono-wa, (C) mono-i, (D) mono] hito da to omoimasu.*

2. CD を聞いたので、きょうみがあるはずだ。

*CD o kiita no de, kyou-mi ga a-ru hazu da.*

‘He/she listened to the CD, so he/she must be interested’

CD を聞いたので、[(A) きょうみ, (B) きょうる, (C) きょう, (D) きょうみる] はずだ。

*CD o kiita no de, [(A) kyou-mi, (B) kyou-ru, (C) kyou, (D) kyou-mi-ru] hazu da.*

.

3. かおいろがわるいので、医者を呼びましょうか。

*kao-iro ga waru-i no de, isya o yobimasyou ka.*

‘Since you look unwell, should I call a doctor?’

[(A) かおい, (B) かお, (C) かおいろい, (D) かおいる] ので、医者を呼びましょうか。

*[(A) kao-i, (B) kao, (C) kao-iro-i, (D) kao-iro] no de, isya o yobimasyou ka.*

4. 彼はゆうきをだして豪雨のうちに出掛けた。

*kare wa yuu-ki o dasi-te gouu no uti ni dekaketa.*

‘He mustered up the courage and went out during the downpour’

彼は[(A) ゆう, (B) ゆうきて, (C) ゆうき, (D) ゆうて] 豪雨のうちに出掛けた。

*kare wa [(A) yuu, (B) yuu-ki-te, (C) yuu-ki, (D) yuu-te] gouu no uti ni dekaketa.*

5. いつがつごうがいいですか。

*itu ga tu-gou ga i-i desu ka.*

‘When is convenient?’

いつが[(A) つごうい, (B) つごう, (C) つごい, (D) つご] ですか。

*itu ga [(A) tu-gou-i, (B) tu-gou, (C) tu-go-i, (D) tu-go] desu ka.*

6. お茶を一杯飲んでげんきがでるでしょう。

*otya o ippai nonde gen-ki ga de-ru desyou.*

‘After you drink a cup of tea, you’ll probably feel energized’

お茶を一杯飲んで[(A) げんき, (B) げんる, (C) げん, (D) げんきる] でしょう。

*otya o ippai nonde [(A) gen-ki, (B) gen-ru, (C) gen, (D) gen-ki-ru] desyou.*

7. 箱の中にようとがひろい道具があります。

*hako no naka ni you-to ga hiro-i dougu ga arimasu.*

‘Inside the box there are versatile tools’

箱の中に[(A) ようい, (B) よう, (C) ようとい, (D) ようと] 道具があります。

*hako no naka ni [(A) you-i, (B) you, (C) you-to-i, (D) you-to] dougu ga arimasu.*

8. このスープはあさりのあじがする。

*kono suupu wa asari no azi ga su-ru.*

‘This soup has the taste of clams’

このスープはあさりの[(A) あ, (B) あじる, (C) あじ, (D) ある]。

*kono suupu wa asari no [(A) a, (B) azi-ru, (C) azi, (D) a-ru].*

Noun Clipping Tests (Questions 2, 10, 18, 26, 34, 42, 50, 58)

1. あの怖そうな人が遺体安置所で勤めています。

*ano kowasou na hito ga i-tai an-ti-syo de tutomete imasu.*

‘That scary person works at the morgue’

あの怖そうな人が[(A) 遺安所, (B) 遺安, (C) 体安所, (D) 体安] で勤めています。

*ano kowasou na hito ga [(A) i-an-syo, (B) i-an, (C) tai-an-syo, (D) tai-an] de tutomete imasu.*

2. チェルノブイリでの放射性物質はまだ危ないです。

*tyerunobuiri de no hou-sya-sei bus-situ wa mada abunai desu.*

‘The radioactive materials at Chernobyl are still dangerous.’

チェルノブイリでの[(A) 放物, (B) 射性物, (C) 射物, (D) 放射性物] はまだ危ないです。

*tyerunobuiri de no [(A) hou-butu, (B) sya-sei-butu, (C) sya-butu, (D) hou-sei-butu] wa mada abunai desu.*



3. 12時に検察審査会は大切な会議があります。

*12-zi ni ken-satu sin-sa-kai wa taisetu na kaigi ga arimasu.*

‘At 12 o’clock the police investigation committee has an important meeting.

12時に[(A) 察審査会, (B) 察審, (C) 検審査会, (D) 検審] は大切な会議があります。

*12-zi ni [(A) sas-sin-kai, (B) sas-sin, (C) ken-sin-kai, (D) ken-sin] wa taisetu na kaigi ga arimasu.*

4. 独裁的権力は悪いことだと思います。

*doku-sai-teki ken-ryoku wa warui koto da to omoimasu.*

‘I think that dictatorial power is a bad thing.

[(A) 裁権, (B) 独的権, (C) 独権, (D) 裁的権] は悪いことだと思います。

*[(A) sai-ken, (B) doku-teki-ken, (C) dok-ken, (D) sai-teki-ken] wa warui koto da to omoimasu.*

5. 所在不明者を探そうと、できるだけの努力をした。

*syō-zai hu-mei-sya o sagasou to, dekiru dake no douryoku o sita.*

‘We tried our best to find the missing person.

[(A) 所不者, (B) 所不, (C) 在不者, (D) 在不] を探そうと、できるだけの努力をした。

[(A) syo-hu-sya, (B) syo-hu, (C) zai-hu-sya, (D) zai-hu] o sagasou to, dekiru dake no douryoku o sita.

6. その会社は中国で最もうまく経営されている消費者金融です。

*sono kaisya wa tyuugoku de mottomo umaku keiei sarete iru syou-hi-sya kin-zoku desu.*

‘The finances of that company are one of the best managed in China.

その会社は中国で最もうまく経営されている[(A) 消金, (B) 費者金, (C) 費金, (D) 消者金] です。

*sono kaisya wa tyuugoku de mottomo umaku keiei sarete iru [(A) syou-kin, (B) hi-sya-kin, (C) hi-kin, (D) syou-sya-kin] desu.*

7. 緊急援助隊はとても大切だと思います。

*kin-kyuu en-zyo-tai wa totemo taisetu da to omoimasu.*

‘I think that emergency aid groups are very important.

[(A) 急援隊, (B) 急援, (C) 緊援隊, (D) 緊援] はとても大切だと思います。

[(A) *kyuu-en-tai*, (B) *kyuu-en*, (C) *kin-en-tai*, (D) *kin-en*] *wa totemo taisetu da to omoimasu.*

8. あの有名な人は自由党幹事です。

*ano yuumei na hito wa zi-yuu-tou kan-zi desu.*

‘That famous person is the liberal party coordinator.

あの有名な人は[(A) 由幹, (B) 自党幹, (C) 自幹, (D) 由党幹] です。

*ano yuumei na hito wa [(A) yuu-kan, (B) zi-tou-kan, (C) zi-kan, (D) yuu-tou-kan] desu.*

“Good” Filler Tests (Questions 3, 7, 11, 15, 19, 23, 27, 31, 35, 39, 43, 47, 51, 55, 59, 63)

1. 嫌な匂いで私きもちわるくなりました。

*iya na nioi de watasi ki-mochi waru-ku narimasita*

‘I became sickly from the unpleasant odour’

嫌な匂いで私[(All) きもく] になりました。

*iya na nioi de watasi [(All) kimo-**ku**] narimasita.*

2. 東京横浜線は便利ですねえ。

*tou-kyou yoko-hama-**sen** wa benri desu nee.*

‘The Tokyo-Yokohama train line is convenient for sure’

[(All) 東横線] は便利ですねえ。

[(All) *tou-yoko-**sen***] *wa benri desu nee.*

3. 朝から晩まで働いてグダグダすることですねえ。

*asa kara ban made hataraitte gudaguda su-ru koto desu nee.*

‘Working from morning until night is a thing which exhausts you for sure’

朝から晩まで働いて[(All) グダる] ことですねえ。

*asa kara ban made hataraitte [(All) guda-**ru**] koto desu nee.*

4. 平成27年1月1日から、改正労働基準法施行されます。

*heisei 27-nen 1-gatu 1-tati kara, kaisei rou-dou ki-zyun-**hou** sikou saremasu.*

‘Starting from January 1st 2017, the reformed labour standards law will be implemented’

平成27年1月1日から、改正[(All) 労基法] 施行されます。

*heisei 27-nen 1-gatu 1-tati kara, kaisei [(All) rou-ki-**hou**] sikou saremasu.*

5. あの科目はむずかしいそうです。

*ano kamoku wa muzuka-si-i sou desu.*

‘I hear that that subject is difficult’

あの科目は[(All) むずい] そうです。

*ano kamoku wa [(All) muzu-i] sou desu.*

6. 彼女は女子高校生です。

*kanozyo wa zyo-si kou-kou-sei desu.*

‘She is a girls’ high school student’

彼女は[(All) 女高生] です。

*kanozyo wa [(All) zyo-kou-sei] desu.*

7. 彼女は動作がしばしばぎこちなくなる。

*kanozyo wa dousa ga gikoti-na-ku na-ru.*

‘Her movements are awkward’

彼女は動作が[(All) ぎこちる]。

*kanozyo wa dousa ga [(All) giko-ru].*

8. 今年、自由民主党は人気がありますね。

*kotosi, zi-yuu min-syu-tou wa ninki ga arimasu ne.*

‘This year, the liberal democratic party is popular, isn’t it?’

今年、[(All) 自民党] は人気がありますね。

*kotosi, [(All) zi-min-tou] wa ninki ga arimasu ne.*

9. けばけばしい服を着ていた彼女は面白かったです。

*kebakeba-si-i huku o kite ita kanozyo wa omosirokatta desu.*

‘She, who was wearing a gaudy outfit, was interesting.

[(All) けばい] 服を着ていた彼女は面白かったです。

*[(All) keba-i] huku o kite ita kanozyo wa omosirokatta desu.*

10. 工業技術院のことが知っていますか。

*kou-gyou gi-zyutu-iN no koto ga sitte imasu ka.*

‘Do you know the technical institute?’

[(All) 工技院] のことが知っていますか。

[(All) *kou-gi-iN*] no koto ga sitte imasu ka.

11. 私は先週の大事なイベントにこしがひけた。

*watasi wa sensyuu no daizi na ibento ni kosi ga hike-ta.*

‘I withdrew from last week’s important event’

私は先週の大事なイベントに[(All) こした]。

*watasi wa sensyuu no daizi na ibento ni [(All) kosi-ta].*

12. すみません。入国管理局はどこですか。

*sumimasen, nyuu-koku kan-ri-kyoku wa doko desu ka.*

‘Excuse me, where is the bureau of immigration?’

すみません、[(All) 入管局] はどこですか。

*sumimasen, [(All) nyuu-kan-kyoku] wa doko desu ka.*

13. 太陽がまぶしいです。

*taiyou ga mabu-si-i desu.*

‘The sun is blinding’

太陽が[(All) まぶい] です。

*taiyou ga [(All) mabu-i] desu.*

14. その人は自動車工業会の一員です。

*sono hito wa zi-dou-sya kou-gyou-kai no itiin desu.*

‘That person is a member of the automobile manufacturers association’

その人は[(All) 自工会] の一員です。

*sono hito wa [(All) zi-kou-kai] no itiin desu.*

15. そんなにいきがる必要はない。

*sonna ni ikiga-ru hituyou wa nai.*

‘You don’t need to pretend that much’

そんなに[(All) いきる] 必要はない。

*sonna ni [(All) iki-ru] hituyou wa nai.*



16. 私は平成13年の前に経済企画庁で勤めていた。

*watasi wa heisei 13-nen no mae ni kei-zai ki-kaku-tyou de tutomete ita.*

‘I was working at the economic planning agency prior to 2001’

私は平成13年の前に[(All) 経企庁]で勤めていた。

*watasi wa heisei 13-nen no mae ni [(All) kei-ki-tyou] de tutomete ita.*

“Bad” Filler Tests (Questions 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64)

1. くうきをよむべきでしょうねえ。

*kuu-ki o yo-**mu**-beki desyou nee.*

‘You should sense the mood, you know’

[(All) うきよ] べきでしょうねえ。

[(All) *u-ki-yo*]-beki desyou nee.

2. 私は科学技術庁で勤めています。

*watasi wa ka-gaku gi-zyutu-**tyou** de tutomete imasu.*

‘I work at the science and technology agency’

[(All) くぎ] で勤めています。

[(All) *ku-gi*] de tutomete imasu.

3. 私はなつかしい写真を見ることが大好きです。

*watasi wa natuka-si-**i** syasin o miru koto ga daisuki desu.*

‘I love looking at nostalgic photographs’

私は[(All) つか] 写真を見ることが大好きです。

*watasi wa [(All) tuka] syasin o miru koto ga daisuki desu.*

4. その国に最低賃金法がありますか。

*sono kuni ni sai-tei tin-gin-hou ga arimasu ka.*

‘Is there a minimum wage law in that country?’

その国に[(All) ていち] がありますか。

*sono kuni ni [(All) tei-ti] ga arimasu ka.*

5. 米はあたたかい気候のところで育つ。

*kome wa atataka-i kikou no tokoro de sodatu.*

‘Rice grows in places with warm climates’

米は[(All) たたか] 気候のところで育つ。

*kome wa [(All) tataka] kikou no tokoro de sodatue.*

6. 経済産業省は新しいですか。

*kei-zai san-gyou-syou wa atarasii desu ka.*

‘Is the Ministry of Economy, Trade, and Industry new?’

[(All) ざいさ] は新しいですか。

*[(All) zai-sa] wa atarasii desu ka.*

7. あさって彼にでんわをかけるの？

*asatte kare ni deN-wa o kake-ru no?*

‘Is it that you’re going to phone him the day after tomorrow?’

あさって彼に[(All) んわか] の？

*asatte kare ni [(All) N-wa-ka] no?*

8. 埼玉東京線はあまり長くないです。

*sai-tama tou-kyou-sen wa amari nagaku nai desu.*

‘The Saitama-Tokyo train line is not very long’

[(All) まとう] はあまり長くないです。

*[(All) ma-tou] wa amari nagaku nai desu.*

9. 私は生徒が宿題のことももんくをいうのを聞いた。

*watasi wa seito ga syukudai no koto de mon-ku o i-u no o kiita.*

‘I heard the students complain about the homework’

私は生徒が宿題のことで[(All) くい] のを聞いた。

*watasi wa seito ga syukudai no koto de [(All) ku-i] no o kiita.*

10. 身体障害者を助けるのが本当に大事です。

*sin-tai syou-gai-sya o tasukeru no ga hontou ni daizi desu.*

‘It is very important that we help persons with disabilities’

[(All) いしょう] を助けるのが本当に大事です。

[(All) i-syou] o tasukeru no ga hontou ni daizi desu.

11. その通りはそうぞうしいですねえ。

*sono toori wa souzou-si-i desu nee.*

‘That street sure is noisy’

その通りは[(All) うぞし] ですねえ。

*sono toori wa [(All) uzo-si] desu nee.*

12. 彼は行政管理局で勤めています。

*kare wa gyou-sei kan-ri-kyoku de tutomete imasu.*

‘He works at the Administrative Management Bureau’

彼は[(All) いかん] で勤めています。

*kare wa [(All) i-kan] de tutomete imasu.*

13. こんなところでぼうしをかぶることはダメです。

*konna tokoro de bousi o kabu-ru koto wa dame desu.*

‘At this kind of place, wearing a hat is not allowed’

こんなところで[(All) うしか] ことはダメです。

*konna tokoro de [(All) usi-ka] koto wa dame desu.*

14. 父は航空幕僚長だった。

*titi wa kou-kuu baku-ryou-tyou datta.*

‘My father was an Air Force chief (of staff)’

父は[(All) くうば] だった。

*titi wa [(All) kuu-ba] datta.*

15. ちょっとすうじによわるのです。

*tyotto suu-zi ni yowa-i desu.*

‘It’s that I’m bad at math’

ちょっと[(All) うじよ] のです。

*tyotto [(All) u-zi-yo] desu.*

16. いとこは政府保証債をもらいました。

*itoko wa sei-hu ho-syou-sai o moraimasita.*

‘My cousin received a government bond’

いとこは[(All) ふほ] をもらいました。

*itoko wa [(All) hu-ho] o moraimasita.*

### APPENDIX 3: R statistical models for survey test categories

The variables which appear in the model's results are "AffixYes", "LengthShort", and "LengthRightLeft"; this is because R takes each variable in alphabetical order. As "AffixNo", "LengthLong", and "LengthLeftLeft" come first in each of their models, they are subsumed under the "(Intercept)".

#### Single-word adjectives

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	1.9625	0.2083	54.8000	9.420	4.69e-13 ***
LengthShort	-0.6000	0.1940	138.0000	-3.093	0.0024 **
AffixYes	-0.0500	0.1940	138.0000	-0.258	0.7970

---

Significant codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#### Compound adjectives

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	1.9625	0.2314	35.3500	8.482	4.82e-10 ***
LengthShort	-0.6750	0.1713	138.0000	-3.941	0.000128 ***
AffixYes	0.0500	0.1713	138.0000	0.292	0.770777



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Significant codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#### Verb and adjective phrases

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	1.9136	0.1753	103.6600	10.916	< 2e-16 ***
LengthShort	-0.6020	0.1880	140.6100	-3.202	0.00169 **
AffixYes	-0.3126	0.1874	138.0300	-1.668	0.09759 .

---

Significant codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#### Compound nouns

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	2.2125	0.2860	41.6100	7.736	1.4e-09 ***
LengthRightLeft	-0.6000	0.2344	138.0000	-2.560	0.0116 *
AffixYes	0.7250	0.2344	138.0000	3.093	0.0024 **

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Significant codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1